



**Asia-Pacific
Economic Cooperation**

**Advancing Free Trade
for Asia-Pacific Prosperity**

APEC Economic Policy Report 2015



**Asia-Pacific
Economic Cooperation**

2015 APEC ECONOMIC POLICY REPORT

Structural Reform and Innovation

**APEC Economic Committee
November 2015**

NOTE:

The terms “national”, “nation” used in the text are for purposes of this report and do not imply the “political status” of any APEC member economy.

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Preface

In 2014, APEC Leaders gathered in Beijing stressed that “the prospects for the shared prosperity of APEC will depend on *innovative development*, *economic reform* and *growth in the region*, which are complementary and mutually reinforcing”.

This 2015 APEC Economic Policy Report (AEPR) on Structural Reform and Innovation explores a question at the heart of this triad: How economies can stimulate innovation through implementing effective structural policies?

To prepare this work, each economy was asked to complete an Individual Economy Report providing overviews of their structural policy mechanisms (see Annexes A and B).

This economic policy report is divided into four chapters:

- 1.-The role of structural policies in innovation;
- 2.-Findings from Individual Economy Reports on Structural Reform and Innovation;
- 3.-Competition Policy and Innovation; and
- 4.-Conclusions and recommendations.

The 2015 AEPR draws valuable experiences and observations relevant to Regulatory Policy, Competition Policy, Corporate Governance, and Public Sector Governance in all APEC economies.

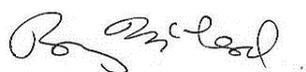
Structural Reform Ministers acknowledged in Cebu (8-9 September, 2015) the main conclusions and recommendations of this report, and instructed the Economic Committee (EC) to continue deepen and sharing with other relevant APEC fora its work on structural reform and innovation.

This publication is the culmination of contributions from all member economies, the APEC Secretariat, and the Economic Committee Chair’s Office.

I would like to express my gratitude, in particular, to New Zealand and the Philippines for their writing of the first and second chapter, and third chapter, respectively.

I am also grateful to all EC Delegates for their useful comments, and for their excellent work to coordinate and ensure the timely completion of the Individual Economy Reports.

Rory McLeod



Chair, APEC Economic Committee

2015 AEPR on Structural Reform and Innovation: Executive Summary

Innovation is key to economic growth and business productivity

Innovation is far broader than invention, technology or research and development. While innovation is widely acknowledged as a key driver of growth, the links between structural reform and innovation have yet to be fully explored. This year's APEC Economic Policy Report (AEPR) examines the links between structural policy settings and firm-level innovation across APEC member economies of varying levels of development, and explores the ways in which these economies harness the growth potential that innovation can provide through implementation of effective structural policies. Twenty Individual Economy Reports (IERs) were submitted by member economies providing overviews of their structural policy mechanisms.

Structural policies have a significant role in promoting firm innovation

Chapter 1 of the AEPR describes the key theories of innovation, the measurement frameworks for innovation, and the implications for structural policies.

Innovation is a dynamic process, and is also path-dependent on individual economies' capabilities. At the firm level, innovation has a major effect on productivity and therefore growth. Continued innovation is important to the ongoing survival of firms.

Structural policy settings matter because they can encourage or hinder innovation by influencing where and how much innovation occurs. In the context of the AEPR, structural policy refers to competition policies, regulatory policy (including ease of doing business), corporate law and governance, and public sector governance. While intellectual property is also important for innovation, it is not examined in this year's AEPR as there is already a wealth of well-established literature on this area, and it is largely outside the scope of the Economic Committee's work programme.

Governments can affect variables such as risk, market opportunity, and availability of funding, and therefore, the level of innovation in an economy. Governments need to identify and recognise the effects their policies have on innovation so that they can mitigate or remove impediments to firm-level innovation.

Chapter 2 of the AEPR summarises the key findings from the IERs and highlights interesting and emerging practices in each of the areas of structural policy.

Regulatory policy can stimulate innovation both directly and indirectly

Regulatory policy has direct links to innovation through areas such as technology standards and administrative simplification and indirect links through policy that improves competition, which in turn is associated with higher levels of innovation and economic growth.

Administrative simplification can directly improve innovation

All APEC economies reported using various good regulatory practices which will enable innovation although the precise details, and stages of development, varied from economy to economy. Programmes that emphasise administrative simplification and red tape reduction are almost universal. As economies develop beyond improving the transactional efficiency of their regulatory environment, technology will increasingly drive economies' simplification programmes for their engagement with business.

Regulatory impact analysis (RIA) is now widely used in APEC. As RIA systems become embedded within an economy, the focus should shift towards developing and strengthening specialised areas of

analysis, such as competition principles. Some economies also utilise the expertise of other departments when undertaking specialised areas of assessment, such as the competition effects of regulatory changes. This can increase the robustness of RIA.

Flexible regulatory approaches can promote innovation

A regulatory system which allows and encourages situation-specific regulatory initiatives (e.g. performance based standards or other flexible regulatory approaches) will support innovative regulatory practices. Innovation is directly enabled when the regulatory system is flexible enough to permit alternative technological solutions under prescriptive regulation, or performance-based standards. While some economies have taken the lead in requiring alternatives to prescriptive regulation to be developed, these approaches have yet to be fully adopted in other economies.

As regulatory institutions improve, arrangements to support innovative approaches are enhanced. Continuing to explore and tailor regulatory approaches to the specific challenges faced by an economy will support innovation.

Competition policy is an important driver of innovation

The pursuit of competitive advantage drives new ways of doing things. Introducing competition into less competitive markets can directly boost innovation. Increased competition drives innovation by encouraging firms to adopt improved technology and organisational arrangements, promoting the diffusion of innovations and encouraging resources to be invested in innovation.

Competition policies generally have comprehensive coverage and include technical efficiency

In order for competition to stimulate innovation, the coverage of competition policy should be as wide as possible, and also consider longer-term technical efficiencies from new technologies. In APEC economies the coverage of competition policy is generally comprehensive with limited defined exemptions such as for organised labour or industries that are directly regulated. There has also been increased recognition that competition policy needs to be able to respond to technological advances and technical efficiency gains, as well as allocative efficiency and consumer protection.

The focus of competition policy could be more strategic

To promote innovation, the design of competition policies and enforcement programmes should focus on making highly uncompetitive industries and monopolies more competitive. There were a wide range of responses on the focus of competition policy in APEC economies. The main gains in improving innovation and economic performance come from introducing greater competition into highly uncompetitive industries.

There is scope in APEC to further refine the focus of competition policy. Competition authorities in advanced economies are developing a more strategic focus in their competition policy to identify and improve inefficient markets. These economies are conducting market studies and accessing information held by other government departments to gather this sophisticated market intelligence. As economies develop, the challenge is examining whether their current competition policies, laws and institutions continue to be fit-for-purpose in the face of emerging new technologies.

Corporate law and governance frameworks enable innovation

Corporate law and governance play a key enabling role for innovation. The government's role is to establish the relevant corporate governance frameworks, including the rules around the formation, restructuring and wind-up of companies through corporate law, securities law, share market regulation, and insolvency and bankruptcy law.

APEC economies recognise the role of directors in ensuring good corporate governance

While competition in product markets helps to discipline poor managers, the role of directors in ensuring good corporate governance and shaping management's approach to innovation is also important. The most common mechanism in APEC economies is the director's duty to act in the interests of the company or its shareholders, coupled with the ability for shareholders to take legal action for breaches of directors' duties. All economies recognise that an appropriate balance needs to be struck between risk-taking and shareholder/creditor protection.

'Ease of Doing Business' programmes (in particular the priority areas of starting a business, getting credit, dealing with permits, enforcing contracts, and trading across borders) are widespread throughout APEC. They assist innovation by smoothing the transitions in the life cycles of businesses and improving the operation of corporate governance policies.

One promising practice is greater flexibility in financing start-ups

The forms of capital raising vary significantly at different levels of development, with advanced economies offering a greater range of options for capital raising. An emerging practice among these advanced economies is the development of legal mechanisms for raising capital by crowdfunding. This enables micro and small innovative enterprises to raise capital from the public to invest in their projects or ventures (providing an alternative means to banks and finance companies).

As economies develop, there appears to be increased focus on enabling a range of options for capital raising, particularly for new innovative firms. All economies recognise the need for incentives to ensure directors act in the long-term interests of shareholders, including by ensuring that adequate firm strategies for innovation are in place.

Public sector governance affects innovation capability

Good public policies that are effectively delivered are an important enabler for innovation. Governments can have a major impact on innovation by providing a stable and predictable legal framework, and through the specific national innovation system.

The quality of public institutions has a key role in setting the overall rules of the game

The quality of public institutions affects the overall capability of the national innovation system. The government has a key role in developing property rights and the rule of law applying to capital, labour and product markets. The stability and predictability of public sector institutions is important because innovation is inherently uncertain and risky.

Legal frameworks are widespread but the application of the rule of law is uneven across APEC. Many developing and middle income economies still struggle to achieve a stable and predictable rule of law regime, despite having the right legal frameworks in place.

As economies become more developed, the role of State Owned Enterprises (SOEs) in the economy declines. In advanced economies, the remaining SOEs generally operate on a level-playing field with private businesses so these SOEs can operate successfully in competitive markets.

Economies are continuing to experiment with improvements in the national innovation systems

Specialist non-market bodies play an important role in the national innovation system, being tasked with and capable of delivering innovation policy, knowledge infrastructure (universities and research institutes), and innovation infrastructure (provided by standards bodies, patents offices etc.). The

knowledge and innovation infrastructures within APEC economies are predominantly publicly owned and funded.

Across APEC, there is a lack of specialist non-market entities tasked explicitly with encouraging private sector innovation. While economies are continuing to develop and improve their national innovation systems, a recurring challenge is the lack of coherence and integration between the different parts of the innovation system.

Economies face different innovation challenges at different levels of development

The demands placed on an economy's structural policy frameworks will change as an economy moves through different stages of economic development. Once an economy establishes basic institutions, its focus will increasingly shift to developing the internal capability to support these institutions. As institutions mature, internal capability becomes a more important factor in driving ongoing success and creating an environment to foster innovation.

Economies at various stages of development will face different challenges in developing the right mix of structural reform policies to support innovation within their economy. There is no 'one size fits all' approach. Economies will need to tailor policy reforms to reflect their individual circumstances and challenges. In many instances, factors such as proximity to export markets, domestic market size or structure, and factor endowments will exert a significant influence on an economy's innovation ecosystem.

Given the complexity of some reform processes, economies may focus on reforms that address the largest impediments to economic growth and seek to build on them through further policy reform and capacity building initiatives.

An in-depth look at how competition policy can promote innovation

Chapter 3 consists of a case study by the Philippines on the links between competition policy and innovation. This follows the passage of the Philippine Competition Act in July 2015. Four elements of competition policy are seen as critical to promote innovation:

- It takes into consideration technical and dynamic efficiency.
- There is a broad coverage of the law.
- The competition authority is independent, accountable and transparent.
- There is coherence between competition policy and other economic policies such as sectoral regulation.

These elements are particularly challenging for young competition agencies. They may face difficulties in obtaining sufficient resources and expertise, as well as being impacted by a lack of awareness of competition issues among other government agencies, the judiciary and the public.

International forums provide opportunities for information exchanges between competition agencies, but the returns to APEC are likely to be greater if targeted initiatives to assist young agencies are pursued. Actions that APEC can take to build capacity of less experienced competition authorities include developing guidelines to help them assess competitive harm and evaluate potential dynamic efficiency gains from particular conduct, and undertaking a campaign to raise the level of understanding of competition policy in government agencies not directly involved in competition governance.

Economies are making progress in developing policies to support innovation

The AEPR concludes in Chapter 4 that firm innovation provides another lens through which governments can consider the impact of structural policies and examine areas where reform may be required.

While economies face different challenges depending on their level of development, it is crucial to focus policy and administrative improvements on the binding constraint to innovation so the structural changes introduced will make the greatest difference. It is also worth noting that the nature of firm innovation will differ depending on the level of development, whether this comprises faster rates of technological catch-up amongst developing economy firms, or pushing out technological frontiers amongst developed economy firms.

The AEPR reaches three further conclusions. Firstly, it is clear that there is significant diversity even between economies at the same levels of development. Secondly, structural policies have a critical role in supporting the development of high performing national innovation systems tailored to each economy's unique circumstances. Thirdly, all economies, no matter their level of development, face capability challenges in developing the policies and institutions that will improve firm innovation outcomes. It is important for all economies to be realistic about their capability needs and to have strategies in place that will allow them to build capability over time.

Recommendations

It is recommended that the Senior Officials' Meeting (SOM) recommend that APEC Ministers:

- (a) Endorse the 2015 AEPR on Structural Reform and Innovation;
- (b) Instruct the Economic Committee to take account of the findings of this Report in developing its structural reform work programmes, particularly in the Renewed APEC Agenda for Structural Reform (RAASR) and Ease of Doing Business (EoDB); and
- (c) Instruct the Economic Committee to transmit and discuss the contents of this report with other APEC bodies with an interest in structural reform and innovation.

1. The role of structural policies in innovation¹

1.1. Key themes

1.1.1. Innovation is key to economic growth and business productivity²

Innovation – in products, processes, designs, marketing and organizational approaches – is a key source of economic growth.³ Innovations unlike other finite resources accumulate and can be utilized simultaneously by a number of producers. Studies suggest that at the national level technological growth alone is responsible for more than half of the observed rise in labor productivity and national income. In a business context, innovation relates to the hard graft of learning and achieving efficiency gains over time. At the firm level innovation has a major effect on productivity and hence growth of firms. Investment in innovation is critical for enhancing firm level productivity. Continued innovation is very important to the ongoing survival of firms. It is innovation at the firm level that is the focus of this report.

Box 1 Firm level innovation – key findings

BIS (2011: page 12) reports cross-country OECD data supports a strong relationship between:

- broad investment in innovation (not simply R&D) being linked to sales of innovative products
- labour productivity and product innovation
- larger firms were more likely to engage in innovation but spent proportionately less than smaller firms
- cooperation with other firms and public financial support were linked to higher innovation spending
- firms closer to the technology frontier spend more on innovation.

1.1.2. Innovation is bigger than invention or technology

Investment in innovation is not limited to R&D. Innovation can take a variety of forms based on quite different patterns of activities. Firms invest in a wide range of tangible assets such as design assets, formal intellectual property such as software, as well as intangible assets including product

¹ This chapter is based on a paper prepared by Derek Gill Principal Economist, New Zealand Institute of Economic Research (NZIER) for the New Zealand Ministry of Business, Innovation and Employment.

² This chapter particularly draws on the 2011 United Kingdom Department for Business Innovation and Skills (BIS) Economics Paper No 15 *Innovation and Research Strategy* https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32445/11-1386-economics-innovation-and-research-strategy-for-growth.pdf, the work of Roger Procter at MBIE on innovation, productivity and growth, and previous work by NZIER staff Chris Nixon and John Stephenson.

³ The Oslo Manual for measuring innovation defines four types of innovation: product innovation, process innovation, marketing innovation and organisational innovation. Product innovation is when a 'good or service that is new or significantly improved. This includes significant improvements in technical specifications, components and materials, software in the product, user friendliness or other functional characteristics'. Process innovation is a 'new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software.' Marketing innovation is a 'new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing'. Organisational innovation is a 'new organisational method in business practices, workplace organisation or external relations'. <http://www.oecd.org/site/innovationstrategy/defininginnovation.htm>.

development management capability. Thus innovation is multifaceted and extends beyond R&D to intangible organizational capabilities. An innovation is a product, process, or marketing method that is new to a firm – it need not be new to the economy.

Innovation used to be portrayed as a linear life cycle that begins with the discovery or idea creation phase, followed by a period of development, testing and demonstration before it comes to market i.e. deployment. In some areas, scientific developments lead to technology developments such as biotechnology. In others, science and technology essentially played no role (for example, the development of steelmaking and steam power). In fact, causality ran the opposite way, since the development of steam power assisted in the creation of the field of modern thermodynamics. Thus, innovation can be theory-led or trial-and-error led development that is later explained scientifically.

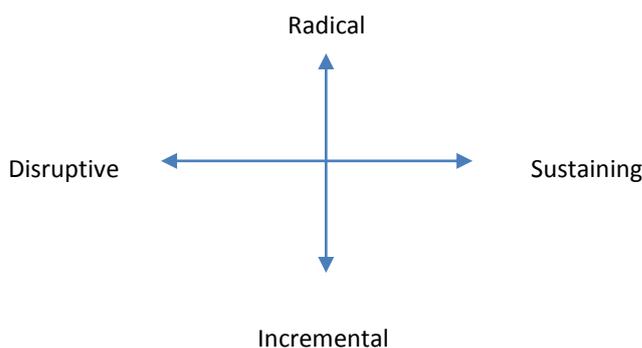
1.1.3. No unified general theory

However, there is no general unified theory of innovation. What the drivers are and how quickly innovations will spread are very context dependent. But generalizations are possible. The United Kingdom’s Department for Business Innovation and Skills observed:

“Innovation activity is pervasive across industries, collective in character (involving interactions of many actors), cumulative over time, risky and uncertain and often rests on national and regional specialization.....Above all innovation performance rests not simply on entrepreneurial actors but is powerfully shaped by the innovation system.” (BIS: 2011: page 2)

Innovations can be usefully classified by the kind of impact on businesses and wider society. For business innovations can be incremental – involving a small departure from existing products, processes and organizational approaches or more radical. Innovation’s effect on society can be sustained relatively easily or more disruptive to the way people live their lives. These impacts can be placed in a diagram with the two dimensions shown in figure 1.

Figure 1 Classifying innovation by potential impacts



Source: NZIER

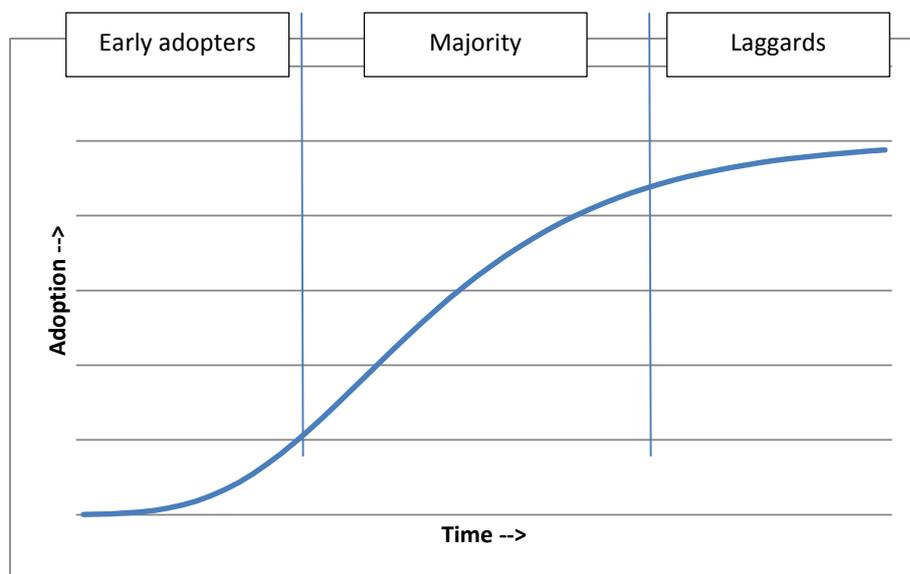
1.1.4. Adoption of innovations is a dynamic process

One common approach to thinking about the timeframe for the take up of innovations is the adoption curve, shown in Figure 2. It shows a sigmoid curve in which adoption of an innovation starts slowly and then builds momentum as it reaches the majority. At some point, the rate of adoption slows. In the last phase, adoption is a slow process. Figure 2 divides adopters into three categories (other analyses use more categories): early adopters who are in the minority and keen to adopt; the majority, who are the bulk of adopters; and laggards, who adopt and innovate slowly and only after

most people have already adopted. The adoption curve shows that adoption is a non-linear process and that it can take a while to build acceptance of an innovation.

Innovation is a dynamic process that plays out over time. Innovation can occur because of changes in the innovation system, firms may adopt new processes, governments may change their approaches to policy, and researchers working with end users may shift their research priorities.

Figure 2 Innovation adoption curve



Source: NZIER

1.1.5. Innovation is path dependent as it depends upon capabilities

Capabilities cover a whole range of attributes that lead to a competitive advantage of a nation or region. These capabilities include the web of social and business relationships, climate, and a myriad of other attributes that contribute to improved innovation. Without such capabilities, a country or a region can struggle to overcome the hurdles to durable growth. The capabilities needed to produce any product in the modern economy are myriad, highly specific and co-evolving. These capabilities evolve organically with the other capabilities, becoming increasingly sophisticated and specialized over time. As a result of capabilities, countries' economic development is highly path dependent: what you can produce today depends on the capabilities you had yesterday, and what you produce tomorrow depends on the capabilities that you have today. As a result, we find apparently similar economies produce quite different things.

1.1.6. Geographic specialization and concentration in clusters persist

Innovations require capabilities which often develop in clusters of interconnected businesses, suppliers and associated institutions. These specialized clusters build up over time and are hard to change or replicate. Clusters traditionally have been horizontal regional clusters but increasingly they are vertical global value chains.

1.1.7. User led demand-side dynamics also matter

While the extent of user led innovation varies across industries, user demands are an increasingly important driver of the innovation system. A key question is what is the nature of the group,

audience, or market for which the innovation is being developed? Some demand-side considerations are:

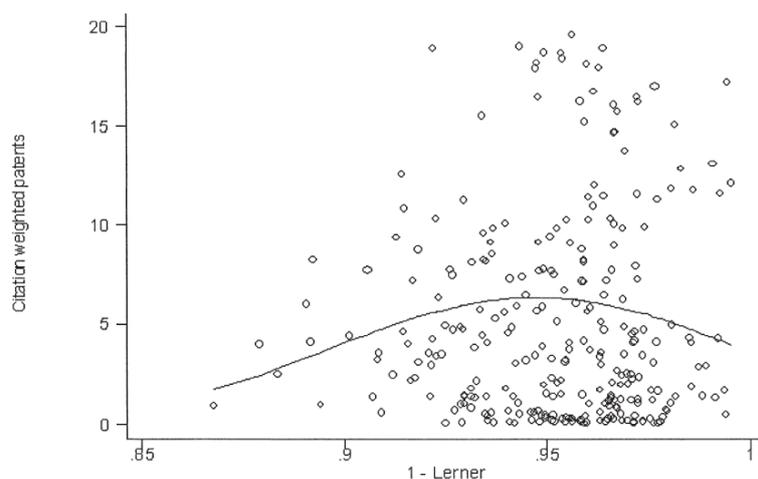
- the size and scale of the problem or market – either domestically or internationally, depending on the focus or transferability of the innovation
- trends – whether increasing or decreasing, and the rate of change
- key drivers of demand – how those drivers are changing and the potential flow-on impacts
- how close to the market the innovation occurs
- absorptive capacity – the market, communities, institutions or targeted end-users must be able absorb the innovation; constraints on capacity are important to understand.

1.1.8. The link between industry structure and innovation is concave⁴

There is an on-going debate in economics about the kinds of business structures that maximize innovation. The debate has centered on the relative merits of productive efficiency and portfolio effects that large firms can generate through scale, versus the (market) dynamic innovation exhibited by small firms in the form of nimbleness and flexibility. There is some evidence that there is a concave relationship between structure and innovation. This suggests, as shown in Figure 3, that moderately competitive markets generate the most innovation while both monopolies and highly competitive markets have less innovation.

Figure 3 Product market competition and innovation

Using measured competition (x axis) and citations of patents as a proxy for innovation (y axis).



Source: OECD (2014) based on Aghion et al (2005)

Competition is an important determinant of innovation because the pursuit of competitive advantage drives new ways of doing things. Firms which operate inside the technological and productivity ‘frontier’ of their industry will tend to focus on cost reduction strategies to remain profitable, rather than innovations. Studies show firms closer to the technology frontier spend more on innovation. These firms invest in innovation to sustain their competitiveness with the rest of the industry and pursue additional ‘rents’ that can come from innovation.

⁴ Drawn from OECD (2014) Factsheet on how competition policy affects macroeconomic outcomes.

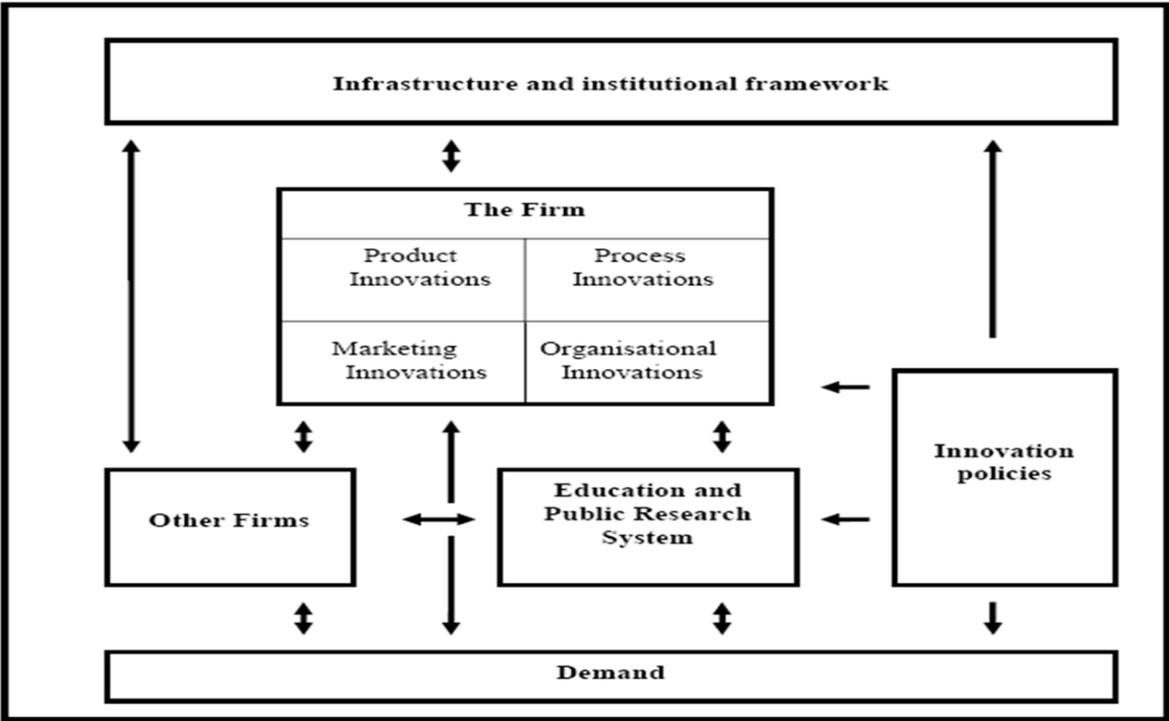
Competitive barriers that encourage monopolies can inhibit innovation. Barriers to entry can reduce the number of new and young firms which are an important source of innovation, in part, because they often pursue innovations overlooked by larger firms.

1.1.9. Innovation in firms depends on the wider innovation system

While competition has a major role in encouraging technological advances by firms, it has been long understood that publicly-funded basic research also has an important role to play, especially when the knowledge is disseminated widely throughout the economy. In addition to supporting scientific and technological breakthroughs through investment in research, it is also important to strengthen the connections for sharing and dissemination of knowledge within the national innovation system shown in Figure 4.

Innovation is a joint process involving a wide range of actors and is not confined to the entrepreneur in a firm. Instead innovation occurs within a wider system that includes customers, other firms, science providers within the education and public research system and the innovation information infrastructure (standard setters, patent offices, geophysical information providers etc.). Figure 4 shows the OECD innovation system measurement framework. In an open system the strong feedback loops are required in order to sustain innovative developments and these loops are reflected in the complexity of the system.

Figure 4 OECD innovation system measurement framework



Source: OECD, Oslo Manual

A key challenge for policy makers is how well the overall innovation system is operating as a system. As well as looking at businesses and markets, it looks at supporting organizations and linkages between them including international linkages and supporting institutions. Successful innovation systems deal with all the following problems: identifying innovation opportunities; accessing, creating and distributing knowledge capabilities; business development and business financing; managing risk and uncertainty; and providing both physical and knowledge infrastructures. Structural

policies have an important role to play in supporting the development of high-performing national innovation systems where:

- regulatory policies stimulate rather than stymie innovations
- the enforcement of competition policies is focused on highly uncompetitive industries
- the laws on corporate and public sector governance create an environment within which risk taking can occur and innovations are developed.

1.1.10. The quality of public institutions matters

The stability and predictability of public sector institutions is important because innovation is inherently uncertain and risky. The quality of public sector governance influences the overall capability of the national innovation system and has an important role in setting the overall rules of the game. Governments can have a major impact on innovation by providing the broad legal framework and the specific national innovation system, as well as conceiving of and undertaking innovation themselves.

1.1.11. The level of technological and economic development matters

Levels of productivity differ significantly between firms but also markedly across economies. In some developing economies, a large number of low productivity firms survive and persist, while in some developed economies, the gaps between productivity leaders and followers is much less. The discussion to date has highlighted how innovation is a vital contributor to economic growth and has the potential to provide a path that avoids the middle income trap. The focus has been on all countries' economies as many of the links between structural policies and productivity and innovation apply equally to both OECD and non-OECD economies alike. But the discussion also highlighted the role of specialized capabilities.

Economic growth comes from creating and exploiting sources of competitive advantage that grow over time and are difficult to replicate. The difficulty of replication arises because of spill overs, increasing returns, and the use of sophisticated capabilities. As a result, the economic development route that a particular economy follows is highly path-dependent.

Economies differ in their starting point, paths and levels of economic development, and government capabilities. Different economies face different imperatives. Looking at public sector governance, for some the priority is getting the basic building blocks in place to underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks.

A recent study of levels of technological and economic development in ASEAN member states (AMSs) concluded that "ASEAN runs the entire range of technological development, from the basic initial conditions to the frontier of knowledge and technological development".⁵ It suggests the wide gap in innovation capability among AMSs reflects the different stages of technological development. Accordingly the emphasis of innovation policy needs to be related to the level of economic development. Using Rasiah's⁶ framework, ERIA suggests some AMSs are in the 'Initial Conditions' where the focus should be on political stability and basic infrastructure as well as integration with the global economy. Others are in a 'Learning Phase' dominated by learning from doing and imitation, expanding tacit social institutions to formal intermediary organizations for network cohesion and integration in global value chains. Middle income AMSs are in the 'Catch Up' phase with smooth integration of basic infrastructure, high technology infrastructure, network cohesion and global

⁵ ASEAN Rising: ASEAN and AEC Beyond 2015 Ponciano Intal, Yoshifumi Fukunaga, Fukunari Kimura, Phoumin Han, Philippa Dee, Dionisius Narjoko, and Sothea Oum, Jakarta: ERIA, 2014 p200

⁶ Rasiah, R. (2013), frames the phases or stages of technological development in terms of four key pillars of (a) basic infrastructure, (b) high technology infrastructure, (c) network cohesion, and (d) global integration. 'Stimulating Innovation in ASEAN Institutional Support, R&D Activity and Intellectual Property Rights', ERIA Discussion Paper 2013-28, Jakarta: ERIA.

integration. Singapore is at the ‘Frontier Stage’, with R & D laboratories creating new knowledge, connected to world nodes of knowledge creation.

1.2. Implications for structural policies

This section examines the link between structural policy settings and innovation in more detail. Structural policy settings matter as they strongly influence where and how much innovation occurs. By structural policies, we include competition policies, regulatory policy (including ease of doing business), corporate law and governance, and public sector governance. Intellectual property law is also important for innovation but there is a well-established literature on this subject and intellectual property is not the focus of this AEPR.

1.2.1. Regulatory policy has direct and indirect links to innovation

Regulatory policy can have *direct* linkages through technology standards, stretch targets and administrative simplification. Regulatory policy (including ease of doing business) that improves the quality of regulation also has *indirect* links through improving competition which in turn is associated with high innovation, productivity and economic growth.

Innovation is directly enabled when the regulatory system is flexible enough to permit the use of alternative approaches and solutions under outcome/performance-based or prescriptive input based regulation. Performance-based regulation tends to be more amenable to innovation than prescriptive input-based standards. Government procurement can assist in speeding the diffusion of new technologies but is less likely to have an effect on discovery.

Innovation can be spurred by regulations which set stretch targets or alter relative prices in the market. This helps to create demand for new technologies or practices. Setting regulatory stretch targets such as emission standards which are beyond current technical capabilities creates incentives to innovate and perform.

Administrative simplification through ease of doing business and ‘red tape’ reduction programs can assist innovation by removing barriers that slow the speed of innovations to markets. Administrative simplification programs can also be linked to programs to reduce corruption. Regulation can also affect the value of new knowledge by enabling or discouraging social and economic change. The OECD (2003) found, for example, that the speed of take up of information technologies in the 1990s was negatively related to the stringency of regulatory regimes. The implication is that regulation which inhibits change inhibits innovation. This includes inhibiting organizational innovation needed to make productive use of new production technologies.

In addition to these direct effects there are also *indirect* mechanisms by which improved regulatory policies can facilitate innovation. For example, innovation often relies on tacit knowledge held by skilled people. Immigration can place barriers on the movement of skilled people between economies and occupational regulation imposes barriers on movement within economies between firms. By encouraging competition for the market (not just in the market), regulatory policies can indirectly encourage innovation.

Competitive barriers also inhibit innovation, for example, by creating barriers to entry to new and young firms which are important sources of innovation. Regulatory regimes also can create barriers to innovation by restricting conduct once entry has occurred. One means of counteracting these barriers is strengthening the regulatory development process. This can encourage the choice of the most effective policy that minimizes any adverse impact on competition by explicitly requiring the identification of the effects of specific regulation on competition.

1.2.2. Competition policy has an important role to play

An earlier section discussed the concave relationship between market structure and innovation whereby moderately competitive markets generate the most innovation while both monopolies and highly competitive markets have less innovation. Policy settings and enforcement actions by competition authorities that focus on highly uncompetitive industries can therefore boost innovation. Increased competition through the presence of rivals can increase innovation through a number of mechanisms:

- within firm adoption of improved technology and organizational arrangements
- reallocation of employment and output to higher productivity firms
- improved efficiency in the investment of the rents from market power in undertaking innovations
- promoting more effective diffusion and adoption of innovation.

There is also growing evidence of the positive link between innovation and the openness of an economy to trade and investment.

The concave relationship between market structure and innovation suggests the potential for a very positive role for competition policies. This is because the focus of competition policies is on making highly uncompetitive industries and monopolies more competitive. Resources for enforcement of competition policies are not generally focused on making already competitive markets hyper-competitive. The focus on making protected industries more competitive has the potential to increase innovation. Achieving this potential benefit from competition policy will depend on the quality of the competition policy settings and whether the competition authority has the mandate and capabilities required.

Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. A balance needs to be struck in competition law itself that favors longer term technical and dynamic efficiency (efficiencies from new technologies) rather than just focusing on allocative efficiency and consumer protection in the short term. Competition policy needs to be able to respond to changes in market structure and technology. This requires that competition authorities have both the legal authority and the capability to move beyond black letter of the law approaches (deemed unlawful per se) and subject the cases to fact-based rule of reason analysis.

1.2.3. Corporate governance affects innovation and productivity growth

Arguably the greatest invention of the mid-nineteenth century was the limited liability joint stock company where the state enabled the legal form that allowed for the separation of management from investor owners. The state continues to have key enabling roles in corporate governance. In short the state has a key role at birth, change of life and at the death of corporations. These roles include corporate or companies law, securities law, share market regulation and insolvency and bankruptcy law.

Corporate or companies law plays a key enabling role for innovation by establishing the relevant corporate governance frameworks. There is a wide range of corporate forms including publicly listed companies, privately controlled firms, publicly owned businesses (state owned enterprises). They all have to grapple with the problem of the separation of management from investor owners to allow good management to be rewarded and poor management to be disciplined. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. Corporate governance also affects the type of investments that management makes. The mix and level of investment firms make is critical for innovation.

Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital funds and direct capital raising from

the public. This can include introducing flexibility into public equity markets, for example, by allowing a second board on the stock exchange where the cost of listing is lower.

The legal framework provides the means for new firms to be created and once they mature to enable changes in their corporate governance. For example, the framework can enable family or closely owned firms to take on private equity partners or go public.

Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these can lead to failure. However, these laws may also allow poor managers the opportunity to repeatedly start businesses that fail, with losses to shareholders and creditors.

In summary, the state can play a positive role at the birth, change of life and at the death of corporations. Administrative simplification through ease of doing business programs can assist innovation by smoothing these transitions in the life cycle of businesses. While competition in product markets helps discipline poor managers, directors' role in corporate governance is also important. Studies suggest "poor management practices are more prevalent when product market competition is weak and/or when family-owned firms pass on control to the eldest sons".⁷

1.2.4. Public sector governance matters

Good public policies that are effectively delivered are an important enabler for innovation. The state has a key enabling role in establishing the corporate governance frameworks discussed above. It also has a pivotal role in development of property rights and the rule of law applying to capital, labor and product markets. The rule of law implies that every citizen is subject to the law, including law makers themselves. Lack of the rule of law occurs because of neglect or ignorance of the law, corruption, or lack of corrective mechanisms for administrative abuse, such as an independent judiciary. In addition to role of *regulation* in establishing general governance frameworks discussed in the previous section, there are three types of public policy tools: *spending, taxation and ownership*.

Specialist non-market bodies play an important part of the overall national innovation system. There are two parts to the public innovation infrastructure that are predominantly publicly owned and funded – the knowledge infrastructure of universities and research institutes and the innovation information infrastructure provided by standards bodies, patents offices etc. The quality of public sector *spending* and governance influences the effectiveness of the public infrastructure and hence the overall capability of the national innovation system.

The *taxation* regimes that apply also can shape the returns on innovation. Innovation takes a variety of forms of which investment in R&D is often relatively minor. Taxation can unintentionally distort the allocation of resources because of the different treatment of investment in R&D, establishing patents, process redesign, and organizational improvements. The tax system also can include explicit tax incentives for R&D spending aimed at increasing overall innovation.

The *ownership* role includes SOEs and specialist non-market bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure. SOEs, which produce and sell their outputs into commercial markets, often form a large part of a developing economy. Like private firms when SOEs are excessively sheltered from competition, innovation is reduced both in the immediate and in downstream markets. Sometimes, however, SOEs play a positive role as they are explicitly tasked with encouraging private sector innovation.

1.3. Measurement of Innovation

While the links between innovation and productivity and economic growth are well established at both the firm and the economy wide level, the multifaceted nature of innovation does not lend itself

⁷ OECD (2014) Factsheet on how competition policy affects macroeconomic outcomes, page 12.

readily to measurement. NZIER collated a suite of innovation indicators for each APEC economy from available data sources. This quantitative data provides comparative information on innovation in APEC economies and a context for the discussion of structural policies in Chapter 2.

1.3.1. Comparative innovation data

Measures of innovation across economies can occur at a number of levels:

- outcomes – economic growth, productivity growth over time
- impact – R & D investment by private business
- output – policies in place
- process – good practice development followed
- input – resources available.

In this section we discuss available innovation measures at the outcome, output and input level and how these relate to levels of economic development.

Section 1 in this chapter discussed how APEC economies are at different stages of economic and technological development ranging from those at the frontiers of knowledge and technological development to those with the basic initial conditions. The emphasis of innovation policy needs to be related to the level of economic development and the critical challenges and binding constraints that each economy faces.

Table 1 Stages of development by economy

Table 1 summarizes the different stages of development for APEC economies based on two data sources, the INSEAD Innovation Index and the World Economic Forum (WEF) Global Competitiveness Index (GCI). Individual economies are categorized for the INSEAD index by drawing upon ERIA and Rasiah.⁸ The WEF categorization is drawn from their annual report.⁹

The WEF groups economies into three levels of economic development:

- ‘factor’ means the economy competes on its factor endowments, primarily unskilled labor and natural resources. Companies compete on price and sell basic products or commodities.
- ‘efficiency’ means the economy develops more efficient production processes and increases product quality.
- ‘innovation’ means the economy competes by producing new and different goods using the most sophisticated production processes and by innovating new ones.

The groupings by levels of development are broadly similar using the Rasiah framework and the WEF. More explanation of Rasiah’s framework can be found at the end of this Appendix.

Economy	Rasiah /ERIA	World Economic Forum
United States of America	Frontier	Innovation driven
Singapore	Frontier	Innovation driven
Hong Kong, China	Frontier	Innovation driven
Canada	Frontier	Innovation driven

⁸ Rasiah, R. (2013), ‘Stimulating Innovation in ASEAN Institutional Support, R&D Activity and Intellectual Property Rights, ERIA Discussion Paper Series, ERIA-DP-2013-28.

⁹ For economies where the level of development was not provided by Rasiah, the WEF grouping was used to indicate to which group the economy was most likely to belong.

Korea, Republic of	Frontier	Innovation driven
Australia	Frontier	Innovation driven
New Zealand	Frontier	Innovation driven
Japan	Frontier	Innovation driven
Chinese Taipei	Frontier	Innovation driven
Malaysia	Catch-up	Innovation driven / Efficiency driven
Chile	Catch-up*	Innovation driven / Efficiency driven
Russian Federation	Catch-up*	Innovation driven / Efficiency driven
Mexico	Catch-up*	Innovation driven / Efficiency driven
People's Republic of China	Catch-up*	Efficiency driven
Thailand	Learning	Efficiency driven
Peru	Learning*	Efficiency driven
Indonesia	Learning	Efficiency driven
Philippines	Learning	Factor driven / Efficiency driven
Viet Nam	Learning	Factor driven

*Level of development inferred based on WEF where not provided by Rasiah.

Incomplete data for Brunei Darussalam and Papua New Guinea

Source: WEF, INSEAD, NZIER, ERIA

Table 2 INSEAD ranking 2014

Table 2 summarizes the APEC economies' innovation ranking using the INSEAD index. Economies are grouped by their level of economic development (on the same basis as Table 1).

The INSEAD Global Innovation Index ranks economies on four dimensions:

- the 'Global innovation index' is a composite index ranking economies in terms of their environment for innovation and their innovation outputs
- the 'Innovation Input Index' shows the relative rankings of the environment supporting innovation based on five pillars (institutions, human capital and research, infrastructure, market sophistication, business sophistication)
- the 'Output Index' ranks economies based on the actual creation and take up of innovation as measured by two pillars (knowledge and technology outputs, creative outputs)
- the 'innovation efficiency' ratio ranks economies on the 'return' each economy gets from the quality of its overall environment (measured by the Input Index) to the creation and take up of innovation (measured by the Output Sub-index).

The color coding shows the relative ranking by countries (darker colored highlights are higher rankings).

Economies for which data was not available (Chinese Taipei and Papua New Guinea) are not shown in this table.

	Economy	Global Innovation Index	Innovation Efficiency Ratio	Innovation Input Sub-index	Innovation Output Sub-index
Frontier	United States of America	6	57	4	7
	Singapore	7	110	1	25
	Hong Kong, China	10	99	2	24
	Canada	12	86	8	20
	Korea, Republic of	16	54	16	15
	Australia	17	81	10	22
	New Zealand	18	66	13	18
	Japan	21	88	15	27
Catching-up	People's Republic of China	29	2	45	16
	Malaysia	33	72	30	35
	Chile	46	92	37	54
	Russian Federation	49	49	56	45
	Mexico	66	79	62	70
Learning	Thailand	48	62	52	49
	Viet Nam	71	5	100	47
	Peru	73	107	60	85
	Indonesia	87	4	117	60
	Brunei Darussalam	88	139	55	124
	Philippines	100	35	110	84

Source: INSEAD

Table 3 WEF ranking

Table 3 summarizes the APEC economies' rankings using the World Economic Forum (WEF) Global Competitiveness Index (GCI) index. The GCI is based on a wider range of factors than the INSEAD index and, while it is not specifically focused on innovation, it is widely used and well regarded.

The color coding shows the relative ranking by countries (darker colored highlights are higher rankings).

The countries in Table 3 are ranked by their competitiveness using four dimensions (WEF 2014¹⁰):

- the Global Competitiveness Index is the composite index and shows the competitiveness world ranking for each economy
- 'basic requirements' rank countries with regards to well-functioning public and private institutions (pillar 1), well-developed infrastructure (pillar 2), stable macroeconomic environment (pillar 3), and a healthy workforce that has received at least a basic education (pillar 4)
- 'efficiency enhancers' ranks countries with regards to higher education and training (pillar 5), efficient goods markets (pillar 6), well-functioning labor markets (pillar 7), developed financial markets (pillar 8), the ability to harness the benefits of existing technologies (pillar 9), and a large domestic or foreign market (pillar 10)

¹⁰ World Economic Forum. 2014. *The Global Competitiveness Report 2014–2015*. Geneva: World Economic Forum.

- 'innovation and sophistication factors' rank countries with regards to producing new and different goods using the most sophisticated production processes (pillar 11) and by innovating new ones (pillar 12).

Economies for which data was not available (Brunei Darussalam and Papua New Guinea) are not shown in this table.

	Economy	Global Competitiveness Index	Basic requirements	Efficiency enhancers	Innovation and sophistication factors
Innovation	Singapore	2	1	2	11
	United States	3	33	1	5
	Japan	6	25	7	2
	Hong Kong, China	7	3	3	23
	Chinese Taipei	14	14	16	13
	Canada	15	18	6	24
	New Zealand	17	9	11	25
	Australia	22	17	15	26
	Korea, Republic of	26	20	25	22
	Innovation / Efficiency	Malaysia	20	23	24
Chile		33	30	29	49
Russian Federation		53	44	41	75
Mexico		61	69	60	59
Efficiency	People's Republic of China	28	28	30	33
	Thailand	31	40	39	54
	Indonesia	34	46	46	30
	Peru	65	74	62	99
Efficiency / Factor	Philippines	52	66	58	48
Factor	Vietnam	68	79	74	98

Source: WEF 2014-15

Tables 1-3 are not intended to imply any judgements about the current national innovation systems. Rather the intent is to provide comparative contextual information from a range of sources. It builds on the idea that the focus of innovation policy will depend on the level of economic development and the unique critical challenges and binding constraints that each economy faces.

Table 4 Rasiah's Stages of technological development

Phases	Basic Infrastructure	High Tech Infrastructure	Network Cohesion	Global Integration
Initial conditions	Political stability and efficient basic infrastructure	Emergence of demand for technology	Social bonds driven by the spirit to compete and achieve	Linking with regional and global markets

Learning	Strengthening of basic infrastructure with better customs and bureaucratic coordination	Learning by doing and imitation	Expansion of tacitly occurring social institutions to formal intermediary organizations to stimulate connections and coordination between economic agents	Access to foreign sources of knowledge, imports of material and capital goods, and FDI inflows
Catch-up	Smooth links between economic agents	Creative destruction activities start here through imports of machinery and equipment, licensing and creative duplication	Participation of intermediary and government organizations in coordinating technology inflows, initiation of commercially viable R&D	Licensing and acquisition of foreign capabilities Upgrading synergies through technology imports Emergence of strong technology-based exports
Advanced	Advanced infrastructure to support meet demands of economic agents	Developmental research to accelerate creative destruction activities	Strong participation of intermediary and government organizations in coordinating technology inflows, initiation of commercially viable R&D	Access to foreign human capital, knowledge linkages and competitiveness in high tech products
Frontier	Novel infrastructure developed to save resource costs	Basic research. R&D labs to support creative accumulation activities	Participation of intermediary organizations in two-way flow of knowledge between producers and users	Connecting to frontier nodes of knowledge, and competitive export of high tech products

Source: Rasiah 2013

2. Findings from Individual Economy Reports on Structural Reform and Innovation

Innovation — in products, processes, designs, marketing, and organizational approaches—is important to economic growth and firm productivity. While innovation is widely acknowledged as a key driver of growth, the links between structural policies and innovation are complex and less widely understood.



This chapter examines the links between structural policies and innovation. Structural policies here include regulatory policy (including ease of doing business), competition policy, corporate law and governance, and public sector governance. The chapter concludes with an exploration of how these linkages vary depending upon the level of economic development. It draws on 20 IERs submitted by member economies in 2015, based on the AEPR questionnaire (Appendix A). These provide an overview of each economy’s structural policy settings and the links to innovation.

Regulatory Policy

Good regulatory policy can be a powerful stimulus to innovation both directly and indirectly. This stimulus can occur through

both the design of individual regulatory regimes and the institutional structures which support good regulatory practice. Where institutional arrangements enable flexibility, and encourage the development of regulatory solutions that are appropriate to the situation, this will encourage innovation.

The 2014 AEPR on Good Regulatory Practices highlighted the progress that APEC economies have made in implementing good regulatory practices. The good regulatory practice toolkit is assisting economies to develop the regulatory frameworks and institutions that will provide a stable business environment for trade and investment. Implementing institutional arrangements such as regulatory impact analysis, strong transparency and public consultation requirements, or internal coordination of regulatory development will provide economies with a strong basis for developing more sophisticated regulatory regimes that support innovation.

The demands placed on an economy’s regulatory system will change as an economy moves through different stages of economic development. Once an economy establishes basic institutional regulatory arrangements, its focus will increasingly shift to developing the internal capability required to support these institutions. As institutions mature, internal capability becomes an increasingly important factor for driving ongoing success and creating an environment to foster innovation.

2.1.1. Flexible regulatory approaches

A regulatory system which allows and encourages situation-specific regulatory initiatives to be developed will support innovative regulatory practices. Most APEC economies have adopted regulatory systems which permit or encourage a range of options to be considered during regulatory policy development (although the extent to which flexibility is used is less clear). The approaches taken can range from the permissive (where alternative regulatory approaches *may* be considered in development) through to the directive (where alternatives *must* be considered). Alternative approaches could also involve not taking direct regulatory action.

The degree to which alternative regulatory approaches are encouraged to be considered during regulatory policy development can reflect different stages of development of an economy's regulatory system. As the capability of regulatory institutions increases, arrangements to support innovative approaches are enhanced. Continuing to explore and tailor regulatory approaches to the specific challenges faced by an economy can support innovation.

Viet Nam's permissive approach to regulatory flexibility

Viet Nam's regulatory system takes a permissive approach to regulatory flexibility. It permits innovation by allowing new approaches, and new methodologies and solutions to be developed or considered for different regulatory initiatives. There are no explicit requirements for developing or considering alternative approaches.

Canada has a more directive approach

Canada's Cabinet Directive on Regulatory Management takes a more directive approach. The Directive requires all federal departments to consider potential alternatives to regulation. This includes voluntary standards, information disclosure, and guidelines, and whether outcome or performance based approaches would be suitable; and to specify, particularly for technical regulations, regulatory requirements in terms of their performance rather than their design.

2.1.2. Administrative simplification

As an economy develops, its regulatory environment needs to adapt to reflect the changing needs and operating environment of its businesses. Regulation that imposes compliance costs on business or provides an impediment to business innovation should be eased to remove barriers that slow the speed of innovations to market. Administrative simplification programs are a mechanism that economies can use to provide structure to initiatives to improve the regulatory environment.

Economies reported that reductions in the administrative burden imposed by regulations can directly improve innovation by removing barriers that slow the speed of goods and services to market or dissemination within the market. Programs that emphasize administrative simplification and red tape reduction are broadly used within APEC. Economies take a number of approaches to these programs depending on their own particular challenges and the goals of the government in power. These approaches range from targets to remove regulatory instruments through to outcome-focused initiatives to reduce regulatory burden.

The variation in approaches taken to simplification can reflect where economies most need to place effort to address the binding constraint on their economy. For instance, if an economy's biggest barrier for business is transactional compliance costs, initiatives that focus on reducing the number of transactions may have the biggest impact. Alternatively, where transactional compliance costs

have been removed, focus may shift to continual improvement of the business operating environment rather than improving transaction efficiency. Most economies in APEC have some type of initiative focused on reducing compliance costs for businesses.

Australia's administrative simplification program

The Australian Government's simplification program commits to reducing the regulatory burden for individuals, businesses and community organizations. The program consists of various initiatives aimed at:

- reducing the volume of regulation itself;
- reducing the duplication and regulatory overlap between different layers of government;
- improving consultation with those affected by regulation;
- using post implementation reviews to determine how effective new regulations have been; and
- ensuring regulators are transparent, accountable and efficient in administering regulations.

As at March 2015, the Australian Government has repealed over 12,000 regulations or pieces of legislation and reported on deregulation initiatives that, if fully implemented, will result in compliance cost savings of more than \$2.45 billion per year. .

Singapore's approach to improving the quality of government regulation

Singapore has two key government platforms responsible for improving the quality of government regulation and removing outdated or unnecessary regulations to foster a pro-business and pro-innovation environment:

- The Smart Regulation Committee (SRC) is set up within the Singapore Public Service to promote good regulation practices within the Government and proactively review rules and regulations. The SRC seeks to get agencies within the Singapore Government to change their mind-set, adopt less of a 'regulator-centric' approach and shift to one that is more stakeholder-centric.
- The Pro-Enterprise Panel (PEP) was formed in August 2000 to actively solicit feedback on rules and regulations that hinder businesses and impede entrepreneurship. The PEP is chaired by the Head of Civil Service and comprises of mainly business representatives from the private sector. Acting on feedback from the public, the PEP engages agencies to review rules and regulations, so that Singapore businesses spend less time, effort, and money in meeting regulatory requirements for their operations. Since its inception, the PEP has received over 1,800 suggestions and more than half of these have resulted in regulatory or rules changes.

The Economic Committee's Ease of Doing Business work program is also supporting APEC economies in their efforts to improve transactional efficiency in their business operating environment. The work program uses the World Bank's Doing Business indicators, which provide practical comparative measurement of economies' progress in improving the business environment in the target areas.

Once economies move beyond improving the transactional efficiency of their regulatory environment, technology will increasingly drive economies' simplification programs for their engagement with business. Some economies are already using technology to drive innovation in how their government interacts with business, for example by joining up government services, sharing

information across government, working with third parties, and applying new digital and online tools. This is an emerging area of work within APEC as economies push the frontier of their simplification programs by developing innovative time-saving administrative solutions to make it easier for businesses to work with government.

Making it “Better for Business” in New Zealand

The “Better for Business” program focuses on making it easier for businesses to interact with government agencies, so they can spend less time on administration and more time focusing on their customers. “Result 9” of this program has a target of reducing business costs from dealing with government by 25% by 2017. This involves a partnership of eight government agencies in New Zealand to support and accelerate change across the public sector in three ways: Supporting individual agencies, co-design and co-delivery, and cross-agency delivery. As part of “Result 9”, the New Zealand Business Number is being introduced, which provides businesses with one unique identifier for each business to use in all their interactions with government agencies and each other.

2.1.3. Deepening impact analysis – competition effects

Competition plays an important role in supporting innovation, and regulatory policy can support or inhibit effective competition. Regulatory institutions such as regulatory impact analysis (RIA) can be designed to support (or require) competition analysis as a part of the regulatory development process. As an economy develops and becomes increasingly sophisticated, it is increasingly important to include competition analysis as a part of regulatory impact analysis to ensure that regulatory regimes do not provide a barrier to innovation.

Regulatory impact analysis is now widely used in APEC. It is an important instrument that supports the objective analysis of regulatory proposals. In varying degrees, economies are also incorporating into their RIA an examination of the proposed regulation’s effects on competition. Approaches vary from an explicit requirement for competition impacts to be assessed, to no explicit competition requirements (but also no restrictions on scope of analysis). This no doubt reflects that economies are at different stages of development with their RIA systems. Initial focus should be on implementing a basic RIA system and building internal capability to support this system. Once RIA systems are embedded, focus should shift to developing and strengthening specialized areas of analysis such as competition analysis principles.

Some economies also draw in authorities with specific expertise to assess competition effects (outside of the department authoring the regulatory impact analysis). This can increase the robustness of the assessment of competition impacts.

Competition analysis is included in RIA activity in Korea

In Korea, a regulatory impact analysis report is expected to include analysis of the impact of regulatory changes on market competition with comparative economic/social cost and benefit analysis. Completed reports are provided to the Regulatory Reform Committee who will also seek input from the Korean Fair Trade Commission (KFTC). The KFTC will provide evaluation of the proposed regulatory changes’ impact on market competition. The evaluation will assess impact in four areas:

- number/size of suppliers;
- capacity of suppliers;
- incentives to suppliers; and

- consumers.

2.1.4. Movement of skilled migrant labor

As a specific example of regulatory policy settings inhibiting or facilitating innovation, economies were asked how easily skilled migrants were able to move between firms. Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupational regulation imposes barriers on movement between firms within economies.

Labor market policies that enable worker mobility are positively associated with an economy's level of innovation and competitiveness.¹¹ Economies to varying degrees either place restrictions on migrants moving between firms or provide some flexibility on movement. There is no one single approach taken across APEC on this issue. Many economies maintain immigration settings which facilitate the entry of skilled migrants, but may have varying degrees of restrictions on movements within the economy, for example it is common to see work permits that are tied to a particular employer, which restrict the migrant worker's ability to move between firms within an economy. However, there are some economies that do make it easier for skilled migrants to move jobs within the economy.

The discussion has focused on how different aspects of economies' regulatory policy can affect innovation. The next section reviews how competition policy can play a specific role in encouraging innovation within economies.

2.2. Competition Policy

Introducing competition into less competitive markets can directly encourage innovation. This requires that the coverage of competition policy is as wide as possible and allows for consideration of longer term technical efficiencies from new technologies. Designing competition policies and enforcement programs that focus on making highly uncompetitive industries and monopolies more competitive can increase innovation. The increase in competition boosts innovation by encouraging firms to adopt improved technology and organizational arrangements, promoting the diffusion of innovations and encouraging resources to be invested in innovation.

2.2.1. Competition policy is generally comprehensive

The reports from individual economies suggest a relationship between development level and coverage of competition law. Developed economies tend to apply their competition law universally, subject only to limited specified exemptions. Absent more detailed information it is difficult to assess the significance of reported exemptions within these economies, though in some cases clearly significant sectors, such as telecommunications are exempt.

Less developed economies are more likely to exempt larger portions of their economies, including in one case a general exemption for firms owned by state and national governments.

¹¹ Negara (2015) *How Labour Market Policies Affect Innovation and Trade Competitiveness – ERIA Discussion Paper 48-*

Chile's competition policy focus

In Chile, competition policy is primarily focused on economic efficiency. Historically, competition policy has focused on sanctioning conduct that tends to have greater consumer impact. However, there is a separate specific focus on consumer protection, which is enforced independently of competition enforcement.

2.2.2. Independence of competition enforcement is universally accepted

Economy responses indicated universal acceptance that competition enforcement should take place in an independent manner. The independence of competition authorities to select cases to investigate is crucial. This ensures that they undertake their investigation in a manner that is not influenced, nor seen to be influenced, by the special interests among the firms they regulate. This requires at least some degree of independence in individual decision-making, at arms-length from the political decisions made by the executive government. This is particularly important for state owned enterprises where the government is a regulator as well as an owner.

Competition enforcement in the Philippines

The Philippines' Office for Competition is operationally independent, although it sits under the Department of Justice. A new independent commission, the Philippine Competition Commission, was recently established through the passage of the ***Philippine Competition Act*** on 21 July 2015. It is an independent quasi-judicial body that has exclusive jurisdiction over the enforcement and implementation of the competition law, which governs merger and acquisition agreements, prohibits anti-competitive agreements and abuse of dominant position, prescribes the disposition of cases, and imposes fines and penalties against violators.

However, competition authorities cannot exist in a vacuum, and like all organs of government, must be held accountable for their use of public funds and actions within the market. Being at arms-length involves balancing the inherent tension between being a public body and having operational independence in decision-making on defined activities such as enforcement.

Responses from the IERs indicated a wide range of structural arrangements across economies aimed at this same goal. This is consistent with a similar conclusion made by UNCTAD,¹² and likely reflects differences in the legal, administrative, political and economic factors that affect each economy.

Two broad levels of independence emerged as common themes across many responses:

- Operational independence – meaning independence in making individual investigation and enforcement decisions.
- Administrative autonomy – which balanced operational independence with public accountability in matters such as accessing funding, making resourcing decisions and responsibility for entering contracts.

Almost all responding economies had measures, and in some cases, an extensive range of measures in place to protect the operational independence of their competition authorities. Different arrangements exist for balancing administrative autonomy with public accountability in the exercise of the competition agency's administrative powers.

¹² *Independence and accountability of competition authorities*, UNCTAD (2008). http://unctad.org/en/Docs/c2clpd67_en.pdf

2.2.3. Developing economies are less likely to consider efficiencies from new technologies in their competition policy

Responses relating to efficiencies from new technologies (also known as dynamic efficiency) revealed a wide range of views among economies. There was a reasonably clear distinction between developed and developing economies in terms of recognizing efficiencies from new technologies within competition enforcement decision-making.

Developing economies generally indicated they had limited capacity to take into account efficiencies from new technologies. Some suggested that institutional capability was a constraint because of the complex modelling necessary to assess such claims.

Viet Nam's young competition authority

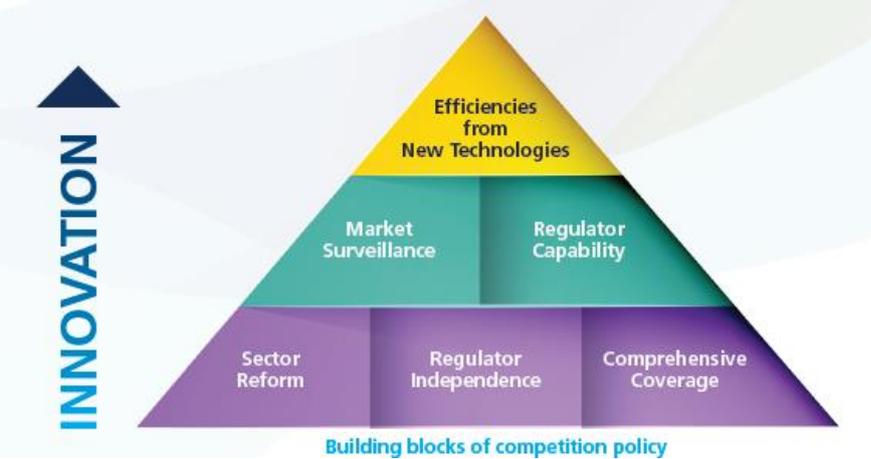
Viet Nam's competition authority is technically able to take into account efficiencies from new technologies under a general provision allowing for consideration of efficiency. However, as a relatively young authority, it struggles to muster the analytical resources to adequately document and assess efficiencies from new technologies.

In contrast, developed economies indicated that they took into account efficiencies from new technologies when assessing mergers, usually as an exception to approve an otherwise prohibited merger. It was not clear to what extent this consideration was universally applied. In some cases, it seems the burden is largely on the applicant to raise and prove claims of efficiencies from new technologies. In others, it seems that efficiencies from new technologies are taken into account largely on the initiative of the competition authority, on the basis of legislation that refers to efficiency in a general sense.

Canada's Competition Act explicitly promotes efficiency and adaptability

Canada's Competition Act includes as one of its stated purposes promoting efficiency and adaptability of the Canadian economy. Efficiency gains are available as a defense to mergers which would otherwise be likely to result in significant competition concerns, as well as to certain other anti-competitive collaborations between competitors. The Competition Tribunal, the specialized adjudicative body responsible for hearing cases that deal with competition matters such as mergers, is statutorily required to take efficiencies into account when the defense is raised. Efficiency gains can succeed as a defense to an anti-competitive merger by outweighing and offsetting any anti-competitive effects.

2.2.4. Strategic focus of competition policy could be sharpened



While the focus of competition policies varied across economies, one emerging trend is the increasing strategic focus of competition policy. Many developing economies indicated a focus on some combination of reforming natural or state owned monopolies, and introducing the

fundamentals of competition law to regulate conduct across markets.

Some of the more advanced economies take a more strategic focus in identifying and improving inefficient markets. While the actual focus of these economies varied, a need for sophisticated market intelligence in order to make these judgements was widely identified. Two notable mechanisms for competition authorities to gather this intelligence are an independent power to conduct 'market studies', and the ability to access information held by other government departments.

Hong Kong, China's competition authority

Hong Kong, China's Competition Commission is an independent statutory body established under the Competition Ordinance to enforce the competition rules and to investigate any conduct that constitutes or may constitute a contravention of competition rules. Investigation is usually driven by whether competition harms have been identified in markets, but the Commission also has the authority to conduct market studies into matters affecting competition in markets in Hong Kong.

For advanced economies, the future challenge will be to examine whether current policies, laws and institutions remain fit for purpose in the face of emergence of new technologies and rapidly changing circumstances.

Taking a strategic approach in a federal context: Australia's national competition policy reform

In Australia, the Hilmer Review of 1993 found “strong and widespread community support” for the implementation of a national competition policy and the benefits such a policy could have for improving international competitiveness. Its recommendations led to all Australian States and Territories adopting a set of National Competition Policy (NCP) Agreements in 1995 and the passing of the Competition Policy Reform Act 1995 by the Federal government.

Reviews were required to be conducted in accordance with the NCP Guiding Legislative Principle. This stated that existing legislative restrictions on competition should only be maintained, and new restrictions imposed, where a two-part test is met:

- the benefits to society as a whole clearly outweigh the costs; and
- there is no alternative means of achieving these benefits that is less restrictive of competition.

Studies by the Australian Productivity Commission have concluded that the Hilmer reforms had a substantial impact on productivity growth, helping to underpin the strong period of economic growth Australia experienced in the 1990s and early 2000s.

The previous discussion has focused on regulation and competition policy. In the next two sections, we turn to the role of Corporate Governance and Public Sector Governance in enabling innovation.

2.3. Corporate Governance

Corporate law plays a key enabling role for innovation by establishing the relevant corporate governance frameworks. There is wide range of corporate forms including publicly listed companies, privately controlled firms, and publicly owned businesses (state owned enterprises). They all have to grapple with the problem of the separation of management from investor owners to allow good management to be rewarded and poor management to be disciplined. While competition in product markets helps discipline poor managers, those (such as directors) responsible for corporate governance also have an important role. Corporate governance includes corporate or companies law, securities law, share market regulation and insolvency and bankruptcy law. These laws play a key enabling role at the birth, change of life and at the death of corporations.

Initiatives to improve Ease of Doing Business are widespread across APEC and they can encourage innovation by smoothing the transitions in the life cycles of businesses. Corporate governance frameworks that set rules for creating, restructuring and liquidating companies exist across economies at all three levels of development. One of the most notable differences between the frameworks of developing and advanced economies is the development of more sophisticated systems to provide greater options for raising capital and to incentivize growth.

2.3.1. Role of directors in ensuring good corporate governance is an area of ongoing emphasis across APEC

While competition in product markets helps discipline poor managers, directors' role in corporate governance is also very important. Well-designed corporate governance policies can contribute to the incentives placed on directors and managers of firms to seek to compete through innovation, as well as adopting capital structures to promote innovation. The majority of APEC economies have mechanisms in legislation to improve alignment of managers' and owners' interests, or at least encourage managers to act in the interests of owners. The most common mechanism is for directors to have a duty to act in the interest of the company or its shareholders. This is often coupled with the ability for shareholders (on behalf of themselves or on behalf of the company) to take court action to enforce breaches of directors' duties.

For companies that are listed on a stock exchange, there are generally additional obligations, such as obligations to publicly announce information that would affect the share price, and to make disclosures regarding related party transactions and executive compensation.

Chinese Taipei's system of corporate governance evaluation

As part of its policies to solve the potential conflict between owners and management of listed companies, Chinese Taipei has introduced a system of corporate governance evaluation. The evaluation is conducted by the Taiwan Stock Exchange with the results of the companies ranked in the top 20% being publicly released.

2.3.2. Forms of capital raising depend upon an economy's level of development

There is a broad spectrum of responses from economies regarding the forms of capital raising used in their jurisdiction. Advanced economies have more developed financial markets with a range of options for capital raising. Developing economies may have a stock exchange but rely on financing through the banking system, self-financing or borrowing from relatives. Middle income economies responded that they are making use of venture capital and private equity.

One promising practice is greater flexibility in financing start-ups. A number of APEC economies are developing legal mechanisms that enable crowdfunding. Crowdfunding is a mechanism that helps micro and small innovative enterprises raise funds from the public to invest in start-ups. It enables those who cannot or do not want to get funds through traditional means such as banks and finance companies a way to access alternative sources of capital.

2.3.3. There is growing flexibility in financing start-ups

Economies with advanced financial markets tend to have a greater range of options for firms to raise capital. The development of a bond market is seen as useful. Some economies have implemented rules to make it easier for small and medium firms and start-ups to raise capital. These may take the form of exemptions from the requirements that larger listed companies must meet. Types of exemptions used are those for small stock offers, or for offers made to specific types of investors, such as institutional investors.

A common way of making capital raising easier, for companies that are not large enough to warrant listing on the main board of the stock exchange, is to operate a board with less stringent and more streamlined requirements. Some economies have government-owned financial institutions which provide loans or equity capital, sometimes targeted at specific sectors.

Alliance of venture capital firms in Indonesia
Eight of Indonesia’s venture capital firms and incubators have formed an alliance to educate the market about venture capital investments and tech entrepreneurship. It will partner with government and regulators to promote a legal environment to support start-ups.

Crowdfunding in New Zealand
A number of economies are in the process of developing rules for raising capital by crowdfunding. Crowdfunding is the practice of funding a project or venture by raising monetary contributions from a large number of people, typically via an online platform. Equity crowdfunding is where the funders receive shares in the venture. This is regulated by the Financial Markets Authority Act in New Zealand, which limits the amount a business can raise to NZ\$2 million in a 12-month period.
The Financial Markets Authority (FMA) requires crowdfunding services to be licensed and to provide investors with information on the risks of crowdfunding. The FMA does not check the companies; it only checks and licenses the crowdfunding platform. The service must also have systems in place to run some basic checks on the companies who want to raise money, such as checking company senior managers or directors are not bankrupt, or that they do not have convictions for fraud or dishonesty.

2.3.4. There are still barriers to accessing private equity partners or publicly listing

Some developing economies with many small and medium-sized enterprises have difficulty accessing finance through financial markets and tend to borrow from friends and family. One example given of a policy that discourages a company from expanding is a tax on initial public offerings.

Regulating the Russian stock market

There are still significant barriers for businesses in Russia to access private equity partners or publicly list on the stock exchange. These include structural problems with the Russian stock market and non-market investment risks, a lack of collective investment schemes, high central bank rates which reduce the availability of credit instruments for Russian companies, and a lack of incentives for angel investors.

However, the Russian government is focused on improving the regulation of the stock market. This includes measures to simplify the issue of securities, inter-industry capital migration and reorganizing procedures of Russian companies and banks. In 2014, the Russian Government introduced the Code of Corporate Management to improve the quality of management in the largest state-owned enterprises. To facilitate growth of small and medium sized enterprises (SMEs), the 2011 Federal Law on Economic Partnership was adopted to create microfinance institutions and guarantee funds, as well as encourage venture capital and seed investment funds. The Innovation and Investment Market was created in 2009 as an exchange market for high-tech companies in the margins of the Moscow Stock Exchange. This is intended to facilitate attraction of investment, especially in the development of small and medium-sized businesses in the innovative sector.

2.3.5. An appropriate balance needs to be struck between enabling risk taking and protecting shareholders and creditors

The responses of APEC economies do not indicate that risk taking and entrepreneurship are hindered by insolvency law. Economies at all levels of development have various mechanisms for restructuring and rehabilitation of insolvent companies with an external party such as a court or a receiver approving or making decisions.

To avoid poor or fraudulent managers repeatedly starting businesses, a number of more advanced economies provide the ability for their courts to prohibit people involved with failed companies from being a director or taking part in the management of a company for a certain period.

Transparency is important as it allows investors to make an informed decision about whether to invest in a company where the directors, executives or promoters have been involved in an insolvency proceeding. Some economies have publicly available information on insolvencies for this purpose.

Corporate governance needs to be supported by good public sector governance. The next section discusses how the quality of public institutions and public governance are also important in encouraging innovation.

2.4. Public Sector Governance

Governments can have a major impact on innovation by providing the broad legal framework through the rule of law, entities that encourage innovation, and through the specific national innovation system. Stable and predictable public sector institutions are essential because innovation is inherently uncertain and risky.

The rule of law requires that adequate legal mechanisms are in place to protect physical and intangible property rights, the level of competition SOEs are exposed to, and the existence of SOEs to explicitly encourage private sector innovation. These mechanisms also determine whether there are public sector bodies tasked with and capable of delivering an innovation policy, a knowledge infrastructure and an innovation infrastructure.

2.4.1. Legal frameworks are widespread but application is uneven

Each APEC economy has its own unique legal mechanism to make and enforce laws, rules and regulations and achieve the rule of law. While generally, property rights exist across all APEC economies, the right to own property is not universal.

Some economies have been less successful than others in achieving a stable and predictable rule of law regime. This can be due to a lack of an independent judiciary or other corrective mechanisms for administrative abuse.

Economies at different levels of development all face different priorities from establishing the legal frameworks to improving the operation of the rule of law within their individual systems.

There are still significant limitations to property ownership in some developing economies. In some developing economies (such as Viet Nam), there is no private ownership of land. Land is owned by the government in these economies, granting only protectable and tradable land use rights. Even if property rights do exist, these property rights may not be guaranteed. In some cases, the government is able to expropriate private immovable property where there is necessary public utility in doing so.

Middle income economies generally have basic legal systems in place, with most having a judiciary independent of the legislature and executive. However, there were some middle income economies that still have relatively weak legal mechanisms and others that have yet to achieve a stable and predictable rule of law despite appearing to have good legal frameworks in place.

Advanced economies generally have strong protection for the rule of law and property rights. Many of these economies reported well-established legal mechanisms, with an independent judiciary and statutory property rights. These property rights are often enforceable via enforcement agencies and the courts system. In addition to remedies such as injunctions and damages, many advanced economies also had alternative dispute resolution mechanisms for rights disputes, and placed importance on having effective and timely dispute resolution processes. The existence of these legal mechanisms and clear enforceable rules helps to reinforce incentives for people to meet their obligations and respect property rights.

Rule of law in the United States

Each economy has its own means of making and enforcing laws, rules and regulations and upholding the rule of law. Providing a stable and predictable rule of law regime reduces the risks of neglect/ignorance of the law, corruption and administrative abuse.

For example, in the United States, the protection of property rights is enshrined in the Fifth Amendment to the United States Constitution, which states that “No person shall be...deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.” Everyone is subject to the law including government. All government officials of the U.S. federal government, including the president, vice president, the justices of the Supreme Court, State judges and legislators, and all members of Congress, pledge first and foremost to uphold the Constitution.

2.4.2. State Owned Enterprises decline in significance as economies become more advanced

The size of the SOE sector within each economy varies significantly depending on the level of development. Generally, the role of SOEs in advanced economies is much smaller than in developing and middle income economies. However, there was a notable lack of data on SOEs for several APEC economies, and SOEs were often not defined or considered a separate sector in these economies.

The role of SOEs appears to decline over time as an economy grows and becomes more advanced, and those remaining SOEs in advanced economies generally face product market competition. SOE sectors generally played a large role in developing economies.

Overall, SOE market revenue as a percentage of GDP was relatively high for developing economies, with reported figures ranging from 20%-50%.

There were greater variations in the size of the SOE sector across middle income economies, with figures ranging from 3% to 50% for these economies. In general, the role of SOEs was still significant for many middle income economies.

Advanced economies had a relatively small SOE sector in terms of the SOE market revenue to GDP measure. Advanced economies that provided SOE data reported having SOE revenue less than 10% of market GDP. There has been a steady decline in the size of the SOE sector in these advanced economies over the last 20-30 years, with a trend towards privatization of smaller government trading enterprises and larger infrastructure providers such as electricity and transportation.

The SOE model in these advanced economies attempts to avoid sheltering public enterprises by putting SOEs on a level playing field with business so they can operate as successful businesses in competitive markets. SOEs in advanced economies often operated at arms-length with no particular advantages from public ownership.

Competitive neutrality for SOEs in Australia

Australia's National Competition Policy (NCP) reform process required the government to reform SOEs (described as Government Business Enterprises (GBEs) or Government Trading Enterprises (GTEs)) in three ways by:

- restructuring them (removing regulatory responsibilities from SOEs where they may have resulted in an advantage for SOE over private business);
- making them compete on an equal basis with private business (the competitive neutrality dimension); and
- setting up independent price regulators where they retained monopoly power.

The Productivity Commission's Review of National Competition Policy Reforms (PC Inquiry Report No 33, 2005) summarized the results as follows:

- the prices of several key economic infrastructure services have fallen in real terms since the early 1990s — though there has been considerable variation across sectors and jurisdictions;
- in general, price reductions do not appear to have come at the cost of reduced service quality. Indeed, service quality has improved in some areas and consumers have benefited from access to a wider range of services;
- NCP and related reforms have been significant (and sometimes major) contributors to those price reductions; and
- businesses have generally benefited more than households, with many enjoying substantial price reductions. This partly reflects intentional 'rebalancing' of prices between businesses and households to more closely reflect the costs of providing services to each.

Across APEC economies, there are not many SOEs that are explicitly tasked with encouraging private sector innovation. However, there were some middle income and advanced economies that reported having government-owned businesses operating in the science sector. These tend to be specialist non-market bodies that play a key role in the overall national innovation system.

SOEs encouraging private sector innovation in New Zealand

In New Zealand, Crown Research Institutes (CRIs) are wholly government-owned research companies that carry out scientific research for the benefit of New Zealand. Each of the seven CRIs is aligned with a productive sector of the economy or a grouping of natural resources. CRIs play a unique and important role supporting their sectors to innovate and grow. They strive to address New Zealand's most pressing issues and achieve economic growth by improving sectors' productivity and the sustainable use of natural resources.

New Zealand Venture Investment Fund (NZVIF) is a government-owned company established in 2002. It partners with private investors to attract greater levels of investment into New Zealand's most promising high growth companies of the future. NZVIF's public-private investment partnership model is intended to attract greater levels of private investment and capability.

2.4.3. National innovation systems generally lack coherence

Economies are continuing to develop and improve their national innovation systems. Among developing and middle income economies, it is common to see all the elements of the national innovation system under the responsibility of one public sector body.

All APEC economies reported having a public sector body tasked with and capable of delivering an innovation policy. However, having different bodies to deliver a knowledge infrastructure and innovation infrastructure was not universal. In more advanced economies, the innovation system is more often divided into distinct areas with different public sector bodies looking after each area. Across APEC economies, two parts of the national innovation system are predominantly publicly owned and funded – the knowledge infrastructure of universities and research institutes, and the innovation information infrastructure provided by standards bodies, and patent offices and stewards of geophysical information.

Innovation infrastructure includes the networks that companies need to innovate. While many economies have these information infrastructures to support business and innovation, they were usually not clearly identified in the IERs as being ‘innovation infrastructure’ as such.

Even among advanced economies with distinct public sector bodies tasked with innovation policy, and knowledge and innovation infrastructure, a lack of coherence in their national innovation systems was a common theme. This indicates that as economies develop and refine their innovation systems, a key challenge will be to examine how the different parts of the innovation system operate, and how they can best work together in an integrated and coherent manner to achieve their innovation priorities.

Canada’s national innovation system

Canada has a public sector body tasked with and capable of delivering innovation policy and the innovation infrastructure.

The Federal Department of Industry (Industry Canada) is the public sector body responsible for Canada’s national innovation policy, and sets the strategic direction for policies and programs that support and stimulate research, development and innovation in Canada. Industry Canada is also tasked with developing and administering framework statutes, regulations, policies and procedures.

Furthermore, innovation infrastructure is delivered by Industry Canada. It is responsible for developing, setting and assuring compliance with related regulatory reform and standards, and consults with a variety of stakeholders and portfolio organizations.

In terms of knowledge infrastructure, Industry Portfolio partners work with Industry Canada to promote scientific excellence and foster an environment conducive to innovation. Industry Portfolio partners include national research granting agencies (such as Canada’s main public research organization – the National Research Council), other science-based government departments, and external stakeholders from the private and public sector (including Council of Canadian Academies and Canadian Institute for Advanced Research).

2.5. Innovation challenges vary at different levels of development

Following the Global Financial Crisis (GFC), many economies have taken a strategic shift in their innovation priorities. Resetting these priorities has resulted in a different mix of policies to encourage innovative growth. Across all APEC economies, while exact priorities vary depending on the economy’s individual context, there were a number of common themes including:

- increasing public spending on innovation, research and development (relative to GDP);

- strengthening the transfer of knowledge from academia to industry;
- increasing the recruitment and development of scientific talent to meet the needs of industry and public sector research institutions;
- reviewing the relative roles of the public bodies in the innovation system; and
- promoting the adoption of Information Communications Technology.

The table below illustrates common aspects of structural reform policies and the challenges faced by economies at different levels of development.

Structural policies and challenges	Developing economies <i>(learning/ factor driven)</i>	Middle income economies <i>(catching-up/ efficiency driven)</i>	Advanced economies <i>(frontier/ innovation driven)</i>
Regulatory policy	Developing institutions to support robust regulatory policy development and implementation. Creating public participation procedures.	Implementing frameworks to identify and manage impacts of regulatory reform. Working to ensure that regulation does not inhibit firm innovation.	Implementing advanced tools to support transparency and robust regulatory policy. Using regulation to promote innovation and the adoption of new technologies.
Competition policy	Establishing a competition authority to enforce competitive markets.	Establishing a comprehensive competition policy framework.	Sophisticated competition framework to encourage long term efficiencies from new technologies.
Corporate governance	Providing basic legal infrastructure to support the birth, life, and death of firms.	Refining corporate governance systems to enable increased capital raising and more complex corporate structures.	Advanced and flexible legal infrastructure to support firm governance and risk taking, incentivize growth and enable raising of capital.
Public sector governance	Implementing governance frameworks to support the rule of law and remove corruption or administrative abuse.	Administrative simplification, improving coordination between government agencies.	Sophisticated governance arrangements to incentivize efficient and effective public spending, taxation, and ownership (where applicable).

2.5.1. Developing economies

Among developing economies, current science, technology and innovation capabilities are still underdeveloped. Developing economies generally lack a national innovation system or have very fragmented systems in place.

These economies are at the ‘learning’ level of development and their economy is largely driven by factors of production. They are generally still working on adoption of technology and tailoring

innovation to respond to specific local conditions. Social innovation to help to introduce technical innovations is another issue facing some developing economies.

The innovation priorities for these economies generally focus on:

- putting in place basic innovation systems;
- strengthening their ability to absorb new technology from more advanced economies; and
- encouraging uptake of and improving public access to cost-effective technology.

Structural challenges facing Viet Nam:

For a developing economy such as Viet Nam, one of the main challenges is to successfully transition into a market-oriented economy. Since the GFC, Viet Nam has implemented bolder structural reform measures but much work remains. This includes proactive economic integration with other economies to liberalize trade and investment. Given the innovation system in Viet Nam is only emerging, the key areas of focus for Viet Nam will be to establish and build the capability of its public institutions, legal frameworks and systems.

Structural challenges facing Thailand:

Thailand is facing internal challenges including an ageing population, depleting natural resources and environment, and instability of its political and administrative systems. There has been limited success with policies focusing on technology transfer from foreign entities. Thailand is increasingly focusing on strategic sectors following the Asian Financial Crisis. It is currently focused on developing manpower and infrastructure policy to resolve a shortage of R&D personnel and incentive policy to promote the commercialization of technology. For example, Thailand's Science Park Development Program aims to promote greater private sector investment in R&D and create new entrepreneurs.

For these developing economies, the immediate priority will be to establish basic institutions such as regulatory impact analysis, competition policy, legal framework, and a basic innovation system. After these institutions are in place, it is crucial to focus on building their internal capability to support the stable and predictable operation of their structural policies and institutions. Adopting new technologies from other economies may speed up this process of learning and developing the policies and institutions to stimulate firm innovation.

2.5.2. Middle income economies

Middle income economies generally have the right institutions and basic innovation systems in place. These economies are big consumers of foreign new technology and are increasingly focused on technological catch-up. Applying innovative technologies to support industrial development is a common feature.

Middle income economies have usually undergone a path of significant growth driven by low-cost factors of production and exports of natural resources. However, such rapid growth rates are becoming unsustainable and many of these economies are now facing a growth slowdown. It was acknowledged that as growth rates declined, future economic growth would have to come from innovation and productivity gains rather than the 'easy gains' such as labor savings.

These economies are recognizing the importance of increasing R&D efforts, and are continuing to develop their innovation systems and building up their innovative capacities to begin to compete with leading world innovators.

Structural challenges facing Mexico:

Mexico's economy is characterized by its significant manufacturing sector. Despite the strong growth in manufacturing, trade liberalization has given rise to disparities between sectors, regions and companies. Mexico is facing low national integration into value chains as well as weak supply chains, and shortages of trained technicians and engineers. The low level of R&D in current industrial processes is also a significant challenge confronting Mexico. Mexico has put in place a *National Program of Innovative Development 2013-2018* to promote innovation in industrial sectors through participation from academia, the private sector and government. This program includes increasing public spending on innovation, and promoting knowledge transfer and local vocations in the areas of science, technology and innovation.

Structural challenges facing China:

As a middle income economy that has achieved over a decade of exponential growth, China is facing rising environmental and resource constraints. Its traditional growth model relying on low cost factors of production and intensive input is unsustainable. China's factor and investment-driven economy must now transition to one that is driven by innovation. A new engine of growth based on innovation will require good supporting structural reform policies and institutional innovation.

In June 2015, the State Council of China issued the document "Promoting Entrepreneurship and Innovation", stating that China should accelerate the implementation of its innovation-driven development strategy and create a supportive environment for innovation and entrepreneurship. China's current areas of focus include resolving the institutional problems that constrain its capability to improve innovation efficiency, promoting inclusive innovation, improving the rate of technology transfer, and developing the regional innovation ecosystem to create innovation poles that diffuse and drive innovation in China.

Across middle income economies, common priorities for innovation include:

- increasing public spending on innovation;
- strengthening knowledge transfer from academia to industry;
- promoting development and adoption of IT; and
- improving recruitment and development of skilled people in the areas of science, technology and innovation.

While middle income economies are making good progress in improving their national innovation systems, they also face internal challenges such as institutional capability and coordination of their innovation policies. These economies are increasingly putting the right institutions in place, but it is important to note that developing quality institutions and implementing good structural policies will require time and sustained commitment.

2.5.3. Advanced economies

Advanced economies are generally considered at the 'frontier' of new technology. Several of these economies have leading innovative companies and are focusing on retaining and improving the competitiveness of these firms. Another common goal for advanced economies is to become a global leader in science and technology.

These advanced economies are generally less reliant on natural resources as a driver of economic growth. A common theme among advanced economies was the stronger focus on innovation following the GFC. They note the need to improve structural imbalances within their economies and

the slowdown of real wage growth. There is also a shared emphasis on transitioning towards a high value-added, knowledge-based economy.

Despite the generally good macroeconomic and institutional settings of advanced economies, the innovation performance of some advanced economies is still relatively weak. For example, New Zealand, whilst ranked third on the World Bank's Ease of Doing Business survey, is only eighteenth on the INSEAD Global Innovation Index. This may be due to the lack of "innovation and sophistication factors", such as having a low share of R&D intensive industries, a small domestic market, smaller firms, and few of the large firms that dominate global R&D.

Structural challenges facing Hong Kong, China:

Hong Kong, China is developing a knowledge based, high value-added economy, with a view to maintaining the city's competitiveness and achieving long-term sustainable development. Throughout the years, Hong Kong, China strives to provide the most favorable business environment for the private sector to flourish including a simple tax regime with low tax rate, level playing field, free flow of information and capital, rule of law, and with minimal red tape.

Moreover, Hong Kong China focuses on fostering an innovative/technological culture and entrepreneurship, and facilitating the provision of technological infrastructure and human resources to support this, as well as promoting international standards and conformity assessment to underpin technological developments and trade.

Collaboration between government, industry, academia and research sectors will also be enhanced, so as to promote R&D and technology transfer in the economy.

Structural challenges facing Japan:

Despite being an advanced, innovation-driven economy, Japan is faced with significant demographic changes with a declining birth rate, an ageing population and a prolonged period of deflation. Japan's maturing economy has resulted in changes to its industrial structures, reducing its industrial competitiveness in the world.

In response to growing economic challenges and to develop a path for sustainable growth, the "Japan Revitalization Strategy" was adopted in June 2013. This was revised in June 2014 to accelerate reforms, and further updated in June 2015 for "Realization of revolution in productivity by investment in the future". The latest strategy includes various innovation policies, aiming to encourage dynamic innovation ventures and a full-fledged national innovation system in Japan.

The "Comprehensive Strategy on Science, Technology and Innovation 2015" directs the Council for Science, Technology and Innovation to function as a command center for the Comprehensive Strategy. Through a nationwide commitment, the Comprehensive Strategy focuses on the five areas: 1) tackle challenges aimed at future industry creation/social change in the "period of grand transformation"; 2) promote science, technology and innovation contributing to regional revitalization; 3) promote science, technology and innovation, capitalizing on the 2020 Tokyo Olympic/Paralympic Games; 4) create an environment that generates innovation chains; and 5) undertake key initiatives to resolve economic and social issues. Innovation priorities for advanced economies generally include:

- shifting the focus from increasing the overall level of support for the national innovation system towards prioritizing areas of competitive advantage;
- restructuring the competitive funding system and better integration and collaboration in different parts of innovation system;

- attracting and developing entrepreneurs and scientific talent and to meet industry needs; and
- improving the global competitiveness of innovative firms.

Overall, the IERs demonstrate that there is no ‘one size fits all’ approach to structural policy settings that drive firm innovation. APEC economies differ significantly in their starting point, paths and levels of economic development, and in the imperatives and constraints they face. Even for economies at similar levels of development, ‘binding constraints’ (their unique contextual factors and individual challenges to economic growth) will be very different. For some the priority is getting the basic building blocks in place to underpin a national innovation system. For others it is to adapt to stay on the frontier of knowledge and technological development. Economies will need to tailor their policy reforms to reflect their respective circumstances and innovation challenges. Sometimes, despite the existence of best practice rules and laws, innovation performance can still be weak. Therefore economies should continue to monitor how their structural policies are operating even after they have put the right systems and policies in place.

The next chapter provided by the Philippines explores the links between competition policy and innovation in greater detail. The chapter also examines the challenges for young competition agencies, such as the agency to be constituted in the Philippines, and how APEC can add value.

3. Competition Policy and Innovation – Case Study by the Philippines

3.1. Competition-Innovation Nexus

There is a general understanding that the mark of a competitive economy is its ability to continuously generate innovations. It seems ironical therefore that safeguarding market competition could be seen as inimical to innovation. Yet just several decades ago, the relationship between bodies promoting innovation and those enforcing competition was tenuous, if not hostile. On one hand, some arrangements designed to incentivize or facilitate production of new technologies were proscribed for restricting competition. On the other, policymakers pushing for innovation disagreed with anti-trust campaigns against certain size of firms and concentration of markets. There was a view then that laws on intellectual property and competition¹³ are inherently incompatible in so far as the former confers exclusive rights that tend to nurture monopoly, while the latter assails monopoly power.

The crux of the discord is the complex relationship between market competition and innovation. There are a number of views on this issue. One view holds that since the process of innovation requires resources, there should be more tolerance for large firms who have the wherewithal to engage in and bear the risks of innovation. Market dominance, especially if borne out of innovation, should not be suppressed, but instead accepted as a natural reward for efficiency. An opposing view argues that size and dominance stifle the incentive to innovate. Smaller firms are seen to be more motivated to innovate, not just so they can forge ahead of others, but also because they have fewer assets whose value may be diminished or rendered obsolete by new technology. Consequently, more competitive markets, comprised of numerous small firms, are predicted to be more dynamic than concentrated markets, consisting of few large firms. Still, a middle-ground view espouses moderate level of market competition to stimulate innovation, based on some empirical evidence suggesting an inverted U relationship between market concentration and rate of technological change.

Neither theory nor empirical research has thrown definitive support behind any of these views.¹⁴ But over the years, the hostility between the bodies protecting intellectual property and enforcing competition waned and was replaced by collaboration – one that perhaps grew out of recognition of their common objectives to promote consumer welfare and ensure efficient allocation of resources.¹⁵

¹³ The terms of “competition policy” and “competition law” are used here interchangeably. Strictly speaking, competition policy refers to a broad set of policies to promote competition in local and national markets. It encompasses policies that enhance trade and investments, favor market entry and exit, reduce unnecessary government interventions and place greater reliance on market forces. Competition law refers to legislation, judicial decisions and regulations specifically aimed at preventing anti-competitive business practices, abuse of market power and anti-competitive mergers. Yet the principles underlying competition law are the same policies that are considered scope of competition policy. To the extent that the former is an embodiment of the latter, the two terms can be justifiably treated the same.

¹⁴ Despite the stream of empirical studies attempting to relate market structure and innovation, there is still demand for more robust results using better data, measures of competition and econometric techniques.

¹⁵ In a number of economies, competition authorities are actively collaborating with patent agencies to ensure that the patent process is not manipulated to forestall innovation (e.g., by patent flooding or trolling) or used to abuse market dominance (e.g., ambushing standards or forcing competitors to cross-license).

However, the recent spate of disruptive innovation brings back to the fore the complexities of the competition-innovation nexus. Disruptive (as opposed to incremental) innovations are new products, production processes or business models that have the potential to radically transform or destroy existing markets, or create new ones. They often result in new, better and lower-priced products and services, but do not fit existing regulatory frameworks. Faced by the threat of novel competition, incumbents demand to bring disruptors under the fold of the same regulatory regime they are subjected to. Such demand may be easily dismissed as an attempt to forestall the market entry of new rivals, but there may be legitimate social concerns (such as consumer health and safety) that may justify uniform application of existing regulations. Hence, many policymakers agonize on the appropriate response that will not afford unfair advantage to disruptors, yet also weaken or destroy incentives to innovate.

There have been, of course, disruptive innovations in the past, but the recent kind brings a new perspective to the discourse for at least two reasons. First, many have been carried out by start-ups with minimal resources (instead of those entrenched with huge resources) but capitalizing on the inefficiencies of incumbents.¹⁶ Second, regulated but not concentrated markets seem to be just as vulnerable to disruptions as concentrated ones. These observations suggest that, contrary to past understanding, neither size of the firm nor concentration of the market is a critical determinant of innovation. It follows that in dealing with innovation concerns, competition policy does not have to focus on some firms because of size, or on some markets because of degree of concentration.¹⁷

It remains the case that encouraging innovation is a central concern of competition policy. In addition, there is a growing perception that innovation could be induced more by competition-enhancing policies than by policies that directly promote it. This view finds support empirically where it is found that easing anticompetitive product regulation tends to have a more powerful effect on innovation than protection of intellectual property rights (IPR).¹⁸

In this case, instead of attempting to unravel the elusive nexus between competition and innovation, it is more useful to distinguish the desirable elements in competition policy that could promote innovation. Four elements are deemed critical: (i) adequate consideration of technical and dynamic efficiency in determining anti-competitive conduct; (2) fairly wide coverage of enforcement but strategic focus on least competitive markets; (3) independence, accountability and transparency of competition authorities; and (4) coherence of competition policy with sector regulation and other economic policies.

These elements are presumably well understood by competition regimes in developed economies, but perhaps less so by developing economies, especially by those still finding a niche for promoting market competition in their national agenda. They deserve to be clarified, *i.e.*, translated from abstract principles to practical terms. It is also useful to explore the challenges these imperatives present to young competition agencies, and the role for APEC. The discussions that follow are devoted to these tasks.

¹⁶ For example, disruptors avoid some of the costs incurred by incumbents such as the use of middlemen.

¹⁷ The problem may be traced to the fact that the promised benefits of competition are based on an abstracted model of a market (described as perfectly competitive) that is unlikely to be observed in practice.

¹⁸ This is based on an OECD study (Jaumotte and Pain, 2005, cited in UNCTAD, 2011) that shows eliminating anticompetitive product market regulation has stronger correlation with business spending on R&D than improving protection of IPR. Similarly, reducing restrictions on foreign direct investment increases domestic patents more than IPR protection.

3.2. Key Elements of an Effective Competition Law

3.2.1. Efficiency Consideration

Competition laws are special in that they cannot be codified as completely, nor applied as precisely, as other laws. The difficulty stems partly from the melding of economic concepts and legal precepts and translating the former to the latter. Most competition laws therefore do not provide detailed, step-by-step guidance for such critical processes as assessing market power. In the absence of standard metrics or parameters for many of the economic concepts and principles embodied in the law, the enforcement of competition laws is not surprisingly varied across jurisdictions and over time.

In large measure, the “inexactness” or “incompleteness” of competition laws is a reflection of the nature of economic behavior and markets that are continuously adapting and evolving. A conduct considered anti-competitive in one context, may be legitimate in another. Moreover, it is impossible to anticipate all future behaviors that could undermine market competition. Thus no competition law can provide an exhaustive listing of abuses of dominant position or anti-competitive agreements. The impacts on market competition and consumers have to be determined on a case-by-case basis.

Most competition laws thus combine two legal frameworks – *per se* prohibition and rule of reason – to take account of the nuances of market competition without completely departing from bright line rules. *Per se* prohibition is akin to an automatic rule of illegality – the determination is immediate since it does not require a thorough analysis of the conduct and its market context. Activities that trigger *per se* prohibition are considered patently anticompetitive, *i.e.*, without consideration of any redeeming value in terms of improving market processes or increasing economic output. Thus the prohibition is commonly reserved for “hard core cartel” behavior such as price- and output-fixing agreement between competitors.¹⁹ The presumption of illegality is conclusive once the elements constituting the prohibited conduct have been established and cannot be rebutted by any pro-competitive justification.

Rule of reason, on the other hand, requires extensive analysis of the impact on the market, counterfactual simulation of market outcomes, and balancing of commercial justification and damage wrought on the market. If pro-competitive justifications outweigh the anticompetitive consequences, then a conduct may be allowed to continue unless a less restrictive alternative is available. The determination of infringement is done on a case-by-case basis.²⁰

Clearly, the application of rule of reason is more consistent with the goal of fostering innovation. For example, in determining whether a proposed merger should be disallowed, a case-specific, often complex, inquiry is undertaken. This is because it might lead to allocative and productive efficiencies, while increasing market power or reducing rivalry post-merger. Competition agencies in more dynamic economies prefer to go through the process of evaluating business justifications and anticompetitive consequences of a conduct under the rubric of rule of reason. There is in fact a move

¹⁹ The 1998 OECD Cartel Recommendation (p. 3) defines a hard core cartel as “an anticompetitive agreement, anticompetitive concerted practice, or anticompetitive arrangement by competitors to fix prices, make rigged bids (collusive tenders), establish output restrictions or quotas, or share or divide markets by allocating customers, suppliers, territories or line of commerce.”

²⁰ In applying rule of reason, there are various standards adopted to distinguish between competitive and anti-competitive conduct. Several APEC economies have opted for test of “substantial lessening of competition” (SLC) which may pertain to the objective or effect (including likely effect) of a conduct or agreement.

towards applying broader exemptions to per se provisions that are already prescribed in the law. This is in recognition of the danger of dampening innovation because of rigid application of rules. Consequently, most competition regimes would allow certain conduct or agreement on the ground that it would create a new product, enhance production, allow risk sharing, or set legitimate standards, even if it might lessen market competition.²¹

Still, considering the analytical work and administrative burden that might be dispensed with if behaviors are per se prohibited, an inexperienced competition authority may prefer such a legal standard. It could be argued that a per se standard reduces the market uncertainty that may be caused by inconsistencies in judgment owing to the competition agency's lack of experience or the absence of domestic jurisprudence. A further justification is it cuts down time and cost of enforcement by avoiding a long and complex investigation. The preference for per se over rule of reason is thus often dictated by convenience and practicality – not by a conviction on its merits or a lack of regard for the technical and dynamic efficiency that may be sacrificed by the rigidity of such a standard.

3.2.2. Coverage and Focus

The effectiveness of competition law may be limited by an exemption from enforcement that is applied to selected sectors. Nonetheless, most competition laws provide for some exemptions based on social or policy objectives, such as agreements or conduct to satisfy international obligations or to pursue collective bargaining by workers. It is also quite common to extend immunity to entities entrusted with the operation of public services but only in pursuit of their mandate such as guaranteeing universal access or quality services at affordable prices.

Some economies rationalize the grant of temporary exemption as providing flexibility to firms engaged in technological activities.²² But like other forms of special privileges, exemption from competition law could distort market competition and dampen innovation incentives, particularly when it results in a dominant firm that could block the entry of innovators or is used to frustrate the introduction of innovations in the market. Accordingly, exemptions should be granted sparingly and only under specified conditions, obligations and a time limit.

Exemptions may also weaken the powers of the competition authority. The sources of anticompetitive behavior are not easy to detect and the effects may not be confined to one sector. Thus, placing some sectors outside the enforcement of competition law could undermine the effectiveness of the authority in investigating, restraining and imposing sanctions.

While a broad coverage of the competition law and commensurate powers of the competition agency are optimal, it is still considered a good practice for competition authorities to set priorities, i.e., to focus their activities, enforcement actions and advocacy initiatives for a given time period. This is a custom that even those less constrained by resources find expedient. The focus may be on specific activities (e.g., merger approval) or sectors (e.g., those most affected by anticompetitive issues), or targets (e.g., elimination of cartels).

Priority setting allows the competition agency to deploy its resources to where its action would have a tangible impact. It is also a legitimate means of controlling public expectations and demands, given that there are far more numerous anticompetitive behaviors than any agency can monitor and effectively deal with. Regardless of how priorities are determined, however, the agency must be able

²¹ It is a common dilemma of many competition authorities where to draw the line between hard core collusion and legitimate business collaboration.

²² The more common case-specific exemptions are those applied to vertical agreements involving technology transfer, exclusive and selective distribution and franchising.

to effectively communicate such priorities to the public in a manner that they are perceived as rational and not arbitrary, selective or discriminatory.

3.2.3. Independence and Accountability

It is a truism that independence and accountability of the body enforcing the competition law are paramount. A competition authority should be free from political interference or business influence. Thus, most competition agencies are statutory bodies, quasi-autonomous of other branches of government and have strong (at least *de jure*) judicial and administrative powers in conducting investigations and applying sanctions. Such autonomy, however, is often counterbalanced by accountability. The public has the right to be informed of the competition agency's decisions and rationale behind those, and should be able to obtain redress if the agency acts arbitrarily or incompetently. In many jurisdictions, decisions of the competition agency are open to judicial review by the regular courts or administrative tribunals.

Apart from statutory authority and judicial review of decisions, several safeguards have been adopted to attain a balance of independence and accountability. For example, officials are appointed to a fixed term and are not able to be removed from office without due cause. Where the structure is collegial, the terms of officials are staggered so that at any time, not all sitting members are appointed by the same government administration. It is also important that the agency's actions cannot be forestalled nor its decisions overturned except through a well-defined court process.

In developing countries where civil servants are lower-paid than their private sector counterparts, exempting competition agencies from public sector salary scales is considered necessary to attract and retain highly qualified staff and to fend off corruption.

Having an adequate and neutral source of funding is also critical to the agency's independence. It is however not clear which source of funding is optimal. There is a view that fees for specific services and penalties on erring parties are better sources than regular fiscal allocation since the budget process is open to political intervention. But the public may have difficulty seeking recourse to the competition agency if the fees are high, and the agency may be perceived as imposing unnecessarily onerous penalties in order raise funds for its own use.

With greater autonomy comes greater responsibility to the public. Since decisions of the competition authority have a pervasive impact on the entire economy, they should hold up to public scrutiny. Hence, final decisions and guidelines, including normative standards, adopted by the competition authority in its investigation and decision-making should be accessible to all stakeholders.

On the other hand, while judicial review of decisions is essential in making the competition authority accountable, many jurisdictions confine the review to procedural issues, *i.e.*, the processes adopted by the competition authority in investigating and adjudicating. In those cases, the task of the appeals body is not to do a *de novo* consideration of evidence and legal arguments, but to ascertain if there was abuse of discretion by the competition authority such as when it acted outside its jurisdiction or misapplied the law.²³ Hence, appeals are accommodated not so much for the courts to substitute their appreciation of the case for the wisdom of the competition authority, as to ensure fairness and integrity of the decision process.

²³ Grounds for appeal typically include error of fact, failure to observe procedures, flawed reasoning and manifest error of appreciation of evidence.

3.2.4. Policy Coherence

Competition law is but one, albeit critical, policy lever that has a direct impact on market competition. But its effectiveness in curbing anti-competitive practices could be easily undermined by industrial policies that erect entry barriers to protect national champions, or restrictive trade policies that prevent the competitive threat from imports. Other policies could also influence the enforcement of competition law. Exemptions afforded to state-owned enterprises, for example, could constrain the enforcement of competition law. Liberal trade and investment policies, on the other hand, could expand the competition authority's perspective of the effective market and its assessment of market dominance and abuse. Considering how other policies could either reinforce or negate the impact of competition policy, coherence is important to the effectiveness of the latter.

The imperative of having a set of policies all contributing to the goal of promoting market competition is not lost to many economies. In various jurisdictions, as a result, one of the important functions of competition authorities is to advise other agencies (through issuance of opinions) on the potential competitive effects of their policies. It is also common for competition authorities to intervene in proceedings concerning technical or economic regulations even where regulators are autonomous.²⁴ Some economies even find the need to craft a national competition plan to harmonize policies and ensure proper coordination among concerned agencies.

3.3. Implications for Young Competition Agencies

The requirements for an innovation-friendly competition policy just described, might seem ordinary and to be expected of any jurisdiction with good governance. But in practice, they may present challenges even to those with long established competition regimes – more so to those with a young and “barefoot”²⁵ competition authority.

In the last two decades, several APEC Member Economies have enacted national legislation to clearly lay down rules to govern domestic market competition and to establish a competition body to enforce such law. The Philippines is the most recent addition to this league of economies with a national competition law. After more than two decades in the legislative mill, the Philippine Competition Act (PCA) was finally enacted on 21 July 2015. At the time of writing, the Competition Commission, the body tasked to implement the law, has yet to be constituted. But the legislation that will support this new body can be assessed in terms of the elements expounded in the preceding discussion to determine the gains that may be expected from this recent initiative.

Like other new legislation, PCA has benefitted significantly from the competition laws, jurisprudence and experiences of its predecessors. Perhaps for this reason, the intent to give due regard to technical and dynamic efficiencies in determining anti-competitive conduct is unmistakable. Only two acts are per se prohibited, namely price-fixing agreements between competitors and bid-rigging. All other prohibited acts must have the object or effect (including likely effect) of “substantially preventing, restricting or lessening competition.”²⁶ More to the point, PCA specifically provides for an evaluation

²⁴ The line distinguishing technical and economic regulation on one side, and competition regulation on another, is often blurred, hence competition authorities normally intervene in regulatory proceedings, and regulators are often asked to participate in competition proceedings.

²⁵ The term “barefoot” refers to agencies “without significant political or financial support” (UNCTAD, 2011). The term “young” is however not qualified, but is used here to refer to a competition authority established in 2000 or later.

²⁶ The PCA spells out an economics-based reasonableness approach in disposing cases, to wit:

of the restraint on competition vis-à-vis potential efficiency gains, forbearance on natural outcomes of superior product or process and adopting a broad and forward-looking view when assessing market impacts.

The application of PCA is meant to be broad and extraterritorial; its enforcement is not constrained by *a priori* exemptions that are often made out of political considerations. It provides that all acts, whether committed within or outside the Philippine territory, and having “direct, substantial and reasonably foreseeable effects in trade, industry or commerce” are covered. The only explicit exclusions are collective bargaining agreements of workers over wages and conditions. Nonetheless, the law empowers the competition authority to forbear application of the law on individuals or sectors under certain conditions.²⁷ This allows the Commission to focus on least competitive markets.²⁸

Cognizant of how governance can be easily compromised, PCA has safeguards to ensure independence of members of the Competition Commission (hereafter the Commission), such as fixed term of office and two-year prohibition (applied after end of office) from appearing as counsel or agent in competition cases.²⁹ The law also exempts the Commission’s staff from the standard pay scale for civil servants to attract individuals with the necessary skill-set required for the complex work of the Commission.³⁰

While no level of safeguards can ensure the probity of an institution, the responsibility entrusted to the Commission on competition matters is enormous. Foremost, it has original and primary

SEC. 26. Determination of Anti-Competitive Agreement or Conduct. – *In determining whether anti-competitive agreement or conduct has been committed, the Commission shall:*

(a) Define the relevant market allegedly affected by the anti-competitive agreement or conduct, following the principles laid out in Section 24 of this Chapter;

(b) Determine if there is actual or potential adverse impact on competition in the relevant market caused by the alleged agreement or conduct, and if such impact is substantial and outweighs the actual or potential efficiency gains that result from the agreement or conduct;

(c) Adopt a broad and forward-looking perspective, recognizing future market developments, any overriding need to make the goods or services available to consumers, the requirements of large investments in infrastructure, the requirements of law, and the need of our economy to respond to international competition, but also taking account of past behavior of the parties involved and prevailing market conditions;

(d) Balance the need to ensure that competition is not prevented or substantially restricted and the risk that competition efficiency, productivity, innovation, or development of priority areas or industries in the general interest of the country may be deterred by overzealous or undue intervention; and

(e) Assess the totality of evidence on whether it is more likely than not that the entity has engaged in anti-competitive agreement or conduct including whether the entity’s conduct was done with a reasonable commercial purpose such as but not limited to phasing out of a product or closure of a business, or as a reasonable commercial response to the market entry or conduct of a competitor.

²⁷ The Commission may forbear only under the following conditions:

(a) Enforcement is not necessary to the attainment of the policy objectives of this Act;

(b) Forbearance will neither impede competition in the market where the entity or group of entities seeking exemption operates nor in related markets; and

(c) Forbearance is consistent with public interest and the benefit and welfare of the consumers. (Sec. 28, PCA)

²⁸ Apart from allowing the Commission to set priorities, the process of forbearance makes it transparent if the Commission’s inaction on a competition issue is intentional and legitimate or sheer neglect of duty.

²⁹ Such prohibition of practice extends to the spouse or relative by consanguinity or affinity within the fourth civil degree.

³⁰ There is a general perception that public servants are vulnerable to corruption because of low pay, and raising the scale will make them less vulnerable.

jurisdiction over all competition cases. This has implications on the ability of other domestic institutions to curb anti-competitive behavior. Although regulators with a competition mandate have not lost their authority, any competition-related case must be first brought to the Commission, which would then decide the body to adjudicate the matter.³¹ That primacy of authority is meant to avoid jurisdictional conflict between the Commission and sector regulators. It is reinforced by the sole and exclusive authority vested in the Commission to initiate and conduct a fact-finding or preliminary inquiry on any competition-related matter.³² Other agencies are therefore estopped from pursuing measures to prevent or curb anticompetitive conduct before the Commission can conduct its inquiry.³³

Apart from adjudicating competition cases, however, an equally crucial role of the Commission is to promote coherence of government policies with the objectives of the competition law. In other jurisdictions, the competition authority role is limited to issuing advisory opinions and guidelines on competition matters. The Commission has more avenues to ensure policy coherence as its functions include; (i) proposing legislation for the regulation of commerce, trade and industry; (ii) intervening in administrative and regulatory proceedings conducted by other government agencies when consideration of the provisions of competition law is required; (iii) working with sector regulators in issuing sector-specific competition rules; (iv) assisting the economic planning body in formulating a national competition policy framework; and (v) reviewing economic and administrative regulations, government actions, policies and programs, *motu proprio* or upon request, as to their impact on market competition.

Overall, the PCA seems to have the critical elements to see through the Commission's work. It still remains to be seen though if the Commission will be effective not only in enforcing the law, but also in boosting domestic market competition. Notwithstanding the supportive legislation, the Commission may not be spared by the usual difficulties faced by young competition agencies.

Perhaps the biggest hurdle for the Commission is the anticipated wide gap between the resources needed to understand the complexities of the market and those that can be provided by the fiscal budget. Despite official pronouncements on the value the government ascribes to the PCA, the fact remains that the Commission will have to compete with other equally important national priorities. Inadequate budget is often exacerbated by a skills shortage, which the PCA will attempt to mitigate by exempting its staff from the standard pay in the public sector. Still, there is no assurance that such a measure can attract the number of technical personnel that the Commission requires.

The absence of domestic jurisprudence to guide the Commission's work is made even more daunting by the generally low awareness about competition issues in other government agencies, including the judiciary, and civil society.³⁴ There is also a limited supply of domestic experts who are versed in the economics and law of competition to provide independent support to the Commission.

Much of the work of the Commission in the initial years will involve building up its credibility to the general public and gaining constituents for market competition. This renders competition advocacy indispensable in the long list of tasks ahead of the Commission. Faced with the enormous responsibility, the Commission, like other young institutions, will need all the support that it can

³¹ Such authority applies also to cases involving competition and noncompetition issues.

³² As a result, no criminal proceeding, to be handled by the Department of Justice, can be pursued without a preliminary investigation initiated by the Commission.

³³ Recognizing the possibility that this may precariously delay all actions to prevent or curb anticompetitive conduct, the PCA requires the Commission to complete its inquiry in 90 days.

³⁴ A 2006 survey conducted by the International Competition Network among young competition agencies reveals a common set of problems. See UNCTAD (2011, p. 11).

muster.

3.4. Towards an Innovation-inducing Competitive Market

Aligned with the overarching goal of attaining shared prosperity is the need for greater cooperation among APEC members to ensure that national competition policies are substantively aligned and effectively enforced to promote innovation.³⁵ The thrust and degree of cooperation are inevitably different among economies that have established competition governance at one level, and between economies with mature competition regimes and those that have just recently set up their system of governance at another level. Many of the current initiatives in APEC involve information exchanges that are more relevant to those with a long tradition of competition governance. Undoubtedly, there is added value to the region if the present activities can be intensified and possibly advanced to the direction of either more regular and systematic enforcement cooperation or harmonization of policies. But the returns to APEC are likely to be greater if targeted initiatives to assist young agencies are pursued. This is because while other international forums such as the International Competition Network, OECD and UNCTAD, have similar work as the current APEC initiatives, there are fewer activities addressing the unique and difficult circumstance of young competition agencies. Considering that about half of APEC members are novices in competition governance, the proposed thrust has considerable merits.

As discussed, the four elements for effective competition policy present more challenges to young agencies than to mature ones. The difficulties arise because the former are invariably handicapped by limited physical, financial and human resources; inadequate support from other government agencies; low level of competition awareness among constituents; lack of domestic jurisprudence; and dearth of independent local expertise to complement in-house resources and exact accountability. The gap between resource availability and need certainly varies across economies, and some are more open to accepting external assistance. It follows that the relevant assistance may have to be tailored to the agencies after an independent and thorough diagnosis of their specific requirements.

Nonetheless, several cooperation activities may be pursued that could have strategic and wider application such as:

- (i) a peer review of the national competition policy and legal framework of members with young agencies, particularly as regard to the four elements for effectiveness;
- (ii) a comparative study of the competition legal framework focusing on three areas: elimination of cartels, curbing abuses of market dominance and merger control, to identify opportunities for enforcement cooperation;
- (iii) a systematic campaign to increase the competition awareness of civil society and raise the level of understanding of government agencies not directly involved in competition governance on the dynamics of market competition and innovation;
- (iv) development of APEC recommended guidelines to help national competition agencies assess and measure competitive harm and evaluate potential dynamic efficiency gains that may arise from a conduct or agreement;
- (v) an ex post assessment of the handling by national competition agencies of selected cases with APEC-wide relevance;

³⁵ There is an added benefit from cooperation in making competition policies work effectively – i.e., it reinforces the efforts to promote trade and investments in the region.

- (vi) an exploration of opportunities for harmonization of national competition and innovation policies; and
- (vii) design and set up of more regular and timely information exchanges that would reduce gaps in information available to national agencies and lead to more informed decision making and consistent enforcement of competition law.

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4. Conclusions and Recommendations

4.1. Conclusions

Analysis of the relationship between structural policies and firm innovation is in its relative infancy. In many ways, therefore, this year's Report has raised as many questions as it has answered. But it is clear that firm innovation provides a new lens through which governments may consider the impact of structural reforms. Innovation is far wider than invention, research and development or technology. In future, this lens is likely to be at least as important as the traditional focus on business compliance costs, particularly as innovation will be of greater importance to growth as more economies and more industries reach the frontiers of technology.

The Report makes it clear that structural reform may either help or hinder firm innovation. For example, poorly conceived or executed structural reforms can create compliance or regulatory burdens that act to chill innovation. A similar impact can be felt if the reforms create economic uncertainty or prohibit or inhibit the adoption of new technologies. On the other hand, well-conceived structural reform can create the conditions under which firm innovation can flourish. This can occur through providing firms with the time, space and resources with which to innovate as well as through incentivizing firms to succeed through the adoption of new technologies.

If governments are to complement and support firm innovation through structural reform, some key conclusions to emerge from the Report are:

- Regulatory flexibility and administrative simplification are key objectives in the area of *regulatory reform*. In particular, APEC economies report that reductions in the burden imposed by the design and administration of regulations can directly improve innovation. As economies develop, many seek to equip themselves to consider the competition impacts of regulation;
- In the area of *competition policy*, it is important for all economies to have comprehensive competition law with an independent competition agency. This helps ensure that the regulation of competition is not captured by special interests to the detriment of innovation. As economies develop, their competition agencies become better equipped to consider efficiencies from new technologies (i.e. competition based on innovation). In addition, governments can better equip themselves to consider innovation outcomes in terms of their wider competition policies in such areas as how state owned enterprises are regulated;
- In the area of *corporate governance*, all economies recognize the need for incentives to ensure directors act in the long term interests of shareholders, including by ensuring that adequate firm strategies for innovation are in place. All also recognize that an appropriate balance needs to be struck between risk taking and shareholder/creditor protection. Insolvency laws appear not to act as a barrier in this area. As economies develop, there is increased focus on enabling a range of options for capital raising, especially for new innovative firms.
- Legal frameworks to promote sound *public sector governance* are widespread but their application is uneven. In areas where application is poor, this can be to the detriment of innovation. The role owned enterprises tends to decline as economies become more developed. However there is still a role for specialist non-market bodies tasked explicitly with encouraging innovation in economies. Most economies report having established national innovation systems but these often lack coherence, particularly when set alongside the objectives for structural reform.

The Report has shown that developing, middle-income and advanced economies face different challenges around structural reform and innovation. The key conclusion of this Report, however, is that all economies can improve innovation outcomes through structural reform, no matter their level of development. Even developing economies have in place at least some elements of the system they will need in order to promote greater firm innovation. The key is to focus policy and administrative improvements on the binding constraint so the changes introduced will make the greatest difference. It is also worth noting that the nature of firm innovation will differ depending on the level of development, whether this comprises faster rates of technological catch-up amongst developing economy firms, or pushing out technological frontiers amongst developed economy firms.

The Report reaches three further conclusions in this area. First, it is clear that there is significant heterogeneity even with the groups of developing, middle-income and developed economies. The types of systems used to promote innovation are different as are the strengths of policies and institutions. Second, structural policies have an important role to play in supporting the development of high performing national innovation systems tailored to each country's unique circumstances. Thirdly all economies, no matter their level of development, face capability challenges in developing the policies and institutions that will improve firm innovation outcomes. While these are more acute for developing economies, this is an area that all economies are on a steep learning curve and there is much that they can learn from each other. It is important for all economies to be realistic about their capability needs and to have strategies in place that will allow them to build capability over time.

There are, however, reasons to be optimistic in this area. As our understanding of the links between structural reform and innovation improves, there is the potential for all economies to move more quickly to adopt the policies and institutions that will lead to improved firm innovation outcomes. In this area, technology, particularly digital technology, and continued value chain integration can also be of significant assistance. Digital technology can provide the means to significantly increase the speed of capability development as well as to put in place digital systems that will significantly streamline and lower the costs of government interaction with the private sector. Value chain integration enables economies to move up the value chain as capabilities grow. Together these will also provide the potential for faster rates of "catch-up" by developing and middle income economies with developed economies.

Finally, it is clear that APEC can play a significant role in this area. Significant momentum has been created for this work because of the challenges faced by economies faced by the "middle income trap" and the importance of improved structural reform and innovation policies to meet these challenges. This Report has made the first step in pointing the way forward to help meet these challenges and in particular, has highlighted the capability challenges that must be addressed to do so. Given APEC's strengths in the area of capacity building, there is significant further work that can be carried forward in this area. In the first instance, this can be achieved by taking account of this Report in existing work programs on structural reform such as RAASR and EODB as well as by transmitting its contents to other APEC bodies with interests in structural reform and innovation.

4.2. Recommendations

It is recommended that the Senior Officials Meeting recommend that APEC Ministers:

- (a) Endorse the 2015 AEPR on Structural Reform and Innovation;
- (b) Instruct the Economic Committee to take account of the findings of this Report in its structural reform work programs, particularly in such areas as RAASR and EODB;
- (c) Instruct the Economic Committee to transmit and discuss the contents of this report with other APEC bodies with an interest in structural reform and innovation.



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ANNEX A

Annex A: Questionnaire on structural policies and innovation

Table A – Country context

Country context questions	Current position	Any other comments
Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i>		

Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</i>		
Administrative simplification including cost of doing business programs can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification program in place and if so how comprehensive is it? Also, is any administrative simplification program linked to programs to reduce corruption?</i>		
Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. <i>Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimizes any adverse impact on competition and hence innovation?</i>		
Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. <i>How easily can skilled people move between firms?</i>		

Table C - Competition policy

Competition policy mechanisms	Current position	Any other comments
Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other. <i>How does competition policy deal with protection of consumers?</i>		

Competition policy mechanisms	Current position	Any other comments
<i>Does competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and dynamic efficiency?</i>		
Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to fact based rule of reason analysis. <i>Does the competition authority(s) have the legal authority to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i>		
Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or sub-national government?</i>		
Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. <i>Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective decision involving other Ministries? How is any independence established and safeguarded?</i>		
There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. <i>Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets with potential for innovation?</i>		
There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i>		

Table D - Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those		

(such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i>		
Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital funds and direct capital raising from the public. <i>Do your economy's financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</i>		
The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. <i>Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing?</i>		
Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However, these also allow poor managers the opportunity to repeatedly start businesses that fail with losses to shareholders and creditors. <i>How is the balance struck between enabling risk taking and protecting shareholders and creditors?</i>		

Table E- Public sector governance

Public sector governance policy mechanisms	Current position	Any other comments
The rule of law implies that every citizen is subject to the law, including law makers themselves. Limits to the rule of law occur because of neglect or ignorance of the law, corruption, or the lack of corrective mechanisms for administrative abuse, such as an independent judiciary. <i>Does your system actively protect and enforce the property rights of different stakeholders? If so what sort of legal mechanisms are available and used?</i>		
State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. <i>In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are there SOEs explicitly tasked with encouraging private sector innovation?</i>		
A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. <i>Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure?</i>		

Public sector governance policy mechanisms	Current position	Any other comments
<p>Strategies need to respond to economy context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks. <i>What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</i></p>		



**Asia-Pacific
Economic Cooperation**

**Advancing Free Trade
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ANNEX B

Appendix A Questionnaire on structural policies and innovation

Table A – Economy context (Optional)

Economy Context Questions	Current position	Any other comments
Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i>	Nil response.	

¹ NZIER report (March 2015) to APEC 2015 Economic Report (AEPR) - The role of structural policies in innovation

Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</i></p>	<p>The Australian Government has announced its commitment to reduce the regulatory burden for individuals, businesses and community organisations. As a result, all policy proposals designed to introduce or abolish regulation must now be accompanied by an Australian Government Regulation Impact Statement (RIS). In the RIS, seven questions need to be answered. Question 3 asks ‘what policy options are you considering?’ (refer to The Australian Government Guide to Regulation at https://www.dpmc.gov.au/office-best-practice-regulation/guidance). In this section of the RIS policy officers are asked to identify a range of (generally three) genuine and viable alternative policy options and thereby encouraging regulators to examine alternative approaches and solutions.</p> <p>Options need to be included in RISs for all policies that either have a substantial or widespread impact on the economy or have a measureable but contained impact on the economy’.</p>	
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification programme in place and if so how comprehensive is it? Also, is any administrative simplification programme linked to programmes to reduce corruption?</i></p>	<p>Yes. As discussed above, in 2013 the Australian Government announced its commitment to reduce the regulatory burden for individuals, businesses and community organisations. The programme consists of various initiatives aimed at:</p> <ul style="list-style-type: none"> a) reducing the volume of regulation itself b) reducing the duplication and regulatory overlap between different layers of government c) improving consultation with those affected by regulation d) using post implementation reviews to determine how effective new regulations have been e) ensuring regulators are transparent, accountable and efficient in administering regulations. <p>As at March 2015, the Australian Government has repealed over 12,000 regulations or pieces of legislation and reported on deregulation initiatives that, if fully implemented, will result in compliance cost savings of more than \$2.45 billion per year.</p>	

	The Australian Government's deregulation agenda is not explicitly linked to programmes to reduce corruption.	
Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. <i>Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any adverse impact on competition and hence innovation?</i>	Under the Government's Deregulation Agenda policy proposals that have substantial or widespread impact on the economy require a formal cost benefit analysis. Barriers to competition created by a proposed regulation should be considered in this section of the RIS. In addition, the Australian Government's Office of Best Practice Regulation has released a guidance note on 'Competition and Regulation' (http://www.dpmc.gov.au/office-best-practice-regulation/publication/competition-and-regulation-guidance-note). The purpose of the guidance note is to assist policy makers to understand the additional 'competition tests' required in a RIS in which the preferred option restricts competition.	
Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. <i>How easily can skilled people move between firms?</i>	The Fair Work Act is the primary legislative instrument which governs Australia's workplace relations system. Ensuring flexibility is one of its key objectives. Workers are able to move easily between firms, subject to the rules relating to employee resignation. For example, an employee may be required to give their employer notice of their resignation, based on a minimum notice period specified in their employment contract or award agreement. In addition, labour mobility is supported by the Mutual Recognition Act 1992 which allows people licensed or registered to practise an occupation in one jurisdiction, to practise the equivalent occupation in another State or Territory in Australia.	

Table C - Competition policy

Competition policy mechanisms	Current position	Any other comments
Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other. <i>How does competition policy deal with protection of consumers? Does</i>	Increased competition leads to dynamic efficiency gains. Competition moves market share towards more efficient (that is, lower-cost and generally therefore lower-price) producers. This may push out some higher-cost producers and also raise the standard required of any new entrant.	

Competition policy mechanisms	Current position	Any other comments
<p><i>competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and dynamic efficiency?</i></p>	<p>The exit of low productivity firms from the market in Australia makes a contribution to industry-level productivity improvements and the additional market share of the remaining firms makes a positive contribution to productivity growth.</p>	
<p>Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to fact based rule of reason analysis. <i>Does the competition authority(s) have the legal authority to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i></p>	<p>The Australian Competition and Consumer Commission (ACCC) is Australia’s peak consumer protection and competition agency. The ACCC is an independent statutory government authority serving the public interest. Most of the ACCC’s enforcement work is conducted under the provisions of the <i>Competition and Consumer Act 2010</i> (the CCA).</p> <p>The purpose of the CCA is to enhance the welfare of Australians by:</p> <ul style="list-style-type: none"> • promoting competition among business • promoting fair trading by business • providing for the protection of consumers in their dealings with business. <p>The CCA provides the ACCC with a range of enforcement remedies, including court-based outcomes and court enforceable undertakings. The ACCC also resolves many matters administratively.</p> <p>This framework allows Australia’s competition law to be responsive to changes in market structure and technology.</p>	
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or sub-national government?</i></p>	<p>The CCA has general application to those sectors of the economy engaged in trade and commerce. Some limited specific exceptions are provided for by section 51 of the CCA.</p> <p>The principles of competition policy and in some cases competition law per se extend to businesses owned by national or sub-national governments.</p>	

Competition policy mechanisms	Current position	Any other comments
<p>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. <i>Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective decision involving other Ministries? How is any independence established and safeguarded?</i></p>	<p>As noted, the ACCC is an independent statutory government authority whose role is to enforce the CCA and a range of additional legislation, promoting competition and fair trading, protecting consumers and regulating national infrastructure (see section 6 of the CCA). The ACCC's statutory decision-making body is its Commission and the Commission makes independent decisions in accordance with the powers set out in the CCA.</p> <p>Under section 29 of the CCA the Australian Government, through the nominated Minister, may direct the ACCC in the performance of its functions or the exercise of its powers. Any such directions must be published as soon as practicable after the direction is given.</p>	
<p>There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. <i>Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets with potential for innovation?</i></p>	<p>The ACCC and the Australian Energy Regulator (AER, a constituent part of the ACCC) have a number of regulatory functions aimed at making markets work, see for example Parts IIIA and XIC of the CCA which sets out the AER and ACCC's respective roles in the regulation of energy markets and the telecommunications sector.</p> <p>The ACCC prioritises its enforcement activity towards those markets which are not competitive and the threshold for determining whether conduct or practices contravenes the CCA is a substantial lessening of competition test. The ACCC's enforcement action is not directed per se at markets with the potential for innovation.</p>	
<p>There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i></p>	<p>The ACCC through its engagement with international competition agencies does look to promote competitive markets which will stimulate trade and investment.</p> <p>Questions of trade and investment are more often relevant to the ACCC's consideration of mergers under section 50 of the CCA. The CCA recognises that Australia operates in a global economy and provides a framework for such matters to be taken into account.</p>	

Table D - Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i></p>	<p>Within Australia's corporate regulatory regime, directors of Australian companies owe duties to their company. Some of the key duties are to:</p> <ul style="list-style-type: none"> • act in good faith and in the best interests of the company; • act honestly and not to act for an improper purpose; • avoid situations where there is a conflict of interest between the company and the director; • exercise due care and diligence; • avoid improper use of the director's position; • avoid improper use of information; and • prevent insolvent trading by the company. <p>Directors also have obligations with respect to the preparation of the company's financial statements including the making of a declaration as to whether the financial statements comply with accounting standards and give a true and fair view of the financial position and performance of the company.</p> <p>Breaches of certain directors' duties carry serious penalties including fines, imprisonment and being prohibited from acting as a director or managing a company.</p> <p>The Corporations Act 2001 also enables current and former members and officers of a company to bring an action on behalf of the company, or intervene in proceedings to which the company is a party. This derivative action can be used to facilitate action being taken against current and former directors for breach of their duties.</p>	
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital funds and direct capital raising from the public. <i>Do your economy's financial markets facilitate capital</i></p>	<p>There does not appear to be any significant regulatory impediments to raising capital to finance innovation. Most businesses rely on personal finance or finance from family and friends. For those that seek external</p>	<p>On 8 December 2014, the Government</p>

<p><i>raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</i></p>	<p>finance, bank loans and public listing are significant sources.</p>	<p>released a discussion paper on a potential regulatory framework for crowd-sourced equity funding.</p> <p>In the 2015/16 Budget, the Government announced that it will provide \$7.8 million to the Australia's corporate regulator, the Australian Securities and Investments Commission, to implement and monitor a regulatory framework to facilitate the use of crowd source equity funding, including simplified reporting and disclosure</p>
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		requirements. This area is currently under review as part of the Productivity Commission Inquiry on Business set-up, transfer and closure.
The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. <i>Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing??</i>	<p>The ASX Listing Rules govern the admission of entities to the official list, quotation of securities, suspension of securities from quotation and removal of entities from the official list. They also govern the disclosure and some aspects of a listed entity's conduct. Compliance with the ASX Listing Rules is a requirement for admission to the official list of ASX. It is a requirement under the contract that an entity enters into with the ASX on being admitted to ASX that an entity comply with the ASX Listing Rules. ASIC has no power to waive or vary the ASX Listing Rules.</p> <p>The ASX Listing Rules are enforceable against listed entities and their associates under the Corporations Act: ss. 793C and 1101B CA.</p>	See above.
Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However, these also allow poor managers the opportunity to repeatedly start businesses that fail with losses to shareholders and creditors. <i>How is the balance struck between enabling risk taking and protecting shareholders and creditors?</i>	<p>The Corporations Act governs insolvent corporations. The options available to creditors and directors of insolvent companies under the Corporations Act include:</p> <ul style="list-style-type: none"> • voluntary administration; • receivership; and • liquidation. <p>Australia has an efficient corporate rescue and rehabilitation regime in the form of the voluntary arrangement regime.</p> <ul style="list-style-type: none"> • It provides a flexible, easily initiated and relatively inexpensive procedure that gives a company the benefit of a debt moratorium. 	This area is currently under review as part of the Productivity Commission Inquiry on Business set-up, transfer and closure.

	<ul style="list-style-type: none"> • This allows the company to attempt a compromise or arrangement with its creditors aimed at saving the company or the business and maximising the return to creditors. • If creditors agree to the arrangement, it will be set out in a deed of company arrangement (DCA) which binds the company and its creditors. <p>Australia’s legal framework also provides for the appointment of receivers, receiver and managers and other controllers by secured creditors where the debtor corporation defaults on covenants set out in security documents.</p> <p>Liquidation is a procedure by which a corporation is dissolved. Generally speaking, upon liquidation, the liquidator takes complete control of the corporation from the directors. The objective of a winding up is to bring about an end to the corporation in an orderly and equitable manner which obtains the maximum return possible for creditors and members.</p>	
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Table E - Public sector governance

Public sector governance mechanisms	Current position	Any other comments
<p>The rule of law implies that every citizen is subject to the law, including law makers themselves. Limits to the rule of law occur because of neglect or ignorance of the law, corruption, or the lack of corrective mechanisms for administrative abuse, such as an independent judiciary. <i>Does your system actively protect and enforce the property rights of different stakeholders? If so what sort of legal mechanisms are available and used?</i></p>	<p>The rule of law underpins the way Australian society is governed, with citizens and the government bound by and entitled to the benefits of laws. The rule of law is upheld by ensuring laws are: clear, predictable and accessible; publicly made and the community is able to participate in the law-making process; publicly adjudicated in courts that are independent from the executive arm of government; and dispute settlement is fair and efficient where parties cannot resolve disputes themselves. .</p> <p>A robust legal system ensures the protection and enforcement of property rights. Australia has four federal courts, including the High Court, Federal Court, Family Court and Federal Circuit Court. Each State and Territory also has their own laws and court systems. A range of law Federal and State enforcement agencies assist in enforcing property rights, including the</p>	

Public sector governance mechanisms	Current position	Any other comments
	<p>Australian Federal Police, IP Australia, Australian Customs and Border Protection Service and State and Territory Police forces.</p> <p>Courts have a number of legal mechanisms to protect property rights, for example issuing injunctions to stop the infringement or ordering damages to be paid. Alternative dispute resolution mechanisms are also available for stakeholders to avoid the expense of litigation.</p>	
<p>State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. <i>In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are there SOEs explicitly tasked with encouraging private sector innovation?</i></p>	<p>Australia is a developed economy that instituted competitive neutrality policies following the Hilmer Review in the 1990s. The Australian Government and all state and territory governments undertook to ensure that their publicly owned businesses did not enjoy any net competitive advantage simply because they are publicly owned.</p> <p>SOEs only account for a small share of Australia's economy.</p>	
<p>A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. <i>Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure?</i></p>	<p>The Australian Government understands the importance of innovation as it drives competitiveness and improvements to our workplace productivity and will be critical in ensuring that living standards are maintained with an ageing population. The Australian Government's Department of Industry and Science is the public sector body tasked with delivering innovation and industry policy. Other areas of the public sector also have an interest in supporting innovation and entrepreneurship such as the Treasury, the Department of Prime Minister and Cabinet, the Department of Communications and state and territory governments within their regions.</p> <p>The Department of Industry and Science delivers a number of programmes and incentives to encourage innovation and entrepreneurship including the Research and Development Tax Incentive, the Entrepreneurs' Infrastructure Programme, Venture Capital tax concessions, Industry Growth Centres and the Cooperative Research Centres.</p>	

Public sector governance mechanisms	Current position	Any other comments
<p>Strategies need to respond to economy context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks. <i>What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</i></p>	<p>The Australian Government is commitment to innovation is part of a policy mix aimed at building a stronger, more productive and diverse economy with more efficient government and more productive businesses. The Australian Government is focussed on lifting Australia’s rate of business and research collaboration to improve commercial outcomes, economic growth and productivity gains, and putting science at the centre of industry policy. The Industry Innovation and Competitiveness Agenda, released in October 2014, sets out the Government’s goals for economic growth, greater entrepreneurship, a more skilled workforce and a more business-friendly economic and regulatory environment.</p> <p>Australia ranks fourth on its rate of entrepreneurship among innovation-driven economies, and innovative businesses account for about a 70% share of Australia’s employment, capital expenditure and business income. The Government’s innovation policies focus on building on these strong fundamentals, ensuring that Australia’s most innovative businesses achieve international scale, and improving our global competitiveness.</p> <p>An important component of the national innovation system is the public sector. Ensuring that the public sector is responsive to change, and can help engage and even help drive innovation in other sectors, is a key consideration. In the Australian Public Service a number of agencies have implemented initiatives to help embed innovation at an organisational level. A prominent example is the Department of Foreign Affairs and Trade’s innovationXchange which has been established to catalyse and support innovation across the Australian aid program, however many other agencies have experimented with a range of approaches for introducing and supporting innovation. There are also a number of other government policies or initiatives which are also helping to drive innovation within the public service, including the digital transformation agenda, in addition to capability and functional reviews of major agencies.</p> <p>The Innovation Australia Board is an existing independent statutory body established to run innovation and venture capital programmes that support industry innovation. The responsibilities of the Innovation Australia Board are</p>	

Public sector governance mechanisms	Current position	Any other comments
	currently being amended to address Australia's science and innovation needs more clearly.	

Appendix A Questionnaire on structural policies and innovation

Table A – Economy context (Optional)

Economy Context Questions	Current position	Any other comments
<p>Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i></p>	<p>Brunei Darussalam’s economy is dependent on the production and export of oil and gas. Therefore, the main challenge is the diversification of the economy.</p> <p>In order to address this challenge, a new long-term development framework was formulated, for a 30-year period which began in 2007. The Brunei Government created a clear set of national long-term development plans, including the ‘Brunei Vision 2035’ which outlines Brunei Darussalam’s long-term vision – the Outline of Strategies and Policies for Development (OSPD). There are twelve main strategies – education, economics, security, institutional development, local business development, infrastructure development, social security, the environment, land use, religion, communication and info-communication, and health – each of which are supported by Policy Directions; and the National Development Plan (RKN) 2007-2012 – The first of six five-year plans to reach the goals of ‘Brunei Vision 2035.’</p> <p>Brunei Darussalam is currently implementing the second of the five-year plan (2012 – 2017), also known as its tenth national development plan. The main theme of the plan is “knowledge and innovation, increase productivity, and accelerate economic growth”. It outlines the importance of innovation in enhancing overall productivity hence generating higher levels of economic growth. In terms of structural reforms and innovation policies, several programmes have been initiated by various government agencies, such as: -</p> <ul style="list-style-type: none"> • Improving the business environment by reducing the procedures to start a business; 	

¹ NZIER report (March 2015) to APEC 2015 Economic Report (AEPR) - The role of structural policies in innovation

	<ul style="list-style-type: none">• Increasing the access to financing and capital for companies, particularly SMEs through several channels such as business grants, SME financing, seed funding and venture capital;• Increasing the government's research and development (R&D) spending as well as participating in R&D cost sharing with private companies;• Enhancing the facilities in the incubation centre;• Building the legal and financial infrastructures for the establishment of capital market;• Enhancing intellectual property rights through the establishment of the Brunei Darussalam Intellectual Property Office (BruIPO);• Providing various human resource development programmes from entrepreneurship modules and schemes at colleges and universities to accounting and financial workshops for entrepreneurs and start-ups;• Improving the governance of corporate entities through structured enterprises programmes;• Setting up an investment holding company to improve the governance and manage the investment activities of government linked companies;• Setting up competition law (Competition Order).	
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Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</i></p>	<p>In general, the regulatory system permits alternative approaches and solutions. In practice, this flexibility is used to adapt to the dynamic current challenges, the development of innovation through proven products and successful approaches.</p> <p>In the case of the ICT industry, innovation is continuously encouraged at different levels in the regulatory system in the ICT industry. This includes:</p> <ul style="list-style-type: none"> - Adaptation to the best practice in regulatory sphere - Facilitate introduction of latest network technology and gadgets - Promote market innovation in terms of new products, features and applications - Encourage skill development: from basic to managing start-ups (SME development) - Benchmarking against the regional market practices for regulations and ICT development <p>AITI has established a technology neutral approach towards its regulatory system which allows for innovation such that the industry is free to use their preferred technologies and solutions in delivering telecommunications services. Stakeholders' engagement is a regular practice to manage business continuity while managing change through innovations.</p>	
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification programme in place and if so how comprehensive is it? Also, is any administrative simplification programme linked to programmes to reduce corruption?</i></p>	<p>The simplification of administrative processes is under the purview of each ministry. However, there are instances of inter-ministerial collaboration where necessary, such as in the case for the Ease of Doing Business (EoDB).</p> <p>There is a national steering committee for the EoDB which is led by the Ministry of Industry and Primary Resources (MIPR).</p>	

	<p>As an example for starting a business, the MOD is also working in conjunction with the MIPR to incorporate the Business Licensing System into the already established single window application network set up by the MIPR.</p> <p>As for the construction industry, in supporting the EoDB, MOD has streamlined procedures and processes for a more efficient service by the Authority for Building Control and Construction Industry (ABCI). ABCI, through the Development Control Section, is also in the process of introducing an online submission system for building and development applications in the immediate future.</p> <p>AITI has changed some of its processes that previously required approval to a more simple process of registration for equipment. In addition, a new class licence regime (for Service license category) will soon be introduced to relax the requirement for some of smaller services.</p> <p>In the public sector, Quality Control Circles (QCC) are being implemented to improve the administrative processes within the government.</p> <p>Apart from QCC, there is a government wide initiative called the e-Government initiative that aims to simplify government processes through the use of IT. This initiative includes the establishment of the E-Government National Centre (EGNC) as a centralized organization that oversees the development of IT personnel, centralize procurement of IT equipment and provides common Government-wide applications and shared IT Services among all Ministries. Services such as network infrastructure and email systems have been consolidated by EGNC as a means to reduce duplication, strengthen security and increase the efficiency of service delivery by the government.</p> <p>EGNC has also funded the Brunei Solutions Development Centre (BSDC) to assist in delivering ICT projects quicker through an agile development methodology. Applications developed through BSDC will first look at the business process and make recommendations for optimisation before any system or application is built. Besides that, EGNC also maintains an Open Data website that makes available all public data collected and released by government agencies. This data can be freely downloaded,</p>	
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	<p>processed, and/or analysed by the user to solve problems, attain better-informed decisions, produce knowledge, inspire new ideas, or stimulate economic growth.</p> <p>The government has also recognised the importance of simplifying the registration process in gaining access to government services for the convenience of citizens and businesses. Through the one-time registration of an E-Darussalam account, users will have access to various government services provided by Ministries, such as application for government vacancies and the renewal of road tax as well as driving license, without the need for registering for the services separately.</p> <p>The Ministry of Finance (MOF) has also provided significant e-Government initiatives to help facilitate business and trade in the country. These include The Brunei Darussalam National Single Window (BDNSW) for providing effortless trade documentation and a one-stop online resource for customs declaration; and Brunei’s online Registry of Companies and Business Names (ROCBN) which allows a business owner to incorporate a new company in just one day.</p>	
<p>Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. <i>Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any adverse impact on competition and hence innovation?</i></p>	<p>Regulatory Impact Assessments are currently undertaken at sectoral level. However, sector regulators aim to provide a competitive environment. For the ICT industry, for example, AITI engages and consults the industry players and consumers when formulating new policies or reviewing existing ones. This is aimed at ensuring open and fair competition in the ICT market, so that both consumers and providers benefit from the new policies. AITI benchmarks itself with other regulators in the region in order to keep itself updated with the current technological development and innovation.</p>	
<p>Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. <i>How easily can skilled people move between firms?</i></p>	<p>Movement of skilled labour between firms within Brunei is generally unrestricted. The Department of Labour does not place any undue restrictions on the ability of skilled migrant workers to move between companies in Brunei Darussalam. Any private company seeking to employ foreign workers (skilled or non-skilled) must obtain a valid foreign worker recruitment license from the Department of Labour – where each license will include an approved quota or fixed number of workers that may be</p>	

	<p>recruited for specific positions relevant to the scope of work of the company in question.</p> <p>To arrange for the transferring for skilled foreign workers between companies:</p> <ul style="list-style-type: none">• Internal interviews are assumed to have been conducted between the employee and interested employer – whereby all parties have confirmed their acceptance and established the suitability of that employee to the vacant occupation in question;• The interested (new) employer must complete all necessary documentation to facilitate the relevant transfer, which would include a transfer form and a work pass recommendation renewal form;• The abovementioned documents should be endorsed by the employee, the current employer as well as the incoming (new) employer;• All intentions to transfer a foreign worker will be checked by the Department of Labour to ensure that:<ul style="list-style-type: none">a) only a skilled worker is transferred employed in a professional category within that company’s labour license and into not an unskilled occupation category that may not be suitable to that workers particular qualifications;b) there is not more of decrease in salary of 50% without an agreement from employee himself/herself; andc) where there is an increase in salary of more than 50%, the Department of Labour may request that the employer source local talent.	
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Table C - Competition policy

Competition policy mechanisms	Current position	Any other comments
<p>Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other. <i>How does competition policy deal with protection of consumers? Does competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and dynamic efficiency?</i></p>	<p>Competition law has just been recently enacted and preparation works to enforce the law is still on-going. The objective of our Competition Order is to promote economic efficiency, economic development and consumer welfare. There are three main prohibitions of the Competition Order which are:</p> <ul style="list-style-type: none"> • Anti-competitive agreements; • Abuse of dominant position; and • Mergers that substantially lessen competition. <p>Competition law provides consumer protection by prohibiting anti-competitive practices and promoting competition amongst business which will, in the long run, result in lower prices / more competitive pricing and wider range of goods and services of higher quality.</p>	
<p>Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to fact based rule of reason analysis. <i>Does the competition authority(s) have the legal authority to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i></p>	<p>For Brunei, the Competition Authority does have the legal authority. However, the Competition Authority will be established soon and the relevant capabilities will be developed in due time.</p> <p>In the ICT sector, considerations such as gains arising from technical or efficiency sourced through dynamism would depend upon the notified primary legislation and sector specific competition code.</p> <p>Our application in introducing sectoral Competition Code is model based on the generic technical and dynamic efficiency present in the telecoms and broadcasting market. Through competition, we believe that market players will become more efficient.</p>	

Competition policy mechanisms	Current position	Any other comments
	<p>AITI will be introducing a sectoral Competition Code that is applicable to the market players of the telecommunications and broadcasting market.</p>	
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or sub-national government?</i></p>	<p>Like many other jurisdictions, the Brunei Competition Law extends to all goods and services markets, except for those activities related to services of general public interest, public policy and goods and services regulated by other competition law or regulations. This can be found in the Third Schedule of Brunei Competition Order 2015.</p>	
<p>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. <i>Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective decision involving other Ministries? How is any independence established and safeguarded?</i></p>	<p>The competition law has provisions to set up a Commission which is made up of a panel of 12 members not including the Minister. The Commission will be represented by members of the public, private sector as well as academia. This commission will be responsible for decision making in competition cases in a collective manner.</p> <p>The decisions made the Commission can be appealed to the Competition Appeal Tribunal. A Competition Appeal Tribunal will be set up consisting of not more than 30 members appointed, from time to time, by the Minister on the basis of their ability and experience in industry, commerce or administration or their professional qualifications or their suitability otherwise for appointment.</p> <p>For the case of the sectoral Competition Code for the Telecommunication and Broadcasting Services, AITI will be the competition authority and will have the enforcement power to enforce the Code through the Telecommunication Order and the Broadcasting Order.</p>	

Competition policy mechanisms	Current position	Any other comments
<p>There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. <i>Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets with potential for innovation?</i></p>	<p>The Competition Authority will certainly focus its attention on least competitive markets with potential for innovation.</p> <p>As a young competition authority which is about to be established, it is in our plan to focus our effort on socializing and generating competition culture. This will begin with general awareness follow by key markets/sectors which are significant to our economy and /or consumers' daily life, which may include relevant <i>least competitive markets</i>, if any.</p>	
<p>There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i></p>	<p>Openness to trade and investment is a trade policy issue which can have cross-cutting concerns. The scope of our national competition law is primarily to prohibit anti-competitive behaviours to maintain well-functioning markets. This is an important element to facilitate and promote openness to trade and investment in the long run.</p> <p>For the telecoms market, our approach to trade and investment is open and subject to the policies set by the Ministry of Communications.</p>	

Table D - Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i></p>	<p>Brunei Darussalam has introduced a Code of Corporate Governance in 2014. It is strongly believed that companies that are managed better, perform better. Better processes add value to the business, help it build its reputation and ensure its reputation and ensure its long-term continuity and success. To encourage a business climate that is pro-business and pro-investment, corporate governance will promote investor confidence which will be important for companies when developing new sources of finance for expansion and growth.</p> <p>Among the principles highlighted in the Code of Corporate Governance are as follows:</p> <ul style="list-style-type: none"> • Principle 2: The company should establish an effective board to lead and control the company. The Board is collectively responsible for the long-term success of the company. The Board works with management to achieve its objective and management remains accountable to the Board. • Principle 3: The size and composition of the Board should reflect the scale and complexity of the company's activities. • Principle 5: The Board is responsible for risk oversight and should maintain a sound system of internal control to safeguard shareholder's investment and the company's asset. • Principle 6: 	

	<p>Companies should actively engage their shareholders and put in place an investor relations policy to promote regular, effective and fair communication with shareholders.</p> <ul style="list-style-type: none"> • Principle 10: The Board should present a balanced and understandable assessment of the company's position and prospects for external shareholders and establish a suitable programme of stakeholders' engagement. 	
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital funds and direct capital raising from the public. <i>Do your economy's financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</i></p>	<p>In the absence of stock market for raising capital from public, the firms' innovation in investment are usually done via direct financing through the banks.</p> <p>The capital markets in Brunei Darussalam are still in its infant stage. The majority of investment instruments offered are foreign investment products such as recognised foreign mutual funds and shares of foreign companies. While there have been corporate <i>sukuk</i> issued in the past, companies mainly raise funds through the bank loans. Nonetheless, the Monetary Authority of Brunei Darussalam (AMBD) is undertaking several initiatives to facilitate and encourage the use of alternative means of capital raising such as the establishment of a stock exchange.</p>	
<p>The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. <i>Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing?</i></p>	<p>The Securities Markets Order, 2013 makes provision for the offering and sale of securities in Brunei Darussalam and has no restrictions for companies from taking on private equity partners. The AMBD is also working on establishing a stock exchange which may include a second board to allow for fund raising by SMEs.</p>	

Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However, these also allow poor managers the opportunity to repeatedly start businesses that fail with losses to shareholders and creditors. *How is the balance struck between enabling risk taking and protecting shareholders and creditors?*

There are provisions in the Banking Order, 2006 and Islamic Banking Order, 2008 which limit the company (a bank) from taking excessive risks. Amongst the provisions are:-

- 1) Limits on a single borrower which limits concentration risk;
- 2) Limits on loans secured by immovable properties;
- 3) Limits on commercial investments etc.
- 4) Payment of dividends require approval from the Authority

Besides the provisions in the Banking Order, regulations are formulated from time to time to ensure excessive risks are mitigated.

However, with respect to corporate governance, as mentioned, the Code of Corporate Governance was introduced to all Financial Institutions and listed companies in the near future. One of the Principles in the Code mentions as below:-

The Board is responsible for the governance of risk. The Board should ensure that Management maintains a sound system of risk management and internal controls to safeguard shareholders' interests and the company's assets, and should determine the nature and extent of the significant risks which the Board is willing to take in achieving its strategic objectives.

That Principle will ensure the balance between enabling risk taking and protecting shareholders and creditors.

In addition, Section 141 of the Companies Act provides that no undischarged bankrupt may act as director or directly and indirectly take part of the company. Section 141A of the Companies Act also provides that the Court may make an order disqualifying a person who has been a director of a company that has at any time gone into liquidation or during which he was director for 3 years the company was insolvent, from being a director of a company for a period not exceeding 5 years.

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Table E - Public sector governance

Public sector governance mechanisms	Current position	Any other comments
<p>The rule of law implies that every citizen is subject to the law, including lawmakers themselves. Limits to the rule of law occur because of neglect or ignorance of the law, corruption, or the lack of corrective mechanisms for administrative abuse, such as an independent judiciary. <i>Does your system actively protect and enforce the property rights of different stakeholders? If so what sort of legal mechanisms are available and used?</i></p>	<p>Generally, everyone has access to legal redress when they are involved in cases of dispute concerning property. The judicial system in Brunei Darussalam is equipped with adjudicating such cases. The system is based on common law and equity. To supplement this, alternative dispute resolutions such as arbitration and mediation are also available</p>	
<p>State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. <i>In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are there SOEs explicitly tasked with encouraging private sector innovation?</i></p>	<p>In Brunei Darussalam, SOEs play a crucial role in economic development and economic diversification. The Government creates and maintains SOEs to provide strategic and essential goods and services the private sector is unable to deliver with the view to develop them into fully private commercial entities. SOEs also help the Government to attract foreign direct investment thereby creating businesses as well as job opportunities.</p> <p>All companies and businesses in Brunei Darussalam enjoy a level playing field wherein SOEs receive the same treatment as private entities. SOEs receive no benefits arising from their government ownership. Some SOEs engage in pioneering industries in the context of Brunei Darussalam that would be considered private sector innovation in and of themselves.</p>	

Public sector governance mechanisms	Current position	Any other comments
<p>A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. <i>Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure?</i></p>	<p>A National Committee on Science and Technology (S&T) was set up in 1994. The Chair of this committee is the Minister of Development. Its terms of reference are as follows:</p> <ul style="list-style-type: none"> • Regulating the development of S&T in Brunei Darussalam; • Formulating policy towards expansion of S&T in Brunei Darussalam; • Developing physical infrastructure for expansion of S&T in Brunei Darussalam. <p><u>Knowledge infrastructure</u></p> <p>In terms of knowledge infrastructure, there are state universities such as Universiti Brunei Darussalam and Institut Teknologi Brunei. Research institutions such as the Center for Strategic and Policy Studies also contribute.</p> <p><u>Innovation infrastructure</u></p> <p>There are in place some institutions that make up the innovation infrastructure such as the BruIPO (patents office) and standards setters.</p> <p>These components to the innovation system however are not seen as a collective. This leaves much room for improvement on the collaboration between all three parts of the system.</p>	
<p>Strategies need to respond to economy context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks. <i>What are the current areas of focus for</i></p>	<p>The current focus would be in trying to get the basic building blocks of the national innovation system as well as coordinate the three parts of the national innovation.</p> <p>The Brunei Research Council, a state run fund for research, does not focus on specific sector but rather focuses on research that can be commercialised easily.</p>	

Public sector governance mechanisms

Current position

Any other comments

innovation policy? What are the future directions for innovation policy?

Appendix A Questionnaire on structural policies and innovation¹

Table A – Economy context (Optional)

Economy Context Questions	Current position	Any other comments
Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i>		

¹ NZIER report (March 2015) to APEC 2015 Economic Report (AEPR) - The role of structural policies in innovation

Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</i></p>	<p>Performance-based regulation is embedded in Canada’s Cabinet Directive on Regulatory Management (CDRM). It applies to all federal departments, agencies, and entities over which the Federal Cabinet has authority relating to regulation making. It is Canada's most powerful regulatory policy document and mandatory guidelines which all government departments must follow throughout the regulatory cycle.</p> <p>According to the CDRM, the government advances the efficiency and effectiveness of regulation by: ensuring that the benefits of regulation justify the costs; focusing human and financial resources where they can do the most good; and demonstrating tangible results.</p> <p>In particular, the CDRM requires departments to: consider potential alternatives to regulation, including voluntary standards, information disclosure, and guidelines, and whether outcome or performance based approaches would be suitable; and to specify, particularly for technical regulations, regulatory requirements in terms of their performance rather than their design. The CDRM also requires departments to assess the results of performance measurement and evaluation to identify regulatory frameworks in need of review. The extent to which departments and agencies use the performance based reporting (PBR) approach to perform their regulatory function is not known. However, some departments have, in their regulatory programs, adopted the PBR or similar approaches—or have at least included the applicability of the PBR approach to their business lines.</p>	
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification programme in place and if so how comprehensive is it? Also, is any administrative</i></p>	<p>Through the Federal Government’s “Red Tape Reduction Action Plan”, Canada has introduced fundamental, systemic reforms to the federal regulatory system. This includes:</p> <ul style="list-style-type: none"> •A One-for-One Rule, which requires regulators to offset new administrative burden costs imposed on business with equal reductions in administrative 	

<p><i>simplification programme linked to programmes to reduce corruption?</i></p>	<p>burden from the stock of existing regulations. They must also remove a regulation when a new one increases administrative burden costs on business. In April 2015, Canada’s Red Tape Reduction Act—an act to control the administrative burden that regulations impose on businesses— became law.</p> <ul style="list-style-type: none"> • In February 2012, a requirement called “Small Business Lens” came into effect, obligating regulators to consider small business realities and consult early with small businesses in designing regulations. The Small Business Lens is ensuring regulators take into account the impact regulations have on small business. This assessment includes the publication of a 20-point checklist that drives efforts to minimize burden on small business, avoidance of bureaucratic duplication and the communication of regulatory requirements in clear, plain language. •The publication of departmental Forward Plans, which highlight upcoming regulatory changes over a 24-month period also provides businesses with critical predictability. •Service Standards are setting targets for the timely issuance of high volume licences, certifications and permits. Regulators will also establish a feedback mechanism for business users in these areas. •Through Canada’s Administrative Burden Baseline Initiative, regulators develop and publicly post inventories of requirements in regulations that impose administrative burden on business. This is updated annually. •An Annual Scorecard published by Canada’s Treasury Board Secretariat reports publicly on implementation of systemic reforms, particularly the One-for-One Rule, Small Business Lens and Service Standards. This year, the second Annual Scorecard showed that the cumulative results of government-wide implementation of the One-for-One Rule between 2012–14 resulted in \$21 million per year in net administrative savings in burden to businesses, 263,000 hours saved for business per year, and 19 net fewer regulations. 	
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	<p>http://www.tbs-sct.gc.ca/rtrap-parfa/report-rapport/2013-14/asr-featb-eng.asp</p> <p>With respect to corruption, Canada's Cabinet Directive on Regulatory Management calls for good regulatory practices that includes promoting a fair and competitive market economy, transparency, accountability, and public scrutiny.</p>	
<p>Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. <i>Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any adverse impact on competition and hence innovation?</i></p>	<p>Canada has a "RIAS Writers' Guide" to help departments and agencies better understand the regulatory impact analysis requirements and to improve the quality of regulatory impact analysis statements. As per this guide, regulations that have been assessed as medium or high impact must include a statement on the impacts of the regulation on administrative burden, competition, and consumers.</p> <p>According to the Cabinet Directive on Regulatory Management (CDRM), when developing the regulatory option that maximizes net benefits, departments and agencies are to ensure that regulatory restrictions on competition are fair, limited, and proportionate to what is necessary to achieve the intended policy objectives. In addition, the CDRM requires that regulators take into account the impact regulations have on small business and demonstrate that the recommended option minimizes the regulatory burden on them.</p>	
<p>Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. <i>How easily can skilled people move between firms?</i></p>	<p><u>Improving Foreign Credential Recognition</u></p> <p>The Government of Canada works with the provinces and territories and other stakeholders to improve foreign credential recognition. This partnership has led to the development of the Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications, which is streamlining foreign credential recognition for priority occupations, including doctors and dentists.</p> <p>Under the framework, internationally trained workers who submit an application to be licensed or registered to work in certain fields, along with all</p>	

fees and relevant documents, will be advised within one year how their credentials compare to Canadian standards. They may also be advised of additional requirements or be directed to alternative occupations that would benefit from their skills and experience.

Service standards have been established so that internationally trained professionals in 14 priority occupations can have their credentials assessed within one year, anywhere in Canada. The first set of 14 priority occupations were: architects, engineers, engineer technicians, accountants, medical lab technicians, occupational therapists, pharmacists, physiotherapists, registered nurses, practical nurses, dentists, medical radiation technologists, physicians, and teachers. An additional 10 priority occupations were announced in July 2014: geoscientists, carpenters, electricians, heavy duty equipment technicians, heavy equipment operators, welders, audiologists and speech language pathologists, midwives, psychologists, and lawyers

Government of Canada Foreign Credential Recognition Programs and Services

The Foreign Credential Recognition (FCR) Program aims to improve the integration of internationally trained workers into the workforce. The program provides funding to and works with the provinces and territories and other stakeholders—including regulatory bodies, post-secondary institutions and employers—to implement projects that facilitate the assessment and recognition of qualifications acquired in other countries.

Canada has recently carried out a Foreign Credential Recognition Loans Pilot Project, which was delivered in cooperation with community organizations, to help internationally trained professionals cover the costs of having their credentials recognized, so they can find jobs that best suit their skills and experience. The Government has now committed to making this project permanent, ensuring continued access to loans for newcomers to Canada. Removing financial barriers to the pursuit of foreign credential recognition will help foreign-trained individuals get their credentials recognized faster and obtain jobs in their fields sooner.

	<p>Canada also has a Foreign Credentials Referral Office, which provides information and path-finding and referral services, both in Canada and overseas, to help internationally trained workers have their credentials assessed quickly so they can find work faster in the fields in which they have been trained.</p> <p>Additionally, our Internationally Educated Health Professionals Initiative works with provinces, territories and stakeholders to enable more internationally educated health professionals to put their skills to work in Canada's health system.</p> <p>While improving access to labour market information and supporting worker mobility helps mitigate labour shortages and avoid skills mismatches in the short term, it also helps students and newcomers make more informed choices so that they train for jobs that will be in demand.</p> <p><u>Intra-company Transferees</u></p> <p>Canada also has intra-company transferee (ICT) positions that provide for facilitated entry of foreign nationals to enter Canada to work when being transferred from related entities. The provisions require that there be a qualifying relationship between the entities (i.e., common ownership), previous work experience with the sending entity, and work as an executive, senior manager or as an employee with specialized knowledge (i.e., advanced level of expertise and proprietary knowledge). Qualified ICTs are able to obtain a work permit without the need for a Labour Market Impact Assessment and are able to work in Canada for up to seven years in executive and senior manager positions and up to five years for those ICTs with specialized knowledge.</p>	
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Table C - Competition policy

Competition policy mechanisms	Current position	Any other comments
<p>Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other. <i>How does competition policy deal with protection of consumers? Does competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and dynamic efficiency?</i></p>	<p>Canada’s Competition Act includes a purpose clause, which sets the overarching goal of the Act. Among other objectives, the purpose of the Act is to “provide consumers with competitive prices and product choices”. In this sense, enforcement of the Competition Act and application of competition policy has this objective in mind.</p> <p>The Competition Act contains provisions whose application is directly related to consumer protection. These provisions include legal obligations for businesses and persons in respect of false or misleading representations, unsubstantiated performance claims, deceptive telemarketing practices, and mass marketing fraud. Indirectly, the Competition Act’s criminal price-fixing provisions have also been applied to markets where a direct impact on consumers was at issue.</p> <p>In terms of economic efficiency, a key purpose of the Competition Act is directly to “promot(ing) efficiency and adaptability of the Canadian economy”. Further, provisions that deal with abuses of market power, those that relate to mergers explicitly, consider gains in efficiency, including allocative, dynamic, and productive efficiencies in the relevant markets. At the same time, losses to efficiency are examined in the context of anti-competitive behaviour or effects.</p>	
<p>Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to fact based rule of reason analysis. <i>Does the competition authority(s) have the legal authority to take into account gains in technical and dynamic efficiency? Does the</i></p>	<p>Canada’s Competition Act includes the consideration of gains in efficiency as a defence for certain anticompetitive behaviours or mergers. The Competition Tribunal—Canada’s adjudicative body that hears and decides certain applications under the Competition Act—must consider the gains in efficiency when making orders under the Competition Act in respect of an alleged anti-competitive merger or other competitor collaboration.</p> <p>Recognizing the Competition Act’s emphasis on economic efficiency both in the purpose clause and in specific clauses relating to certain reviewable matters,</p>	

Competition policy mechanisms	Current position	Any other comments
<p><i>authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i></p>	<p>the Competition Bureau—the investigative body that enforces the Competition Act—routinely considers gains in efficiencies when deciding to apply for an order from the Competition Tribunal.</p> <p>The Competition Bureau employs both internal economists, external experts (e.g. economists, accountants, and industry experts), and consults with foreign competition authorities (where applicable) in its analysis of gains of efficiency. The Competition Bureau’s approach to efficiencies is guided by the efficiency defence found in the Competition Act. This is an explicit defence for anti-competitive mergers or other competitor collaboration, where cognizable efficiencies outweigh anti-competitive effects that force the Competition Bureau to consider technical and dynamic efficiency, even in anti-competitive mergers or collaborations that offer small amounts of efficiency gains.</p>	
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or sub-national government?</i></p>	<p>Most businesses and sectors of the economy are subject to the Competition Act. The Competition Act also applies to Crown corporations (state owned enterprises) engaged in commercial activities in actual or potential competition with other businesses. Notwithstanding the broad application of the Competition Act, exemptions to its application do exist under the Competition Act itself and other federal statutes.</p> <p>These include, but are not limited to, exemptions:</p> <ul style="list-style-type: none"> •for certain business activities (e.g. securities underwriting, amateur sport and collective bargaining); •for proposed merger transactions involving a federally-regulated financial institution where the Minister of Finance has certified the merger to be in the public interest; •for mergers involving a transportation undertaking where the Minister of Transport has certified the merger to be in the public interest; •to address temporary emergencies and commitments in international 	

Competition policy mechanisms	Current position	Any other comments
	<p>agreements;</p> <ul style="list-style-type: none"> •for a variety of other Competition Act specific exemptions to address issues such as affiliation between businesses, efficiencies, the application of intellectual property laws as well as the regulated conduct defence; and •for mergers of transportation undertakings that are approved by the Governor-in-Council upon recommendation of the Minister of Transport. 	
<p>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. <i>Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective decision involving other Ministries? How is any independence established and safeguarded?</i></p>	<p>The Bureau is an independent law enforcement agency. The Commissioner reports to the Deputy Minister of Industry for administrative and financial purposes, and reports to Parliament via the Minister of Industry in respect of its independent law enforcement role.</p> <p>The Commissioner and the Bureau do not make final and binding decisions on whether the Competition Act has been breached. Rather, the Commissioner initiates and litigates civil cases or recommends that the Public Prosecution Service of Canada lay charges, and initiate criminal cases. Any internal or investigative decisions the Commissioner makes are not published. The Competition Act requires that inquiries be conducted in private and restricts the communication of confidential information (see subsection 10(3) and section 29 of the Competition Act).</p> <p>The Competition Act grants neither the executive, nor the Minister of Industry, power to decide individual competition law cases under the Act in the public interest. In certain sectors of the economy, however, other ministers can base decisions on the public interest. These decisions can, in turn, affect the type of relief available under the Competition Act.</p> <p>The Commissioner is solely responsible for administering and enforcing the Competition Act, which is a law of general application applicable across industry sectors. However, depending on the circumstances of a case, the Commissioner may share concurrent jurisdiction over a business practice or transactions with</p>	

Competition policy mechanisms	Current position	Any other comments
	regulatory bodies that administer sector-based legislation.	
<p>There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. <i>Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets with potential for innovation?</i></p>	<p>The Competition Act applies broadly to all sectors of the economy, and no one industry is targeted directly. The Competition Bureau, in setting its priorities, will periodically focus its efforts on certain industries or markets that could benefit from enhanced competition to drive innovation, or that have tangible benefits for Canadian consumers.</p> <p>Recent enforcement action in the telecommunications sector, for example, highlights the Competition Bureau’s strategic focus on the digital economy. The Competition Bureau has also undertaken advocacy efforts to reduce regulatory barriers to competition to encourage the growth of disruptive technologies that deliver competitive alternatives in markets that lack innovative competition.</p>	
<p>There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i></p>	<p>International trade is an indispensable part of promoting and fostering healthy competitive markets. When trade barriers are lifted, firms can compete in previously inaccessible markets, and as a result, consumers have a wider choice of products and services to choose from. This in turn forces businesses to develop ever more attractive product offerings and prices, for fear of losing their customers to a more efficient overseas competitor.</p> <p>This increase in competition offers many benefits for consumers, including better products, greater choice and convenience, and lower prices.</p> <p>The benefits of trade liberalization however are offset by anticompetitive business conduct. For Canadian firms that aim to compete in foreign markets or for Canadian consumers seeking to benefit from liberalized trade, practices such as cartels, exclusive contracts to tie up suppliers or customers, or a host of</p>	

Competition policy mechanisms	Current position	Any other comments
	<p>other anti-competitive conduct present real obstacles to realizing the benefits of free trade for Canada and Canadian businesses and investors.</p> <p>The competition policy tools Canada uses to support its openness to trade are threefold:</p> <p>i) Agreements</p> <p>Dating back to the North American Free Trade Agreement in 1994, Canada has sought to include a competition policy chapter in all of its comprehensive free trade agreements. The competition policy commitments ensure that, at a minimum, the parties:</p> <ul style="list-style-type: none"> •Seek to adopt or maintain measures to proscribe anticompetitive business conduct; •Ensure that these measures are enforced in accordance with the principles of transparency, procedural fairness and non-discrimination; •Cooperate on cross-border enforcement matters; and •Exempt competition policy matters from all forms of international dispute settlement. <p>ii) Cooperation</p> <p>To help Canada and the Competition Bureau better work with our international counterparts, we develop and sign cooperation instruments ranging from legally binding state-to-state cooperation agreements to non-binding instruments such as agency-to-agency cooperation arrangements and memoranda of understanding. These instruments serve two functions:</p> <ul style="list-style-type: none"> •First, they recognize the importance of cooperation when dealing with cross-border matters of shared interest; and •Second, they act as mechanisms for greater communication on topics of mutual interest, including each agency’s best practices and experiences in 	

Competition policy mechanisms	Current position	Any other comments
	<p>competition law and policy.</p> <p>iii) Convergence</p> <p>Canada and the Competition Bureau are actively involved in the work of international fora such as the International Competition Network, the Organisation for Economic Cooperation and Development (OECD), Asia-Pacific Economic Cooperation (APEC), United Nations Conference on Trade and Development (UNCTAD) and other trade, economic and development organizations. On competition policy matters, these fora are critical for the development of best practices endorsed by the international community. Canada also uses these fora as platforms for training and suasion of foreign partners and to generate discussions on topics of mutual interest. This work culminates in 'soft convergence' whereby our trading partners are encouraged to consider best practices as models in structuring their own competition enforcement regimes.</p>	

Table D - Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i></p>	<p>Corporate governance is recognized as contributing to stability in the financial markets, investment and economic growth. Good corporate governance can instil competition and corporate performance, which could include investing in innovation.</p> <p>The Canada Business Corporations Act (CBCA) requires directors to act honestly and in good faith with a view to the best interests of the corporation; and exercise the care, diligence and skill that a reasonably prudent person would exercise in comparable circumstances. If directors breach this duty to the</p>	

	<p>corporation, shareholders could bring court actions to hold the directors liability to the corporation.</p> <p>The CBCA also permits a shareholder holding not less than 5% of shares (minority shareholder) to requisition a shareholders meeting. Shareholders can, at the meeting, raise issues that the shareholder is objecting to (e.g. to replace the board, amend the corporation bylaws, to seek to require the board to replace the CEO).</p> <p>This governance structure seeks to ensure that directors are accountable to shareholders and that shareholders have democratic participation and oversight of corporate management.</p>	
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital funds and direct capital raising from the public. <i>Do your economy's financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</i></p>	<p>Canada has vibrant capital markets that allow businesses of all sizes and at all stages of development to access funding for growth and innovation. Canadian businesses raise external equity funding from investors in both private and public markets.</p> <p>Private capital investors in Canada, who invest by purchasing equity shares, include:</p> <ul style="list-style-type: none"> • Angel investors; • Venture capital firms; • Institutional investors, including pension plans; • Labour-sponsored venture funds; and, • Some government-owned financial institutions. <p>Entrepreneurs in Canada typically capitalize new business ventures with personal resources. As their businesses outgrow the capacity of self-financing, entrepreneurs usually first seek external financing from family and business associates. The next stage of growth typically requires the participation of "angel" investors who expect a reasonable risk-adjusted rate of return. Larger risk capital investments in Canada are often sought from venture capital and</p>	

	<p>private equity firms. Investments in Canadian private companies are most commonly made through convertible preferred shares or subordinated debt convertible into common shares and are often accompanied by warrants to acquire common shares.</p> <p>If the desired financing is not available in the private market, the business may choose to initiate an initial public offering (IPO) on a recognized stock exchange. Canadian public equity markets provide funding access to both larger, established companies and to small and medium enterprises with shorter track records. Companies can raise equity in Canada through the Toronto Stock Exchange, the TSX Venture Exchange and the Canadian Securities Exchange.</p>	
<p>The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. <i>Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing??</i></p>	<p>This issue is regulated under provincial securities regulation.</p>	
<p>Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However, these also allow poor managers the opportunity to repeatedly start businesses that fail with losses to shareholders and creditors. <i>How is the balance struck between enabling risk taking and protecting shareholders and creditors?</i></p>	<p>While many legislative and institutional factors can influence entrepreneurship and innovation (taxation, corporate law, direct government funding), insolvency law can also play a crucial role in creating favourable conditions for creativity and risk taking. Canada's insolvency laws mitigate entrepreneurial risks, by allowing for the discharge of unsustainable debts and the restructuring of the debts of distressed but viable enterprises in appropriate circumstances. Canada's insolvency laws also recognize creditor rights and establish clear rules to rank the priority of competing claims, which provides investors and lenders with commercial certainty in the event of default.</p>	

Table E - Public sector governance

Public sector governance mechanisms	Current position	Any other comments
<p>The rule of law implies that every citizen is subject to the law, including law makers themselves. Limits to the rule of law occur because of neglect or ignorance of the law, corruption, or the lack of corrective mechanisms for administrative abuse, such as an independent judiciary. <i>Does your system actively protect and enforce the property rights of different stakeholders? If so what sort of legal mechanisms are available and used?</i></p>	<p>In Canada, judicial and, in some cases, extra-judicial mechanisms are used for the protection of property rights.</p>	
<p>State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. <i>In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are there SOEs explicitly tasked with encouraging private sector innovation?</i></p>	<p>The total book equity value of federal Crown corporations is \$36B CDN and total revenues (excluding appropriations) are \$29B for 2013/14. Since these organizations are not publically-traded companies, it is not possible to calculate the total dollar market value of all of the organizations' outstanding shares. As a result, Canada is providing the total book equity value consistent with the amounts presented in the Public Accounts for 2013/2014 (the Government's annual summary of its financial transactions).</p>	<p>The innovation and competition-related questions are difficult to measure/estimate since the federal Crown corporations operate at arm's length from government with specific mandates and purposes which differentiate them from the public or private sector.</p>
<p>A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. <i>Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure?</i></p>	<p>Canada's lead public sector body responsible for innovation policy is the Federal Department of Industry (Industry Canada).</p> <p>Industry Canada (IC) sets the strategic direction for policies and programs that support and stimulate research, development and innovation in Canada. IC fosters an environment that is conducive to innovation and promotes scientific excellence in collaboration with Industry Portfolio partners (e.g., national research granting agencies such as the Natural Science and Engineering Council and the Canada Foundation for Innovation, and Canada's main public research organization -- the National Research Council), other government departments (science-</p>	

Public sector governance mechanisms	Current position	Any other comments
	<p>based departments and agencies) and external stakeholders from the private and public sector (e.g., Genome Canada, Council of Canadian Academies, Canadian Institute for Advanced Research, Perimeter Institute for Theoretical Physics, Institute for Quantum Computing, Ivey Centre for Health Innovation and Leadership, Mitacs Inc).</p> <p>IC also helps Canadian businesses increase research and development activities by investing in innovative projects and collaborations through repayable and non-repayable contributions. Projects supported by IC are expected to produce benefits to Canada, including generating strategic R&D investment, developing new technologies and enhancing Canadian innovation capacity and expertise.</p> <p>Further, IC regulates and provides oversight over a number of aspects of the Canadian marketplace, including trade measurement, insolvency, corporate governance including federal incorporation, competition, intellectual property, market access and consumer affairs. IC develops and administers framework statutes, regulations, policies and procedures; develops, sets and assures compliance with related regulatory reforms and standards; and consults with a variety of stakeholders and portfolio organizations.</p> <p>Furthermore, IC is responsible for federal laws relating to the investigation of anti-competitive conduct and the general regulation of trade and commerce in respect of business practices, including the review of mergers and significant foreign investments. It protects, promotes and advocates for efficient markets in a manner that encourages economic growth and innovation, providing consumers and businesses with competitive prices and increased product choices.</p> <p>IC sets legislative and policy frameworks to encourage competition, innovation, private sector investment in digital infrastructure, confidence</p>	

Public sector governance mechanisms	Current position	Any other comments
	in the online marketplace, and greater adoption of information and communications technologies by business.	
<p>Strategies need to respond to economy context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks. <i>What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</i></p>	<p>In 2007, Canada launched its Science and Technology (S&T) Strategy, Mobilizing Science and Technology to Canada’s Advantage, setting out a comprehensive plan to make Canada a leader in S&T, research and innovation.</p> <p>Since then, Canada has made significant progress in fostering entrepreneurs and new businesses. The federal government has provided more than \$11 billion in new resources to support basic and applied research, talent development, research infrastructure and innovative activities since 2006. In the past seven years, however, the global landscape has changed, and a renewed strategy was required to provide a framework that more adequately reflects today’s economy and guides federal priorities to promote Canada’s strengths in research.</p> <p>Seizing Canada’s Moment, Canada’s 2014 updated strategy, builds on the foundation laid out in the 2007 framework, but goes further to ensure Canada remains well-positioned in the global arena for excellence, talent and wealth. It continues to be guided by the four important core principles: promoting world-leading excellence, focusing on priorities, fostering partnerships and enhancing accountability.</p> <p>Seizing Canada’s Moment sets out the following objectives:</p> <ul style="list-style-type: none"> •People: We will develop, attract and retain highly-qualified and skilled individuals, as well as top experts and leaders needed for Canada to thrive in the global knowledge economy. We will enhance opportunities for innovators and researchers whose ambitions and creativity generate discoveries that improve social and economic outcomes for Canadians. 	

Public sector governance mechanisms	Current position	Any other comments
	<ul style="list-style-type: none"> •Knowledge: We will strengthen support for excellence across discovery-driven and applied activities by investing in research and infrastructure. We will continue to support federal science-based institutions to perform research to deliver on regulatory, public policy and operational mandates such as public health, responsible resource development, environmental protection, transportation safety and public security. We will make federally funded research more open and transparent to the public and to end users. •Innovation: We will help bring new ideas and knowledge to market by stimulating more demand for innovation from firms of all sizes and influencing more innovation-focussed business strategies. We will make it easier for businesses to work with partners, including government, in the innovation system and foster collaborations based on industrial-demand that encourage newly-emerging as well as established industries to look for solutions from Canada’s research institutions. We will build on Digital Canada 150, a Federal Government plan to guide our digital future. We will emphasize the need for firms to protect their intellectual property and enhance Canada’s access to global markets. 	

Appendix A Questionnaire on structural policies and innovation

Table A – Economy context (Optional)

Economy Context Questions	Current position	Any other comments
Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i>		

¹ NZIER report (March 2015) to APEC 2015 Economic Report (AEPR) - The role of structural policies in innovation

Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</i></p>	<p><i>The Government of Chile recognizes the importance of innovation and is making an important effort to promote it. There are several teams in various parts of central government which work in coordination in order to foster innovation within the administration, such as the Ministry of Economy's special division in charge of promoting innovation or the Ministry Secretary General to the Presidency's Modernization Unit.</i></p> <p><i>There are different regulatory fields in which authorities are allowed to consider alternative approaches in their solutions. In those contexts, there are fertile grounds for boosting more innovative outcomes. Good examples of this kind of openness of solutions are the mitigation measures and remedies that can be applied in the context of Environmental Law and Competition Law.</i></p> <p><i>Moreover simplification plans have been in place for over ten years with very positive outcomes especially in the fields of one stop shops and the use of ITCs across government.</i></p> <p><i>The use of these flexible ways to proceed require, as a general rule, a statute or law that empowers the authority with the discretion and tools necessary for this purpose. Therefore, increasing the use of alternative solutions is a slow process. It is important to remark that the Government of Chile is committed to create a new unit of evaluation and coordination of regulation, whose priority will be to simplify and improve processes and regulation in order to boost innovation.</i></p>	
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification programme in place and if so how comprehensive is it? Also, is any administrative simplification programme linked to programmes to reduce corruption?</i></p>	<p><i>As mentioned before, the Government of Chile is committed to create a new special unit that will have the responsibility of coordinating and evaluating regulatory initiatives. One of the key objectives of this new unit is to advocate for the simplification of procedures and the elimination of administrative requirements and formalities that discourage innovation and productivity.</i></p> <p><i>Corruption risks are not a relevant concern in Chile. Thus, there is no simplification programmes specifically aimed to reduce corruption. Nevertheless, other programmes may have a positive impact on this issue. For example, the government is currently assessing the implementation of an on-line platform that will allow entrepreneurs to obtain all business permits required through a standardized and transparent procedure. This platform will leave behind the current system, where entrepreneurs have to carry out procedures before several administrative local authorities.</i></p> <p><i>In addition to these, and as stated in the above question, administrative simplification plans have been in place for over ten years, successfully aimed at reducing user burden, enhance</i></p>	

	<i>transparency and foster completion. Programs such as Chileatiende and Chile Compra are good examples of this.</i>	
Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. <i>Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any adverse impact on competition and hence innovation?</i>	<p><i>In accordance with Chile's SMEs Act, authorities should evaluate the economic and social cost of every new regulation that is applicable to small businesses. In practice, this norm has a low implementation rate because the authorities are not obliged to perform the evaluation.</i></p> <p><i>It is important to remark that the Government is taking a proactive approach towards the negative effects of new regulations over competitiveness. In that sense, one of the core measures of the Agenda of Productivity, Innovation, and Growth is to create a new unit that will be in charge of coordinating and evaluating all regulatory initiatives, in order to diminish the negative consequences of regulation over the performance of Chile's markets.</i></p> <p><i>Chile is aware of the importance of RIA in the design and implementation of good regulation and is one of the elements that will be evaluated in the design of the special unit that will have the responsibility of coordinating and evaluating regulatory initiatives mentioned above.</i></p>	
Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. <i>How easily can skilled people move between firms?</i>	<i>There are no major barriers for well qualified professionals to move between different firms and organizations.</i>	

Table C - Competition policy

Competition policy mechanisms	Current position	Any other comments
Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other. <i>How does competition policy deal with protection of consumers? Does competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and</i>	<p><i>Chile's Competition Act expressly states that the goal of the competition system is the promotion and defense of competition in the markets, without making any further distinction or specification. In Chile, the defense of competition has a strong orientation towards promoting economic efficiency. Nevertheless, and to a lesser extent, consumer protection is also a concern of our competition authorities.</i></p> <p><i>Historically, Chile's Competition Policy has been directed to sanction misconducts with a greater social impact, such as hardcore cartel, and behavior related to markets that are of crucial importance for society, which normally coincide with</i></p>	

Competition policy mechanisms	Current position	Any other comments
<i>dynamic efficiency?</i>	<p><i>those that have a larger impact over consumers.</i></p> <p><i>It is important to highlight that neither the National Competition Prosecutors Office (FNE) nor the Competition Tribunal have been entrusted with the role of protecting consumer rights, which falls within the function of another agency, the National Consumer Protection Service (Sernac).</i></p>	
<p>Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to fact based rule of reason analysis. <i>Does the competition authority(s) have the legal authority to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i></p>	<p><i>The statutory mandate of Chile' competition authorities, which is "to promote and defend free competition in the markets", allows them to consider different dimensions of efficiency.</i></p> <p><i>In addition, Chile's competition authorities have enough tools and resources to consider technical and dynamic efficiency gains. For instance, both authorities are independent, well established and composed by lawyers and economists, a feature that has been a driving force behind the increasingly economic approach adopted in competition cases.</i></p> <p><i>As a result, relevant market definition, quantitative and qualitative data analysis, and the assessment of efficiency gains are, when possible and relevant for the case, commonly considered by the FNE and the Competition Tribunal.</i></p> <p><i>Furthermore, a Bill of Amendment of Chile's Competition Act, which is currently being discussed by Chile's Congress, proposes to grant an additional power to the FNE consisting in conducting market studies. Such power will give the agency the ability to request information from both private and public agents, which will be useful to improve the consideration of technical and dynamic efficiency gains in decision making.</i></p>	
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or sub-national government?</i></p>	<p><i>Chile's Competition Act does not have exceptional regimes nor exemptions for specific goods or services. Furthermore, and unlike other jurisdictions, competition provisions are applicable to all economic agents, without distinction between private or public ones. The Competition Tribunal has sentenced public services and some sectoral regulatory bodies which were found to have participated in Competition Act infringements.</i></p>	

Competition policy mechanisms	Current position	Any other comments
<p>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. <i>Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective decision involving other Ministries? How is any independence established and safeguarded?</i></p>	<p><i>Both, the Competition Tribunal and the FNE, are completely independent from a statutory and practical point of view when exercising their attributions and powers. Ministries are not involved in the investigation or judgment of a Competition case.</i></p> <p><i>The independence of the competition authorities has its origin in the institutional design. On one hand, in Chile we have two separate authorities: an agency (the FNE) and a Competition Tribunal. The FNE, headed by the National Economic Prosecutor, is an agency with the function of investigating cases initiated ex-officio or by request of a third party. The Competition Tribunal is a specialized court, under the Supreme Court's judicial control. Both institutions are independent of any other authority. On the other hand, the National Economic Prosecutor and the judges of the Competition Tribunal are appointed and removed by a special mechanism that ensures their independence. The Competition Act also contemplates special rules regarding service incompatibilities to avoid conflicts of interest.</i></p>	
<p>There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. <i>Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets with potential for innovation?</i></p>	<p><i>Currently, the FNE does not have a formal policy that focus on the least competitive markets with potential for innovation. However, it is expected that if the Bill of Amendment is passed and the FNE is granted with the power to carry out market studies and surveil the competitive dynamics of the markets, the agency will be able to issue these kind of policies in order to focus its attention on certain markets and take the necessary measures to ensure competition.</i></p>	
<p>There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i></p>	<p><i>Chile has an open economy and policies that actively encourage foreign trade and investment. The permanent improvement of the competition system and the relevant role that Competition Authorities have in Chile's economy, promoting and defending the competitive process, prove that Chile is actively committed to strengthen its market based economy.</i></p> <p><i>Besides, it is important to mention that competition authorities consider in their analysis potential competition from foreign enterprises and the competitive pressure that they may exert. In addition, both national and foreign enterprises are equally treated before competition authorities.</i></p>	

Table D - Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i></p>	<p><i>The Law states that Directors of Companies cannot fail in their duties arguing that they are defending the interest of who choose them.</i></p> <p><i>Additionally, the Superintendence of Securities and Insurance establishes several standards of Corporate Governance for issuers of securities, which the companies should inform to the regulator under the concept "comply or explain". In this norm, it is consulted about the policies of sustainability that the Board should adopt, including fostering innovation.</i></p>	
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital funds and direct capital raising from the public. <i>Do your economy's financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</i></p>	<p><i>CORFO has the main objective of foster entrepreneurship and the innovation to improve the productivity in Chile. CORFO offers to Investment Funds resources as a modality of long term credit lines, with the aim these funds will be invest in SME with growth potential and that require technical support.</i></p>	
<p>The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. <i>Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing??</i></p>	<p><i>In 2012, the Superintendence of Securities and Insurance (SVS) passed a law to regulate when a security offer will not be considered a "public offer", and therefore will be excluded of the application of the law N° 18.045 of Security Market and the supervision of the SVS, except when necessary to demonstrate that the requirements established in the "General Norm" are accomplished.</i></p>	
<p>Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However, these also allow poor managers the opportunity to repeatedly start businesses that fail with losses to shareholders and creditors. <i>How is the balance struck between enabling risk taking and protecting shareholders and creditors?</i></p>	<p><i>Recently, a new Bankruptcy law was approved, which established several changes to the Chilean system, such as: the introduction of an effective and expeditious procedure for the verification and payment of credits; it distinguishes between individuals and business; it distinguishes between procedures of reorganizations and liquidations; it establishes transparent auctions, among others.</i></p>	

Table E - Public sector governance

Public sector governance mechanisms	Current position	Any other comments
<p>The rule of law implies that every citizen is subject to the law, including law makers themselves. Limits to the rule of law occur because of neglect or ignorance of the law, corruption, or the lack of corrective mechanisms for administrative abuse, such as an independent judiciary. <i>Does your system actively protect and enforce the property rights of different stakeholders? If so what sort of legal mechanisms are available and used?</i></p>	<p><i>Chile remains an independent judiciary to the Executive power and the legislative power, which guarantees high degrees of fairness in decision making for citizens, and also to the members of the other powers of the State. During the past 20 years, the country has developed work schedules aimed to address issues of probity and transparency, engaging in their design the 3 designated powers, so give the public a framework of guarantees that adequately safeguard the conflicts of interest, failures to the probity or acts of corruption. The main themes addressed in the agendas of probity include: (1) system of public procurement, (2) system of senior public management, (3) creation of the National Directorate of the Civil Service, (4) financing of political parties (5) the Declaration mandatory law of interest and heritage of public authorities, among others.</i></p>	
<p>State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. <i>In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are there SOEs explicitly tasked with encouraging private sector innovation?</i></p>	<p><i>Chile has a system of public companies (SEP), which brings together more than 60% of the companies with State participation. All accounts with the SEP-independent corporate governance. Since 1990, Chile has begun a process of professionalization of the corporate governance of public companies, incorporating in them increasingly competitive variables with respect to the national and international market, and encouraging innovation in increasing levels. Proof of this is the various distinctions that, internationally, has received the National Corporation of the copper (CODELCO) with regard to their production processes, and the systematic decrease in production costs, as well as the increase in the levels of production and product quality.</i></p>	
<p>A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. <i>Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure?</i></p>	<p><i>There are three key issues to strengthen our economy: first, increase productivity which has remained virtually stagnant in recent years; secondly, diversify our economy; and thirdly, creating new centers of innovation and entrepreneurship.</i></p> <p><i>The increase of investments in energy and infrastructure, the measures incorporated in the Agenda for Productivity, Innovation and Growth that we launched in May 2014, will allow Chile to move into a productive transformation.</i></p> <p><i>Innovation is key to boosting productivity and growth of our country. Therefore, we have increased the Fund for Innovation for Competitiveness and we are also promoting projects to drive innovation beyond the mere creation of new business towards social</i></p>	

Public sector governance mechanisms	Current position	Any other comments
	<p><i>development fields.</i></p> <p><i>The last year the government found the first "Laboratory of Government", which will implement innovative ideas to improve public services.</i></p>	
<p>Strategies need to respond to economy context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks. <i>What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</i></p>	<p><i>Taking as reference the manual Oslo of the Organization for cooperation and economic development (OECD), defined innovation as the use new knowledge, to generate a product, process or novel method, or the redefinition of business models that generate new value in the market. These processes of transformation of knowledge to value, which is led by people and can occur through a venture or an existing business, are understood as diffusion or transfer of technology. This, combined with the constant dynamic in that move the markets, implies that this policy not considered productive/commercial "winning" sectors, but rather is responsible for increasing productivity and competitiveness</i></p> <p><i>National innovation policy takes into account those pillars that the most successful countries in this regard have been recognized, and adds the Global connection and financing as enablers fundamentals to make innovation happen. So the associated innovation processes occur with all its potential required that each and every one of the pillars is fully developed, because the deficiency or malfunction of one of them would be sufficient to endanger the process of innovation. In other words, the newly defined pillars behave as fundamentals of the innovation ecosystem. For this reason, the Government has decided to focus its efforts on improving those aspects that could jeopardize the entire effort, i.e., those areas which have more opportunities and challenges. A program of innovation cannot be static. The pace of the changes observed today at the global level required to be permanently open, reviewing the guidelines and identifying threats and opportunities.</i></p>	

Appendix A Questionnaire on structural policies and innovation¹

Table A– Economy context (Optional)

Economy Context Questions	Current position	Any other comments
<p>Economies differ in their levels of economic development and government capabilities. Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</p>	<p>In 2014, China's GDP exceeded 10 trillion US dollars and per capita GDP was 7,000 US dollars. With the intensified constraints of environment and resource and flagging driving force of factors, traditional growth model that relied on high cost and intensive input cannot be sustained. China's economic development has entered into new normal. China's economy needs to make the transformation from factor- and investment driven to innovation driven, building the new growth engine by structural reform and institutional innovation. In June 2015, the State Council of China issued the document on <i>Promoting Popular Entrepreneurship and Innovation</i>, claiming that China should accelerate the implementation of innovation-driven development strategy and create a supportive environment for innovation and entrepreneurship in terms of policy, institution and public service system.</p>	

¹ NZIER report (March 2015) to APEC 2015 Economic Report (AEPR) - The role of structural policies in innovation

Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</p>	<p>In 2014, China ranked 90th among 189 economies according to the World Bank's regulatory environment ratings, indicating there is a lot of room to enhance the flexibility of the regulatory system. At present, the national regulatory system is undergoing profound changes as China vigorously pushes ahead deregulation and decentralization in public administrative reform to build a service-oriented government.</p> <p>China is working to let the market play a decisive role in the allocation of resources and give better play to the role of government. To this end, the regulatory authorities have introduced more flexible economic policies including prescriptive input based as well as performance based incentives to encourage "popular entrepreneurship and innovation". All market agents are encouraged to carry out comprehensive, open and inclusive innovation in technology, management, market, and business model. The government also adopts many measures such as improving the basic condition for technological innovation, creating the environment for fair competition, strengthening the intellectual property protection, establishing the public platform for innovation and entrepreneurship, reforming toward a non-selective tax regime, opening the human resource market, upgrading the management system of S&T achievement, and encouraging the equitable distribution among knowledge, technology, management and techniques. At present, these measures have gained popularity and played an active role in stimulating innovation.</p>	
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. Is there an administrative simplification programme in place and if so how comprehensive is it? Also, is any administrative simplification programme</p>	<p>China's current government gives priority to deregulation and decentralization in the administrative reform, in order to stimulate new vitality and gain new impetus. In past two years, nearly 600 administrative permits have been removed or delegated to lower level governments and non-administrative licensing approval items have been completely eliminated. Totally 420 items subject to administrative fees and government funds have been cancelled, suspended or reduced at the central level. This reduces the burden on businesses and individuals by nearly 100 billion yuan. The idea of streamlining government functions and administration and delegating powers for better services has been widely received.</p> <p>In April 2015, the coordination group led by Vice Premier was set up by the State Council to formulate the overall plan and push forward the transformation of government functions.</p> <p>At the same time, the Chinese Government sets about developing the lists of powers and responsi-</p>	

linked to programmes to reduce corruption?	bilities and the negative list for market access, which clearly establishes the behaviour boundaries.	
Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any adverse impact on competition and hence innovation?	To remove the barriers of entry of market agents, especially private agents and SME, is one of the priorities of China's ongoing regulatory reform. As the result of business registration system reform, the number of newly established firms grew explosively since 2014. In efforts to minimize the distortion of market, China also requires that the new policy be subject to appraisal of effect on the competition. However, the practice is still in its early stage. The systematic analysis method and tool, such as RIA, is still not used extensively.	
Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. How easily can skilled people move between firms?	<p>As the market begins to play a decisive role in the allocation of resources, the mobility of technical personnel has become increasingly active, particularly among enterprises of different ownership and among cross-regional enterprises.</p> <p>Because of differences in business ownership, the flow of skilled talents between state-owned enterprises (SOEs) and private enterprises used to be difficult. However, with the improvement of governance structure and management flexibility, the labour market is greatly and continuously improved. This accelerates the talent flow among enterprises of different kinds.</p> <p>China's household registration regulations have ever restricted the flow of technical personnel. With the accelerated process of urbanization, the government has relaxed the policy for floating population management, such as conditional household registration, and access to local public service, such as education, medical insurance and social security. Many developed regions have deployed programs and funding to attract skilled labour. These measures are conducive to the flow of technical talents among cross-regional companies.</p>	

Table C- Competition policy

Competition policy mechanisms	Current position	Any other comments
<p>Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other. How does competition policy deal with protection of consumers? Does competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and dynamic efficiency?</p>	<p>The <i>Anti-Monopoly Law of the People's Republic of China</i> which came into force on August 1, 2008 is the legal basis for formulating competition policies. The law is enacted for the purpose of preventing and curbing monopolistic conducts, protecting fair market competition, enhancing economic efficiency, maintaining the consumer interests and the public interests. The law clearly stipulates that the firms granted with exclusive production and sale right by law shall not harm the consumer interests by taking advantage of their controlling or exclusive business position. The state shall supervise and control the business operations and the prices of commodities and services provided by business operators therein. For example, Ministry of Commerce (MOC) as the competent authorities carries out investigation on mergers and acquisitions (M&A) and engages third parties or requires M&A companies to provide third-party research report which assesses the impact on competition and particularly the potential damage to consumer interests caused by reduced competition.</p> <p>China's anti-monopoly law take balanced stance on the allocative efficiency on short term and technological and dynamic efficiency in the long run by protecting and promoting competition. For example, Article 15 sets out that in some circumstances the article of "forbidden to reach monopolistic agreement" can be waived if operators prove that the concluded agreement will not substantially restrict competition in the relevant market and can enable consumers to share the resulting benefits. Among these circumstances, the agreement shall be for the purpose of improving technologies and researching and developing new products; upgrading product quality, reducing costs, improving efficiency, harmonizing product specifications or standards, or carrying out professional labour division; enhancing operational efficiency and reinforcing the competitiveness of small and medium-sized business operators. These provisions cover product innovation, process innovation and organizational innovation.</p>	
<p>Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to</p>	<p>According to the anti-monopoly law, the Anti-Monopoly Committee (AMC) of the State Council is responsible for organizing, coordinating and guiding anti-monopoly work. The specific responsibilities include studying and drafting competition policies, organizing the investigation and assessment of overall competition situations and releasing reports, formulating guidelines, and coordinating administrative law enforcement. This establishes the legal status of anti-monopoly authorities while taking full account of technical and dynamic efficiency of competition policies.</p> <p>Currently, China has a dual structure for anti-monopoly led by AMC and anti-monopoly enforce-</p>	<p>In practice, market share is only an indicator of antitrust and does not directly decide monopolistic behaviour. Therefore,</p>

Competition policy mechanisms	Current position	Any other comments
<p>take gains in technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to fact based rule of reason analysis. Does the competition authority(s) have the legal authority to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</p>	<p>ment authorities. AMC sets up an expert advisory group and hires a number of experts in economics and law. A series of mechanisms are also established to ensure the accomplishment of long-term dynamic efficiency targets including technological advances. For example, MOC carries out investigation specific to M&A cases and cost-benefit analysis of M&A, covering technological advances and competition reduction.</p>	<p>more indicators are introduced to analyze the effects of market share expansion on competition and innovation, in order to balance the interests of consumers and dynamic efficiency of technologies.</p>
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or</p>	<p>China's anti-monopoly law applies to all the industries and areas except a few ones. Just like the Article 15 which has been mentioned above as well as the Article 56 which claims the derogation of law in coalition or coordination behaviours in agricultural production, processing, sales, transportation as well as storage. Although the state-owned economy takes up a large proportion in many sectors, such as oil, telecommunications, banking, and power generation, the anti-monopoly law clearly stipulates the operator with a dominant market position cannot abuse this advantage, eliminate and restrict competition. Detriment of the consumer depending on the dominant market position is also prohibited.</p> <p>Some natural monopoly industries are largely state owned. But it is more because of the historical legacy or incumbent advantage rather the exclusion of competition from new entrant.</p>	

Competition policy mechanisms	Current position	Any other comments
sub-national government?		
<p>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective decision involving other Ministries? How is any independence established and safeguarded?</p>	<p>As for the institutional structure, China's anti-monopoly agencies do not have strict legal independence due to the dual structure, coupled with the cross connection with functional departments. For example, National Development and Reform Commission (NDRC), MOC and State Administration for Industry and Commerce (SAIC) have set up anti-monopoly enforcement agencies.</p> <p>To mitigate dispersion of agencies, anti-monopoly law enforcement follows an integrated decision-making model involving broad participation of various ministries. Nevertheless, due to differences in objects, the specific anti-monopoly enforcement agencies have a certain degree of independence in practice.</p>	
<p>There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets</p>	<p>The Chinese Government is taking strategic measures in order to encourage all kinds of innovations in uncompetitive fields. The first is to promote the reform of SOEs. In many cases, the inadequate competition is accompanied by large SOEs which fail to make full of the massive resources and lack the motivation of innovation. The reform oriented to fair competition, operating efficiency and undertaking social responsibility by developing a mixed ownership economy can stimulate endogenous innovation of enterprises. The second is to accelerate spinoff, split-up, M&A and re-organization. By way of appropriate adjustments to companies, competition has been enhanced in the transmission and distribution, telecommunications, petroleum, and mechanical manufacturing sectors. Third, thresholds to the public sector are lowered to attract private investment and improve operational efficiency.</p> <p>With the introduction of new competitors to sectors with insufficient competition, such as power generation and finance, the companies have been motivated to stimulating business model, institutional and organizational innovation.</p>	

Competition policy mechanisms	Current position	Any other comments
with potential for innovation?		
There is growing evidence of the positive link between innovation and openness to trade and investment. How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?	Opening up is a basic, long-term state policy upheld by the Chinese Government. After joining the WTO, China has gradually reduced the tariff level and realizes the opening up of service sectors according to the promises. Meanwhile, China has signed trade and investment agreements with many other countries and regions to further open the market. In the recently created free trade zones, the Chinese Government has implemented pre-establishment national treatment and the negative list system which is conducive to further expanding investment access. All these measures are aimed to introduce the competition and stimulate the innovation.	

Table D- Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</p>	<p>The <i>Company Law of the People's Republic of China</i> was adopted on December 29, 1993 and amended several times. The law clearly stipulates that companies shall establish a corporate governance structure for checks and balances, comprising of shareholders' assembly, board of directors, board of supervisors, and senior managers. Executives preside over the routine production and management, organize the implementation of resolutions of the board of directors and report to the board. Major resolutions require affirmative votes at the shareholders' assembly and employees' assembly before adoption. In some high-tech enterprises, the employee stock ownership plan (ESOP) allows the entry technical backbone of the board of directors by a certain percentage of shares. This gives rise to an incentive mechanism that enhances corporate value by encouraging managers to invest in innovation.</p>	<p>The managers of SOEs are appointed by human resources department of the party committee and are subject to the assessment of State-owned Assets Supervision and Administration Commission.</p>
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital funds and direct capital raising from the public. Do your economy's financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</p>	<p>The <i>Securities Law of the People's Republic of China</i>, entering into force in 1999, has played a positive role in regulating the financial market. At present, China has gradually established a multi-level capital market consisting of the Main-Board Market (including the SME Board), Growth Enterprise Market (GEM) and Over-the-Counter (OTC) market. The OTC market includes the National Equities Exchange and Quotations (NEEQ), regional equity exchange market, and securities-led OTC market. As the operation and regulation improves, the securities market trade becomes active. In particular, the GEM Board is launched to support small and medium-sized enterprises (SMEs), especially high-growth enterprises. It establishes the exit mechanism for venture capital and venture capital companies and provides the financing platform for the independent innovation strategy.</p> <p>China allows and encourages enterprises to adopt a variety of financing models for innovation, including equity financing and debt financing, such as bonds issuance and bank loans. For fast-growing technological SMEs with great potential, angel investors and equity investments are also available, while Internet-based crowdfunding and peer-to-peer (P2P) fundraising are encouraged.</p>	

<p>The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing?</p>	<p>In the legal framework, China has gradually fostered a multi-level capital market to help companies to find equity partners and get listed. Due to stringent requirements for listing in the Main Board, a large number of SMEs cannot get financing from stock market. To tackle this problem, China launched the NEEQ market, regional equity exchange market, and OTC market.</p> <p>NEEQ provides services for finance and M&A of unlisted companies through the public trade of shares. The regional equity exchange market provides equity and bond transfer and financing services for companies in a particular area. It plays a positive role in promoting equity trading and financing of micro, small and medium-sized enterprises (MSMEs), stimulating technological innovation</p>	
<p>Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However, these also allow poor managers the opportunity to repeatedly start businesses that fail with losses to shareholders and creditors. How is the balance struck between enabling risk taking and protecting shareholders and creditors?</p>	<p>Under the circumstances proscribed by the <i>Company Law</i> (Article 188) and the <i>Regulations on the Administration of Company Registration</i>, the liquidation group shall file an application to the people's court for cancellation of registration within 30 days from the completion of liquidation. The <i>Enterprise Bankruptcy Law</i> also makes provisions on bankruptcy proceedings and liquidation of claims and debts. This allows companies to terminate operations by liquidation and registration cancelation without undermining the follow-up entrepreneurship. However, if the business license is revoked for other reasons, entrepreneurs shall not serve as directors, supervisors or senior management of companies.</p> <p>In the bankruptcy proceedings, the legitimate rights and interests of creditors and shareholders are protected by law through financial claims, creditors' meeting, reorganization, and reconciliation, and the debtor's property is liquidated in accordance with law. Enterprises shall be declared bankrupt upon insolvency.</p>	

Table E- Public sector governance

Public sector governance mechanisms	Current position	Any other comments
<p>The rule of law implies that every citizen is subject to the law, including law makers themselves. Limits to the rule of law occur because of neglect or ignorance of the law, corruption, or the lack of corrective mechanisms for administrative abuse, such as an independent judiciary. Does your system actively protect and enforce the property rights of different stakeholders? If so what sort of legal mechanisms are available and used?</p>	<p>Property rights are the core of ownership. The <i>Decision of the CPC Central Committee on Major Issues Concerning Deepening Reform</i> makes it clear that "the property rights of the public sector are inviolable, as are those of the non-public sector." In order to effectively protect the property rights of different ownership, China has promulgated the <i>Company Law, Property Law, Law Against Unfair Competition, and Anti-Monopoly Law</i>. Under the law, the modern property rights system with clear ownership, clear-cut rights and obligations, strict protection and smooth flow shall be established; state, collective and private property rights, as well as property rights of other rights holders shall be protected from infringement. The level of protection of private property has improved significantly with the sharp reduce of the infringement from public power and state property.</p> <p>Meanwhile, the Chinese Government has stepped up the protection of intellectual property rights (IPR) though the IPR legislation started late. The legal system up to the international advanced standards has been established, and the combat against IPR infringement noticeably intensified, especially in recent years.</p>	
<p>State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is shel-</p>	<p>In China, SOE is broadly distributed in industrial and network sectors. In terms of sale value, SOE accounted for 20.3% of the industrial sector in 2012, down from 40.5% in 2004. Except a few sectors, such as tobacco, salt, transmission grid, etc, SOE is not sheltered from competition.</p> <p>SOEs drive innovation in the private sector in two channels. First, they provide public goods which include infrastructure, such as power grids and communications facilities, and a large number of public research and advisory service agencies. Second, in competitive industries, SOEs compete with private enterprises and simulate innovation in the private sector.</p>	

Public sector governance mechanisms	Current position	Any other comments
<p>tered from competition? Are there SOEs explicitly tasked with encouraging private sector innovation?</p>		
<p>A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure?</p>	<p>China has strong public departments and agencies to build and coordinate the national innovation system. First, Ministry of Science and Technology in conjunction with NDRC and Ministry of Industry and Information Technology creates top-level design of the national innovation system and allocates scientific and technological resources at the state level. Second, public research institutes and universities, mainly engaged in the production of knowledge, have begun transition towards close link with the market. Third, growing innovation intermediaries, such as talent market, technology transfer centres, technology market, and incubators, give an important impetus for technology diffusion and create the conditions for the commercialization of technologies.</p>	
<p>Strategies need to respond to economy context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks. What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</p>	<p>China has achieved positive progress in the national innovation system. Currently, innovation policies are focused on resolving institutional problems that constrain innovation capability, in order to improve innovation efficiency. Three policy trends can be observed:</p> <p>First, emphasis on open, comprehensive and inclusive innovation. China actively promotes "popular entrepreneurship and innovation" and strives to create a situation of open, comprehensive and inclusive innovation. Technical cooperation platforms and technical alliances are established to build up the capacity of independent open innovation. Total innovation centring on scientific and technological innovation is advocated, to form benign interaction among market, organization, mechanism and business model innovation. Inclusive financial innovation and "micro-innovation" are expected to make a difference in social benefits as a whole, especially to improve the quality of life of people, alleviate and eliminate poverty.</p> <p>Second, emphasis on the S&T integration with the economy. The low technology transfer rate undermines the S&T contribution to the economy. Now, the state has taken measures to improve the fit, such as promoting cooperation of enterprises, universities and institutions, encouraging innovation and entrepreneurship of scientific and technological personnel and students, and allowing intangibles-based equity financing.</p> <p>Third, focus on regional innovation system. Innovation policies give prominence to lively inno-</p>	

Public sector governance mechanisms	Current position	Any other comments
	<p>vation communities which include business clusters, leading research universities with extensive R&D activities, medical institutions and business incubators, in order to create regional innovation ecosystems featured by compact design, easy accessibility and wireless coverage. The ultimate target is innovation poles that radiate and drive innovation inChina.</p>	

Appendix A Questionnaire on structural policies and innovation

Table A – Economy context (Optional)

Economy Context Questions	Current position	Any other comments
<p>Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i></p>	<p>The Hong Kong Special Administrative Region (HKSAR) Government spares no effort in developing a knowledge-based, high value-added economy, with a view to maintaining Hong Kong’s economic competitiveness and achieving long-term sustainable development. To this end, the Government always strives to provide the most favourable business environment for the private sector to flourish – including a simple tax regime with low tax rate, level playing field, free flow of information and capital, rule of law, and with minimal red tape. Such a favourable business environment is widely recognised by the international community. For instance, Hong Kong is ranked 3rd in World Bank’s Ease of Doing Business Report 2015. The Government will continue to improve the ecosystem for nurturing local start-ups and for facilitating businesses to move up the value chain, so as to provide a stronger economic base for Hong Kong’s future development.</p>	<p>Nil</p>

Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative</i></p>	<p>Over the past years, the HKSAR Government has made incessant efforts in business facilitation. Smart regulations ensure that innovation is not impeded by rigid guidelines and that barriers to businesses are not created, either through high compliance costs or long processing time.</p> <p>Some examples of alternative approaches and solutions are given below:</p> <ol style="list-style-type: none"> 1. To rectify unintended regulation, enforcement actions against the mere 	<p>Nil</p>

¹ NZIER report (March 2015) to APEC 2015 Economic Report (AEPR) - The role of structural policies in innovation

<p><i>approaches and solutions? In practice how often is this flexibility used?</i></p>	<p>playing of electronic darting machines for entertainment in bars, clubs and billiard establishments has been suspended. (http://www.gov.hk/en/theme/bf/pdf/BLGTFPaper5.pdf)</p> <p>2. Instead of mandatory restricting the sale of incandescent light bulbs, the government has opted to launch a voluntary chartered scheme with suppliers and retailers and to step up the education of the public on the benefits of switching to energy-efficient products. (http://www.gov.hk/en/theme/bf/pdf/WRTFpaper14(Eng).pdf)</p> <p>3. Subject to the passing of the relevant legislation, licensees could opt to hire private engineers to conduct risk assessment, formulation of fire safety requirements and compliance check. (http://www.gov.hk/en/theme/bf/pdf/FBTFpaper49withAnnex.pdf).</p>	
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification programme in place and if so how comprehensive is it? Also, is any administrative simplification programme linked to programmes to reduce corruption?</i></p>	<p>In 2007, the Hong Kong Government launched the “Be the Smart Regulator” Programme (the Programme) to improve the efficiency, transparency and business-friendliness of Hong Kong’s business licensing services, thereby helping to reduce the overall business compliance costs. Currently, 30 bureaux/departments are participating in the Programme. Enhancement measures that have been introduced under the Programme include:</p> <ol style="list-style-type: none"> 1. Promote the wider use of IT to support licensing work, such as develop e-licensing systems to reduce applicants’ administrative burden and costs of submission and to enhance the efficiency of licensing application processing, and develop application tracking systems to increase the transparency of licence application. 2. Develop fast track licence application process to shorten processing time. 3. Set up business liaison groups to enhance the communication between the licensing authorities and the trades and to resolve/clarify licensing matters at the operational level. 4. Conduct process reviews to streamline licensing procedures. 5. Conduct business impact assessment studies on regulatory proposals to avoid introducing unreasonable requirements and to reduce potential compliance difficulties and costs. 6. Develop an e-platform and related mobile apps to facilitate the business sectors to access consultation information of regulatory proposals and to express their views. 	<p>Nil</p>

	<p>7. Measure customers' satisfaction and trust towards the government's business licensing services over time. Identify key drivers of service excellence and provide diagnostic information on priority of service improvements that may contribute to increase in satisfaction and trust.</p> <p>8. Cultivate a business facilitation and customer centric culture within the civil service through training and publicity.</p> <p>Insofar as administrative simplification is concerned, the Efficiency Unit was established in 1992 with the aim of improving the quality and value of public services. Specifically, it offers management consultancy service to improve work flow efficiency at the request of government departments/bureaux.</p> <p>Apart from the continuous effort in business facilitation and administrative simplification programmes, Hong Kong is also a front-runner in the fight against corruption. Hong Kong has strong norms of zero tolerance of corruption and is in fact a city enjoying very low level of corruption. In 2015, the Heritage Foundation has rated Hong Kong as the freest economy in the world for the 21st consecutive year and acknowledged that "Hong Kong continues to enjoy relatively low rates of corruption". In the "2014 Trace Matrix" conducted by RAND Corporation to assess global corruption risks, Hong Kong was ranked the 4th least corrupt place in 197 economies around the world and came first in Asia.</p>	
<p>Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. <i>Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any adverse impact on competition and hence</i></p>	<p>The Competition Policy Advisory Group (COMPAG) is a high level government body established in 1997 to review competition-related issues and examine the extent to which competition should be further promoted. It issued the Statement on Competition Policy (the Statement) to provide a policy framework to guide efforts to promote competition. To supplement the Statement, COMPAG has, in consultation with chambers of commerce, trade and industry organisations and the consumer body, developed a set of guidelines to help define and tackle anti-competitive conduct, and to promote Hong Kong's competition policy. COMPAG also considers competition-related matters which may have a bearing on government policy and also handles complaints from members of the public on any anti-competitive behaviour. Advocated by COMPAG, the policy making process of any new policy initiatives is required to contain an analysis of the initiatives' competition</p>	<p>Nil</p>

<i>innovation?</i>	implication.	
<p>Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. <i>How easily can skilled people move between firms?</i></p>	<p>Hong Kong welcomes people with valuable skills, knowledge and experience around the world to work and stay here through our various talent admission schemes. Our schemes adopt largely a market-driven, non-sector specific approach. For entry for employment, professionals from overseas, Taiwan and Macao can apply under the General Employment Policy (GEP) and those from the Mainland can apply under the Admission Scheme for Mainland Talents and Professionals (ASMTP). Applicants must have secured a job relevant to his / her academic qualifications or work experience that cannot be readily taken up by the local workforce with a remuneration package commensurate with the prevailing market rate. There is no quota or restrictions on employment sector under the GEP and the ASMTP. For highly-skilled and talented persons, they can apply under the Quality Migrant Admission Scheme (QMAS) without first securing an offer of local employment before entry.</p> <p>Professionals admitted under the GEP and the ASMTP should only take employment as approved by the Director of Immigration; any change in employment will require prior approval from the Director of Immigration. Such prior approval for change of employment, however, is not required from GEP and ASMTP professionals who are in the top-tier stream. Similarly, QMAS entrants are also free to change employment any time.</p>	Nil

Table C - Competition policy

Competition policy mechanisms	Current position	Any other comments
<p>Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in</p>	<p>The Competition Ordinance enacted in 2012 in Hong Kong provides a legal framework that prohibits anti-competitive behaviour in all sectors in three major areas (described as the first conduct rule, the second conduct rule and the merger rule). The first conduct rule prohibits agreements, concerted practices as well as</p>	Nil

Competition policy mechanisms	Current position	Any other comments
<p>competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other. <i>How does competition policy deal with protection of consumers? Does competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and dynamic efficiency?</i></p>	<p>decisions of an association of undertakings that have the object or effect to prevent, restrict or distort competition in Hong Kong. The second conduct rule prohibits an undertaking with a substantial degree of market power to abuse that power by engaging in conduct that has as its object or effect the prevention, restriction or distortion of competition in Hong Kong. The merger rule prohibits against mergers or acquisitions involving carrier licensees of the telecommunications sector that have, or are likely to have, the effect of substantially lessening competition in Hong Kong.</p> <p>The competition rules help sustain competition in the market. The competitive process would ensure consumers have access to a variety of goods and services at competitive prices, and drives more efficient business practices and innovation.</p> <p>In cases there are strong justifications that the competition in a market has to be balanced against competing public values, the Competition Ordinance provides that some conducts may be excluded from the competition rules if they enhance overall economic efficiency by way of improving production or distribution, or promoting technical or economic progress.</p>	
<p>Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to fact based rule of reason analysis. <i>Does</i></p>	<p>The Competition Commission is the statutory body established under the Competition Ordinance to enforce the competition rules. In considering whether a particular agreement between commercial entities is anti-competitive, it can evaluate if such agreement is qualified for the efficiency exclusion.</p> <p>As explained in the guidelines promulgated by the Competition Commission, the efficiencies referred to in the efficiency exclusion cover all objective economic efficiencies, including cost efficiencies and qualitative efficiencies. Cost efficiencies can originate from a number of sources. The development of new production technologies, for example, may give rise to cost savings; so too may the synergies brought about by an integration of particular assets. Cost efficiencies may also</p>	<p>Nil</p>

Competition policy mechanisms	Current position	Any other comments
<p><i>the competition authority(s) have the legal authority to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i></p>	<p>result from economies of scale or scope. Qualitative efficiencies arise when agreements between entities generate efficiencies in the form of quality improvements, innovation, or similar product improvements. This type of efficiency can include the technical and technological advances brought about when undertakings cooperate on research and development leading to improved or new products.</p>	
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or sub-national government?</i></p>	<p>The conduct rules (i.e., prohibition of anti-competitive agreements and abuse of market power) of the Competition Ordinance apply to all goods and services markets. Specified entities or agreements may be excluded from the application of the competition rules only when there are compelling reasons to do so, for example, when the goods or services involved are related to delivery of essential public services, or fulfilment of international obligations, etc.</p> <p>Entities which engage in economic activities and which have government ownership are not exempted from the competition rules by virtue of the government ownership. There is also no prior exclusion of the competition rules to particular sectors of the economy.</p>	Nil
<p>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. <i>Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective decision involving other Ministries? How is any independence established and safeguarded?</i></p>	<p>The Competition Ordinance adopts a judicial enforcement model to separate the powers of investigation and enforcement from adjudication. The Competition Commission is established as an independent statutory body responsible for investigation and enforcement. Meanwhile, the Competition Tribunal is established as a specialised court with primary jurisdiction to hear and adjudicate cases of competition-related cases. Government bureaux or departments do not have any power to interfere with the enforcement decisions of the Competition Commission, nor with the adjudication by the Competition Tribunal.</p>	Nil

Competition policy mechanisms	Current position	Any other comments
<p>There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. <i>Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets with potential for innovation?</i></p>	<p>The Competition Commission may conduct an investigation into any conduct that constitutes or may constitute a contravention of a competition rule of its own volition, or where it has received a complaint, or where cases are referred to it, if the Commission has reasonable cause to suspect that contravention of a competition rule has taken place, is taking place or is about to take place.</p> <p>Like other competition authorities, investigation is usually driven by whether competition harms have been identified and such harms may not necessarily take place in the more closed markets. However, the Competition Ordinance also provides the Competition Commission the authority to, other than investigate potential contravention of competition rules, conduct market studies into matters affecting competition in markets in Hong Kong. The Competition Commission may therefore conduct studies in some specific markets where there are relatively few competitors when it sees the need to do so.</p>	<p>Nil</p>
<p>There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i></p>	<p>Hong Kong maintains a business-friendly environment characterised by free trade, free flow of information, robust legal system, sound and transparent regulatory systems, simple taxation and well-developed infrastructure. Hong Kong remains one of the most open economies in the world with very few trade and investment barriers. In fact, Hong Kong has been consistently ranked as the world's freest economy by the Heritage Foundation and the Fraser Institute.</p> <p>The free trade and investment policy and the competition policy are mutually supportive. The Competition Commission has acknowledged that competition is a much cherished value in Hong Kong as competition drives economic vibrancy, stimulates innovation, creates work opportunities and brings consumer benefits. It is one of the cornerstones of Hong Kong's open economy.</p>	<p>Nil</p>

Table D - Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i></p>	<p>Promoting good corporate governance has long been our key policy objective in tandem with the strive to maintain our status as an international financial centre.</p> <p>To ensure that Directors act in the interest of the company, there are provisions in the Companies Ordinance that enhance transparency and accountability of Directors (e.g. restriction on the appointment of Corporate directors, Statutory directors' duty of care, skill and diligence, avoidance of provisions protecting Directors from liability, prohibition of interested Directors and associated persons to vote in ratification of Directors' breach of duty); provisions that ensure fair dealing by directors to prevent conflict of interest and abuse of power (e.g. requiring disclosure or members' approval in certain transactions where a director has material interest or conflict of interest); provisions that require timely and accurate disclosure of material matters including financial statements and, for public companies and large private companies, a comprehensive directors' report with analytical and forward-looking business review; and other provisions that foster shareholder protection (e.g. minority shareholder remedies on unfair prejudice basis, statutory derivative action and statutory injunction to restrain breach of directors' duty).</p> <p>For companies listed on the Stock Exchange of Hong Kong ("SEHK"), the Securities and Futures Ordinance ("SFO") provides for a regulatory framework to ensure that Directors act in the interests of owners. For example, a statutory regime on disclosure of inside information was introduced under the SFO in 2013. Under this regime, a listed company has a statutory obligation to make a public announcement when it has information that would have a material effect on the price of its shares.</p>	<p>Nil</p>
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital</p>	<p>Hong Kong is an international capital raising centre operating under effective and transparent regulations, which are in line with international standards. It is an ideal place for enterprises around the world to raise capital, including those engaging in</p>	<p>Nil</p>

<p>funds and direct capital raising from the public. <i>Do your economy's financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</i></p>	<p>innovation businesses.</p> <p>At the end of April 2015, 1 780 public companies, with a total market capitalisation of US\$4 trillion, were listed on the SEHK, representing a wide range of industries. Hong Kong was one of the most active markets for raising initial public offering funds. In 2014, US\$29.8 billion was raised, ranking second globally. In addition to new share issues, another US\$91.1 billion was raised on the secondary market, also ranking second globally.</p> <p>The Hong Kong debt market is vibrant with global issuers and investors. We operate a debt securities settlement system which facilitates clearing, settlement and custody of debt securities issued and traded in Hong Kong as well as cross-border settlement for overseas investors through links to regional and international central securities depositories. Our legal and taxation frameworks further provide a level playing field between conventional bonds and Islamic bonds (i.e. sukuk).</p>	
<p>The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. <i>Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing?</i></p>	<p>For public listing, the regulatory objective of the SFO is to ensure orderly, informed and fair markets of securities. This is essential for raising capital through listing of new or growing enterprises of all sizes.</p> <p>The SEHK operates two markets on which companies may choose to list their shares. The Main Board is the market for companies that meet profit and other financial standard requirements. The Growth Enterprise Market ("GEM") is the second board and a stepping stone towards the Main Board. The admission requirements for the GEM are largely in line with the Main Board but they are less stringent. The admission procedures of the GEM are streamlined.</p> <p>As for private equity, the SFO does not impose any barriers to taking on private equity partners.</p>	<p>The Government has set up a steering group to study how to develop Hong Kong into and promote Hong Kong as a Fintech hub, including issues relating to crowdfunding.</p>
<p>Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to</p>	<p>The corporate insolvency regime of Hong Kong provides a fair and orderly process for realising and collecting the assets of an insolvent company and distributing them</p>	<p>The Government has commenced an exercise to improve corporate</p>

<p>take risks even if these lead to failure. However, these also allow poor managers the opportunity to repeatedly start businesses that fail with losses to shareholders and creditors. <i>How is the balance struck between enabling risk taking and protecting shareholders and creditors?</i></p>	<p>among the creditors of the company.</p> <p>There are sufficient safeguards in the statutory framework to provide protection to creditors, e.g. the Companies (Winding Up and Miscellaneous Provisions) Ordinance (“CWUMPO”) contains provisions to empower the court to make orders in respect of cases involving “unfair preference”, i.e. the company has made payment to a particular creditor prior to the commencement of its winding-up and preferred that creditor to the other creditors. Another measure is that the CWUMPO provides that if any officer or liquidator of the company has misapplied or retained any money or property of the company, such person could be held liable and accountable for such money or property.</p> <p>There is also a mechanism to impose sanction on unfit directors. The CWUMPO contains provisions on disqualification of directors which empower the court to disqualify a person from acting as a director of a company if there is misconduct on the part of that person, including, for example, where that person has been persistently in default of his obligations under the provisions of the CWUMPO.</p>	<p>insolvency laws to streamline and rationalise the company winding-up procedures and enhance regulation of the winding-up process having regard to international experience. The relevant legislation is planned to be introduced into the Legislative Council in 2015. With the passage of the new legislation, it is expected that the statutory framework on measures to protect creditors will be further strengthened, e.g. new provisions will be in place to avoid transactions at an undervalue.</p> <p>In addition, the Government has announced a package of legislative proposals in respect of insolvent trading provisions which impose liabilities on directors of a company which traded while insolvent.</p>
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Table E - Public sector governance

Public sector governance mechanisms	Current position	Any other comments
<p>The rule of law implies that every citizen is subject to the law, including law makers themselves. Limits to the rule of law occur because of neglect or ignorance of the law,</p>	<p>The Basic Law of the HKSAR prescribes the systems practised in the HKSAR in order to ensure the implementation of the basic policies of the People’s Republic of China (PRC) regarding Hong Kong. It enshrines, in the form of law, the important principles of “one country, two systems”, “Hong Kong people administering Hong</p>	<p>Nil</p>

Public sector governance mechanisms	Current position	Any other comments
<p>corruption, or the lack of corrective mechanisms for administrative abuse, such as an independent judiciary. <i>Does your system actively protect and enforce the property rights of different stakeholders? If so what sort of legal mechanisms are available and used?</i></p>	<p>Kong” and a high degree of autonomy. Under the Basic Law, the National People’s Congress authorises the HKSAR to exercise a high degree of autonomy and enjoy executive, legislative and independent judicial power, including that of final adjudication, in accordance with the provisions of the Basic Law.</p> <p>Regarding protecting and enforcing the property rights, the HKSAR shall protect the right of private ownership of property in accordance with Article 6 of the Basic Law.</p> <p>To deal with corruption, Hong Kong has comprehensive legislation including the Prevention of Bribery Ordinance (POBO), the Elections (Corrupt and Illegal Conduct) Ordinance and the Independent Commission Against Corruption (ICAC) Ordinance. The POBO is Hong Kong’s principal anti-corruption legislation, which aims to maintain a fair and just society by protecting the legitimate interests of public institutions and employers, and by inflicting punishment on the unscrupulous and corrupt. It addresses corruption in both the public and private sectors.</p> <p>The ICAC is responsible for enforcing anti-corruption laws and is empowered to investigate corrupt practices. After completion of investigations, the power to prosecute is vested with the Secretary for Justice, and the separation of powers ensures that no case is brought to the courts solely on the judgement of the ICAC.</p> <p>The presence of independent judiciary ensures that the ICAC does not step out of line. The ICAC is required to seek prior court approval for exercising certain powers, and will carefully consider comments from the court and conduct reviews on operational procedures to avoid misuse of power.</p> <p>The legislation also provides the ICAC with the necessary authority to examine the practices and procedures of government departments and public bodies and secure revision of any that may be conducive to corruption.</p>	

Public sector governance mechanisms	Current position	Any other comments
	<p>Our corruption-free society is well-recognised internationally. According to the World Justice Project (WJP), the absence of corruption is one of the factors to measure how well the principles of rule of law are upheld in a jurisdiction. WJP's "Rule of Law Index 2015" ranked Hong Kong the 10th in "absence of corruption" among 102 countries and territories surveyed. In the World Economic Forum's Global Competitiveness Report 2014-2015, respondents generally considered that Hong Kong had a clean business environment (Only 1.8% of the respondents / organisations selected corruption as one of the most problematic factors for doing business in Hong Kong).</p>	
<p>State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. <i>In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are there SOEs explicitly tasked with encouraging private sector innovation?</i></p>	<p>Hong Kong is a staunch supporter of free market principles and the Government's participation in market activities is small relative to most other economies. Yet the public sector contributes a significant share in the research and development activities in Hong Kong. Hong Kong's Gross Domestic Expenditure on R&D (GERD) as a ratio to GDP is generally around 0.7% in recent years. In 2013, the total expenditure on R&D in the private sector amounted to around 45% of GERD whereas the public sector (the Government and higher education) was responsible for the remaining 55%.</p>	<p>Nil</p>
<p>A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. <i>Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a</i></p>	<p>Hong Kong leverages its strengths including the rule of law, robust intellectual property protection, free flow of information, international financial services, well established infrastructure, as well as our strategic location in the Mainland China to further promote Hong Kong as vibrant innovation hub in the region.</p>	<p>Nil</p>

Public sector governance mechanisms	Current position	Any other comments
<p><i>knowledge infrastructure and (c) an innovation infrastructure?</i></p>	<p>Government's approach in promoting innovation and technology development is underpinned by five core strategies:</p> <ul style="list-style-type: none"> a) Offering financial support to research and development (R&D) and technology transfer; b) Providing world-class technological infrastructure; c) Nurturing human resource development; d) Strengthening Mainland and international collaboration in science and technology; and e) Fostering a vibrant innovation culture in the community. <p>The government, industry, academia and research sectors in Hong Kong are working closely together in promoting the innovation and technology development in Hong Kong.</p> <p>The Hong Kong Science Park (HKSP) is our flagship technology infrastructure which provides facilities, services and a dynamic environment that enable companies to nurture ideas, innovate and develop. At present, Phases 1 and 2 of HKSP provide 20 buildings, offering 220 000 square metres of research and development (R&D) office space. Construction of the \$4.9 billion HKSP Phase 3 is progressing on schedule. When fully completed, the gross floor area of the HKSP will increase by around 50% to 330 000 square metres, accommodating over 600 partner companies and providing 15 000 job opportunities.</p> <p>There is also the Cyberport which is Hong Kong's information and communications technology (ICT) flagship with a cluster of over 300 technology and digital tenants. Cyberport is committed to supporting and promoting ICT in Hong Kong through the creation of a cluster of ICT companies and professionals, as well as implementation of programmes to foster industry development and nurture ICT start-ups. Equipped with an array of state-of-the-art ICT facilities, Cyberport currently offers 94 678 square metres of office space.</p>	

Public sector governance mechanisms	Current position	Any other comments
	<p>In 2006, the Government also set up five R&D Centres to drive and coordinate applied R&D in their respective technology areas and promote commercialisation. They are:</p> <ul style="list-style-type: none"> (a) Hong Kong Automotive Parts and Accessory Systems R&D Centre (APAS); (b) R&D Centre for Information and Communications Technologies under the Hong Kong Applied Science and Technology Research Institute (ASTRI); (c) Hong Kong Research Institute of Textiles and Apparel (HKRITA); (d) Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies (LSCM); and (e) Nano and Advanced Materials Institute (NAMI). <p>The R&D Centres as well as the Hong Kong Productivity Council have gradually made a name as the trusted R&D partner in their respective sectors.</p>	
<p>Strategies need to respond to economy context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks. <i>What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</i></p>	<p>Hong Kong, China has been working on the following initiatives</p> <ul style="list-style-type: none"> - promoting and supporting applied R&D, and technology transfer and application; - fostering an innovation and technology culture in the community, and promoting technological entrepreneurship; - facilitating the provision of technological infrastructure and development of human resources to support innovation and technology; - formulating, developing and implementing the Government's policies, programmes and measures to promote innovation and technology; and - promoting internationally accepted standards and conformity assessment services to underpin technological development and international trade. 	<p>The Government firmly believes that innovation and technology is a key driver for economic development. We are committed to developing Hong Kong into a knowledge-based economy that thrives as an innovation hub in the region. In meeting such commitment, we will enhance collaboration among the Government, industry, academia and research sectors to promote research and development as well as technology transfer. A multi-pronged approach will be</p>

Public sector governance mechanisms	Current position	Any other comments
		adopted, comprising provision of infrastructural and financial support, human resource development, collaboration with economies outside Hong Kong and fostering an innovation culture in the community.

Appendix A Questionnaire on structural policies and innovation¹

Table A – Economy context (Optional)

Economy Context Questions	Current position	Any other comments
<p>Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i></p>	<p>Indonesia has risen to become a middle-income economy through appreciable levels of economic growth which have relied to a large extent on exports of natural resources and good trade links with leading global economies. It has yet to develop a technology intensive industry structure and imports of high-technology products. Increases in total factor productivity (TFP) have contributed to economic growth.</p> <p>While FDI is flowing into high- and medium-technology sectors, input levels are relatively low compared to other economies who appear to be modernising their economy more rapidly and economically.</p> <p>Indonesia has now put the emphasis on policies and mechanisms designed to stimulate innovation-led growth, with mechanisms freshly in place to oversee their co-ordination. Data capable of determining the effectiveness of these measures, however, are scarce. Significant improvements in infrastructure will be required to realise the government's growth ambitions -ICT infrastructure in particular is poor relative to much of the region- and other barriers to entrepreneurship and business risk holding back rapid knowledge-based economic development.</p> <p>Improving skills is one of the most important ways to boost innovation, productivity, economic growth and improve social welfare and equality. Indonesia's quality of human resources is still lagged behind other economies, as shown in INSEAD Global Innovation Index by dropping two places from ranked 85th in 2013 to 87th (out of 143) in 2014 and ranked 34th on the WEF Global Competitiveness Index 2014-2015.</p> <p>Increasing competitiveness, and human resources and investing more on research and technology are Indonesia's main priorities on the national medium term development plan 2015-2019.</p>	

Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</i></p>	<p>Indonesia's regulatory policy have yet to adopt flexible approach to allow alternative solutions and spur innovations. As shown on World Bank Doing Business Report 2015, Indonesia ranked 117th. One major obstacle in reforming doing business in Indonesia is the rigid approach to regulations.</p>	
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification programme in place and if so how comprehensive is it? Also, is any administrative simplification programme linked to programmes to reduce corruption?</i></p>	<p>On January 2015, Indonesia has launched the one stop service coordinated by the National Investment Coordinating Board (BKPM) which covers 134 licensing and non-licensing services from 22 ministries/agencies in central government. Moreover, the government has also enacted the national implementing number of programs to reduce corruption, such as, online registration system for National ID or e-KTP, <i>e-Immigration; e-Procurement, Ina Trade, National Single Windows (NSW); e-Planning, e-Budgeting, and e-Auditing.</i></p> <p>Indonesia Open Government Initiative (OGI) has been disseminated and implemented through establishing a E-Government Task Team E-Government to improve the synergies in the development of e-government policies.</p>	
<p>Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. <i>Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any adverse impact on competition and hence innovation?</i></p>	<p>Law No. 12/2011 on the Formulation on Laws and Regulations requires that proposed bills from the House of Representatives, Regional Representative Council or President of the Republic, as well as draft sub-national government regulations, be based on a standardised academic study. The focus of academic study is to justify the government's intervention and choice of instrument prior to discussions on a proposed bill and draft sub-national government regulation.</p> <p>The concept of the academic study shares a number of similarities with RIA. First, its aims to improve the design of regulation by assisting policy makers to identify the specific policy need and objective of the regulation. Second, it is intended to be integrated early into the policy making process, as is a prerequisite for initiating formal discussions on laws and sub-national regulations. Third, responsibility for the preparation of academic studies principally resides with the institution that is initiating the bill or draft sub-national regulation. Fourth, its introduction as a formal requirement was supported by the highest political levels, having been agreed upon both by the President of the Republic and the House of Representatives.</p> <p>However, academic studies also share a number of significant differences with RIA. First, academic studies are to be applied equally to all bills and draft sub-national regulations, but not at all for their implementing regulations. Second, academic studies do not explicitly require an assessment of the quantitative impact, including direct (administrative and financial) and indirect (opportunity) costs borne by business, citizens or government. Third,</p>	

	academic studies are treated more from a compliance perspective – rather than to support decision making.	
Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. <i>How easily can skilled people move between firms?</i>	Indonesia has ratified International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families. The convention has given the guarantee to freedom of movement rights for migrant workers, including the right to move, enter or leave any country, including their country of origin. Migrant workers are also given the freedom for family reunion, and the government is required to facilitate it. The Convention also gives the opportunity to the Government to control migrant flows into Indonesia. As a developing economy, Indonesia required highly skilled migrant workers to support its development. Nevertheless, migrant workers also need to be highly skilled, certified and be able to speak Indonesian language, which is also required by migrant workers in other economies. Indonesia has also develop online registration system for migrant workers to speed up administration process.	

Table C - Competition policy

Competition policy mechanisms	Current position	Any other comments
Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other. <i>How does competition policy deal with protection of consumers? Does competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and dynamic efficiency?</i>	Competition policy is one of the factors of protecting consumers through securing the availability of goods and services that meet their preferences. The development of such policy is rather complicated due to the increase demand of coordination between related state agencies to maintain such objective. Unavailability of formal and specific forum across agencies is somehow halting the process of achieving the objective of competition policy to consumer protection. Competition law in the timeline is able to provide certainty to the businesses by vigorous enforcement mechanism. The law mostly focus on long-term allocative efficiency, by balancing the distribution of goods and services with consumer's preference. Technical and dynamic efficiency of a firm may not part of the objective of competition law, since the competition agency is not regulators or policy makers.	
Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to fact based rule of reason analysis. <i>Does the competition authority(s) have the</i>	In term of enforcement on anti-competitive behaviours, competition authority may not take into account the gains in technical and dynamic efficiency. The authority has no right in affecting or determining specific price level of goods and services. The law mandates competition authorities as an enforcer rather as a regulator. However, technical and dynamic efficiencies did apply to the merger review process by the competition authority. They are one of the defining factors in assessing whether to decide a merger can affect competition in the market.	

Competition policy mechanisms	Current position	Any other comments
<p><i>legal authority to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i></p>	<p>Tools, procedures, or guidelines in such determination are sufficiently provided to the public by competition authority.</p>	
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or sub-national government?</i></p>	<p>Competition policy and law applies to all goods and services markets through the implementation of Law Number 5 Year 1999. Certain exclusions do apply. Article 50 of the Law Number 5 Year 1999 provide several exclusion from the law, as follows:</p> <ol style="list-style-type: none"> a. Actions and or agreements aimed at implementing applicable laws and regulations; or b. Agreements related to intellectual property rights, such as licenses, patents, trademarks, copyright, industrial product design, integrated electronic circuits, and trade secrets as well as agreements related to franchise; or c. Agreements for the stipulation of technical standarts of goods and or services which do not restrain, and or do not impede competition; or d. Agency agreements which do not stipulate the resupply of goods and or services at a price level lower than the contracted price; or e. Cooperation agreements in the field of research for raising or improving the living standard of society at large; or f. International agreements ratified by the Government of the Republic of Indonesia; or g. Export-oriented agreements and or actions not disrupting domestic needs and or supplies; or h. Business actors of the small-scale group; or i. Activities of cooperatives with the specific aim of serving their members. <p>Moreover, Article 51 of the Law also provides exemption to natural monopoly or exclusive control of goods and or services that affecting the livelihood of society and strategic branches of production. The exemption may provide to state-owned other enterprises defined by certain law.</p> <p>However, it should be highly noted that the article 50 and 51 are implemented under the Rule of Reason principle, which means, all conducts executed by the businessess will be evaluated by analyzing the implication of those conducts to the relevant market.</p>	

Competition policy mechanisms	Current position	Any other comments
	<p>Note:</p> <p>Relevant market shall be the market related to a certain marketing range or area by business actors in respect of goods and or services of the same or similar type or substitutes for such goods and or services.</p>	
<p>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. <i>Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective decision involving other Ministries? How is any independence established and safeguarded?</i></p>	<p>As stated in the Article 30, Law Number 5 Year 1999, competition authority of Indonesia calls Komisi Pengawas Persaingan Usaha (KPPU) shall be an independent institution free from the influence and authority of the Government and other parties. Thus, the competition law enforcement implemented independently and solely by the KPPU.</p> <p>This independence is established and safeguarded by the maintainance of public transparency in the implementation of competition law and policy. For example, the hearing process of competition cases is open for public audiences. The case decisions and regulations issued by competition authority can be obtained freely from their website. In addition, the commission also bound by code of ethics that open to the public.</p>	
<p>There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. <i>Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets with potential for innovation?</i></p>	<p>Competition authority of Indonesia is focusing their efforts to five sectors, which are: health and education, banking and finance, infrastructure and logistic, energy, and last but not least, food sector. These sectors were chosen because they affect the livelihood of society at large and significantly contribute to the Gross Domestic Product (GDP) of Indonesia as a whole. So, the focus is not entirely provided to the least competitive markets in Indonesia, but to their impact to Indonesian economy.</p>	
<p>There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i></p>	<p>Openness to trade and investment may create a highly competitive market, setting up a new standard for domestic market in the term of value added services to retain customers.</p> <p>However, openness to trade and investment may also create cross-border competition in the market, with a possible threat of international cartel, which involves foreign businesses. In this case, competition authorities will need to be strengthen to handle such violations. Nowadays, the main obstacles faced by</p>	

Competition policy mechanisms	Current position	Any other comments
	<p>competition authority are the limited enforcement power, jurisdictional territory of competition law enforcement, and unavailability of leniency application to tackle international cartel. These obstacles will be overcome through the amendment of competition law, as part of national development plan 2015-2019.</p>	

Table D - Corporate governance

Table E -

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i></p>	<p>The National Committee on Governance (KNKG) Indonesia published the Indonesia's Code of Good Corporate Governance (Code of GCG) in 1999, and revised in 2001 and 2006. To support the government's reform efforts, a number of initiatives were launched by organizations that pioneered the importance of corporate governance practices in Indonesia (the Indonesian Institute for Corporate Directorship (IICD), the Indonesian Institute for Corporate Governance (IICG), Forum for Corporate Governance in Indonesia (FCGI), the Indonesian Institute of Audit Committee (IKAI) and the Indonesian Institute of Commissioners and Directors (LKDI)). These organizations aim to promote governance awareness by organizing seminars and conferences, helping companies to conduct self-assessment, providing education and training programs, assessing governance practices, as well as providing governance perception index on an annual basis.</p> <p>Law No. 40 of 2007 concerning Limited Liability Company (Limited Liability Company Law), replacing an earlier law of 1995, is more comprehensive in accommodating and outlining governance principles to regulate the equality of company organs comprised of the General Meeting of Shareholders (GMS), Board of Commissioners, and Board of Directors. The Law also describes the roles and responsibilities of the Board of Commissioners and Board of Directors, as well as other corporate governance elements. This revision represents that corporate governance issues in Indonesia has been accommodated in important companies regulation in Indonesia. To complete the Indonesia's Code of GCG that have been issued by KNKG, KNKG also published a series of sectoral codes and manuals for the application of corporate governance.</p>	<p>The most recent development in the Indonesian financial sector has been the establishment of the Financial Services Authority (OJK) through Law No. 21 of 2011 concerning the Financial Services Authority (OJK). The main goal of the establishment of the OJK is to ensure activities in the financial services sector are held on a regular basis, and are fair, transparent, and accountable, so that Indonesia's financial system may grow in a sustainable and stable manner, capable of protecting the interests of consumers and the public. The OJK serves to organize regulatory and supervisory systems which are integrated with overall activities in the financial services sector in Indonesia. It is, established through the combining of two financial services regulatory agencies in Indonesia, namely the capital market and non-bank financial industry authority (Bapepam - LK) and the banking authority (Bank Indonesia). The transition period for all regulatory authorities on the</p>

		<p>activities in the capital market, insurance, pension funds, and other financial services institutions to be assumed by the OJK was completed on December 31, 2012. Meanwhile, the banking industry supervisory authority under Bank Indonesia was end and transferred to OJK on December 31, 2013. OJK is an independent body in conducting its duties and authorities, and functions to regulate and supervise all financial sector activities in Indonesia.</p>
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital funds and direct capital raising from the public. <i>Do your economy's financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</i></p>	<p>Indonesia's financial system is dominated by the banking sector, which represented almost 80% of total system assets as of December 2013. Banks are the leading financial intermediaries. Capital markets are growing but remain smaller than the banking sector in terms of their importance to financial intermediation. The remaining financial sector assets belong to insurance companies, finance companies, pension funds, other funds, equity funds, broker dealers, fixed income/bond funds, structured finance vehicles, and money market funds. Indonesia's financial system is relatively small compared to other emerging market peers but is growing. The total assets of the financial sector increased from below 60% of Gross Domestic Product (GDP) in 2009 to around 72% of GDP in December 2013.</p> <p><u>Regulation concerning credit and financing disbursement to support MSMEs</u></p> <p>The main objective of this policy is to increase MSME access to credit and finance from commercial banks. Indonesia Central Bank requires commercial banks operating in Indonesia to provide a minimum of 20% of their total loan portfolio for financing MSMEs. In addition, this regulation governs technical assistance to be provided by BI and coordination among relevant agencies to support the development of MSMEs.</p> <p><u>Venture Capital</u></p> <p>Venture Capital in Indonesia in 2014 grew by 9.10% from IDR 8.24 trillion in 2013 to IDR 8.99 trillion at the end of December</p>	<p>Financial Services Authority (OJK) will implement a new regulation regarding venture capital in Indonesia to revitalise venture capital system by expanding sources of funding for venture capital firms in the form of venture fund management from other the financial industry such as insurance and pension funds. Moreover, the new regulation will provides flexibility for venture capital firms to seek funds from other activities. Including the provision of opportunities for venture capital firms to undertake activities in the form of the provision of advisory services and fee-based business activities.</p> <p>The new regulation may also provide tax incentives and equity management program, increasing the role of the association venture capital firms in the efforts to establish a business angel network, and strengthening the sources of funding from venture capital firms</p>

2014. However, the venture capital industry market size is only 0.67% of the total assets of IDR 1,351 trillion of the non-banking financial industry.

to examine the possibility of establishing venture fund.

Meanwhile, eight of Indonesia's venture capital firms and incubators, familiar names to the ecosystem, have formed the Alliance of Venture Capitals in Indonesia (AVCII) to educate the market about venture capital investments and tech entrepreneurship. The stated mission of the alliance is to "help each other in terms of knowledge, resources, facilities, data, and information sharing within the organization." It also aims to ensure the growth of e-commerce and internet based companies in the nation.

AVCII will organize workshops to educate entrepreneurs about investments and growing scalable companies. They also hope to educate the market on the existence of VCs and incubators as a support network for startups.

The organization will be reaching out to universities to support their entrepreneurship curriculums and scout out startups or talents with potential. It will also partner with government and regulatory institutions to advocate a legal environment that favors startups.

While it is named an alliance of VCs, the organization is open to incubators, accelerators, and angel investors, both local and foreign. The key criterion is that they support the local tech scene.

<p>The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. <i>Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing??</i></p>	<p>Indonesia Stock Exchange Regulations No. Kep-00001/BEI/01-2014 aim to improve the quality of listed companies and to increase the liquidity of shares listed issuers in the capital market. IPO process only takes 10 days, provided all requirements completed. the company's IPO process in total takes about three months.</p>	<p>A New regulation is now being developed to facilitate the company in mineral and coal mining industries to offer its shares to the public or initial public offering (IPO) even before the company begin to operate.</p>
<p>Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However, these also allow poor managers the opportunity to repeatedly start businesses that fail with losses to shareholders and creditors. <i>How is the balance struck between enabling risk taking and protecting shareholders and creditors?</i></p>	<p>Law No. 37 of 2004 regarding Bankruptcy and Suspension of Debt Repayments stipulates that, where a debtor has been declared bankrupt, any legal proceedings initiated by the debtor may, at the request of the defendant, be suspended so as to give the liquidator the opportunity to assume control of the proceedings and determine whether to continue them.</p> <p>Article 37 of Law No. 8/1995 About Capital Markets to mention the separation of assets of clients with securities companies. Securities companies which received the effect of customers must keep these securities in a separate account from the accounts of securities companies.</p> <p>Financial Services Authority (OJK) regulation No. 01/POJK.07/2013, with regard to Consumer Protection in Financial Sectors with several main aspects, mainly to increased transparency and disclosure of the benefits, risks and costs of products and/or services from Financial Services business and to simplified complaints and dispute settlement process from consumers on the produces/services from financial services business. This regulation applies to all financial sector, banking industry, non-bank finance and capital markets.</p>	

Public sector governance

Public sector governance mechanisms	Current position	Any other comments
<p>The rule of law implies that every citizen is subject to the law, including law makers themselves. Limits to the rule of law occur because of neglect or ignorance of the law, corruption, or the lack of corrective mechanisms for administrative abuse, such as an</p>	<p>Act No. 5 of 1960 regulates the rights over land ownership in Indonesia. The law covers some rights - mostly for Indonesian citizens - namely rights of ownership, building rights, cultivation rights on land and rights of use. Current rules governing foreign ownership of property in Indonesia are laid out in Government Regulation Number 41</p>	

Public sector governance mechanisms	Current position	Any other comments
<p>independent judiciary. Does your system actively protect and enforce the property rights of different stakeholders? If so what sort of legal mechanisms are available and used?</p>	<p>Year 1996 on Housing or Residential Ownership for Foreign Citizens Based in Indonesia. This is now under discussion to be redrafted as part of Law 1/2011 regarding Housing and Residential Areas. As of June 2011 the current law is still in place stipulating that foreigners who maintain a 'presence' in Indonesia be it through regular visits, residency or business interests are allowed to own a leasehold on a property in Indonesia for up to 70 years. This 70 year period is subject to renewal after an initial tenure of 25 years, then 20 years and then another 25 years.</p> <p>What is still under discussion is the type of property that foreigners would be allowed to purchase. Current proposals being discussed are for properties of IDR 1.5 billion while the government is more inclined to IDR 2 billion and up, to protect the lower income property segment.</p> <p>Indonesia's copyright law (Law 19/2002) takes effect on July 29, 2003 fines up to IDR 500 million (USD 62,000) and provides for prison terms of up to five years for dealers of pirate materials.</p> <p>The law directs cases of alleged copyright violations to be tried in commercial courts, and for the rendering of judgments within 90 days. As part of the law's implementation, the Ministry of Industry and Trade plans to issue optical disc regulations that would enhance the government's ability to identify and prosecute producers of pirated products.</p> <p>In an effort to enhance interagency coordination on enforcement, Indonesia's Ministry of Justice recently formed an IPR task force made up of the national police, customs, attorney general, judiciary, and members of the computer software and entertainment industries. The task force has already conducted a few high profile raids.</p> <p>Indonesia acceded to numerous international conventions on intellectual property rights, including the Paris Convention for the Protection of Intellectual Property; the Berne Convention for the Protection of Literary and Artistic Works (with a reservation on Article 33); the Patent Cooperation Treaty; Trademark Law Treaty; the Nice Agreement for the International Classification of Unclassified Goods and Services. Patents: The current patent law dates from 2001, which amended and consolidated in a single text all previous legislation.</p> <p>In 1997, Indonesian law extended the term of patent protection to 20 years from 14 years, and maintained the provision for a two-year patent extension. The amendment allows for the patenting of plant and animals.</p> <p>Trademarks: Indonesia enacted its new trademark law on August 1, 2001. Like the new patent law, the latest version consolidated into one text a series of trademark laws enacted over the past 20 years. The new law raised the maximum fine for trademark violations to IDR 1 billion (USD 95,000) and slightly reduced the maximum possible</p>	

Public sector governance mechanisms	Current position	Any other comments
	<p>prison term. The government justified this move by claiming that financial penalties were a greater deterrent to IPR violators than imprisonment.</p> <p>The trademark law provides for the determination of trademark rights by priority of registration, rather than by priority of commercial use. The law also provides for the protection of well-known marks, but offers no administrative procedures or legal ground under which legitimate owners of well-known marks can cancel pre-existing registrations.</p> <p>Currently, the only avenue for challenging existing trademark registrations in Indonesia is through the commercial courts, which generally have issued decisions within three months upholding legitimate trademarks.</p>	
<p>State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are there SOEs explicitly tasked with encouraging private sector innovation?</p>	<p>There are 114 SOEs in 2014 in Indonesia which covers all sectors such as agriculture, plantation, forestry, manufacturing, mining, finance, post and telecommunications, transportation, electricity, industry and trade as well as construction. The total assets of 114 state-owned companies in 2014 reach approximately IDR 4.467 trillion, rose 5.95 percent from 2013. SOE revenue also rose to 6.7 percent from 1.792 trillion in 2013 to Rp1.912 trillion. The roadmap of SOE reform is currently underway reducing the number of SOE to 87 companies in 2015 and only 25 SOEs in 2025.</p> <p>To foster business entrepreneurship, innovation, improving and strengthening SMEs, Indonesia had launched SOE - Small and Medium Enterprises Partnership Program. The program utilized State-Owned Company's 1 to 5% of its net profit to improve the capacity of SMEs to become strong and self-sufficient while providing a multiplier effect for improving welfare in the communities.</p>	
<p>A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure?</p>	<p>Established in 1962, Indonesia's Ministry of Research and Technology's main purpose are policy development and its implementation in the field of research and technology; Coordinating and synchronizing of policy implementation in research and technology; and supervising main direction and priority of science and technology development, also formulating strategic policy of science and technology national development.</p> <p>SINas</p> <p>The competitive incentive program of "National Innovation System Research" (SINas) is one of the policy instruments of the Ministry of Research and Technology with the aim to support R&D practitioners to optimising their resources as well as establishing innovative collaboration with industrial bodies. Moreover, the program is also intended for assisting industrial entities to strengthening their science and technology (S&T) capacities.</p>	

Public sector governance mechanisms	Current position	Any other comments
	<p>The beneficiaries may come by consortium and non-consortium entities. Each consortium organisation should be comprised by triple helix elements of government, higher education /university, and industries bodies that share a functional cross-exchanging R&D agreement for executing an arm-length project, with research subject concurs to the national interest.</p> <p>For each approved proposal, the maximum amount of disbursed fund for non-consortium research shall be IDR 500 million (approximately USD 50,000), while the lower limit for consortium fund will be IDR 500 million.</p> <p>The targeted recipients of this program are legally-recognised government agencies or non-government bodies, such as:</p> <ul style="list-style-type: none"> • Non-ministerial government bodies (Nuclear Energy Regulatory Agency/Bapeten, National Nuclear Energy Agency/Batan, Information Geospatial Body/BIG, Agency for the Assessment & Application of Technology/BPPT, the National Standardization Agency (BSN), National Space and Aviation Agency/LAPAN, Indonesian Institute of Sciences (LIPI); • Research units at government ministerial bodies; • Industrial R&D entities; • State/private universities; • R&D units of NGO's bodies. <p>Inotek</p> <p>Indonesia Innovation Technology Foundation (INOTEK) is a private sector initiatives to support the development of technologically-innovative start-up and small and growing businesses (SGBs) that serve Bottom-of-Pyramid (BOP) markets. INOTEK was established on the strong belief that applicable and appropriate-use of technology and innovation will provide economic benefits as well as positive social and environmental impacts to society.</p> <p>Inotek aim to support the development and implementation of innovative technologies and entrepreneurial approaches to improve society's welfare and alleviate poverty; Support technology-based entrepreneurial educational activities; Support efforts to improve technological competencies and entrepreneurial approaches in implementing innovative technology with economic, social and environmental benefits.</p>	
Strategies need to respond to economy context, level of capability development and the binding constraints. For some the priority is	To increase productivity and competitiveness is the main purpose of Indonesia's innovation and technology policy as stated in the National Mid-Term Development Plan	

Public sector governance mechanisms	Current position	Any other comments
<p>getting the basic building blocks in place to underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks. What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</p>	<p>2015-2025. The national program could be described, among others:</p> <ol style="list-style-type: none"> 1) In production sector: (i) to conduct research to promote science & technology in order to increase competitiveness in productivity sectors, such as food and agriculture, transportation, sustainable energy, etc.; (ii) To increase standardisation infrastructure to improve the quality of Indonesia National Standard (SNI); (iii) To strengthening the supervision of Nuclear Energy; and (iv) to strengthen the capacity and services for engineering and technology 2) To improve competitiveness and preparedness among Indonesian people towards globalisation, the government has also planned to prioritized social and humanity research and build around 100 Techno Park development in Regency / City area as well as to build Science Park in each provincial area to promote utilization of technology in the economy and foster community-based innovation entrepreneur. 	

Appendix A Questionnaire on structural policies and innovation

Table A – Economy context (Optional)

Economy Context Questions	Current position	Any other comments
<p>Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i></p>	<p>The Abe administration, which was inaugurated at the end of 2012, attaches its highest priority to exiting from Japan’s prolonged deflation and to revitalizing the economy, and launched a new economic policy known as Abenomics. Since then the administration has pursued its three arrows of economic policy package, consisting of (i) bold monetary policy, (ii) flexible fiscal policy, and (iii) growth strategy that encourages private-sector investment.</p> <p>In June 2013 Japan adopted a new growth strategy called “Japan Revitalization Strategy”, which contains a number of bold reforms to bring Japanese economy to a sustainable growth path. “Japan Revitalization Strategy” was revised to accelerate the reforms further in June 2014. Further revision of “Japan Revitalization Strategy” was made in June 2015 under key concepts of “Realization of revolution in productivity by investment in the future”. The latest strategy include various innovation policies, aiming to encourage dynamic innovation ventures and a full-fledged national innovation system in Japan.</p>	

¹ NZIER report (March 2015) to APEC 2015 Economic Report (AEPR) - The role of structural policies in innovation

Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</i></p>	<p>There are both prescriptive input based regulation and outcome/performance based regulation. Authorities formulate regulations based on the targeted objectives.</p>	
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification programme in place and if so how comprehensive is it? Also, is any administrative simplification programme linked to programmes to reduce corruption?</i></p>	<p>“Implementation Plan for Regulatory Reform” was decided by the Cabinet in June 30, 2015. Its intention was to conduct a wide variety of regulatory reforms, which support economic activities through realizing potential demands and contribute to recovery of the Japanese Economy, thereby promoting economic and social structural reforms.</p> <p>The plan defines the aim of regulatory reform as the contribution to the national growth and development, stabilization and improvement of people’s lives and invigorating economic activities. From this perspective, Japan is pushing forward regulatory reform with an eye on assisting innovation by removing barriers that hinder creative ideas and efforts of enterprises and NPOs.</p>	
<p>Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. <i>Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any adverse impact on competition and hence innovation?</i></p>	<p>Based on the purpose of improving the quality of regulations, the Implementation Guidelines for ex-ante Evaluation of Regulations indicate that if it is apparent that the enactment, or revision or abolition of regulations has impact on competition, such impacts shall be taken into consideration in conducting costs analysis of the regulations.</p>	
<p>Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement</p>	<p>Japan takes a policy to positively accept foreign nationals in professional or technical fields in order to further stimulate the economy and enhance the competitiveness of Japan. The foreign nationals who reside in Japan with statuses of residence for working are permitted to engage in work activities corresponding to their statuses and are enabled to change their organizations to which they belong within the range of activities which are permitted</p>	

between firms within economies. <i>How easily can skilled people move between firms?</i>	corresponding to their statuses during their period of residence. In this regard, when they change their organizations, they are required to notify the Minister of Justice of matters related to their new organizations, etc.	
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Table C - Competition policy

Competition policy mechanisms	Current position	Any other comments
<p>Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other. <i>How does competition policy deal with protection of consumers? Does competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and dynamic efficiency?</i></p>	<p>The Antimonopoly Act (hereinafter referred to the “AMA”) provides that, "The purpose of this Act is to promote fair and free competition, stimulate the creative initiative of enterprises, encourage business activity, heighten the level of employment and actual national income, and thereby promote the democratic and wholesome development of the national economy as well as secure the interests of general consumers by prohibiting private monopolization, unreasonable restraint of trade and unfair trade practices, preventing excessive concentration of economic power and eliminating unreasonable restraints on production, sale, price, technology, etc., and all other unjust restrictions on business activity through combinations, agreements, etc.," (Article 1). This article stipulates the purpose of the AMA and it is interpreted to mean that the direct objective of the AMA is the promotion of fair and free competition, and the ultimate objective of the AMA is the assurance of the interests of general consumers and the promotion of democratic and wholesome development of the national economy. In order to achieve this purpose, the Japan Fair Trade Commission (“JFTC”) was established (Article 27) and is responsible for competition policy in Japan. The AMA makes it clear that the JFTC independently carries out its authority concerning the enforcement of the AMA (Article 28).</p> <p>Thus, the purpose of competition policy is to promote fair and free competition in the market and to secure the interests of consumers by increasing the efficiency of all economic activities through competition. In order to achieve this policy objective, the JFTC has been strictly enforcing the AMA against violations of the AMA including price fixing and bid-rigging. During FY2014, the JFTC took legal measures in 10 cases.</p>	

Competition policy mechanisms	Current position	Any other comments
<p>Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to fact based rule of reason analysis. <i>Does the competition authority(s) have the legal authority to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i></p>	<p>With respect to sectors such as those related to digital economy or intellectual property, innovation driving economic growth is expected, while at the same time their market environments are changing at an extremely rapid pace. It is therefore necessary to clearly identify the real status of these sectors which have been becoming far more complex, in order to adequately create a competitive environment in each sector. The JFTC shows the guidance under the AMA by publishing “Guidelines Concerning Joint Research and Development under the Antimonopoly”(1993), “Guidelines on Standardization and Patent Pool Arrangements”(2005) and “Guidelines for the Use of Intellectual Property under the Antimonopoly Act”(2007). The JFTC also established the taskforces ((i) IT and public industry (in April 2001), (ii) Intellectual Property (in August 2002)) to focus on cases regarding these sectors and has actively and promptly addressed issues in the sectors.</p> <p>Furthermore, although there are no provisions considering efficiency under the AMA, the guidelines regarding merger and private monopolization demonstrate the basic viewpoints on efficiency.</p> <ol style="list-style-type: none"> 1. “Guidelines to application of the Antimonopoly Act Concerning Review of Business Combination” (hereinafter referred to the “Merger Guidelines”) <p>The AMA prohibits business combinations whose effect may be to substantially restrain competition in a particular field of trade. In the Merger Guidelines published by the JFTC, the efficiency of mergers is one of “the factors for judging whether competition would be substantially restrained or not”.</p> <p>The Merger Guidelines states as follows: “when efficiency improvement, whether through economies of scale, integration of production facilities, specialization of factories, reduction in transportation costs or efficiency in research and development, is deemed likely to make the company group take competitive action after the business combination, this factor will also be considered to determine the impact of the business combination on competition”. In addition, “efficiencies to be considered in this case are determined from three aspects: (i) efficiencies should be improved as effects specific to the business combination; (ii) efficiency improvement should be feasible; and (iii) efficiency improvement contributes to the</p>	

Competition policy mechanisms	Current position	Any other comments
	<p>users' welfare".</p> <p>There are sometimes cases where the parties concerned claim efficiency during merger review. In such cases, the JFTC reviews their claims.</p> <p>2. "Guidelines for Exclusionary Private Monopolization under the Antimonopoly Act" (2009) (hereinafter referred to the "Exclusionary Private Monopolization Guidelines")</p> <p>"Substantial restraint of competition in a particular field of trade" constitutes a factor of violation of the AMA as private monopolization which is one type of violative conduct of the AMA. In the Exclusionary Private Monopolization Guidelines, the JFTC demonstrates that the efficiency is one of the deciding factors regarding "the substantial restraint of competition" of private monopolizations.</p>	
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or sub-national government?</i></p>	<p>The AMA applies to all goods and services except for those exempted from the AMA (e.g. works subject to exemption regarding resale price maintenance).</p> <p>The AMA institutes systems for exempting the application of the AMA's prohibition provisions to certain conducts in specific fields in principle with a view to achieving certain objectives of policies (e.g. to ensure management stability by small and medium-sized enterprises and user-friendliness). These systems are stipulated in the AMA as well as in individual legislations. There are currently 24 exemption systems stipulated in 17 legislations.</p> <p>These exemptions are not meant to apply to particular sectors or businesses owned by national or sub-national government.</p>	
<p>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. <i>Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective decision involving other Ministries? How is any</i></p>	<p>Independence of exercising its authority</p> <p>In order to ensure that the market fully functions in a free economic society, it is necessary to constantly monitor whether the rules for fair and free competition are being observed. Thus, the JFTC (a council organization consisting of a chairman and 4 commissioners) was established as the agency responsible for administering the AMA.</p>	

Competition policy mechanisms	Current position	Any other comments
<p><i>independence established and safeguarded?</i></p>	<p>The JFTC sets up the General Secretariat for handling the administration of its affairs.</p> <p>The JFTC is under the jurisdiction of the Prime Minister and it is structurally established as an external bureau of the Cabinet Office (CAO) in the administrative structure of the government. However, the unique characteristic of the JFTC is that the agency exercises its authority independently as an administrative commission without the direction or supervision from other agencies, because the AMA is a basic rule for economic activities that needs to be enforced continuously and consistently by a fair and neutral agency free from political influence. For this reason, Article 28 of the AMA stipulates that “the chairman and commissioners of the Fair Trade Commission exercise their authority independently”. The chairman and commissioners are appointed by the Prime Minister with the consent of both Houses of the Diet among persons who have knowledge and experience in law or economics (Article 29) and, in principle, the chairman or a commissioner may not, against their will, be dismissed from office while they are in office (Article 31).</p> <p>Independence from regulatory agencies</p> <ol style="list-style-type: none"> 1. Enforcement of the AMA in regulated sectors <p>Sector regulatory agencies which supervise specific industry sector can exercise exclusively its regulatory authorities, while the JFTC can exercise its authority set forth in the AMA independently of the regulatory agencies.</p> <p>For example, the JFTC can apply the AMA to a violative act of an enterprise or trade association, even if the act was induced through the direction or guidance of a regulatory agency, and can take legal action, etc. against the enterprise or trade association.</p> 2. Conducting survey and submitting viewpoints to agencies’ policy <p>The JFTC is given the authority to conduct survey on competition policy issues and to submit viewpoints to ministries and agencies in charge of regulations for the</p> 	

Competition policy mechanisms	Current position	Any other comments
	purpose of promoting competition in regulated sectors (Article 58, Paragraph 8 of the Act for Establishment of the Cabinet Office).	
<p>There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. <i>Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets with potential for innovation?</i></p>	<p>To promote fair and free competition in the fields where competition-restricting regulation by government exist, the JFTC establishes the guidelines which explain certain acts such as blocking new entry that tends to violate the AMA, and publishes surveys and reports that study the status of competition in the market as well as issues from the viewpoint of competition policy.</p>	
<p>There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i></p>	<p>To maximize the effects of trade and investment liberalization, provisions regarding competition are stipulated in Economic Partnership Agreements which Japan has concluded. These provisions stipulate that both jurisdictions address appropriately anticompetitive activities and cooperate to address such activities.</p> <p>Based on the recognition that amid the globalization of corporate activities in recent years, the effects of trade liberalization may be diminished by cross-border anti-competitive practices such as international cartels, the JFTC established a new special task force in the Investigation Bureau, in April 2010, to accumulate the knowledge and knowhow necessary to investigate these international cartels and to efficiently deal with the cases. The JFTC continues to address vigorously international cartels in close cooperation with other competition agencies.</p>	

Table D - Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i></p>	<p>Under the Companies Act of Japan, Japan has corporate governance systems in which relevant organs such as directors and company auditors shall monitor or supervise the execution of duties by each director, and, if necessary, they may take appropriate corrective measures including pursuing liabilities of the director who neglects his/her duties and dismissal of such director. In addition, Japan has certain legislation relating to incentive compensation plans for directors such as stock options.</p> <p>In addition, the Japan's Corporate Governance Code, which entered into force in June 2015, establishes fundamental principles for effective corporate governance including those of "Responsibilities of the Board" and "Dialogue with Shareholders". In the section of "Responsibilities of the Board", the Code states as follows:</p> <p>"Given its fiduciary responsibility and accountability to shareholders, in order to promote sustainable corporate growth and the increase of corporate value over the mid- to long-term and enhance earnings power and capital efficiency, the board should appropriately fulfill its roles and responsibilities, including:</p> <ol style="list-style-type: none"> 1. Setting the broad direction of corporate strategy; 2. Establishing an environment where appropriate risk-taking by the senior management is supported; and 3. Carrying out effective oversight of directors and the management (including shikkoyaku and so-called shikkoyakuin) from an independent and objective standpoint." <p>Moreover, the Japan's Stewardship Code, which is also known as the Principles for Responsible Investors, was formulated in February 2014 to promote sustainable growth of companies through investment and dialogue.</p> <p>Both Codes are "the two wheels of a cart", and it is hoped that they will work appropriately and together so as to achieve effective corporate governance in Japan.</p> 	
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take</p>	<p>In addition to traditional SME financing through banks, Japanese government facilitates providing risk money for emerging and growth companies through angel taxation and crowdfunding. In order to develop the systems of security-based crowdfunding,</p>	

<p>a variety of forms including venture capital funds and direct capital raising from the public. <i>Do your economy's financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</i></p>	<p>necessary amendments to the Financial Instruments and Exchange Act were added in 2014.</p> <p>Japan have a tax program for angel investors investing into start-ups, and a tax program for private companies investing into start-ups through authorized VC funds.</p>	
<p>The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. <i>Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing?</i></p>	<p>Through such measures as above-mentioned, Japanese government facilitate providing risk money for emerging and growth companies.</p> <p>The Tokyo Stock Exchange operates not only the "First Section," where famous, large Japanese and foreign companies are listed, but also the "Mothers," a market for emerging companies with growth potential, and the "JASDAQ" one for growth companies with a certain scale of business and good performance, as well as for companies full of future growth potential with unique technologies and/or business models. The cost of being listed on those markets is lower than on the "First Section."</p> <p>Japanese government provide "LPS", Investment Limited Partnership in English, as a legal framework that enables limited partnership agreement for investment by distinguishing limited partners from general partners.</p>	
<p>Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However, these also allow poor managers the opportunity to repeatedly start businesses that fail with losses to shareholders and creditors. <i>How is the balance struck between enabling risk taking and protecting shareholders and creditors?</i></p>	<p>Companies and managers are distinct legal entities, so, entrepreneurs are not liable only by the fact their companies went bankrupt.</p> <p>Managers who neglect their duties shall be liable for damages arising as a result thereof (Companies Act Article 423 etc.), and, special system for which pursuing the liabilities of managers is provided in bankruptcy proceedings (Bankruptcy Act Article 177 to Article 183).</p>	

Table E - Public sector governance

Public sector governance mechanisms	Current position	Any other comments
<p>The rule of law implies that every citizen is subject to the law, including law makers themselves. Limits to the rule of law</p>	<p>Under the Constitution of Japan, the independence of judicial power is secured and the whole judicial power is vested in a Supreme Court and in such inferior courts as are established by law. Furthermore, all judges shall be independent in their practice.</p>	

Public sector governance mechanisms	Current position	Any other comments
<p>occur because of neglect or ignorance of the law, corruption, or the lack of corrective mechanisms for administrative abuse, such as an independent judiciary. <i>Does your system actively protect and enforce the property rights of different stakeholders? If so what sort of legal mechanisms are available and used?</i></p>	<p>Every citizen whose legal rights are infringed may claim damages based on torts law or State Redress Act.</p> <p>To resolve dispute between individuals, a party may file a law suit in the court against the other, for example, seeking evacuation from land or buildings, or seeking compensation of damages. Also, to correct administrative abuse, legal actions against the state or public entity may be taken seeking for the judicial review of administrative dispositions as actions for damages.</p>	
<p>State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. <i>In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are there SOEs explicitly tasked with encouraging private sector innovation?</i></p>	<p>The value added of SOE is not estimated independently in Japanese system of national accounts.</p> <p>The AMA applies to all economic bodies including government organizations which conduct business activities except for those being targeted by exemption. There is no exemption for SOE and government-owned market sectors under the AMA. Thus, government-owned market sector is not sheltered from competition.</p>	
<p>A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. <i>Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure?</i></p>	<p>Council for Science, Technology and Innovation (CSTI) at Cabinet Office is tasked with and capable of delivering: (a), (b), and (c). CSTI is responsible for basic STI policy through planning and promoting “Science & Technology Basic Plan” and “Comprehensive Strategy on Science, Technology, and Innovation”. These include policy directions on STI such as (a), (b), and (c).</p> <p>In addition, government ministries, universities, national research and development institutions and other public institutions are also involved in the formulation of national innovation system in their respective fields.</p>	
<p>Strategies need to respond to economy context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to underpin a national innovation system. For others the priority</p>	<p>According to Comprehensive Strategy on Science, Technology and Innovation 2015, Direction of policies on Science, Technology, and Innovation is as follows:</p> <ul style="list-style-type: none"> • Advent of a “period of grand transformation”, in which processes of economic and 	

Public sector governance mechanisms	Current position	Any other comments
<p>is to refine how the system is operating and focus on removing bottlenecks. <i>What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</i></p>	<p>social value creation will undergo substantial change.</p> <ul style="list-style-type: none"> • In this “period of grand transformation”, or “Fourth Industrial Revolution”, the aim is to open the way to a new future, resolve domestic and international problems, and achieve sustainable development in Japan. • The Council for Science, Technology, and Innovation will fulfill its function as a command center based on the Comprehensive Strategy. <p>Based on this direction, the following five areas are focused and promoted through nationwide commitment.</p> <ol style="list-style-type: none"> 1. Challenges aimed at future industry creation/social change in the “period of grand transformation” 2. Promotion of science, technology, and innovation contributing to regional revitalization 3. Promotion of science, technology, and innovation capitalizing on the opportunity of the 2020 Tokyo Olympic/Paralympic Games 4. Creation of an environment that generates innovation chains 5. Key initiatives for resolving economic/social issues 	

Appendix A Questionnaire on structural policies and innovation

Table A – Economy context (Optional)

Economy Context Questions	Current position	Any other comments
Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i>		

¹ NZIER report (March 2015) to APEC 2015 Economic Report (AEPR) - The role of structural policies in innovation

Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</i></p>	<p>The regulatory system of Korea requires to consider alternative approaches and solutions mandatorily when to introduce new regulations. The Framework Act on Administrative Regulation states that if any central governmental agency wishes to create or strengthen regulations, it should first produce and release an impact analysis report on the regulations. The report is required to 1. contain regulatory alternatives to the regulations, 2. conduct comparative analyses between the alternatives and the regulations, and 3. make sure that there is no regulatory overlap with existing regulations. Once completed, the report becomes open to the public to get opinions of supplement or improvement. After undergoing the revision process, the final report is submitted to the Regulatory Reform Committee for a review to check that whether creating/strengthening of the regulations is the best way even considering the alternative approaches and solutions suggested in the report.</p> <p>In 2014, the Regulatory Reform Committee reviewed 138 cases. Among them 8 were recommended to withdraw while 76 cases getting recommendation of improvement or supplement.</p>	
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification programme in place and if so how comprehensive is it? Also, is any administrative simplification programme linked to programmes to reduce corruption?</i></p>	<p>The Korean government has been streamlining its administrative procedures in various ways. First and foremost, the current administration has pledged to abolish 20% of regulations on economic matters during its term to further the autonomy of the private sector and boost the national economy. In 2014, the government decided to abolish 995 economic regulations, which account for more than 10% of the total economic regulations. Among the 995 regulations, 433 were removed and abolishment of the remaining 562 is currently deliberated at the National Assembly. Also, the government has been active in improving its regulatory system by taking opinions and advices from companies, economic groups and the public. During last year's ministers' meeting for deregulation chaired by the President, 77 regulatory issues were raised for improvement, and until to date, 76 of them, which is 99% of the total, have completed its improvement. Additionally based on an issue report submitted by economic and corporate associations as a whole, the government</p>	

	<p>chose 114 reform targets for regulatory guillotine program, which is run by the Deputy Minister for Regulatory Reform. Through the program, the government has completed its improvement 103 issues or 90% of the total. Plus, the Korean government has been running a website. Every petition and regulatory suggestion raised through the website should be answered by relevant government agency within 14 days, and deregulation ideas that are not adopted by the government will be reviewed again within 3 months of time. Through the website, the government has received 7,084 deregulation suggestions, and 2,692 of them were adopted by the government for regulatory reform and improvement.</p>	
<p>Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. <i>Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any adverse impact on competition and hence innovation?</i></p>	<p>As mentioned above, the Korean law clearly states that, if any governmental agency wishes to create or strengthen regulations, it should first submit a regulatory impact analysis report, which analyzes expected impact of regulatory changes on the market competition with comparative economic/social cost and benefit analysis, to the Regulatory Reform Committee.</p> <p>Once the report is submitted, the committee sends it the Korean Fair Trade Commission (KFTC) for evaluation of the regulatory changes' impact on the market competition. The evaluation is done in the four aspects – 1. Number/size of suppliers, 2. Capacity of suppliers, 3. Incentives to suppliers, and 4. Consumers - and the outcome is sent to the Regulatory Reform Committee with feedbacks of the KFTC.</p> <p>Based on the outcome and feedbacks, the Regulatory Reform Committee makes its stance after having due deliberation, and notifies its decisions to the agency which submitted the regulatory impact analysis report. The agency, with the evaluation outcome and opinions of the Regulatory Reform Committee, improves and revises its draft plan. With such a process the Korean government tries to minimize negative impact of regulations on market competition and innovation by encouraging government agencies to make regulatory improvements based on recommendations suggested in the regulatory impact analysis report.</p>	
<p>Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. <i>How easily can skilled people move between firms?</i></p>	<p>In the past, if any skilled foreign worker working in Korea wished to change or add employer, s/he had to get advance permission from Korea's immigration authorities. From January 2011, however, the law has allowed them to do it only with report. The report subjects are separately stipulated in the order of the Justice Minister and most of the people holding E-type visa – from E-1(professorship) to E-7(special occupations) - are considered as report subject except artists and performers(E-6)</p>	

	<p>visa holders who engage in performance activities at hotels, entertainment establishments, etc., and chefs and cooks among the special occupations (E-7) visa holders. Until 2014, 22,594 cases (or 8.3% of the total cases) of changes of employers and 3,551 (or 77.9% of the total cases) of additions of employers have been benefitted from the report system.</p>	
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Table C - Competition policy

Competition policy mechanisms	Current position	Any other comments
<p>Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other. <i>How does competition policy deal with protection of consumers? Does competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and dynamic efficiency?</i></p>	<p>Article 1 of the Monopoly Regulation and Fair Trade Act (hereinafter “MRFTA”), Korea’s competition law, stipulates that the MRFTA’s purpose is “to promote fair and free competition, to encourage thereby creative enterprising activities, to protect consumers and to strive for balanced development of the national economy.” As such, consumer protection is one of the ultimate goals of the MRFTA.</p> <p>In this context, consumer welfare is an important factor in determining whether an act is the violation of competition law. For instance, according to Article 3-2 (1) 5 of the MRFTA, “Unfairly excluding competitive enterprisers, or doing considerable harm to consumer benefits” constitutes an abuse of market-dominant position, therefore Korea’s competition law demands in express terms that competition law enforcement shall take into account whether there has been a loss in consumer benefits. Furthermore, it is generally understood that determining illegality of conduct should factor in whether the conduct has harmed consumer benefits or not even in cases where such judgement is not required by law in express terms.</p> <p>In addition, to effectively enhance consumer welfare, the ultimate goal of competition and consumer policies, the Korea Fair Trade Commission is in charge of both competition and consumer policies at the same time.</p>	

Competition policy mechanisms	Current position	Any other comments
<p>Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to fact based rule of reason analysis. <i>Does the competition authority(s) have the legal authority to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i></p>	<p>The MRFTA does not come down to a choice between per se illegal and rule of reason in express terms. Instead, its major substantive provisions include “unfairness” or “absence of justifiable ground” as positive or negative requirement. For example, when defining specifics of the abuse of market dominance or unfair business transactions, the MRFTA includes adverbs like “without justifiable reason” or “unfairly.” This means the MRFTA provides competition authority with certain legal room to take into account various factors in its decision making process.</p>	
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or sub-national government?</i></p>	<p>Korea’s competition law shall be applied to all economic activities in principle, but that does not mean that it should not have exceptions. Because without exception, law and order as a whole can face problems. Therefore, to “strive for balanced development of the national economy” as set forth in Article 1 of the MRFTA, Korea’s competition law contains exceptional clause.</p> <p>The MRFTA stipulates in express terms that the following cases could be an exception to the application of competition law:</p> <ol style="list-style-type: none"> 1) Justifiable actions pursuant to law; 2) Justifiable exercises of intangible property rights set forth in Copyright Act, Trademark Act, etc.; 3) Actions of cooperative of small-scale enterprises or consumers that meet certain requirements. 	
<p>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. <i>Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective</i></p>	<p>Article 35 of the MRFTA prescribes that the Fair Trade Commission shall be established under the jurisdiction of the Prime Minister for the purpose of “independently” performing the objectives of the Act. The MRFTA has provisions regarding the term of office, organization structure, and the guarantee of status to ensure the KFTC’s independence. Specifically, the</p>	

Competition policy mechanisms	Current position	Any other comments
<p><i>decision involving other Ministries? How is any independence established and safeguarded?</i></p>	<p>term of office of the chairman, vice-chairman and commissioners shall be three years (Article 39 of the MRFTA), and no commissioner shall be removed from office contrary to his/her intention except in some cases (Article 40).</p>	
<p>There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. <i>Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets with potential for innovation?</i></p>	<p>Innovation today plays a key role of creating quality jobs by securing sustainable growth engines. However, in some creative areas, unnecessary regulations often impede such innovation. The role of competition authorities is not confined to law enforcement activities of detecting and punishing anti-competitive activities. Its role also includes competition advocacy activities such as fostering competition-friendly environment, providing other government agencies with recommendations to improve their anti-competitive laws and regulations.</p> <p>Recognizing the importance of such competition advocacy activities, the KFTC spares no effort in eliminating unreasonable entry barriers and addressing anti-competitive regulations, thereby building free and fair competition environment. By collecting opinions from enterprisers' organizations and experts as well as conducting its independent market analysis, the KFTC is carrying out various studies and coming up with solutions, focusing on areas where monopoly has persisted for a long time and improvement is urgently needed.</p>	
<p>There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i></p>	<p>These days, economic activities are transnational. Therefore, economic activities in a foreign country are increasingly affecting the domestic market. The problem here is whether competition authorities can enforce their laws extraterritorially against enterprises that pose an impact on the domestic consumers but are domiciled abroad.</p> <p>Legal ground for extraterritorial competition law enforcement was put in place in 2004 by the 11th amendment to the MRFTA. In the amendment, it is stipulated that "in cases where any act that performs even abroad affects the domestic market, this Act (the MRFTA) shall apply to such act,".</p>	

Table D - Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i></p>	<p>Consistent adjustments are made in Korea to make sure that provisions of the Commercial Act ensure directors make decisions and manage company affairs in the interest of the company and shareholders. The Commercial Act of Korea provides that directors, as persons entrusted with company affairs, have a duty to fulfil their responsibility based on trust and good faith(Article 382), and if conflicts of interest arise between a director and the company, directors' duty of loyalty prescribed by the Act(Article 382-3) requires directors to act in the interest of the company. Furthermore, if a director neglected to perform his/her duty or acted in violation of legislations, thereby causing damages to the company, he/she can be held liable for damages(Articles 399 and 401). Provisions which prohibit directors' appropriation of company opportunities and assets(Article 397-2) and impose stricter requirements for self-dealings(Article 398) and other corporate governance-related provisions are also aimed at ensuring directors' duty of loyalty.</p>	
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital funds and direct capital raising from the public. <i>Do your economy's financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</i></p>	<p>In Korea, there are markets for stocks and financial investment products. Marketable securities market, KOSDAQ and KONEX(exclusively for small and medium-sized firms) are where stocks are publicly traded. Furthermore, the Financial Investment Services and Capital Markets Act sets forth grounds on which management of hedge funds and private equity funds is allowed. Meanwhile, the Act on Special Measures for the Promotion of Venture Businesses, to support financing of small and medium sized firms, allows investors to make investment with a size of the target business in mind, according to their investment preferences.</p>	
<p>The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock</p>	<p>Korea endeavours to improve the doing business environment by simplifying the business start-up process and applying eased listing requirements for companies. The amendment of the Commercial Act in 2009 resulted in the abolition of the minimum capital requirement(Article 329), simplified process of establishing and operating small-sized</p>	

<p>Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. <i>Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing??</i></p>	<p>companies(with total capital less than one billion won, Articles 363 (4), 383 (4), 409 (4), etc.) and several other changes that contribute to a better business environment. Meanwhile, KOSDAQ and KONEX, with less strict listing requirements compared to the existing stock exchange, facilitates listing of small and medium-sized companies and venture capital firms. A variety of benefits are given to companies listed in these markets, including tax benefits, reduced disclosure requirements, etc.</p>	
<p>Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However, these also allow poor managers the opportunity to repeatedly start businesses that fail with losses to shareholders and creditors. <i>How is the balance struck between enabling risk taking and protecting shareholders and creditors?</i></p>	<p>The Debtor Rehabilitation and Bankruptcy Act of Korea provides means for businesses to make a fresh start through rehabilitation and bankruptcy process. The Act, at the same time, protects rights of creditors and other interested persons by prescribing the court’s role to supervise and intervene in the proceedings and its authority to punish those who abuse relevant procedures.</p> <p>In Korea, rehabilitation and bankruptcy process must take place under the supervision of the court to protect the rights of interested persons. Creditors can also supervise the process by forming a creditors’ consultative council which allows them to participate in the bankruptcy proceedings. Meanwhile, shareholders, creditors and etc. can have their voices heard by exercising their voting rights on draft rehabilitation plans which bring changes to their rights. While it is a basic rule to appoint existing managers as custodians in the rehabilitation proceedings, creditors can request the appointment of a third party as a custodian if managers are found to be responsible for a poor corporate governance of the company(Article 74). The Act also prescribes penal provisions(Article 643-656) based on which managers with certain responsibilities for a rehabilitation or bankruptcy of the company are punished for the offense of fraudulent rehabilitation and offense of fraudulent bankruptcy.</p>	

Table E - Public sector governance

Public sector governance mechanisms	Current position	Any other comments
<p>The rule of law implies that every citizen is subject to the law, including law makers themselves. Limits to the rule of law occur because of neglect or ignorance of the law, corruption, or the lack of corrective mechanisms for administrative abuse, such as an independent judiciary. <i>Does your system actively protect and enforce the property rights of different stakeholders? If so what sort of legal mechanisms are available and used?</i></p>	<p>Property rights of Korean citizens including shareholders and creditors are protected by various provisions of the Civil Act, Commercial Act, administrative laws and so forth. As preventive measures, a third party's unlawful acts or administrative agency's illegal activities can be halted or suspended upon request, and ex-post measures such as damage claims and compensation for losses are put in place. To raise peoples' awareness of the law and their rights, when laws are enacted or amended, it is required that a notice is made on the web pages of the National Assembly, Ministry of Government Legislation, and other relevant organizations, and make a pre-announce of legislation. Theses legal mechanisms are believed to enhance Korean citizens' understanding and awareness of the law.</p>	
<p>State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. <i>In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are there SOEs explicitly tasked with encouraging private sector innovation?</i></p>	<p>State-owned enterprises (SOE) played a key role in economic development of Korea. On the early stage of economic development, SOE nurtured industries such as airplane, steel, and IT industries. For example, Korean Air (occupies around 30% of international flights in Korea in 2014), POSCO(5th steel- producing company in the world in 2014), and KT (occupies around 30% of mobile telecommunications market) had been SOEs until 1969, 2000, and 2002.</p> <p>SOE produced 3.2% of market GDP in 2013(UNSNA standard). The ratio has been almost the same since 2007 when the Bank of Korea started to compile the national accounts according to the System of National Accounts 2008.</p> <p>The Korean government has been trying hard to minimize SOEs roles in the related markets and instead open the markets to private competitors. Recently, the Fair Trade Commission in Korea announced that it will investigate the institutional or non-institutional benefits that SOEs are enjoying during competition with private companies, and eliminate such benefits to build competitive environment.</p> <p>There are a number of SOEs explicitly tasked with encouraging private sector innovation. For example, Korea Institute of Science & Technology Evaluation</p>	

Public sector governance mechanisms	Current position	Any other comments
	and Planning aims to promote technology innovation by supporting the full cycle of Korea's national R&D system including the allocation and coordination of government funds.	
<p>A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. <i>Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure?</i></p>	<p>President Park announced the “three-year plan for economic innovation”, a comprehensive structural reform policy to boost the economy, in March 2014. Its three key goals are to build an economy based on strong fundamentals, dynamic innovation, and a balance between domestic demand and exports. This plan is carried out on the basis of cooperation of all government ministries. As a result, Korea laid a foundation of legal and institutional framework for innovation and made significant progress in each sector.</p> <p>Main actors of Korea's innovation system are as follows:</p> <p>(a) Ministry of Science, ICT and Future Planning(MSIP) is the lead agency on innovation policy. National Science and Technology Council(NSTC) coordinates inter-ministerial innovation policy. National Research Foundation(NRF) is the main funder of academic research.</p> <p>(b) Knowledge providers include government-funded research institutes(GRIs), universities and private research institutes.</p> <p>(c) Actors of Innovation infrastructure include Korea Intellectual Property Office(KIPO), Korean Agency for Technology and Standards(KATS), National Research Facilities and Equipment Center(NFEC), and Korea Institute of Science and Technology Information(KISTI).</p>	
<p>Strategies need to respond to economy context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks. <i>What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</i></p>	<p>Korea's “three-year plan for economic innovation” is a comprehensive structural reform policy to boost the economy. And this year, this plan intends to focus on materializing an economy based on strong fundamentals by undertaking reforms in key sectors including the labour market, finance, public and education. Also, it aims to strike a balance between domestic demand and exports by fostering favourable environment for investment, expanding consumer base, and promoting youth as well as female employment. As this three-year plan is carried out which covers all economic sectors, it is pushing</p>	

Public sector governance mechanisms	Current position	Any other comments
	<p>forward both strategies of building blocks to establish innovative system for effective structural reforms and eliminating bottlenecks in the economy.</p> <p>For example, implementing key reform tasks of the labour market based on the grand compromise among labour, management, and government is to minimize pushback from stake holders and establish the innovative system based on mutual agreement, which refer to the former case.</p> <p>On the other hand, introducing “Cost- in Cost-out” and “Regulatory Guillotine” to remove unnecessary regulations that undermine creative economic activities and improve the environment for investment is to eliminate bottlenecks that hinder innovation, which refer to the latter case.</p>	

Appendix A Questionnaire on structural policies and innovation

Table A – Economy context (Optional)

Economy Context Questions	Current position	Any other comments
<p>Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i></p>	<p>Innovation is a vital ingredient to increasing productivity and ultimately raising the competitiveness of the economy. Through innovation and the exploitation of new ideas, additional value can be captured from the same base of capital and human resource.</p> <p>Innovation can come in many forms, from improvements in products, processes, and organisational structures. Innovation involves both the creation and diffusion of knowledge. The bulk of innovation in an economy comes from a myriad of companies, institutions and individuals making improvements to products or processes, or identifying new markets and opportunities on an ongoing basis. The Government’s innovation agenda will therefore promote innovative activity across the Malaysian economy. The innovation policy will require wide-ranging reform to ensure that Malaysia becomes an efficient, flexible, and vibrant business environment.</p> <p>The business environment is a critical ingredient of this innovation process, for example, by ensuring a competitive environment with the right price signals, companies will see a clear incentive to innovate. Similarly, by allowing for companies to be efficiently created and ended, resources can be flexibly reallocated towards the highest growth areas of the economy.</p>	

¹ NZIER report (March 2015) to APEC 2015 Economic Report (AEPR) - The role of structural policies in innovation

Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</i></p>	<p>Implementation on Good Regulatory Practice (GRP) in Malaysia is to ensure the national regulatory administrative system is effective in enhancing the quality of regulation. Collaboration with the Organisation for Economic Cooperation and Development (OECD) since 2012 is undertaken with regards to technical assistance and advisory services on the full implementation of GRP. The collaboration is focused on strengthening GRP in line with the National Policy on the Development and Implementation of Regulation (NPDIR) including:</p> <ul style="list-style-type: none"> • Positioning, awareness raising and training of senior and technocratic-level officials on regulatory transparency and civic engagement in the policy making process; • Capacity building for regulatory coordinators on the regulatory process for the application of regulatory impact statement (RIS); • Developing systems, procedures and processes to operationalize public consultation in rule making process; and • Developing a framework to monitor and evaluate NPDIR implementation, with specific attention on Regulatory Impact Analysis (RIA), public consultation, ex-post evaluation - including post implementation review (PIR). <p>The process of RIA, among others, requires the regulators to examine options to address the regulatory problem rather than by introducing new regulation. The regulators should describe each alternative option and explain how the options, if implemented, would achieve the desired result. Ideally, Regulatory Impact Statement (RIS) will report on all legitimate options considered. The basis of selection of the options should be examined thus will promote innovation by allowing alternative approaches and solutions.</p> <p>RIA also provides an explanation for the variation and examines the implication of</p>	

	<p>this variation. Option should also explain how they achieve the outcome. Option also include the use of regulatory instrument such as:</p> <ol style="list-style-type: none"> i. Self-regulation Generally characterised by industry – formulated rules and codes of conduct, with industry solely responsible for enforcement. ii. Quasi-regulation Includes a wide range of rules or rules or arrangements where government influences businesses to comply with, but which do not form part of explicit government regulation. iii. Co-regulation Typically refers to the situation where industry develops and administers its own arrangements, but government provides legislative backing to enable the arrangements to be enforced. 	
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification programme in place and if so how comprehensive is it? Also, is any administrative simplification programme linked to programmes to reduce corruption?</i></p>	<p>The most common problem that affect the relationship between the public and the private sectors are duplication of rules, overlapping and low quality regulations, and uneven enforcement. The Special Task Force to Facilitate Business or PEMUDAH (taken from the task force’s Malay name <i>‘Pasukan Petugas Khas Pemudahcara Perniagaan’</i>) was established in 2007 and reporting directly to the Prime Minister. The taskforce comprises of 23 highly respected individuals from both the private and public sectors; 15 heads of selected Government Ministries and Departments and 8 leaders of Malaysian business. It is co-chaired by the Chief Secretary to the Government of Malaysia and the President of Federation of Malaysian Manufacturers (FMM). Among the administrative simplification programme undertaken to reduce cost of doing business are as follows:</p> <ul style="list-style-type: none"> • Starting A Business • Registering Property • Paying Taxes • Employing Workers • Trading Across Borders • Dealing with Construction Permits 	

- Enforcing Contract
- Getting Electricity
- Resolving Insolvency
- Business Process Re-engineering in Business Licensing

Many ministries and agencies have annual dialogues with industry associations and various chambers of commerce to review issues and difficulties faced by the respective industry. The government also encourage agencies to garner and harness the wealth of knowledge and thought process that exist in the private sector. Interactive sessions in the form of focus groups, labs and experts groups comprising both multi agency officials and private sectors both national and international as is currently practiced will be intensified and adopted thus speed-up the process of innovation to market.

The “whole of government” effort also contributes in reducing corruption and this is intensified with the National Key Result Areas (NKRA) in Fighting Corruption undertaken by Performance Management Delivery Unit (PEMANDU). Among the initiatives are:

- Developed a "Name and Shame" offender database, functioning as a public database to house information on convicted offenders of corruption. This is to be implemented as a strong deterrent on committing corruption. A total of 902 convicted corrupt offenders have been published on the Malaysian Anti-Corruption Commission website. This database is used by the US Embassy when issuing out US Visas, and as this information is made public for 3 years, all information captured will be housed indefinitely for internal references. This serves to facilitate employment decisions, especially for sensitive positions involving authority and trust;
- Enactment of the Whistle-blower Protection Act 2010 which aims to provide protection to the Whistle-blower in the form of confidentiality of their information, immunity from civil and criminal action and protection from detrimental action being taken against them. This is to encourage prosecution against high ranking individuals; and
- Transforming the Auditor General (AG) reporting process to speed up the delivery of the AG’s performance audit, thereby allowing the relevant agencies

	<p>to prosecute instances of corruption in a timelier manner. It will also clear out the backlog of issues identified by the AG in previous reports. The AG Report is now tabled at every parliamentary sitting since 2013.</p>	
<p>Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. <i>Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any adverse impact on competition and hence innovation?</i></p>	<p>Regulation is an essential part of a well-functioning economy. While aiming to achieve their objectives, particular regulations may also have effects in areas that are not their primary targets, e.g. on trade. Such effects may be unavoidable. Yet there may also be cases where regulations have unnecessarily distortive or restrictive effects on market access granted to trading partners, and where regulatory reform or improved regulatory quality might make it possible to reduce such effects. The main objective of NPDIR and the Malaysian “<i>Government Circular 1/2013: National Policy on the Development and Implementation of Regulation</i>” launched in July 2013 is to improved regulatory quality and processes are first and foremost in the interest of the domestic economy, they can also underpin market openness. To this purpose, the NPDIR includes six important principles to guide sound regulatory processes:</p> <ul style="list-style-type: none"> • Transparency and openness of decision making; • Non-discrimination; • Avoidance of unnecessary trade restrictiveness; • Use of internationally harmonised measures; • Recognition of equivalence of other countries’ regulatory measures; and • Application of competitive principles and compliance to Malaysia Competition Act 2010. <p>Furthermore, RIA aimed to conduct a comprehensive assessment of the expected impact (cost and benefit of each feasible option). The assessment must clearly identify all groups affected by the problem and its proposed solution, whether directly or indirectly. In addition, one should assess the effects on the community as a whole, such as economy, environmental and social impacts. Groups should generally be distinguished as consumers, businesses and government. The impact of the proposed regulation on the economy, including the administrative burden imposed, the impact on businesses, consumers, competition, and on domestic and international trade (exports and imports) will be minimised through RIA approach.</p>	

<p>Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. <i>How easily can skilled people move between firms?</i></p>	<p>Liberalization on labour mobility to skilled people in Malaysia is also a major focus of undergoing review of Employment Act 1955 and Industrial Relations Act 1967. The proposed amendment of the Act (Act 265) includes several provisions on the issuance of permits and Act 177 regarding trade disputes resolution process. As one of the key goals of the government is for Malaysia to become a high-income economy, the ongoing review of employment and immigration regulation is critical to rapid educational and knowledge improvement contributing to the innovation process. This also include pertinent areas such as:</p> <ol style="list-style-type: none"> i. Allowing for managed mobility or facilitated entry for the movement of natural persons engaged in trade in goods, services, and investments, domestic and international market according to the prevailing regulations. <ul style="list-style-type: none"> • Facilitate the issuance of visas and employment passes for foreign professionals and skilled labour who are engaged in cross-border trade and investment related activities • Access to working visas in relation to labour market opening. ii. Facilitating the free flow of services in the domestic as well as international market (service liberalization) and ASEAN (by 2015). <ul style="list-style-type: none"> • Develop core competencies and qualifications for job/occupational and trainers skills required in the priority services sectors (by 2009); and in other services sectors (from 2010 to 2015); iii. Towards more open labour markets to realize the full potential benefits of deeper labour market integration. 	
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Table C - Competition policy

Competition policy mechanisms	Current position	Any other comments
<p>Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other. <i>How does competition policy deal with protection of consumers? Does competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and dynamic efficiency?</i></p>	<p>The Malaysia Competition Act 2010 is an act to promote development by promoting and protecting the process of competition, thereby protecting the interests of consumers and to provide for matters connected therewith.</p> <p>The Malaysia Consumer Protection Act 1999 (the CPA) which basically covers all the main areas of consumer protection is under the purview of the Ministry of Domestic Trade, Co-operatives & Consumerism.</p>	
<p>Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to fact based rule of reason analysis. <i>Does the competition authority(s) have the legal authority to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i></p>	<p>The Malaysia Competition Commission has the capability to allow for technical and dynamic efficiency gains in decision making.</p> <p>Under Section 5 of the Malaysia Competition Act 2010, one of the criteria for relief of liability is related to technological, efficiency or social benefits reasons.</p>	

Competition policy mechanisms	Current position	Any other comments
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or sub-national government?</i></p>	<p>The Competition Act 2010 applies to “enterprises”, defined as any entities carrying on commercial activities relating to goods or services, both within and outside Malaysia, provided that the commercial activity has an effect on competition in any market in Malaysia.</p> <p>The Malaysia Competition Act 2010 shall not apply to any commercial activity regulated under the legislation specified in the First Schedule, i.e., the Communication and Multimedia Act 1998 and the Energy Commission Act 2001. These activities are subject to some competition related provisions, which can be found in the acts.</p> <p>In 2013, the First Schedule to the Malaysia Competition Act 2010 was amended by inserting the Petroleum Development Act 19754 and the Petroleum Regulations 1974 as the commercial activities regulated under these legislations are directly in connection with upstream operations.</p>	
<p>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. <i>Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective decision involving other Ministries? How is any independence established and safeguarded?</i></p>	<p>The Malaysia Competition Act 2010 provides the Competition Commission with powers to investigate any infringement or offence in accordance to the rules and procedures under Part III of the same Act. Under the Act, an investigation can start on the Competition Commission’s initiative, on the direction of the Minister or following a complaint.</p> <p>Under Section 17 of the Malaysia Competition Commission Act 2010, the Malaysia Competition Commission (MyCC) shall have the power to do all things necessary or expedient for or in connection with the performance of its functions under the competition laws.</p> <p>Nonetheless, the Malaysia Competition Commission is independent in the decision making.</p>	

Competition policy mechanisms	Current position	Any other comments
	<p>Section 7 (2) of the Malaysia Competition Commission Act 2010 stated that if a member of the Commission acquires any interest, financial or otherwise, in any commercial undertaking or trade, he shall within one month after such acquisition, give notice in writing to the Minister specifying the interest acquired.</p> <p>Section 15 of the Malaysia Competition Commission Act 2010 also mentioned on the disclosure of interest by Members of the Commission.</p>	
<p>There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. <i>Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets with potential for innovation?</i></p>	<p>The Malaysia Competition Commission (MyCC) is proactively and strategically seeks to focus on both competitive and least competitive markets.</p> <p>Under the MyCC's competition advocacy strategic plan and enforcement activities from 2012-2014, the MyCC focused on professional bodies, SMEs and pharmaceutical.</p>	
<p>There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i></p>	<p>Specific policy initiatives undertaken towards driving the competitiveness of the Malaysian economy included the implementation of the Competition Act 2010. Established in June 2011, the Malaysia Competition Commission (MyCC) is an independent body responsible for enforcing the Competition Act 2010.</p>	

Table D - Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i></p>	<p>Whilst there is no specific legislation which directly links managers' duties to innovation, the Malaysian Companies Act 1965 stipulates that the general duties of directors are to act in the interest of owners. This includes the duties to :-</p> <ul style="list-style-type: none"> • act in good faith and for proper purpose - Section 132(1); • exercise reasonable care and skill- Section 132(1A) • avoid conflicts of interest - Section 131, Section 131(1A) <p>Breaches of statutory duties under the Malaysian Companies Act may attract criminal liability where provided, which includes substantial fines or terms of imprisonment. Companies and third parties affected by the directors' breach of duties may also commence civil proceedings against the directors.</p> <p>Corporate Governance is defined as <i>'the process and structure used to direct and manage business and affairs of the company towards enhancing business prosperity and corporate accountability with the ultimate objective of realising long term shareholder value, whilst taking into account the interest of other stakeholders'</i>. Aligned to this, the Recommendation 1.1 of the Malaysian Code on Corporate Governance 2012 (MCCG) recommends that the board should establish clear roles and responsibilities reserved for board and management and that the allocation of responsibilities should reflect the dynamic nature necessary for the company to adapt to changing circumstances. Recommendation 2.3 of the MCCG states that remuneration package should be aligned with the business strategy and the long term objectives of the company. Additionally, Recommendation 8.3 of the MCCG encourages board and senior management to have constructive engagement with shareholders on matters affecting shareholders' interests. Companies are also</p>	

	<p>encouraged to achieve equilibrium between the quest for profitability and creating a sustainable environment. In this regard, listed companies are required to provide a description of their corporate social responsibility activities in their annual reports (Paragraph 9.25 of Bursa Listing Requirements read together with Item 29 of Appendix 9C).</p> <p>Whilst there isn't specific corporate governance legislation on investment in innovation, it is nevertheless an intrinsic component in ensuring best interest of the company for long term value creation.</p>	
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital funds and direct capital raising from the public. <i>Do your economy's financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</i></p>	<p>Malaysia's financial market facilitates fund-raising, in the forms of equity and debt financing, for companies to finance the development of innovation.</p> <p>On the equities front, the ACE market, which evolved from the earlier MESDAQ Market for high growth or technology based companies, accords flexibilities for young, innovative entrepreneurs to access the capital market. Such flexibilities include no minimum requirements on operating history, size and track record; no minimum issue price and allowing offer for sale for applicants with operating profits subject to moratorium. For newly established businesses, especially in the technology sector, financing could also be obtained from venture capital companies which will take a stake in the business in exchange for providing capital. Corporations undertaking venture capital are licensed or registered by the Securities Commission as stated in Schedule 4 of the Capital Markets and Services Act 2007 (CMSA). More recently, Malaysia has leveraged on the rise of technology to develop the Equity Crowdfunding Framework, which would provide an alternative method for start-ups and Small and Medium Enterprises (SMEs) to raise capital from the public. Under the framework, an eligible issuer can raise up to RM3 million within a 12-month period which will help these enterprises to bring innovative ideas into fruition. Amendments to the Capital Markets & Services Act (CMSA) to allow for the activity of equity crowdfunding are expected to be legislated in the year 2015.</p>	

	<p>In relation to debt-financing, loans to finance the development of innovation can be obtained from financial institutions, particularly Development Financial Institutions (DFIs). The DFIs that provide financing in Malaysia amongst others include the SME Bank, EXIM Bank, MIDF, Agrobank and Bank Pembangunan Malaysia Berhad for technology companies. The Credit Guarantee Corporation Malaysia Berhad (CGC) plays its role as Malaysia's primary provider of guarantees to enable SMEs and start-ups with insufficient collateral to obtain financing from banking institutions.</p> <p>The government has been very supportive of innovation and has provided various forms of grants, loan and matching funds for start-ups in specific sectors such as ICT, biotechnology and creative industry. For example, in the proposed National Budget 2015, an initial fund of RM375 million was allocated for the implementation of the SME Investment Partner programme, aimed at providing financing assistance in the form of loans, equity or both, particularly at the start-up stage. Additionally, there is an allocation of RM1.3 billion allocation to the Ministry of Science, Technology and Innovation (MOSTI) to implement several projects, including RM290 million in research funds for companies to implement various high-impact R&D&C (research and development and commercialisation) programmes.</p>	
<p>The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. <i>Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing??</i></p>	<p>The Malaysian legal framework provides specific enablers and a facilitative environment to smoothen the transition of enterprises along their life cycles.</p> <p>The Securities Commission ("SC") and Bursa Malaysia Securities Berhad ("Bursa Securities") had on 8 May 2009 jointly launched a new framework (revamp of Bursa Listing Requirements and SC Guidelines) for listings and equity fund-raising aimed at allowing efficient access to capital. The new framework entailed the merging of Bursa Securities' Main Board and Second Board into a single board (Main Market) for established corporations and transforming the MESDAQ Market into the ACE Market.</p>	

As mentioned above, the ACE market accords flexibilities for young, innovative entrepreneurs to access the capital market. The cost of listing on the ACE Market is cheaper compared to the main market. Based on the formula of 0.01% of the market capitalisation, the minimum initial listing fees is RM 10k and max of RM20k, compared to the main market with a minimum of RM 20k and a maximum of RM200k. There are no minimum requirements on profit track record, operating history and size. ACE Market is sponsor-driven where each applicant for listing must have a sponsor who advises and guides the company for listing application and stay for 3 years after listing. Sponsors will have to evaluate the suitability of applicants seeking admission. Sponsors will have to conduct and actively participate in and oversee the preparation and due diligence process for the ACE Market companies. The sponsors are also subject to strict governance where they have to comply with SC and Bursa's requirements like a principal adviser.

Recognizing the financing needs of emerging companies, the SC via the CMSA regime also facilitates the development of the venture capital industry. Corporations undertaking venture capital activity are registered persons under Schedule 4 of the CMSA. Recently, in March 2015, the SC has issued revised guidelines- *Guidelines on the Registration of Venture Capital and Private Equity Corporations and Management Corporations* replacing the *Guidelines for the Registration of Venture Capital Corporations and Management Corporations* with the aim of according greater flexibilities to venture capital and private equity firms while addressing limitations within the existing rules. Revisions encompass the inclusion of private equity activities, giving further flexibility to registered venture capital corporations to invest in listed securities subject to a certain threshold and enhancing the current reporting requirements to allow for better data capture or developmental and future policy making purposes.

Also, as mentioned above, amendments to the CMSA to allow for the activity of Equity Crowdfunding are expected to be legislated in the year

	<p>2015. The availability of Equity Crowdfunding as a financing option could increase competition among suppliers of capital to start-ups and other small enterprises, resulting in a potentially lower cost of capital for these issuers, including those not utilising Equity Crowdfunding. This may also help reduce the capital gap within the innovation sector.</p>	
<p>Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However, these also allow poor managers the opportunity to repeatedly start businesses that fail with losses to shareholders and creditors. <i>How is the balance struck between enabling risk taking and protecting shareholders and creditors?</i></p>	<p>The Malaysian government has strongly supported innovation as a means towards achieving high income and developed nation status. Whilst recognising the high risk of failure in entrepreneurship, the Malaysian law allows entrepreneurs to ‘bounce back’ from their failures. For example, entrepreneurs who are a bankrupt may apply to the court for an order to be discharged as a bankrupt before proceeding to undertake a new venture.</p> <p>Companies in Malaysia are also encouraged to innovate towards creating greater shareholders’ value. Notwithstanding this, company directors are still bound by statutory duties under section 132 of the Companies Act to act with reasonable care, skill and diligence in protecting the interest of shareholders. Section 132 (1B) further states that Directors are required to make informed business judgement in good faith and proper purpose, without personal interest and in the best interest of the company.</p> <p>For <u>directors</u> of an insolvent company, section 130A(1) of the Companies Act states that the court may make an order that a person shall not, without the leave of the court, be a director of or in any way, whether directly or indirectly, be concerned or rake part in the management of a company for such period beginning on the date of the order and not exceeding five years as may be specified in the order. This is to protect companies from poor managers taking opportunity and repeatedly start businesses that fail with losses to shareholders and creditors.</p> <p>Malaysian laws accord shareholders various rights to enable them to perform their role and exercise their responsibility. For example, the</p>	

	<p>Companies Act provides for remedy to shareholders on oppressive actions by companies through derivative actions. Section 218 of the Companies Act also enables application to initiate winding-up proceeding on the ground that the directors have acted in their own interest rather than the interest of the company.</p> <p>In situation where the companies proceed for liquidation, the Companies Act and Bankruptcy Act protect the interest of shareholders and creditors through scheme of arrangements. This mechanism is used to facilitate reorganization of share capital, rights and liabilities. This provides clear demarcation for distribution of assets between shareholders and creditors in transparent and objective manner.</p> <p>Malaysia was ranked 36th out of 189 countries for the indicator ‘<i>resolving insolvency</i>’ in the <i>World Bank Ease of Doing Business Report 2015</i>. The assessment evaluated the time, cost, outcome of insolvency proceedings and strength of the Malaysian insolvency framework. Malaysia has always actively taken steps to implement international good practice standards on insolvency as prescribed by the World Bank and the United Nations Commission on International Trade Law (UNCITRAL).</p>	
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Table E - Public sector governance

Public sector governance mechanisms	Current position	Any other comments
<p>The rule of law implies that every citizen is subject to the law, including law makers themselves. Limits to the rule of law occur because of neglect or ignorance of the law, corruption, or the lack of corrective mechanisms for administrative abuse, such as an independent judiciary. <i>Does your system actively protect and enforce the property rights of different</i></p>	<p>There are legal mechanisms under the Malaysian system which actively protects and enforces the property rights of stakeholders.</p> <p>The principle of rule of law is enshrined in Article 8 of the Federal Constitution, which provides that all persons are equal before the law and is entitled to equal protection before the law. Article 13 of the Federal Constitution guarantees the</p>	

Public sector governance mechanisms	Current position	Any other comments
<p>stakeholders? If so what sort of legal mechanisms are available and used?</p>	<p>rights to property by providing that no person shall be deprived of property save in accordance with law and that no law shall provide for the compulsory acquisition or use of property without adequate compensation.</p> <p>The rights of any property, tangible or intangible, are further protected in various legislation such as the National Land Code 1965, Land Acquisition Act 1960, Copyright Act 1987, Trademark Act 2002, Trade Description Act 2011 and the Companies Act 1965.</p> <p>Where the property rights are infringed, the applicable legislation would contain avenues to address any grievances faced by the property owners. The redress may be through criminal action or civil action for damages.</p> <p>Where the property rights are affected through executive action, the, property owner may seek judicial review of such actions before the high court under Order 53 of the Rules of Court 2012. Judicial Review is an important and effective means of controlling executive action as it –</p> <ul style="list-style-type: none"> • Protect the individual against illegal acts of the administration; • provide remedies for wrongs done to the individuals; • ensures that administrative bodies act lawfully; and • ensures that administrative bodies perform their public duties. <p>The effectiveness of judicial review lies in the power of the courts to issue an order of <i>Habeas Corpus</i>, <i>Mandamus</i>, <i>Certeriori</i>, Injunction and/or declaration against the administration.</p> <p>Additionally, Article 182(1) of the Federal Constitution established the Special Court, which is a court specifically to hear and determine any action brought by or against the Head of the Federation (Yang DiPertuan Agong) or a Ruler of a State (Sultans) in his personal capacity. Hence, even the Head of the Federation</p>	

Public sector governance mechanisms	Current position	Any other comments
	and Ruler of a State is not above the law.	
<p>State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. <i>In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are there SOEs explicitly tasked with encouraging private sector innovation?</i></p>	<p><i>In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition?</i></p> <p>We do not have data on the value of SOE against GDP. SOE/GLC's value in Malaysia is always referred to in terms of market capitalization.</p> <p>None of the SOE companies are actually sheltered from competition as Competition Act 2010 applies to each and every commercial undertaking except in certain sectors (i.e: telecommunication) where competition is governed by their respective regulators.</p> <p><i>Are there SOEs explicitly tasked with encouraging private sector innovation?</i></p> <p>There are a number of SOEs in Malaysia that are explicitly tasked with encouraging private sector innovation. For example, we have venture capital companies which play an important role to support innovation/technology-based private companies. We also have sectoral development companies such as BiotechCorp which is established to promote biotechnology development and the Multimedia Development Corporation (MDEC) that focuses on multimedia development in Malaysia.</p>	
<p>A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. <i>Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure?</i></p>	<p>a) An Innovation Policy</p> <p>The Malaysian Administrative Modernisation and Management Planning Unit (MAMPU) is entrusted with the responsibility to provide the policy and recognition for notable innovations in the public sector. In this respect, MAMPU has formulated a guideline for fostering a culture of innovation in public sector. This guideline details out the approach for innovation and creativity within the public sector to further enhance the service delivery to the customers and the general public. The various aspects embedded in the guideline are as below:</p>	

Public sector governance mechanisms	Current position	Any other comments
	<ul style="list-style-type: none"> i) establishment of Innovation Unit in every government agency; ii) replacing the traditional Quality Day with Innovation Day Celebration, since 2010; iii) strengthening the role of Heads of Departments/Agencies in promoting and institutionalising the culture of innovation; and iv) periodically updating the innovation initiatives implemented through the Public Sector Innovation Hub (HISA) established by MAMPU. <p>b) A Knowledge Infrastructure</p> <p>MAMPU has established the Public Sector Innovation Hub (HISA) in 2010 as a repository for public sector innovations. This platform provides an avenue for the public sector agencies to share their innovative initiatives and solutions to further enhance services delivered to the targeted audience. As of now, 666 innovation initiatives have been deposited into the system.</p> <p>c) An Innovation Infrastructure</p> <p>MAMPU has introduced a 2-tier recognition system for the Public Service Innovations, with details as follows:</p> <ul style="list-style-type: none"> i) The highest tier is the Prime Minister’s Innovation Award (AIPM) which is the most prestigious and unique Public Service award to recognise innovations that are significant and provide high impact solutions to the citizens. This reward replaces the traditional Quality Awards and carries a cash prize, a trophy and a certificate. ii) The second tier is the Public Service Innovation Award (AISA) which was also introduced in 2010 to recognise innovation in 4 core areas, namely Financial Management, ICT Management, Local Authority Management, and District and Land Administration Management in the public sector. The award carries a cash prize, a trophy and a certificate for each category. 	
Strategies need to respond to economy context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to	The Government supports innovation by creating an environment in which companies, research organisations, and individuals are better able to engage in innovative activity. These measures include developing human capital, investing	

Public sector governance mechanisms	Current position	Any other comments
<p>underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks. <i>What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</i></p>	<p>in innovation infrastructure and nurturing new ventures through incubators.</p> <p>The success of the innovation agenda hinges on a Malaysian citizenry that values openness, embraces critical thinking and encourages risk taking and experimentation. This requires an education system that nurtures creative and analytical human capital. An important step is to develop world-class educational institutions with world-class leadership, particularly universities.</p> <p>To that end, the Government is using global search to headhunt the best academic leadership for programmes that support innovation, and partnering with leading global research institutions to ensure deep and sustained capability transfer. In parallel, education and training will be brought closer to industry by allowing greater mobility of academics to conduct contract research and consultancy and for industry practitioners to teach in universities. A programme has been introduced to promote participation from the industry to co-sponsor employees to obtain industrial PhDs.</p> <p>Information technology infrastructure will be substantially extended under the Plan period to facilitate connectivity to the global knowledge network. The Government targeted 75% of households to have broadband by 2015, and the Malaysia Research and Education Network (MyREN) will be further promoted to allow Malaysian researchers to connect to the global research community.</p> <p>The Government also focuses on developing comprehensive innovation and research and development (R&D) infrastructures in selected areas where Malaysia has inherent strength and competitive advantage (such as downstream palm oil, modern agriculture, and oil and gas) in order to become a world leader in these areas. Innovation and R&D initiatives are also aligned with National Key Economic Areas (NKEAs) and the geographic cluster strategy to ensure that the science and technology development is consistent with the</p>	

Public sector governance mechanisms	Current position	Any other comments
	<p>overall economic agenda.</p> <p>Trade and investment policy are being geared towards building innovation capabilities as well as market access and production and volume of investment. Incentive packages for FDI will have strict conditions for transfer of knowledge based on key performance indicators (KPIs). Incentives are provided to multinational companies (MNCs) for establishing research centres in Malaysia. In addition to market access, FTAs are being leveraged for knowledge transfer through programmes such as student and knowledge worker exchange and technology development collaborations.</p> <p>Malaysia innovation capacity and capabilities should continue to be enhanced in the next Malaysia Plan period (2016-2020) to provide a major role in re-engineering economic growth. The nation's existing innovation framework is being strengthened in order to enhance the execution of policies besides providing mechanisms to ensure commitment by all parties towards delivering economic returns for the country.</p> <p>In addition, in December 2010 , the National Innovation Agency Malaysia (AIM) was established under the Prime Minister's Department to address the gaps in the national innovation eco-system in all areas – education system, funding, intellectual properties (IPs) and commercialisation among others.</p> <p>The set up is part of the Government's efforts in reforming the institutional structure that innovation is encompassing and cuts across all sectors of the economy towards achieving a high-income nation by the year 2020, by creating wealth through innovation.</p> <p>The "Innovation" agenda is important as the key-driving factor in the 10th Malaysia Plan and it remains relevant, as it will be one of the "Game Changers"</p>	

Public sector governance mechanisms	Current position	Any other comments
	<p>for the 11th Malaysia Plan to spur the economic growth of the country.</p> <p>AIM has prioritised Six (6) Key Focus Areas in its efforts to promote innovation in the country:</p> <ul style="list-style-type: none"> (i) <u>Cultivating a Thinking Culture</u> – equipping Malaysia’s next generation with the ability to think critically and creatively. (ii) <u>Innovation For and By Society</u> – the burden and risk of social progress are shared between the three sectors, public (government), private (companies and foundations) and voluntary sector (social organisations) – Public-Private Partnership model for Social Finance. (iii) <u>Facilitate Industry-Academia Collaboration</u> – catalysing greater collaboration activities between industry and academia to generate commercial-ready IPs via Steinbeis Malaysia Foundation. (iv) <u>Transforming Strategic Sectors</u> – identifying high potential strategic sectors and developing the national strategies / action plans on the development of value added activities such as Biomass, Graphene. (v) <u>Innovating Organisations</u> – promoting innovation in private and public listed companies by developing innovation management and assessment tools to enhance innovation governance of corporations. (vi) <u>Catalyse Commercialisation</u> – to monetise Malaysia’s existing intellectual properties (“IP”) by creating technology commercialisation platforms and making selective investments to catalyse new ventures and startups. 	

Appendix A Questionnaire on structural policies and innovation

Table A – Economy context (Optional)

Economy Context Questions	Current position	Any other comments
<p>Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i></p>	<p><u>Structural policies</u></p> <ul style="list-style-type: none"> • Like many emerging economies, particularly in Latin America, Mexico currently faces important challenges resulting from: <ul style="list-style-type: none"> <i>i)</i> the normalization of the U.S. monetary policy; <i>ii)</i> the soft landing of the Chinese economy towards a more sustainable growth path between 6 and 7 percent; and, <i>iii)</i> a downward trend in commodity prices. • Moreover, in many Latin American countries, the sudden and deep fall in oil prices will result in the need for timely fiscal adjustments, including an improvement in the efficiency of public spending. • In addition, these factors have led to higher volatility and the depreciation of currencies in the region. • In this context, the Federal Government has adopted a strategy to promote sustainable and inclusive growth, with two main focuses: <ul style="list-style-type: none"> <i>i)</i> Maintaining the solid macroeconomic fundamentals that have characterized Mexico’s economy in the past years. <i>ii)</i> Undertaking a far-reaching comprehensive Structural Reform Agenda to promote greater competition and productivity in strategic sectors including Energy, Financial Services, Telecommunications, Public Finances, Education, Labor and Competitiveness. <p><u>Innovation policies</u></p>	

¹ NZIER report (March 2015) to APEC 2015 Economic Report (AEPR) - The role of structural policies in innovation

Since 2014, in Mexico has implemented a policy of industrial development and innovation with a focus on an open economy, promoting balanced economic growth by sectors, regions and companies. At the same time, this policy aims to promote innovation in commerce and services sectors; encourages entrepreneurship and strengthens business development of SMEs; promotes greater competition in the markets and moves towards a comprehensive regulatory reform and, aims to increase international flows of trade and investment as well as the domestic content of exports.

- **The recent performance of the industrial sector**

In the period 2000-2012, the Mexican economy went from the 9th to 12th place, measured by the size of GDP. While the average rate of economic growth was higher than in developed countries, it was lower than the observed in countries with similar levels of development, which are considered Mexico's competitors in the investment and market sector.

Despite these results, Mexico is one of the most important manufacturing economies in the world, resulting from an accumulation of capacities developed over seven decades. This was possible due to a greater vertical integration, integration of companies to the GVC, with higher value-added activities (design, logistics, and services) and innovation.

However, the structural change caused by the trade liberalization policy transformed the composition of industrial production and gave rise to the generation of disparities between sectors, regions and companies.

- **Dual production system: intensive mature industries and growing sectors in technology**

In Mexico, several sectors are integrated into the logic and dynamic of the GVC, with sectors that generate low value added and require a transformation to compete in international markets.

Mature industries have lost competitiveness and face a number of problems, such as the low incorporation to value chains, technological backwardness and low capacity for innovation.

On the other hand, dynamic sectors have an important participation on production and job creation, with a huge potential and greater use and generation of technology and important linkages with other sectors.

	<p>Among the industries with high growth and performance, we can find automotive, auto parts, aerospace and electrical-electronic. For the attraction and development of these sectors, the geographical location plays an important role, as well as the skills, infrastructure and business environment conducive to the formation of clusters.</p> <p>However, the country faces major challenges such as: weak supply value chains and low national integration, a shortage of trained technicians and engineers, and low incorporation of research and development in the current industrial processes.</p>	
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Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</i></p>	<ul style="list-style-type: none"> • Yes, the Mexican RIA includes a section dedicated to identify the potential alternatives (regulatory or not) to be used to handle the defined problem. The regulator should provide an explanation of how each alternative, achieves the identified goals and potential impacts. In the process to identify alternatives to regulation, the regulator should identify flexible regulatory approaches such as the proposals in order to promote innovation activities. 	
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification programme in place and if so how comprehensive is it? Also, is any administrative simplification programme linked to programmes to reduce corruption?</i></p>	<ul style="list-style-type: none"> • In Mexico, since 2010 the Federal Commission for Regulatory Improvement (COFEMER) has implemented the measurement of administrative burdens through the <i>Standard Cost Model</i> in all federal information requirements on formalities and services, which by Law are established and updated on the Federal Register of Formalities and Services. At that time, the total administrative burden of these requirements was estimated at around 4.8% of National GDP, and in 2011-2012 a Strategy was implemented to reduce that cost, resulting in a total burden equivalent to 4.25% of GDP by January, 2013. • On the current administration, a new goal for reducing administrative burdens has been established, so that by 2018 the total burden coming from federal requirements should be of no more than 3.2% of GDP. To this purpose, COFEMER has been measuring and promoting simplification actions with all Ministries and Regulatory Agencies. Furthermore, a Presidential Decree was issued on 5 January, 2015, to provide a higher mandate to all the Federal Government to include simplification strategies through the Regulatory Improvement Programs 2015-2016 (our forward planning agenda), also administered by COFEMER, to achieve this goal. • It is important to note that this simplification actions are applied to all types of information requirements and regulations, including those that affect the ease of doing business, innovation, financing and, in general, all topics and sectors in the economy. Also, these Programs include a review on existing regulations to remove unnecessary or duplicated rules, reduce barriers to competition, implement 	

	<p>structural reforms, improve quality of life, promote human rights and improve productivity, among other relevant objectives.</p> <ul style="list-style-type: none"> • Finally, it is important to note that COFEMER is also promoting this same kind of actions at the subnational level, through a <i>Common Agenda on Regulatory Improvement</i> that was the result of an Agreement with all 32 States, which includes 21 points relating to institutions, policies and tools for regulatory improvement, including simplification strategies, and 4 specific points on the Doing Business agenda, including simplification of procedures for opening a business, registering property, enforcing contracts and dealing with construction permits. Based on this Common Agenda, COFEMER applies a specific individual agenda for each state, based on their most important areas of potential improvement an impact. • Also, for a full implementation of this agenda, on the topic of administrative simplification, COFEMER has applied with at least 5 States a Program called “SIMPLIFICA”, which analyzes the procedures and services, by identifying time and costs (with the Standard Cost Model) incurred by individuals, and based on this input it promotes a specific agenda with recommendations for simplification to local administrations, so they can start a Simplification Program. • Finally, since 2002 COFEMER applies the Fast Business Startup System (SARE) which allows businesses of low risk to open in less than 72 hours. This is currently applied in 247 municipalities in Mexico. 	
<p>Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. <i>Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any adverse impact on competition and hence innovation?</i></p>	<ul style="list-style-type: none"> • YES. In Mexico RIA has been implemented by Law since the year 2000 through the oversight body for regulatory improvement and it is mandatory for all Ministries and Regulatory Bodies. • The Competition Assessment (CA) was introduced in Mexico as a specific component of RIA on November 16th 2012. It became mandatory on 1 April, 2013. • CA is an exercise that allows regulators and oversight bodies, such as Mexico’s Federal Commission for Regulatory Improvement (COFEMER) and the Mexican 	

	<p>Federal Economic Competition Commission (COFECE), to identify regulatory proposals that could needlessly restrict competition.</p> <ul style="list-style-type: none"> • The assessment is aimed to institutionalize the analysis of competition into the Regulatory Improvement Process (rulemaking process conducted by COFEMER), to identify regulatory proposals that could have the potential to unduly restrict competition and to evaluate among regulatory alternatives, in order to choose the most favourable in terms of competition, and with the largest social net benefit. • The main benefits of CA are: <ul style="list-style-type: none"> <i>i)</i> Contributing to avoid the entry into force of regulations that unduly restrict market activity. <i>ii)</i> Generating coherence and integration of Federal Government public policies with competition policies via the Regulatory Improvement Policy. <i>iii)</i> Improving the quality of regulation. <i>iv)</i> Improving the supply of goods and services for businesses and consumers. • The Competition Assessment into the Mexican RIA is based on the OECD Competition Assessment Toolkit. • The fulfillment of this process, including opinions from COFEMER and Competition Authority (COFECE) with responses from regulators is a legal requirement before any regulation can be issued. This ensures an <i>ex ante</i> evaluation of impacts on competition for all new rules. 	
<p>Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. <i>How easily can skilled people move between firms?</i></p>	<ul style="list-style-type: none"> • A recent study on the labor market for professionals in Mexico established that while the number of Mexicans graduating from college grew by 6.7% per year between 1990 and 2000, the Mexican economy grew by only 3.5%, creating a labor market that was not big enough relative to supply. The study shows that 45% of university graduates during this 10-year period were unable to find employment appropriate to their education level. Essentially, Mexico has been losing its capacity to generate social mobility through education, and to provide appropriate opportunities for educated people.² 	

² Hernández Laos, Desarrollo demográfico y económico de México.

Table C - Competition policy

Competition policy mechanisms	Current position	Any other comments
<p>Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other. <i>How does competition policy deal with protection of consumers? Does competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and dynamic efficiency?</i></p>	<ul style="list-style-type: none"> • In the Mexican legal system, the competition and consumer protection laws are enforced separately by two different agencies. The Federal Consumer Protection Law is enforced by the Federal Prosecutor for Consumers (PROFECO) and the Federal Economic Competition Law (FECL) is enforced by the Federal Economic Competition Commission (COFECE). • There are relatively few overlaps between the conception of consumer policy administered by PROFECO and the issues that arise under competition policy. • In Mexico, the law allows dominant firms to bring forward efficiency claims. • An important element to note regarding efficiencies in the FECL is the fact that the law establishes as its object to protect the process of competition and free market access, through ... and other restrictions to the efficient functioning of markets for goods and services. In other words, the Commission is charged with ensuring that total welfare is attained. • Efficiencies claimed in merger review, which must be provided by the parties, seem geared towards technical efficiencies, with the exception perhaps of the first efficiency mentioned in the bylaws which addresses permanent savings obtained through permanent increases in productivity. In this case, the first efficiency considered by COFECE in merger review cases is a dynamic one, which highlights the importance placed by the Commission on the possibility of productivity growth brought about by a merger. 	

Competition policy mechanisms	Current position	Any other comments
	<ul style="list-style-type: none"> • Nevertheless, for the Mexican case, it is complicated to specify if the focus of the competition policy has been on short term allocative efficiencies or long term dynamic. <p>Telecommunications sector</p> <ul style="list-style-type: none"> • In Mexico the competition policy in telecommunications and broadcasting sectors is entrusted to the Federal Telecommunications Institute (IFT), which also acts as the technical regulator of those sectors. Thus, competition policy pursuits the goals established by the Federal Economic Competition Law (FECL) and the Federal Telecommunications and Broadcasting Law (FTBL). • From a normative perspective, competition policy in Mexico pursues the economic efficiency, which is assessed under the total welfare standard. <ul style="list-style-type: none"> <i>i)</i> The purpose of the competition law, the FECL, is to promote, protect and guarantee the free competition and economic competition, as means to enhance efficient functioning of the markets. <i>ii)</i> The sectorial law, the FTBL, has, among others, the purpose to regulate the competition process and free competition in telecommunications and broadcasting sectors. This law also establishes a mandate to the State to guarantee the efficient provision of these services to the consumers, and for such purposes, it shall establish effective competition conditions. • Under the welfare standard, the IFT assesses all sources of efficiency, either static (allocative, productive) or dynamic. The underlying rationale is to assess the total welfare effects of competition policy. 	

Competition policy mechanisms	Current position	Any other comments
<p>Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to fact based rule of reason analysis. <i>Does the competition authority(s) have the legal authority to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i></p>	<ul style="list-style-type: none"> • Yes, in Mexico, the law allows dominant firms to bring forward efficiency claims. • An important element to note regarding efficiencies in the FECL is the fact that the law establishes as its object to protect the process of competition and free market access, through ... and other restrictions to the efficient functioning of markets for goods and services. In other words, the Commission is charged with ensuring that total welfare is attained. • Efficiencies claimed in merger review, which must be provided by the parties, seem geared towards technical efficiencies, with the exception perhaps of the first efficiency mentioned in the Regulatory Provisions which addresses permanent savings obtained through permanent increases in productivity. In this case, the first efficiency considered by COFECE in merger review cases is a dynamic one, which highlights the importance placed by the Commission on the possibility of productivity growth brought about by a merger. • Since the constitutional reform of 2013, COFECE has obtained more enforcement powers through changes to its law, has increased technical expertise and is pushing to develop this expertise both within and outside COFECE. Therefore, the Commission is building its capacity so efficiency arguments can be the basis for its decision making. 	
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or sub-national government?</i></p>	<ul style="list-style-type: none"> • Yes. In México competition policy reaches all sectors of economic activity including all goods and services markets and all economic agents are subject to the FECL. However, the Mexican Constitution expressly excludes certain activities conducted by the State which do not constitute monopolies, these are; post services, telegraphs and radiotelegraphy; radioactive minerals and nuclear energy generation; planning and controlling the national electricity system as well as public service transmission and distribution of electric energy, and the 	

Competition policy mechanisms	Current position	Any other comments
	<p>exploration and extraction of oil and other hydrocarbons in terms of paragraphs six and seven of article 27. “The Nation’s domain shall not be transferred to other and will be, therefore, permanent. The Exploitation, use and consumption of the aforementioned resources by private individual or legal corporations shall always need to be authorized by a permit issued by the Executive Branch of Federal Government which will comply with the regulations and conditions established by the law. Mineral exploitation laws which paragraph four refers to shall regulate mining as well as the ways in which such an activity can be proved to have been done within the dates established by the permit, whatever the starting date of the authorization might be. Any mining work performed beyond the date established at the permit, shall be cancelled. The federal government shall have power to both create and suppress national reserves. The respective resolutions shall be made by the Executive Branch of Federal Government according to the law. With respect to oil and solid, liquid, gaseous or radioactive hydrocarbons no new permit shall be issued and those already issued shall be cancelled in order to allow the Nation to carry out the exploitation of the material mentioned above according to statutory law. The Nation shall be in charge of generating, conducting, transforming, distributing and providing electricity as a public service. No permit shall be issued to private individual or corporations in order to provide such a public service. The Nation will use all necessary commodities and natural resources available to achieve the goals set so far”.³</p>	
<p>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. <i>Does the competition authority(s) have statutory independence in the cases it selects for</i></p>	<ul style="list-style-type: none"> • Yes. The 2013 Constitutional Reform in Telecommunications and Competition created COFECE as a constitutional autonomous entity in replacement of the previous Mexican Competition Commission which was dependent of the Economy Ministry. The constitutional reform also 	

³ CPEUM, Article 27, Paragraphs 6 and 7.

Competition policy mechanisms	Current position	Any other comments
<p><i>enforcement action or is this a more collective decision involving other Ministries? How is any independence established and safeguarded?</i></p>	<p>created the Federal Telecommunications Institute⁴ (IFETEL) as a constitutionally autonomous entity in charge of competition enforcement for the broadcasting and telecommunications sectors in Mexico⁵. The FECL provides both entities with independence regarding the agencies' enforcement actions however, also provides that complaints received on behalf of the Federal Executive Branch through the Ministry of Economy and the Federal Consumer Attorney shall have a preferential status.</p> <ul style="list-style-type: none"> • It is important to state that the agencies' independence is safeguarded through various legal features. Firstly, their annual budgets are granted and audited directly by the Mexican Congress, the Federal Executive Branch is no longer able to determine budgetary issues. Secondly, enforcement actions may not be guided or directed in any way by the Government and the agencies may even dismiss a complaint filed under the preferential status figure provided a duly justified resolution is issued. Lastly, both agencies may file constitutional challenges before the Supreme Court when they consider that the Federal Executive Branch or Congress have encroached upon their powers through certain acts or general provisions. 	
<p><i>There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets with potential for innovation?</i></p>	<ul style="list-style-type: none"> • Yes. In 2014 COFECE issued a broad reaching Strategic Plan which establishes a prioritization strategy from 2014 to 2017, to focus on economic sectors that will maximize COFECE's effectiveness. The five prioritization criteria are: <ul style="list-style-type: none"> i) Economic Growth: identifies those sectors which, by their market size and growth rate, contribute most to GDP. 	

⁴ IFETEL's role relates closely to COFECE's regarding competition policy due to the fact the FECL provides for the agencies' enforcement capabilities and legal standards.

⁵ CPEUM, Article 28, Paragraph 16.

Competition policy mechanisms	Current position	Any other comments
	<ul style="list-style-type: none"> <li data-bbox="1041 311 1899 422"><i>ii)</i> Widespread Consumption: emphasizes the sectors producing goods and services of greatest demand among the general population. <li data-bbox="1041 438 1899 550"><i>iii)</i> Cross-Sectional Impact: identifies sectors and markets where goods and intermediate services are produced and are inputs for the production of goods and services for final consumption. <li data-bbox="1041 566 1899 678"><i>iv)</i> Lower income households: highlights sectors producing goods and services that have a major impact on the expenditures of families with greater economic deprivation. <li data-bbox="1041 694 1899 805"><i>v)</i> Regulated Sectors: emphasizes the economic sectors where existing regulations or governmental practices could create barriers to competition. <li data-bbox="1041 821 1899 933"><i>vi)</i> Monopolistic behavior risk: identifies market characteristics and regulations that might facilitate collusion or abuse of dominance. <ul style="list-style-type: none"> <li data-bbox="985 949 1899 1157">• Pursuant to this prioritization criteria, at the very beginning of 2014 COFECE undertook a comprehensive and detailed study into the financial sector in Mexico. This study was rendered and made public in July 2014, and included concrete recommendations regarding the structural and legal changes needed to improve competition and ultimately benefit consumers. <li data-bbox="985 1220 1899 1401">• In November 2014, COFECE began a study of the Agri-food sector in Mexico. The purpose is to analyze if effective competition in the markets for agricultural products is taking place. It is examining the fairness and openness aspects in agricultural markets and seeking to answer the question of whether there is adequate competition in the Agri-food 	

Competition policy mechanisms	Current position	Any other comments
	<p>industry and whether the system is fair to all participants. This study and its recommendations shall be concluded in August 2015.</p> <ul style="list-style-type: none"> Likewise, COFECE is undertaking important advocacy efforts regarding small and medium enterprises with the underlining belief that empowerment of entrepreneurs contributes to innovation and competition 	
<p>There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i></p>	<ul style="list-style-type: none"> COFECE is very active in issuing opinions to government acts and regulations from a competition policy perspective, advocating for openness and against barriers to entry is a constant objective. In 2014, COFECE issued a total of 103 opinions: 54 opinions addressed competition issues with respect to proposed regulation and the remaining 49 regarding tenders and the granting of governmental licenses, concessions, and permits. Out of the 54 opinions on proposed regulations, 50 were issued as part of the public consultation process conducted by the Federal Commission for Regulatory Improvement. It is worth noting that COFECE and COFEMER signed a collaboration agreement in order to assess, from the perspective of competition, regulations proposed by the Federal Government. The remaining 4 opinions were on legislative matters. 	

Table D - Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i></p>	<ul style="list-style-type: none"> • The Securities Market Law (LMV) establishes the functions, duties and responsibilities within the framework of corporate governance. The laws that apply to each type of company can be found as follows: <ul style="list-style-type: none"> <i>i)</i> Investment Promotion Companies "SAPIs" (Articles 14 to 16 of the LMV). <i>ii)</i> Stock Market Investment Promotion Companies "SAPIBs" (Article 19 of the LMV). <i>iii)</i> Publicly Traded Companies "SABs" (Articles 23 to 46 of the LMV). • According to LMV, public companies must comply with the following: establish guidelines on internal control and internal audit; submit relevant information (financial, legal and operational) to the board of directors and reveal this information in the shareholders' meetings. <ul style="list-style-type: none"> <i>i)</i> Development Capital Certificates (CKD) and Real Estate Investment Trust (FIBRA) (Articles 64 Bis and 64 Bis 1 of the LMV, and Article 7, section II, paragraph "c" of the Regulation applicable to Securities (<i>Circular Única de Emisoras</i>)). <i>ii)</i> These types of securities disclose all of the rights and benefits of the holders in detail in the prospectus. If the manager of the trust, i.e.: General Partner (GP), does not deliver the expected results, the law grants the security holders the right to replace the GP. • The LMV does not distinguish investment in innovation by the companies described above, since investments are carried out according to the guidelines that each society determines appropriate by internal corporate governance. 	
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of</p>	<ul style="list-style-type: none"> • The 2014 financial reform amended the laws that apply to investment funds in order to foster investment and align Mexican legislation with 	

forms including venture capital funds and direct capital raising from the public. *Do your economy's financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?*

international standards. Among the provisions within the amendments to the law, the following impact the development of capital markets:

- i) The legal figure of "Restricted initial public offering" was introduced to allow specialized offerings.
 - ii) It allows the Mexican Stock Exchange to enter into routing agreements with other stock exchanges.
 - A threshold of 250 million UDIs⁶ (~84 million USD) in terms of equity is established for the companies operating in the Intermediate Market⁷. If the companies surpass this threshold they must list themselves as publicly-traded companies (Sociedad Anónima Bursátil) in the Mexican Stock Exchange.
- The regulatory framework was strengthened for Development Capital Certificates (CKD), Real Estate Investment Trust (FIBRA) and exchange traded funds (TRACs or ETFs), in order to allow the legislator to develop specific regulation for each type of security.
 - The CKDs are used to finance infrastructure projects, including airports, ports, roads, railways, water, electricity, communications, real estate projects, mining, general business, and technological projects. Usually they work as a public vehicle for private equity activity. Both the risks and the profits of the projects financed with CKDs are passed down to the holders.
 - The National Institute of Entrepreneurship (INADEM) was created in order to encourage entrepreneurship. The Institute follows the guidelines established by the national policy of inclusive support to micro, small and medium enterprises, promoting innovation, competitiveness and national and international activity. Through these efforts, small and medium sized enterprises increase their contribution

⁶ Mexico's Investment Units (UDIS) are units based on price increases and are used to settle mortgage obligations or commercial acts. Its value can be checked on: <http://www.banxico.org.mx/SielInternet/consultarDirectorioInternetAction.do?accion=consultarCuadro&idCuadro=CP150§or=8&locale=en>

⁷ The Intermediate Market is only open to fast growing medium size companies. The exchange has lower requirements than the regular exchange and it is only accessible to qualified and institutional investors.

	<p>to economic development and social welfare, as well as to the development of policies that promote business culture and productivity.</p>	
<p>The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. <i>Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing??</i></p>	<ul style="list-style-type: none"> • The Securities Market Law (LMV), through a transitional provision, urges the Mexican Nacional Development Bank (<i>Nacional Financiera, Sociedad Nacional de Crédito, NAFIN</i>) to design and implement a support scheme to encourage the listing of new Investment Promotion Companies (SAPIs). • Facilitate the registration and disclosure regime, including: <ul style="list-style-type: none"> <i>i)</i> A number of facilities are granted to the listing requirements of the SAPIB's shares in the stock market. <i>ii)</i> Minimum shareholders' equity is set at 12 million UDIS (~4 million USD). <i>iii)</i> Minimum number of shares to be offered, percentage of equity, number of shareholders and distribution were eliminated. • Financial statements A period of three years was granted (until January 1, 2017) to implement IFRS (and transition away from Mexican accounting standards) • Terms and conditions to transition from a Stock Market Investment Promotion Companies to a Publicly Traded Company SAB according to the LMV The time that a company is protected under the SAPIB regime may not exceed 10 years. When that time frame is up, the company will have six months to formally transit into a public company. In a SAPIB, if the shareholders' equity exceeds 250 million UDIS (~84 million USD), the companies will have one year to carry out the necessary adjustments to transition into a SAB. <p style="text-align: center;">Eligible companies criteria</p>	

Criteria	Debt		Equity
	Short term (1 to 360 days)	Long term (1 to 10 years)	SAPIBs
Minimum sales	\$ 150 to \$ 200 million pesos (MXN) 10 to 13 million USD	\$ 200 MXN 13 million USD	\$ 250 MXN 16 million USD
Minimum amount to be issued	Program between \$ 50 to \$ 100 million pesos (MXN) 3 to 6.5 million USD	Between \$ 100 to \$ 150 million pesos (MXN) 6.5 to 10 million USD	\$300 MXN 19.5 million USD
Rates	Variable	Variable, Fixed, UDIS	N/A
Credit Ratings	F1+, F1, F2 y F3 (at least 1 rating)	AAA, AAs y As, BBB (at least 1 rating)	N/A
Timeframe (Structuring Process)	Program 2-3 months Subsequents 1 week	Program 3-4 months, Subsequents 1 month Recurrent 1 week	From 4 to 6 months

- The government, through its development bank, NAFIN, has created a series of programs to achieve the institutionalization of midsize companies. This will complement the efforts to promote the creation of Stock Market Investment Promotion Companies (SAPIBs):
 - i) The MIDAS Program (*Mercado Institucional de Deuda Alternativa Societaria*) seeks to support medium and large size Mexican companies, with sales above 250 million pesos (~16 million USD), providing them with working capital loans and capital expenditure loans, helping them in their institutionalization process in order for the companies to be able to issue debt in a timeframe of 3 to 5 years. The loans start from 300 million pesos (~20 million USD) up to 2,000 million pesos (~130 million USD).
 - ii) The MICA Program finances (*Mercado Institucional de Capital Alternativo*), Investment Promotion Companies (SAPIs) with sales above 300 million pesos (~20 million USD), in the form of credit,

	<p>mezzanine loans and/or equity for fixed assets, working capital, debt restructuring; with the goal of assisting them in the process of institutionalization in order to help them go public. The financing for these companies starts from 300 million pesos (~20 million USD) up to 1,000 million pesos (~65 million USD), with a duration of 3 to 5 years.</p>	
<p>Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However, these also allow poor managers the opportunity to repeatedly start businesses that fail with losses to shareholders and creditors. <i>How is the balance struck between enabling risk taking and protecting shareholders and creditors?</i></p>	<ul style="list-style-type: none"> • In order to promote the balance between enabling risk-taking and protecting shareholders and creditors, the Financial Reform amended the Commercial Bankruptcy Law. The first article of this Law now establishes that: “It is of public interest to safeguard companies and prevent that payment defaults may pose a risk in their viability and affect other companies with which they maintain a business relationship. To protect creditors and shareholders, every party involved in the insolvency and bankruptcy process must, at all times, observe the principles of procedural economy, legal relevance, expeditiousness of the proceedings, good faith and transparency.” • The Commercial Bankruptcy Law provides the legal framework to protect the interests of creditors and shareholders. • Nevertheless it is important to note that in Mexico, the law that regulates credit bureaus, states the mandate to provide the information of companies with the information of shareholders who hold 10% or more of the capital of such company. Such information can protect creditors against any individual who repeatedly starts and fails businesses. 	

Table E - Public sector governance

Public sector governance mechanisms	Current position	Any other comments
<p>State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. <i>In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are there SOEs explicitly tasked with encouraging private sector innovation?</i></p>	<ul style="list-style-type: none"> • The Institute of National Statistics and Geography (INEGI), is the entity responsible for the measurements of GDP. • Of the universe of 87 SOEs that SHCP has identified, in terms of Article 28 of the Constitution, only SEPOMEX, TELECOMM, CENACE and CFE (transmission and distribution of electricity) their markets are protected from the involvement of other competitors . • Of this universe, 11 SOEs focus their purpose to collaborate with the private sector in the innovation of their products and services: <ul style="list-style-type: none"> i) Agencia Espacial Mexicana ii) Centro de Ingeniería y Desarrollo Industrial iii) Corporación Mexicana de Investigación en Materiales, S.A. de C.V. iv) Laboratorios de Biológicos y Reactivos de México, S.A. de C.V. v) Productora Nacional de Biológicos Veterinarios vi) Centro de Investigación y Desarrollo Tecnológico en Electroquímica, S.C. vii) Centro de Investigaciones Biológicas del Noroeste, S.C. viii) Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, A.C. ix) Centro de Investigaciones en Óptica, A.C. x) CIATEC, A.C. “Centro de Innovación Aplicada en Tecnologías Competitivas” xi) CIATEQ, A.C. Centro de Tecnología Avanzada 	

Public sector governance mechanisms	Current position	Any other comments
<p>A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. <i>Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure?</i></p>	<ul style="list-style-type: none"> The Ministry of Economy of Mexico is the body in charge of the implementation of the National Program of innovative Development 2013-2018 (PRODEIIN). 	
<p>Strategies need to respond to economy context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks. <i>What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</i></p>	<ul style="list-style-type: none"> The current administration identified the fall of productivity as the main cause for low economic growth in Mexico. To address this challenge, over the past two years economic policy has been guided by the “Program to Democratize Productivity”. The main objectives of this plan are: <ul style="list-style-type: none"> <i>xii)</i> Promote the use and efficient allocation of the factors of production, promoting formality and access to financing. <i>xiii)</i> Elevate workers’ and enterprises’ productivity through capacity building, certifications, incentivizing innovation and improving the business environment. <i>xiv)</i> Guide public policy to elevate productivity in strategic sectors and regions. <i>xv)</i> Strengthen the process of design, instrumentation and evaluation of public policy to promote democratization of productivity. In coordination with this Program, the Structural Reform Agenda targets productivity and innovation gaps in a comprehensive manner: <ul style="list-style-type: none"> <i>i)</i> The Financial Reform improves the capital allocation and stimulates entrepreneurs’ productive investments. <i>ii)</i> The Competitiveness Reform improves the business environment. <i>iii)</i> The Fiscal Reform promotes a better allocation of labor, an increase of enterprises’ productivity and an expansion of the fiscal base. 	

Public sector governance mechanisms	Current position	Any other comments
	<p><i>iv)</i> The Telecommunications Reform and the Energy Reform reduce the costs of essential inputs for enterprises and contribute to the development of high-productivity and innovative sectors.</p> <p><i>v)</i> The Education Reform contributes to an increase in labor productivity.</p> <p><i>vi)</i> The Labor Reform promotes an equitable distribution of productivity's benefits, and a better allocation of labor.</p> <ul style="list-style-type: none"> • The 2013-2018 National Development Plan (NDP), in its objective 3.5, set "Making the scientific, technological and innovation pillars for sustainable economic and social progress" and thus also establishes the commitment to develop a comprehensive policy to strengthen the innovative capacity through: <ul style="list-style-type: none"> <i>i)</i> Increase public spending on innovation. <i>ii)</i> Promote the transfer of knowledge from academy to industry. <i>iii)</i> Promote local vocations in science, technology and innovation. <i>iv)</i> Increase funding for innovation and patenting. <i>v)</i> Driving innovation through government procurement. <i>vi)</i> Promote the development and adoption of Information Technologies. • The PND 2013-018 established a target of R&D spending to reach 1% of GDP in 2018. • Innovative Development Program 2013-2018 (PRODEINN), designed by the Ministry of Economy and derived from PND, established the following strategies and actions: <ul style="list-style-type: none"> <i>i)</i> Strategy 1.6. Promote innovation on industrial sectors under the scheme of participation of academia, private sector and government (triple helix). <p>Lines of action:</p>	

Public sector governance mechanisms	Current position	Any other comments
	<ul style="list-style-type: none"> ▪ 1.6.1 To promote the alignment of human capital formation with the needs of sectors and facilitate their specialization. ▪ 1.6.2 To promote innovation and its application in companies to scale production to higher value-added goods. ▪ 1.6.3 To promote technological development by improving incentives to investment in research, development and technology management. ▪ 1.6.4 To promote the creation, attraction and strengthening of centers of engineering, design, research, development, services, training, innovation and cross-impact. ▪ 1.6.5 To promote the research and application of new technologies. ▪ 1.6.6 To facilitate and promote the protection of IP. ▪ 1.6.7 To promote a culture of innovation based on design and technology as well as business and organizational models. ▪ 1.6.8 Develop an ecosystem of digital economy through ICT. <p><i>ii) Strategy 2.6. Promote innovation on service sector under the scheme academia, private sector and government (triple helix).</i></p> <p>Lines of action:</p> <ul style="list-style-type: none"> ▪ 2.6.1 Foster entrepreneurial innovative culture, promoting creativity, design, organizational models and technological innovation. ▪ 2.6.2 To encourage the knowledge transfer to facilitate its economic use. ▪ 2.6.3 To promote the development and consolidation of regional innovation ecosystems. ▪ 2.6.4 To identify inhibitors and enablers of innovation in sectors and regions. ▪ 2.6.5 Public policies different levels of government, aimed at promoting innovation, to maximize impact articulate. 	

Public sector governance mechanisms	Current position	Any other comments
	<ul style="list-style-type: none"> ▪ 2.6.6 To promote collaboration schemes such as open innovation, work in global networks, co-creation and co-design. ▪ 2.6.7 Boosting demand for innovative products and services in both the private and public sectors (public procurement). ▪ 2.6.8 Facilitating access to sources of financing and capitalization accompanying the different stages of innovation. 	

Appendix A Questionnaire on structural policies and innovation

Table A – Economy context (Optional)

Economy Context Questions	Current position	Any other comments
<p>Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i></p>	<p>In spite of the good macroeconomic and institutional characteristics of the New Zealand economy, its innovation performance is relatively weak. New Zealand is ranked 18th on the INSEAD Global Innovation Index and 17th on the WEF Global Competitiveness Index. This is because while New Zealand scores highly on basic requirements and infrastructure, we score less well on ‘innovation sophistication factors.’ For example New Zealand has a relatively low share of R&D intensive industries, limited resources, and there are few of the large firms that dominate R&D around the world. This appears to be related to the geographical isolation and small size of firms, firm structure, domestic market and cities in New Zealand.</p> <p>The commercialisation of innovation in New Zealand is also relatively poor. This poses problems for innovation policy because the direct economic and financial returns from programmes aimed at supporting innovative research or business investments have been generally low.</p> <p>While New Zealand exports a broad range of products, it is reliant on exports of commodity-based products as the main source of export receipts and relies on imports of raw materials and capital equipment for industry. New Zealand is distant from its main markets, but has significant natural resources in agricultural land, timber and forests, and fish. Its physical make-up poses major physical infrastructure challenges. It has a highly efficient export-oriented agricultural sector. Primary commodities account for more than half of total goods exports while exports of goods and services represent around 30% of real expenditure GDP.</p> <p>New Zealand is characterised by an industrial structure with a strong emphasis on agriculture, a sizable manufacturing sector with a large proportion of output concentrated on low and medium-technology sectors and a large service sector incorporating a large social and community services element.</p>	<p>There are a growing number of small, innovative hi-tech firms which are increasingly using technology to overcome issues of distance to global markets, and investing heavily in R&D to create unique products and services.</p> <p>The government has set a target of increasing R&D spend to 1 per cent of GDP by 2018.</p>

¹ NZIER report (March 2015) to APEC 2015 Economic Report (AEPR) - The role of structural policies in innovation

Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</i></p>	<p>New Zealand’s regulatory system is widely acknowledged to be flexible/non prescriptive in nature. The enabling environment for innovation is delivered through a supportive regulatory environment, rather than merely goal-based regulation. A regulatory system that is non prescriptive helps encourage innovation by reducing the cost to business of experimenting and developing new ideas. New Zealand is ranked 2/189 in the World Bank’s Ease of Doing Business study reflecting regulatory flexibility and the ease of starting a business and innovating.</p> <p>New Zealand ranks highly in other international measures of a good business environment that helps facilitate innovation. For example, New Zealand is ranked 8th in the OECD in Product Market regulation indicators and in the top decile for World Bank’s Regulatory Quality Indicator. This provides a good indication that current regulation is striking a good balance between minimising compliance costs and ensuring market integrity and trust.</p> <p>The regulatory system sometimes allows for alternative approaches and solutions. An example of this is the ability of applicants to use alternative solution proposals when applying for building consents in New Zealand: <http://www.dbh.govt.nz/establishing-compliance-alternative-solutions>.</p>	<p>New Zealand has been a leader in adopting goal based regulatory regimes. However over time we have become more prescriptive, in how the rules and goal based regimes are being administered.</p> <p>Moreover while New Zealand has moved away from economic regulation in most market sectors of the economy, the non-economic regulatory regimes such as safety regulation on the transport sector still affects ease of entry and exit.</p>
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification programme in place and if so how comprehensive is it? Also, is any administrative simplification programme linked to programmes to reduce corruption?</i></p>	<p>New Zealand is known to be a country that imposes some of the lowest costs to businesses (reflected in ease of doing business rankings – see above). Low barriers to market entry/exit, such as licensing or official-approval requirements, results in increased firm rivalry and better resource allocation which drives innovation.</p> <p>Successive governments have worked towards administrative simplification and reducing the cost of doing business through sectoral based reforms. The current</p>	<p>New Zealand established a world leading position in cost of doing business through sectoral based reform and</p>

	<p>Government's Results 9 and 10 Better Public Services programme are focused on trying to simplify administrative requirements for businesses and the general public.</p> <p>The aim of result 9 is to reduce the cost to businesses when dealing with the government and providing performance indicators to communicate success. Since 2012 businesses have reported a 7% drop in effort required to deal with the government.</p> <p>The aim of result 10 is to meet the public's desire to access government services digitally. The government's target is for an average of 70% of New Zealander's most common transaction to be completed in a digital environment by 2017.</p> <p>New Zealand has the highest non-corruption rating in the world and this reflects strong norms and strong institutions rather than administrative simplification.</p>	<p>improving the quality of new regulatory interventions. Until 2012 there has been no across the board red tape reduction or administrative reduction programme.</p>
<p>Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. <i>Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any adverse impact on competition and hence innovation?</i></p>	<p>New Zealand's RIA regime requires all the impacts (e.g. impact on competition) of a regulatory proposal to be identified and analysed. The result of this analysis is a regulatory impact statement (RIS). The RIS summarises the RIA and is completed by the government department proposing the regulatory solution. The RIS is signed out by a senior member of the government department and is quality assured by either an independent panel within the department, or if the proposal is deemed to have a 'significant' impact it will be QA'd by the Regulatory Impact Analysis Team (RIAT) in the Treasury.</p> <p>One of the questions to determine whether or not a regulatory proposal will have a significant impact is whether the proposal will: "affect the structure or openness of a particular market or industry?" If the answer is yes then more detail on the size, likelihood and distribution of this impact will be provided.</p> <p>Ultimately the choice of whether a regulatory proposal is passed is decided by parliament. New Zealand's regulatory development process (in particular the RIS) provides a comprehensive evidence-base that includes the costs (e.g. reduction in competition) and benefits of a proposal which informs and influences decision-makers final decision.</p>	
<p>Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. <i>How easily can skilled people move between firms?</i></p>	<p>New Zealand's Skilled Migration policies are designed to facilitate the entry of migrants where there are skills shortages in the economy. For temporary work migrants, there are occupational skills shortage lists which make it easier for businesses to hire migrants in industries where there are persistent skills shortages. For permanent migrants, a points system is used to select migrants with higher skills and qualifications, with an emphasis placed on an employment offer in New Zealand. This system is regarded as being among international best practice, and isn't thought to place</p>	<p>There is not much research into occupational regulation barriers to the movement of people between firms domestically, there is</p>

	constraint on the movement of skilled labour into New Zealand where there are skills the domestic labour market can't fill.	little evidence that there is a problem in NZ. Rather the main adverse effect of occupational regulation is to increase the final prices faced by consumers without corresponding increases in service quality.
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Table C - Competition policy

Competition policy mechanisms	Current position	Any other comments
<p>Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other. <i>How does competition policy deal with protection of consumers? Does competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and dynamic efficiency?</i></p>	<p>The Commerce Act 1986 is the primary source of competition law in New Zealand. The Act established the Commerce Commission, the key competition authority in New Zealand.</p> <p>The purpose of the Commerce Act 1986 is to promote competition in markets for the long-term benefit of consumers within New Zealand. In that sense, consumers are central to the Act. It also recognises that consumer benefits from greater choice, lower prices and better quality goods and services is consistent with incentives to invest and innovate if a longer term view is applied.</p> <p>Alongside the competition-focussed consumer protections in the Commerce Act, New Zealand law protects consumers from misleading and deceptive conduct (Fair Trading Act 1986) and from products which are not fit-for-purpose (Consumer Guarantees Act 1993). These protections can strengthen competition by making consumer choice a more effective discipline and forcing firms to compete on the merits (rather than on the basis of misleading claims, for example).</p> <p>The Commerce Act has a presumption that competition is the best means to achieve the long term benefits of consumers. It prohibits arrangements which will, or are likely to, substantially lessen competition in a market. A similar test applies for mergers and acquisitions. This assessment is made on a case-by-case basis, and takes into account both pro-competitive factors (such as technical efficiencies that may be passed on to consumers) and anti-competitive factors.</p> <p>In the unusual circumstance that competition is not the best means to achieve this goal, the Commerce Act also allows for anti-competitive arrangements to be “authorised” where the benefits to the public outweigh the costs. The Commerce Act provides that, to the extent that the Commission is required to determine whether conduct will result in a benefit to the public, the Commission shall have regard to any efficiencies which it considers relevant. This includes allocative, productive and dynamic efficiency.</p>	<p>Responding to new technologies which have a disruptive effect on established markets is an emerging challenge for policy makers. In particular, the challenge is to ensure that competition laws do not hinder the emergence of disruptive technologies and the flow-on benefits, while ensuring that expected consumer safeguards are maintained.</p>
<p>Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in technical</p>	<p>The three main classes of prohibitions in the Commerce Act all require a wider ‘rule of reason’ competition analysis. Per se treatment in prohibitions is reserved for conduct that is clearly presumptively anticompetitive (e.g. hard core cartels).</p> <p>In conducting its assessment of whether a substantial lessening of competition is likely,</p>	<p>The Commerce (Cartels and Other Matters) Bill proposes to introduce an</p>

Competition policy mechanisms	Current position	Any other comments
<p>and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to fact based rule of reason analysis. <i>Does the competition authority(s) have the legal authority to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i></p>	<p>the Commerce Commission has regard to all factors that impact on competition. Market shares are one factor that is taken into account, but it is not sufficient on its own to assess likely market power.</p> <p>The Commerce Commission’s consideration of technical and dynamic efficiency is highlighted in the Commerce Commission’s Mergers and Acquisitions Guidelines, which states that the Commission looks for variable cost savings (e.g. process innovation) or product enhancements that increase product demand (e.g. product innovation). The balancing of factors which are pro-competitive (e.g. actual or potential efficiency gains) has also been endorsed by the High Court.</p> <p>As noted above, the Commerce Act also allows for anti-competitive arrangements to be “authorised” by the Commerce Commission where the benefits to the public outweigh the costs. The Commerce Act provides that, to the extent that the Commission is required to determine whether conduct will result in a benefit to the public, the Commission shall have regard to any efficiencies which it considers relevant.</p> <p>The Commerce Commission is well resourced with expert staff. As well as investigators, the Commission has in-house teams of lawyers and economists.</p> <p>The Commerce Commission’s processes allow for consideration of technical and dynamic efficiency gains in decision-making. For every merger case, an economist from the specialist team within the Commerce Commission is appointed to the project team.</p> <p>In cases which involve a more complex quantitative analysis, the Commerce Commission will often put its quantitative analysis to relevant parties for comment in order to maintain a transparent and robust process. Commerce Commission models which are considered critical to Commission decision-making are subject to internal quality controls and may be challenged by appeals to the court.</p>	<p>exemption from the expanded per se prohibitions for “collaborative activities”. Parties will be able to apply to the Commerce Commission for confirmation that a cartel provision falls within the exemption — i.e. the cartel provision is reasonably necessary for the purpose of the collaborative activity and is not carried on for the dominant purpose of lessening competition between the parties.</p> <p>This means that the Commerce Commission can consider the impact on prices, output, innovation and any associated costs savings when considering per se prohibited conduct.</p>
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also</p>	<p>New Zealand’s competition policy is comprehensive. It extends to all goods and services supplied or acquired in trade in markets in New Zealand, unless specifically exempt. The</p>	<p>Competition policy can have an</p>

Competition policy mechanisms	Current position	Any other comments
<p>competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or sub-national government?</i></p>	<p>Commerce Act also applies to the government to the extent it engages in trade, and all central and local government businesses.</p> <p>The main exemptions from competition law are for contracts of employment and outwards shipping, which are subject to other legislation. It is proposed in the Commerce (Cartels and Other Matters) Bill that shipping arrangements be subject to the general Commerce Act regime.</p> <p>New Zealand's competition policy also recognises that Parliament may have wider public welfare objectives that may not be consistent with competition. In such cases, other laws may specifically authorise conduct that would otherwise contravene the competition in order to achieve those wider public welfare objectives. An example is restrictions on the sale of medicines by pharmacies under the Medicines Act 1981.</p>	<p>important role in supplementing competition law through promoting competition assessment in regulatory development processes and government procurement policies.</p>
<p>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. <i>Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective decision involving other Ministries? How is any independence established and safeguarded?</i></p>	<p>The Commerce Act provides that the Commerce Commission must act independently in performing its statutory functions and duties and exercising its powers under the Act. The Commerce Commission has statutory independence in the cases it selects for enforcement action. This statutory requirement to act independently is subject to oversight by the courts.</p> <p>Independence is supported in a number of ways.</p> <p>The Commerce Commission is established as a body corporate separate from the Government. Commissioners are appointed for a term of 5 years. They may not be removed from office, except by the Governor-General for just cause (e.g. misconduct).</p> <p>The Commerce Commission receives dedicated Crown funding, for which any changes are transparently identified in accordance with the Public Finance Act 1989. Contributing to its independence, the Commerce Commission also has separate physical premises (i.e. the Commerce Commission is not co-located with any government department).</p> <p>The Commerce Commission is accountable to the Minister of Commerce and Consumer Affairs for its performance. There are established accountability mechanisms in place, such as the preparation and publication of statements of intent in accordance with the Crown Entities Act 2004.</p>	
<p>There is evidence that structure and innovation hold a concave</p>	<p>The Commerce Commission targets its efforts at consumer harm, focussing its resources to areas where it can have maximum impact. The Commerce Commission's</p>	<p>Work is underway to review New</p>

Competition policy mechanisms	Current position	Any other comments
<p>relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. <i>Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets with potential for innovation?</i></p>	<p>intelligence unit collects data from a wide range of sources and develops and evidence-based assessment of consumer harm in New Zealand.</p> <p>Where there is little or no competition in a market, and little or no likelihood of a substantial increase in competition in that market, the Commission may inquire into whether (and if so how) to regulate the relevant goods or services. In doing so, the Commerce Commission must undertake a qualitative analysis of all material long-term efficiency and distributional considerations. As far as practicable, it must also quantify material effects on allocative, productive and dynamic efficiency.</p>	<p>Zealand’s misuse of market power prohibition to ensure that it is fit-for-purpose. New Zealand has been watching Australian and other international developments with interest.</p>
<p>There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i></p>	<p>The use of concepts like “market” and “competition” in the Commerce Act take into account factors outside the geographical boundaries of New Zealand to the extent they are relevant to competition within New Zealand.</p> <p>The Act provides that the effect on competition in a market is to be determined by reference to all factors that affect competition in that market, including competition from goods or services supplied or likely to be supplied by persons not resident or not carrying on business in New Zealand. In its Merger and Acquisition Guidelines, the Commerce Commission points out that it considers entry or expansion through imports as part of its assessment into whether a merger is likely to substantially lessen competition.</p>	<p>Many transactions and market practices transcend geographic boundaries. This is highlighted by the large number of trans-Tasman and global mergers considered recently by the Commerce Commission.</p> <p>The Commerce Commission has close links with a number of competition regulators from other jurisdictions. In some cases these are formalised by Memoranda of Understanding.</p>

Table D - Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i></p>	<p>New Zealand is consistently at or near the top of comparative international studies on the ease of doing business. The Companies Act 1993 contributes to this by providing a comprehensive and flexible framework for creating, operating, restructuring and liquidating companies.</p> <p>The Companies Act includes duties which ensure that directors act in the interests of owners. These include duties to act in good faith and in the best interests of the company, to exercise powers for a proper purpose, comply with the Companies Act and the company's constitution and to exercise care, diligence and skill.</p>	
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital funds and direct capital raising from the public. <i>Do your economy's financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</i></p>	<p>New Zealand has well-developed and active public and private markets for the purposes of raising both debt and equity capital. These include a listed equity market (NZX), significant wholesale and retail corporate bond markets, a private equity market, a small venture capital industry, an angel investment market, equity crowd funding, and informal capital raising (family and friends).</p> <p>The FMC Act also facilitates a range of other forms of capital raising, such as person-to-person lending and innovative forms such as crowd funding.</p>	
<p>The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. <i>Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing??</i></p>	<p>The Financial Markets Conduct Act 2013 promotes confident and informed participation of business, investors and consumers in financial markets by providing for the development of fair, efficient and transparent financial markets.</p> <p>The FMA Act includes specific provisions that allow second boards to be established and operate effectively and efficiently, including lower listing and ongoing compliance costs for entities that list on second boards aimed at companies with lower amounts of capital.</p>	
<p>Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However, these also allow poor managers the opportunity to</p>	<p>The insolvency provisions in the Companies Act incorporate fresh start principles. Creditors of the company must be paid to the extent possible but the remainder of the debt is forgiven. This provides the opportunity for entrepreneurs to</p>	

<p>repeatedly start businesses that fail with losses to shareholders and creditors. <i>How is the balance struck between enabling risk taking and protecting shareholders and creditors?</i></p>	<p>learn from their mistakes and establish new companies.</p> <p>There are protections against the misuse of limited liability. These include powers for the courts to prohibit individuals from managing companies or disqualify them from being directors of a company.</p> <p>There are also protections against phoenix companies including imposing personal liability on directors in certain circumstances.</p>	
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Table E - Public sector governance

Public sector governance mechanisms	Current position	Any other comments
<p>The rule of law implies that every citizen is subject to the law, including law makers themselves. Limits to the rule of law occur because of neglect or ignorance of the law, corruption, or the lack of corrective mechanisms for administrative abuse, such as an independent judiciary. <i>Does your system actively protect and enforce the property rights of different stakeholders? If so what sort of legal mechanisms are available and used?</i></p>	<p>New Zealand is consistently ranked highly for both quality of government and rule of law. The rankings for the latest (2012) World Bank Governance Indicators were: control of corruption (2nd out of 215 countries), rule of law (4/215), voice and accountability (5/215 countries), political stability (7/215). The World Justice project ranks New Zealand between 4th and 10th (out of 120 countries) on open government measures and between second and 13th on different measures of limits to government.</p> <p>While New Zealand has no formal written constitution to protect property and other rights, there is strong protection for the rule of law generally and property rights in particular. New Zealand’s constitutional arrangements are founded on the operation of certain fundamental principles including the rule of law. The key legal mechanisms for the rule of law include that everyone is subject to the law including the government, power should be dispersed rather than concentrated, clear rules which are clearly enforceable, an independent judiciary and an effective justice system. All of these mechanisms are features of the New Zealand system.</p> <p>In New Zealand property rights are protected by a mix of statute and common law. The practical effect of the rule of law in New Zealand is to foster order and predictability. People can rely on effective property and contract laws that will be enforced by an independent judiciary. Effective and timely dispute resolution mechanisms give people an orderly way of protecting and enforcing their interests. The very existence of these mechanisms can reinforce incentives for people to meet their obligations and respect property and other rights. Limits on, and scrutiny of, government powers also ensure</p>	<p>All systems have pressure points and scope for continuous system improvements. In New Zealand’s case these include:</p> <p>The concern of the Regulations Review Committee about disallowable instruments that are not legislative instruments as these are not published on a central register</p> <p>Fixed funding levels putting pressure on system capability such as the Ombudsmen’s Office.</p> <p>The cost of public access to the courts</p>

Public sector governance mechanisms	Current position	Any other comments
	<p>that property rights are well protected. Power is dispersed with the separation of powers between the executive, the legislature and the judiciary and there are a number of agencies that have statutory independence to scrutinise the Executive's use of power (such as the Ombudsman).</p> <p>The legal mechanisms available to protect property rights in land include:</p> <ul style="list-style-type: none"> • "Strong protection.....partly deriving from the common law but more particularly by means of the "Torrens System • Cheap and efficient conveyancing and highly effective guarantee of private titles; • A strong and well developed system for public works takings.... • A strong system of zoning laws..." <p>(P129 Boast and Quigley <i>Regulatory reform and property rights in New Zealand</i> Frankel ed Lexus Nexus 2011).</p> <p>(The Torrens system is the system of title registration for land whereby the Government effectively guarantees titles underpinning indefeasibility of title.)</p>	<p>system is an ongoing subject of public debate, recently brought into focus with reforms to Legal Aid.</p>
<p>State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. <i>In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are there SOEs explicitly tasked with encouraging private sector innovation?</i></p>	<p>Government-owned businesses produced 6.6% of market GDP in in 2012, of which 4.5% was central government and 2.1% was local government. This share has trended down over time from 12% in 1972 and that trend decline continued with the partial privatisation of electricity companies and Air New Zealand in 2013 and 2014.</p> <p>The SOE model attempts to avoid sheltering public enterprises by putting businesses on a level playing field so that they can operate as successful businesses in competitive product markets. SOEs operate at arms-length with no particular advantages or handicaps from public ownership. Similar disciplines apply to Local Authority Trading Enterprises.</p> <p>Central government's commercial ownership interest is now consists of 12 smaller SOE companies that operate in competitive markets, Air NZ and some regional airports (partly owned) and 3 majority owned companies, the 100% owned electricity transmission company which operate in the regulated electricity market and around a dozen other companies under the Public Finance Act and the Crown Entities Act. Local Governments ownership interests are dominated by shareholdings in Ports and Airports companies.</p>	<p>The historical role for central and local government as owner of commercial businesses has declined over time and those that remain generally face product market competition. With the recent partial privatisation of the Electricity companies there is no SNA market production group where the state has a major</p>

Public sector governance mechanisms	Current position	Any other comments
	<p>There are a number of government-owned businesses operating in the science sector. The 100% government owned Crown Research Institutes are funded to provide public good research. The 100% government owned New Zealand Venture Investment Fund invests with venture capital funds and alongside angel investors to support New Zealand technology companies.</p>	<p>ownership interest.</p> <p>Both central and local government do however continue to use the company form to achieve public policy goals such as the creation of Crown Fibre Holdings to facilitate the roll out of a national ultra-fast broadband infrastructure.</p>
<p>A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. <i>Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure?</i></p>	<p>The science sector is organised in three parts:</p> <ul style="list-style-type: none"> i a lead Ministry, the Ministry of Business, Innovation and Employment, which is the lead agency on innovation policy and is the funder of research outputs from science providers ii a range of science providers both government-owned businesses (CRIs), public universities and private research institutes. iii the innovation infrastructure which includes standard setters (such as the Standards Council and other regulators which set standards), the patent office (the Intellectual Property Office of NZ) and stewards of geophysical information (Land Information NZ which oversees the Torrens Land registration system as well as bathometric and geodetic data standards). 	<p>As a small but advanced jurisdiction, New Zealand has struggled to sustain the specialised capabilities required and increasingly is looking to partner with Australia to sustain capable world class information infrastructures to support business and innovation.</p>
<p>Strategies need to respond to country context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to underpin a national innovation system. For others the priority</p>	<p>The current areas of focus are to raise the performance of the science system, increase Government investment in science and innovation from 0.56 per cent of GDP to 0.8 per cent, increase expenditure on R&D in the business sector to 1 per cent of GDP by 2018, lift New Zealanders' engagement with science, and have better alignment between different parts of the system. As a small advanced economy with an industrial focus on</p>	<p>New Zealand's science and innovation system is small. Despite significant growth in</p>

Public sector governance mechanisms	Current position	Any other comments
<p>is to refine how the system is operating and focus on removing bottlenecks. <i>What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</i></p>	<p>the primary sector, New Zealand faces unique challenges in meeting these objectives. Attracting activity from larger firms in support of New Zealand's R&D business expenditure, supporting strong growth in the ICT sector, and encouraging innovation in the primary sector through initiatives such as the Primary Growth Partnership, are important areas of focus. The Government is also investigating the establishment of up to three regional science institutes around New Zealand and continuing the Science in Society initiative.</p>	<p>recent years, New Zealand's investment in both public science and business innovation still lags behind international comparators.</p> <p>Future directions for innovation policy include accelerating the performance of science and innovation in New Zealand, strengthening New Zealand's connections through building a more connected and collaborative science system, and providing strong leadership to guide these changes and communicate a clear future direction for New Zealand's science and innovation system.</p>

Appendix A Questionnaire on structural policies and innovation¹

Table A – Economy context (Optional)

Economy Context Questions	Current position	Any other comments
<p>Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i></p>	<p>The Government remains committed to developing an environment that is conducive to private sector development, including through encouraging innovation, and supporting competitive markets. As part of this commitment, the Government has commenced two reviews fundamental to these objectives, the Competition review and the Financial Sector Services Review respectively. These reviews combined with the significant transparency and governance reforms currently being implemented will arm the Government with a program for reform that will improve the environment for PNG businesses both private and public into the future.</p> <p>In addition, the recently passed PPP legislation will encourage a competitive bidding process that will encourage private sector participation to deliver more effective public infrastructure development essential for boosting economic activity and alleviating poverty</p> <p>Furthermore, the Government announced last year that in 2014 and over the next 5 years (2015-2020), its micro reform agenda will;</p> <ol style="list-style-type: none"> 1. Encourage SOEs to be efficient and increase the nature and level of competition in the markets in which they operate, with a particular focus on the telecommunication, electricity and transport sectors; 2. Ensure that a strong regulator enforces the competition and consumer protection law so that markets operate competitively, and ethical traders, small businesses and consumers are not treated unfairly; misled or deceived. 3. Build the productivity of sectors particularly important to the rural and remote area of PNG such as tourism and agriculture; 	

4. Reduce the cost of doing business and remove regulatory impediments to private sector growth and facilitate the development of the small and medium enterprise sector; and
5. Encourage the operation of the informal economy and the transition of informal economy participants to the formal economy.

Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</i></p>	<p>PNG recognises that there is a balance to be struck between predictable and certain regulatory practices and the need for flexibility.</p> <p>Flexible arrangements are becoming more important to PNG as we grapple with how to bring more economic participants into the formal economy. Currently 85 per cent of the population is estimated to be primary engaged in informal economic activities.</p> <p>A range of simplified regulatory tax arrangements are currently being explored by the PNG Tax Review Committee, In order to reduce compliance costs and increase participation. Similarly the Financial sector is looking at alternative methods for establishing identification where there is poor data and documentation available from more traditional sources.</p>	
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification programme in place and if so how comprehensive is it? Also, is any administrative simplification programme linked to programmes to reduce corruption?</i></p>	<p>Papua New Guinea is increasingly moving a number of administrative processes ‘on-line’ Giving rise to a number of benefits including; reduced processing times, access to information, more comprehensive data sets.</p> <p>Some examples include online company registration, The establishment of on online personal properties securities register and while not at the direct interface level, some tax and immigration processes are becoming automated.</p> <p>The online Mining Cadastre Portal administered by the Minerals Resource Authority enables mining licence information to be searched for online leading to administrative cost savings for both Government and Business. These processes will be instrumental in supporting and meeting the requirements of the Extractive Industries Transparency Initiative (EITI), a key transparency and anti-corruption initiative.</p>	

<p>Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. <i>Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any adverse impact on competition and hence innovation?</i></p>	<p>PNG is yet to formulate an official Regulatory Assessment framework to track the impacts of regulation. Any potential effects of regulation will become explicit if there are regulatory tools such as the Regulatory Impact Assessment or the Regulatory Impact Evaluation that will aid the country in its decision making. In relation to good regulatory practices PNG currently relies on consultation processes. Similar to the experience of many jurisdictions larger business are often better able to devote resources to participating in consultation, and are therefore more likely to alert Government to proposed regulations that may put them at a competitive disadvantage.</p> <p>New or young firms can often find it relatively more difficult to coordinate or find the necessary resources to be active participant in regulatory design processes. This is an issue PNG grapples with. One initiative that assists smaller businesses or groups participate is the Consultative Implementation and Monitoring Council (CIMC). CIMC is an independent organisation that brings together all civil society, the private sector and government partners to develop policy and directly influence and monitor government decision making.</p>	
<p>Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. <i>How easily can skilled people move between firms?</i></p>	<p>All non-citizens who seek employment in the private sector in Papua New Guinea (PNG) must possess a valid work permit, issued by the Department of Labour and Industrial Relations (DLIR). DLIR maintains a database of work permits issued per year and of active work permits. There is a clear and transparent process for obtaining work visas and permits.</p> <p>Generally, for non-citizens, a specific position needs to be offered to an individual before the relevant Visa and work permit can be obtained.</p> <p>Domestic labour mobility is not subject to regulatory barriers, however other factors such as geographic terrain, transport infrastructure limitations, language diversification and access to residential accommodation (due to high levels of customary land ownership) can complicate decisions to move between employment opportunities. For skilled people, however, these challenges are usually not insurmountable.</p>	

Table C - Competition policy

Competition policy mechanisms	Current position	Any other comments
<p>Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other. <i>How does competition policy deal with protection of consumers? Does competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and dynamic efficiency?</i></p>	<p>In 2002, the competition policy of Papua New Guinea was introduced. PNG's competition and consumer protection law is called the <i>Independent Consumer and Competition Commission Act, 2002 (ICCC Act)</i>. The introduction of the competition law has contributed significantly to the welfare of Papua New Guineans. The telecommunications industry is one example of a sector where an increase in competition has resulted in price reductions, wide spread increases in access and significantly improved the environment for business as well as for individuals needing basic health services in the rural areas. The introduction of similar reforms also resulted in increase in productivity and price changes that enabled the general public or users of services with greater access to the services needed.</p> <p>The fact that the PNG economy has grown and changed since the introduction of competition law makes it timely to assess whether the competition and consumer protection environment will continue to address the current and emerging developments in PNG's growing economy.</p> <p>Competition policy and other similar microeconomic reforms contribute to long term market competitiveness, increase productivity, support real wage growth, promote investment and improve living standards for Papua New Guineans.</p> <p>On that note, the Government in its 2014 Budget announced looking at an aggressive microeconomic reform agenda that will enable private sector led growth in the economy; competition was given particular emphasis as an area of policy reform that would strengthen this agenda. The Government announced its intention to review the competition framework to ensure broadened public benefit through enhanced competition while at the same time ensuring consumer protection against hazardous and unsafe products or practices. The findings of the review will aim to foster economic prosperity, stimulate efficient and innovative business activities including small to medium enterprises and promote PNG as an attractive destination for investment.</p>	
<p>Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law</p>	<p>The Independent Consumer and Competition Commission (ICCC) who is the custodian of the <i>ICCC Act</i> is a relatively 'young' institution, having been established in 2002. Resources are heavily focussed on core functions. However, The ICCC does have legislative authority to consider efficiency. The ICCC does have an obligation to consider costs and benefits under section 46 of the <i>ICCC Act</i> (PNG's competition act).</p>	

Competition policy mechanisms	Current position	Any other comments
<p>approaches (deemed unlawful per se) and subject cases to fact based rule of reason analysis. <i>Does the competition authority(s) have the legal authority to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i></p>	<p>Section 46 basically sets out that the Commission is required to consider efficiency when assessing whether certain conduct is, or is likely to result in a benefit to the public, for the purposes of an Authorization application.</p> <p>Under the ICC Act, an Authorisation can be given for certain anti-competitive conduct if likely public benefits resulting of that conduct outweigh potential public detriments, including lessening of competition.</p> <p>The ICC assesses technical and dynamic efficiencies in the Regulatory Contracts for regulated entities and services.</p>	
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or sub-national government?</i></p>	<p>Papua New Guinea’s competition policy is comprehensive and broad based. It extends to all sectors and industries of the in PNG, unless specifically exempt.</p> <p>There are some exemptions under the ICC Act. Broadly, the exclusions relate to joint pricing, carriage of goods by Sea and Intellectual Property rights. These activities are subject to alternative legislation.</p> <p>The ICC Act binds the State in so far as the State ‘engages in trade’. There are provisions giving exclusions for the State but where it engages in trade the State falls within the scope and scrutiny of the ICC Act.</p>	
<p>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. <i>Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective decision involving other Ministries? How is any independence established and safeguarded?</i></p>	<p>Yes, section 23 of the ICC Act sets out that the ICC is <u>not</u> subject to the direction or control of the Minister or any other person in the performance of its functions. So the ICC is <u>independent</u> and free from Ministerial direction. It must comply with the Public Finances Administration Act but is not required to engage with Ministers on case selection and decision making.</p> <p>The Act (section 27) does allow for collaboration with other regulatory bodies (domestic or foreign) in order to undertake joint prosecutions. The ICC does have Memorandum of Understanding’s (MOU’s) with other regulatory bodies, like Customs and NICTA (PNG’s Communications and Information Technology Regulator)</p>	

Competition policy mechanisms	Current position	Any other comments
<p>There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. <i>Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets with potential for innovation?</i></p>	<p>The ICCC Act does not require the Commission to strategically focus on the least competitive markets. Currently, there is no real focus by the ICCC to proactively and strategically attend to markets with the least competition. The focus of ICCC has been on competition in key sectors like electricity, shipping and others which are inputs to cost of doing business. It is worth noting that most of our major industries/ markets are highly concentrated with only a few major firms. And so these industries are not highly competitive in the first instance. We need to introduce competition into these industries to bring the concentration level down.</p> <p>One way is to change pre-merger notification from voluntary to compulsory so few players, especially the smaller firms, are not easily bought off by big firms.</p> <p>However, the ICCC did recently initiate a competition assessment project for the PNG economy which seeks to identify industries within PNG which have rules and regulations which hamper effective competition within these industries. The ICCC seeks to identify these industries in its assessment and lobby regulators and legislators to remove these impediments to competition. So in some way, we are slowly trying to strategically identify markets with hindrances to competition and thus less competition (then what could potentially be possible) and attend to them with the objective to reduce these barriers and open them to potential new entrants and eventually introduce competition.</p>	
<p>There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i></p>	<p>As mentioned above the ICCC has initiated a competition assessment which seeks to identify government rules and regulations that hinder competition within industries and are a barrier to trade and investment. As some State Departments cannot be scrutinised under the ICCC Act we seek to simply lobby them by making them aware of the effects, these rules/regulations are having in terms of growth of the respective industries and the impact on the economy as a whole.</p> <p>In terms of the 'practices' of the ICCC and how openness to trade and investment is factored in, the Market Conduct Rules, set out in the ICCC indirectly encourages open trade and investment within the economy without expressly mentioning it. The Market Conduct Rules has sections which prohibit contracts, arrangements or understandings that <i>substantially lessen competition</i> within a market. Contracts/arrangements which are anti-competitive and restrict trade and investment within a market, are prohibited. There</p>	

Competition policy mechanisms	Current position	Any other comments
	<p>are also provisions which prohibit firms with market power from ‘abusing their market power’, as well as prohibitions on ‘price fixing’ and ‘retail price maintenance’. The Market Conduct Rules allow the ICCC to create a level playing field where access to relevant markets are opened and barriers to entry are reduced, thus facilitating trade and investment flows.</p> <p>The use of concepts like ‘market’ and ‘competition’ in the ICCC Act acknowledges the importance of imported goods and services. Subsection 33(8) extracted below make this point explicitly.</p> <p>(8) In this section, “market” means a market in the whole or any part of Papua New Guinea for goods or services as well as other goods or services that, as a matter of fact and commercial common sense, are substitutable for them, including imports.</p> <p>When this section is read with the objectives of the Commission specifically those that relate to facilitating effective competition and promote competitive market conduct; preventing the misuse of market power; and promoting and encouraging fair trading practices and a fair market, the Act clearly supports openness to trade.</p>	

Table D - Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy’s corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i></p>	<p>The Companies Act requires directors to act in good faith and in best interests of the company, exercise care, diligence, and skill and not to act in a manner that contravenes the Act or the company’s constitution</p>	
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital funds and direct capital raising</p>	<p>Papua New Guinea has a listed equities market - the Port Moresby Stock Exchange The Securities Commission of Papua New Guinea (SCPNG) regulates the capital markets in Papua New Guinea.</p>	<p>Access to finance has not always been readily available for</p>

<p>from the public. <i>Do your economy's financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</i></p>	<p>The Papua New Guinea banking system is made up of the Bank of Papua New Guinea, the National Development Bank, four commercial banks and several licensed financial institutions and credit unions (or savings and loan societies).</p>	<p>people in PNG, particularly for the SME sector. To address this issue the PNG Government remains committed to promoting its Financial Inclusion and Financial Literacy Strategy and facilitating access to finance through: promoting microfinance; facilitating secured lending through the Personal Properties Security Register (PPSR) and establishing the Centre for Excellence in Financial Inclusion (CEFI).</p>
<p>The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. <i>Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing??</i></p>	<p>The PNG Securities Act requires any offer of securities or debt instruments to the public to be made by way of a registered prospectus.</p>	<p>The Government has announced that it will introduce legislation aimed at reforming PNG's securities legislation to spur greater competition and capital market growth. In announcing the reforms the Prime Minister said the government would encourage</p>

		companies to introduce new products to the market (including investment funds, unit trust funds, debentures and other capital market or financial products) and would like to private equity funds established to provide capital for major transformational projects in key national sectors such as agriculture.
Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However, these also allow poor managers the opportunity to repeatedly start businesses that fail with losses to shareholders and creditors. <i>How is the balance struck between enabling risk taking and protecting shareholders and creditors?</i>	The PNG Companies Act while providing for limited liability allows for any debts incurred while a company is insolent to be recovered from the directors of the company.	

Table E - Public sector governance

Public sector governance mechanisms	Current position	Any other comments
The rule of law implies that every citizen is subject to the law, including law makers themselves. Limits to the rule of law occur because of neglect or ignorance of the law, corruption, or the lack of corrective mechanisms for administrative abuse, such as	Papua New Guinea's legal system is a mixture of the English system and customary law. Its formal judicial system is similar to that of many common law countries and is supplemented by a village court system.	

Public sector governance mechanisms	Current position	Any other comments
<p>an independent judiciary. <i>Does your system actively protect and enforce the property rights of different stakeholders? If so what sort of legal mechanisms are available and used?</i></p>	<p>Papua New Guinea's constitution adopts the separation of powers doctrine and the Judiciary is independent.</p> <p>Having celebrated 40 years of independence earlier this year, Papua New Guinea's legal institutions are still developing and enforcing contracts, property rights and other aspects of the law continues to be a significant challenge for Papua New Guinea's business environment.</p> <p>The World Bank Group's Ease of Doing Business ranks PNG at 181 in relation to the enforcing contracts criteria. This ranking demonstrates there is significant potential to improve the business environment if further improvements can be made in this area.</p>	
<p>State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. <i>In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are there SOEs explicitly tasked with encouraging private sector innovation?</i></p>	<p>Public enterprises play a significant role in the economy of PNG. They have a major role in providing power, telecommunications, transport and other services that are essential for a growing economy. Good public policy will help ensure that public enterprises are run in a way that helps ensure that these critical services are available broadly within PNG, are reliable, and are provided as efficiently as possible.</p> <p>Since 2013, the Government announced that it would take a new approach to increase the level of transparency and accountability of public enterprises with the objective to improve SOE performance. This culminated in the inclusion of a section in the Budget to provide an update of public enterprise performance and reforms, and outline plans for further reforms.</p> <p>The Government is seeking public enterprises to instill commercial disciplines in their business operations. This means all public enterprises are now required to pursue an objective to operate as professionally managed commercial entities. These reforms aimed at increasing commercial behavior requires that public enterprises are, as far as possible, free from adhoc Government intervention.</p> <p>The Government will reflect this desire through the finalization and further implementation of a range of reforms. These include the Dividend and Guarantee Policies and the implementation of the On Lending and Community Service Obligation (CSO) Policies in 2015.</p>	

Public sector governance mechanisms	Current position	Any other comments
	<ul style="list-style-type: none"> • A Community Service Obligations (CSO) Policy will help improve the delivery and affordability and transparency of community services provided by the public enterprises on commercial terms. • A Dividend Policy for public enterprises will help to clarify the role of the State as a shareholder and seek a reasonable rate of return on its investments which contributes to its overall fiscal strategy. • An On-Lending Policy will provide lending by the State to State entities (via subsidiary loans) for projects that they undertake on commercial terms. • A Guarantee Policy will ensure the State’s comparatively stronger balance sheet is not inappropriately used to guarantee the borrowings of public enterprises providing a comparative advantage over potential private sector competitors. <p>These policies seek to reduce the degree to which SOE’s are shielded from competition. There are at least some examples of where SOE’s have sought to encourage private sector participation through the use of PPP arrangements</p>	
<p>A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. <i>Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure?</i></p>	<p>No, see comments below.</p>	

Public sector governance mechanisms	Current position	Any other comments
<p>Strategies need to respond to country context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks. <i>What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</i></p>	<p>Papua New Guinea does not have a specific innovation policy. Given the level of development in Papua New Guinea it is felt that the supporting our development priorities like Health, Education, law and order and infrastructure are likely to have the biggest impact on supporting innovation within the economy.</p> <p>PNG is currently undertaking reviews designed to expand our Financial services sector and Competition policy framework which will also assist innovation. Major initiatives to increase access to finance are likely to spur innovation in the MSME sector.</p> <p>Papua New Guinea has in the past offered R&D tax concessions but like many jurisdictions had serious concerns regarding effectiveness and scope for abuse so these were removed in early 2014. PNG has continued to support innovation through direct expenditure in research bodies, such as the National Research Institute, the National Agricultural Research Institute and the Institute of Medical Research. PNG is also investing heavily in the Tertiary Education Sector and TVET.</p>	

Appendix A Questionnaire on structural policies and innovation

Table A– Economy context (Optional)

Economy Context Questions	Current position	Any other comments
<p>Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i></p>	<p>The Philippines’ socioeconomic and institutional profiles greatly influence our overall economic strategy as well as structural and innovation policies. As a lower-middle income economy with a medium level of human development and still relatively high poverty and inequality in the distribution of wealth and income, the overarching goal is to achieve more inclusive growth. A key priority is to sustain and hasten the structural transformation of the economy from being largely consumption-driven and dominated by services, to a more investment-driven and industrializing economy. Consequently, this initiative is focused on sectors with high economic growth opportunities and are labor-intensive such as manufacturing, agribusiness and services. In particular, efforts are intended on boosting productivity and competitiveness through open trade regime, sound tax policies and administration, efficient and effective bureaucracy, improved regulatory environment, human capital investments, research and development, among others. On innovation, catch-up technological adoption would generally be more feasible rather than frontier or cutting-edge innovation given the country’s level of development.</p> <p>As a result, the country’s stellar performance in achieving economic growth and implementing institutional reforms were matched, though not in the same rate, with improvements in structural and innovation policies. This is evident in the improved Philippine rankings on Macroeconomic Environment (from 40th to 26th out of 144 countries from), Institutions (from 79th to 67th) and Innovation (from 69th to 52nd) pillars of the 2014-2015 Global Competitiveness Index.</p>	

¹ NZIER report (March 2015) to APEC 2015 Economic Report (AEPR) - The role of structural policies in innovation

Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</i></p>	<p>There are recent moves that show a shift to outcome/performance based regulation as evidenced in regulatory reforms in banking and utilities sectors. The highly prescriptive regulatory environment of sectors such as higher education, construction and mining puts the country behind its neighboring, and the stringent processes and requirements to start a business put the country behind its neighbour in the Doing Business 2015 ranking. The Philippines is ranked 95th compared to other Southeast Asian countries like Vietnam (78th), Thailand (26th), and Malaysia (18th).</p> <p>While a regulatory environment that does not only prohibit price controls and other monopolistic acts but also fosters innovation is still a fighting target for the Philippines, initiatives to reform regulatory institutions and rationalize processes already kicked off in the past few years. The introduction of Regulatory Impact Assessment (RIA) in pilot agencies and the planned bureaucracy-wide rollout are deemed supportive of said target.</p>	
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification programme in place and if so how comprehensive is it? Also, is any administrative simplification programme linked to programmes to reduce corruption?</i></p>	<p>Administrative simplification programs are carried out to make public institutions deliver services more efficiently and effectively. The Anti-Red Tape Act (ARTA) of 2007 requires government offices and agencies including local government units (LGUs) and government-owned or -controlled corporations (GOCCs) to simplify procedures, formulate service standards and properly inform the public of its services and standards through their respective Citizen’s Charters. The ARTA aims to promote integrity, accountability and establish effective practices aimed at prevention of corruption in government.</p> <p>Reforms that improve the business environment, facilitate transactions and reduce the cost of doing business are also in place. These include, among others, the streamlining of the Business Permit and Licensing System (BPLS) of local government units, which reduced the number of days to process business permits and licenses to</p>	

	<p>five (5) days or less for renewals and at most 10 days for new applications. As of November 2014, over 75 percent of all LGUs nationwide have eased business permit and licensing system.</p> <p>The enhanced Business Name Registration (eBNR)² System cut the processing time for business name registration from four (4) to eight (8) hours to 15 minutes for sole proprietorships.</p> <p>The Philippine Business Registry (PBR) reduced the registration time to 30 minutes and provided an alternative web-based method for sole proprietorships on several business-related transactions such as registration of business name, application for tax identification number and employer registration numbers (Social Security System, Philippine Health Insurance Corp and Home Development Mutual Fund). Likewise, improved procedures and simplified documents slashed the number of days to process applications of micro and small enterprises for registration with the Board of Investments from 20 days to one (1) day. The eBNRS and the PBR have also shifted to the cloud-computing environment to improve service delivery.</p> <p>The government also utilized government financial institutions (GFIs) to tap online facilities for payroll-related payments, reducing the number of payments from 36 to 13 per year representing time and cost savings for entrepreneurs.</p> <p>Reforms related to the indicators under the Ease of Doing Business (EoDB) report are implemented and monitored by the National Competitiveness Council (NCC) comprised of government agencies and instrumentalities, GOCCs and private sector champions. The Gameplan for Competitiveness developed by the NCC in 2012 aims at improving the ranking of the Philippines in all ten (10) indicators under EoDB report.</p> <p>The government has also instituted reforms that allow for more transparency in government operations and in the use of public funds. Government agencies were</p>	
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²Launched by the Department of Trade and Industry in partnership with the Development Bank of the Philippines, Globe Xchange Inc. and Bancnet.

	mandated to feature appropriated budget, public offerings, and project implementations status, for public access and scrutiny in their respective websites. The Department of Budget and Management (DBM) has likewise built online infrastructure that provides citizens the opportunity to monitor the disbursement of public funds ³ .	
Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. <i>Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any adverse impact on competition and hence innovation?</i>	Most major regulations go through dialogues and public consultations with stakeholders before approval, thus, allowing them to argue on the potential effects. Furthermore, the introduction of RIA is expected to strengthen the existing consultative process as well as foster a more informed regulatory-making process hinged on improving competition and innovation in the market. RIA pilot agencies, the Department of Tourism (DOT) and the Department of Labor and Employment (DOLE), are already exercising this regulatory practice while the National Economic and Development Authority (NEDA) is building its capacities to spearhead a bureaucracy-wide rollout.	
Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. <i>How easily can skilled people move between firms?</i>	The DOLE is pushing for a new law on the hiring of foreign workers in the country. It pushes to amend existing rules in preparation for the establishment of the Association of Southeast Asian Nations (ASEAN) economic community in 2015, which is expected to pave the way for free movement of professionals and other workers in 10 ASEAN countries, including the Philippines.	

Table C- Competition policy

Competition policy mechanisms	Current position	Any other comments
Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the	Competition policy in the Philippines allows longer term technical and dynamic efficiency. Monopolies which tend to employ inefficient practices due to lack of competitive pressure are regulated. Likewise, integration which leads to efficiency gains is allowed under certain circumstances.	

³Governance and Anti-Corruption, National Gazette- www.gov.ph/aquino-adminsitration/good-governance- and anti-corruption/)

Competition policy mechanisms	Current position	Any other comments
<p>other. <i>How does competition policy deal with protection of consumers? Does competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and dynamic efficiency?</i></p>	<p>Apart from guaranteeing efficient working of markets, the country's competition policy also encourages innovation that results in wider range of choices in products and services at competitive prices. Although the primary objective of competition policy is the promotion and protection of competitive process, it rightly complements policies that promote and protect the interest of consumers by allowing them to exercise their right of choice over best value goods and services. Republic Act 7394 otherwise known as the Consumer Protection Act of the Philippines protects the right of the consumer against deceptive and unfair business practices.</p>	
<p>Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to factbased rule of reason analysis. <i>Does the competition authority(s) have the legal authority to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i></p>	<p>The Office for Competition (OFC) housed at the Department of Justice (DOJ) was created through an executive order issued in 2011. The OFC, mandated to serve as the country's competition authority, refers to existing laws, decrees, and other issuances relating to competition as well as regional and international business practices in investigating cases involving monopolization, cartels and combinations in restraint of trade.</p> <p>Furthermore, the Philippine Competition Act, up for signing by the President, requires the Philippine Competition Commission to decide on cases based on gains in technical and dynamic efficiency. Thus, the implementation of this law necessitates building the capabilities of personnel that would comprise the Commission.</p>	
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses</i></p>	<p>A comprehensive competition law for the Philippines has just been enacted in the Philippine Legislature and as of this writing, the law is yet to be ratified by the President. Nevertheless, the Philippines has a wide range of laws and statutes which deal with different aspects of competition law such as monopolies and combinations in restraint of trade, restrictive business practices, price control measures and consumer protection. A survey of antitrust laws and regulations in the Philippines⁴ indicates that the Philippine</p>	

⁴Abad, Anthony R.A. "Recommendations for a Philippine Antitrust Policy" In *Toward a National Competition Policy for the Philippines*, edited by Dr. Erlinda M. Medalla, 339-402. Philippines: Philippine APEC Study Center Network and Philippine Institute for Development Studies, 2002

Competition policy mechanisms	Current position	Any other comments
<i>owned by national or sub-national government?</i>	Constitution; Act 3815 or the Revised Penal Code; Republic Act (RA) 386 or the Civil Code of the Philippines; RA 8293 or the Intellectual Property Code of the Philippines ; Batas Pambansa Blg. 68 or The Philippine Corporation Code; RA 7581 (The Price Act) and RA 7394 (The Consumer Act), among others, are existing laws and regulations that are deemed as the existing antitrust and/or competition policy framework of the Philippines. These laws extend to all goods and services markets, and even to state-owned enterprises.	
<i>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective decision involving other Ministries? How is any independence established and safeguarded?</i>	<p>As stipulated in Executive Order 45 Series of 2011, DOJ-OFC enjoys operational independence in the exercise of its functions as the country's competition authority. It can investigate on any cases involving violations of competition laws and prosecute violators to prevent, restrain and punish monopolization, cartels and combinations in restraint of trade. However, the OFC is still under the DOJ and Secretary of Justice designates the chief/head and members of the said office. Likewise, funds of the OFC are incorporated in the department's annual appropriation.</p> <p>Under the Philippine Competition Act recently approved by the Congress, an independent Philippine Competition Commission will be established. The Commission shall have statutory independence and has exclusive and original jurisdiction on all cases relating to abuse of dominant position and anti-competitive agreements, including review of mergers and acquisition.</p>	
<i>There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets with potential for innovation?</i>	Department Circular No. 005 of the DOJ provides for the guidelines in the enforcement of competition laws. These laws also ensure that focus is given to least competitive markets for firms to be able to compete and at the same time innovate or adopt new technologies. This will be further strengthened under the Philippine Competition Act.	

Competition policy mechanisms	Current position	Any other comments
<p>There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i></p>	<p>Existing competition policies support an open trade and investment environment by minimizing or eradicating barriers to entry and providing checks and balances to avoid market abuses. While the Philippines has just enacted a comprehensive law that will integrate all existing competition policies, the country is already undertaking trade and investment liberalization, privatization, and deregulation reforms to encourage competition, increase efficiency, boost competitiveness, and foster sustained economic growth.</p> <p>Trade reforms have been implemented since the 1980s to reduce tariffs and remove quantitative restrictions. Investment liberalization has allowed entry of foreign banks and foreign retailers into the country. Reforms have been put in place in specific sectors such as telecommunication, oil, shipping and airline industries, among others, in line with the goal to improve the competitiveness of the economy, and promote competition in the market.</p>	

Table D- Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i></p>	<p>Article 3 of the Revised Code of Corporate Governance of the Philippines provides for the duties and responsibilities of the Board of Directors. Among these is to sustain the competitiveness and profitability of the corporation in a manner consistent with its corporate objectives and the best interests of its stockholders.</p>	
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital funds and direct capital raising from the public. <i>Do your economy's financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</i></p>	<p>Over the years, the Philippines has made great strides in improving the efficiency and soundness of financial institutions as well as developing money and capital markets that facilitated capital raising to finance, in part, the development of innovations.</p> <p>Corporate entities have increasingly tapped the country's fixed income market as an alternative to commercial bank financing. When the 2008 global financial crisis brought the international corporate bond market to a halt, the domestic corporate bond market provided financing to a few of the larger companies, albeit in a limited way. In 2014, local currency bond issuances of both financial and non-financial firms amounted to P295.0 billion, from P130.2 billion in 2008.</p> <p>Capital raised through the equities market likewise rose remarkably. Listed firms sourced capital via initial public offerings, private placement and stock-rights offerings. From P31.6 billion in 2008, capital raised from the equities market climbed to P153.1 billion in 2014.</p>	

Large corporations and big businesses were able to source their financing requirements from the fixed income and equities market given their improved credit-worthiness and years of solid corporate earnings. Available financing to start-up corporations or small businesses that are usually provided by venture capitalists appeared to be limited.⁵

The government is actively collaborating with the private sector in sustaining growth in the domestic money market and in the development of the Philippine capital market, in general. In the past decade, the reforms initiated by Bangko Sentral ng Pilipinas (BSP) focused on:

- developing the necessary market infrastructure such as the Real Time Gross Settlement (RTGS) and the Third-Party Custodian in 2001;
- improving bond issuing process and pricing mechanisms through recognition of domestic rating agencies; and
- promoting demand for local currency bonds, among others.

More recently, the BSP carried out initiatives aimed at promoting fair market access, enhancing transparency, disclosures and good governance, and fostering investor confidence. These include, among others, the following:

- amendment on market valuation of government securities;
- overseeing of the setup of the overnight index swap (OIS) as a short-term benchmark yield curve;
- review of the single price proposal as a pricing convention;
- initiation of the framework to adopt tri-market repo market structure;
- drafting of the policy proposal to segregate securities activities from regular banking functions (brokering, dealership and

⁵Venture capitalists are firms extending out funds to start-up businesses in exchange of a share in the company. Thus, they are usually called equity financiers financing businesses that are risky but have the potential for high return. The amounts involved in venture financing are high. As such, proposals submitted to venture capital firms are subjected to detailed due diligence before getting approved or denied for venture financing.

	<p>underwriting);</p> <ul style="list-style-type: none"> - drafting of Governance Framework on Financial Benchmarks; - initiation of the policy study on stripping of bonds and market maker incentives; and - conduct of the study on the applicability to Philippine banks of the Volcker, Vicker, Liikanen proposed structural measures. 	
<p>The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. <i>Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing?</i></p>	<p>In the Philippines, the initial public offerings (IPO) tax of 1 percent to 4 percent of gross proceeds on shares of stock sold, bartered or exchanged or otherwise disposed in the local stock exchange adds to friction costs and becomes a disincentive for companies on expansion mode.</p> <p>To address this and other barriers to increasing private capital, the Philippines is working towards an enabling environment that will not only deliver strong macroeconomic and macro-prudential supervision to attract steady and long-term capital flows, but will also broaden investor's base and reduce the friction costs associated with trading which includes trading fee, clearing fee, broker's commission and stock transaction tax. Further, synergy of equities and fixed income exchanges are also pursued to achieve a significant cost savings in maintaining exchanges and pricing assets.</p> <p>The Philippines is also strengthening its financial regulatory framework. Planned reforms include forging linkages of the trading, clearing and settlement that will guarantee positive net investment flows; coordination of requirements for the sale or offering for sale of securities; and the streamlining of procedures for availing of tax relief under bilateral tax treaties; among others. Also, the Philippine participation in the ASEAN integration, particularly in the creation and marketing of an ASEAN asset class, will intensify its financial linkages with the rest of the ASEAN countries.</p>	
<p>Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However, these also allow poor managers the opportunity to repeatedly start</p>	<p>Policies and institutions that facilitate risk-taking but implement effective rehabilitation and insolvency system for failed attempts encourage innovations among enterprises. In the Philippines, the passage of Financial</p>	

<p>businesses that fail with losses to shareholders and creditors. <i>How is the balance struck between enabling risk taking and protecting shareholders and creditors?</i></p>	<p>Rehabilitation and Insolvency Act (FRIA) in 2010 and the approval of its implementing rules and guidelines in 2013 improved recovery of investments from failed companies to 21.2 percent.</p> <p>The FRIA protects the right of both entrepreneurs and creditors by employing the three (3) remedies under the current law; court-supervised rehabilitation, pre-negotiated rehabilitation, and out-of-court or informal restructuring agreements or rehabilitation plans. Aside from protecting the rights of entrepreneurs, creditors are also given the opportunity to protect their rights.</p> <p>The government also waives national and local taxes and fees, penalties and surcharges from issuance of the commencement order until approval of the rehabilitation plan to help affected corporation and creditors to recover.</p> <p>An efficient insolvency regime provides a background for the terms on which creditors/ investors can be willing to lend. The predictability and confidence in loan recovery upon default may give specific parameters, including price points which may lead to a balance between enabling risk-taking and protecting shareholders and creditors since it will improve credit availability, and lower cost of credit. Both entrepreneurs and creditors will benefit on the efficient insolvency laws as these will enable transacting parties to take calculated risks in their investment decisions. Furthermore, these may induce greater caution in the incurrence of liabilities by debtors and greater confidence in creditors when extending credit or rescheduling their claims, thereby encouraging a healthy credit culture and discipline.</p> <p>This reform, designed to promote investor confidence and contribute to financial stability and sustained growth in our economy, led to marked improvement in the country's ranking in the World Bank Group's June 2014 Doing Business report that ranked the Philippines at 50 (out of 189 countries) in the Resolving Insolvency Index.</p>	
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Table E- Public sector governance

Public sector governance mechanisms	Current position	Any other comments
<p>The rule of law implies that every citizen is subject to the law, including law makers themselves. Limits to the rule of law occur because of neglect or ignorance of the law, corruption, or the lack of corrective mechanisms for administrative abuse, such as an independent judiciary. <i>Does your system actively protect and enforce the property rights of different stakeholders? If so what sort of legal mechanisms are available and used?</i></p>	<p>In the Philippines, enforcement of the rule of law is seen as a prerequisite to the promotion of equality and fairness in the administration of justice to protect the poor and vulnerable on the one hand, and the creation of an environment conducive to economic development on the other. Consequently, the demonstration of rule of law requires fostering just and efficient resolution of commercial disputes, including contractual obligations and property rights.</p> <p>The Philippine legal framework empowers public authorities to take an active role in the protection and enforcement of intellectual property rights (IPRs). Essentially, like any other property right, IPRs are private rights that are exercisable by the right owner. However, as part of the mandate of law enforcement agencies, authorities such as the Philippine National Police (PNP) and the National Bureau of Investigation (NBI) may investigate cases of infringement of IPRs.</p> <p>Under Republic Act No. 10372, amending Republic Act No. 8293 or the Intellectual Property Code of the Philippines, the Intellectual Property Office of the Philippines (IPOPHL) is also mandated to undertake enforcement actions supported by the concerned law enforcement agencies. The IPOPHL is further empowered to conduct visits to establishments and businesses engaging in activities violating IPRs, based on the report, information or complaints received by the Office. Other judicial remedies for the enforcement of IPRs are also available under the Rules of Court and the Rules of Procedure for IPR Cases under A.M. No. 10-3-10-SC issued by the Supreme Court of the Philippines. Other administrative, criminal, and civil remedies are also available under the following related legislations:</p> <p>(1) The Customs and Tariff Code of the Philippines and Customs</p>	

Public sector governance mechanisms	Current position	Any other comments
	<p>Administrative Order No. 6-2002;</p> <p>(2) Optical Media Act of 2003 or Republic Act No. 9239;</p> <p>(3) Anti-Camcording Act or Republic Act No.1 0088;</p> <p>(4) Republic Act No. 3720 or the Food and Drug Administration Act, as amended by R.A. No. 9711;</p> <p>(5) the Electronic Commerce Act or RA No. 8792;</p> <p>(6) RA No. 8203 or the Special Law on Counterfeit Drugs;</p> <p>(7) RA No. 9168 or the Plant Variety Protection Act;</p> <p>(8) RA No. 9502 or the Cheaper Medicines Act;</p> <p>(9) R.A. No. 10178 or the Cybercrime Prevention Act;</p> <p>(10) RA No. 10365 amending RA No. 9160 or the Anti-Money Laundering Act; and</p> <p>(11) RA No. 10515 or the Anti-Cable Television and Cable Internet Tapping Act.</p>	
<p>State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. <i>In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are there SOEs explicitly tasked with encouraging private sector innovation?</i></p>	<p>Currently, there are around 146 government-owned and –controlled corporations (GOCCs), but most of which are either developmental and/or regulatory agencies structured as corporations. Only about 39 firms could be considered market players (3 in agriculture, 5 in food, 3 in banking, 5 in trade, 2 in energy, 3 in mining, 5 in transport, 4 in infrastructure, 7 in communications and 2 in gaming). Of the 39 GOCCs that are market players, only seven (7) are in the top 1000 corporations of the Philippines (excluding 2 whose revenues are coming mainly from the privatization of its assets). Their combined gross revenues was less than Php 63 billion (about € 1 bn or 0.5% of GDP) in 2012.</p> <p>Overall, state-owned enterprises reported a combined Total Comprehensive Income of P267.5 billion (net of subsidies and unrealized gains/losses) for CY 2013 and 2014, comprising about 2.1 percent of the</p>	

Public sector governance mechanisms	Current position	Any other comments
	<p>country's 2014 total outputs.</p> <p>GOCCs are mandated by law to declare and remit at least 50 percent of their annual net earnings to the national coffers, thereby limiting their cash positions and the opportunities to use their earnings for capital outlays. The total GOCC dividend remittances of the past four (4) years, from 2011 to 2014, amounted to approximately P103 billion, significantly surpassing the total dividends remitted for eight (8) years, from 2002 to 2010 of approximately only P81 billion. Notwithstanding the remittance of dividends, GOCCs are still subjected to Corporate Income Tax similar to the private sector corporations.</p> <p>Nevertheless, these limitations are complimented with a certain advantage or preference, or exception from government liabilities. As a rule, GOCCs, which fall under the definition of a Government Entities with Corporate Powers (GICPs) and/or Government Corporate Entities (GCE),⁶ have the benefit of being exempted from paying Real Property Tax, pursuant to the Supreme Court decision in MIAA v. Court of Appeals.⁷</p> <p>Furthermore, several GOCCs are accorded with advantages in the form of tax exemption on properties and transactions, yields and interest of guaranteed accounts and corporate borrowings (up to certain rates); conditional and unconditional guaranties on corporate borrowings and sovereign guaranty on investment in bonds and securities; among others.</p>	

⁶RA 10149, Section 3

⁷G.R. No. 155650, 201 July 2006

Public sector governance mechanisms	Current position	Any other comments
	<p>GOCCs are also provided with operating subsidies. In 2014, operating subsidies for GOCCs amounted to P2.1 billion while program funds were at P74.9 billion.</p> <p>On innovation, there is presently no GOCC, whose primary mandate will allow the same to be considered as to have been “explicitly asked with encouraging private sector innovation.”</p>	
<p>A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. <i>Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure?</i></p>	<p>The Department of Science and Technology (DOST) leads the country’s innovation efforts --- implementing programs that push innovations, conducting long-term research, engaging in knowledge-sharing and capacity-building initiatives, providing testing services and facilities, among others.</p> <p>For instance, the Small Enterprises Technology Upgrading Program (SETUP) of the DOST encourages micro, small and medium enterprises to improve products, services and operations, and increase productivity and competitiveness by adopting technological innovations.⁸ To date, there are 135 completed projects and 507 on-going projects in 15 regions all over the country. SETUP projects range from food processing, ICT/electronics, furniture, gifts, housewares, decors; horticulture and agriculture, marine and aquatic resources, metals and engineering, health products and services/pharmaceuticals, among others.⁹</p> <p>On the research and development side, the Research and development institutes (RDIs) of the DOST carry out long-term research covering various industries to produce cost-effective and innovative technologies</p>	

⁸<http://webgis.dost.gov.ph/aboutsetup.php>

⁹http://webgis.dost.gov.ph/nationwide_project_summary.php

Public sector governance mechanisms	Current position	Any other comments
	<p>to support competitiveness and growth of industries. Additionally, RDIs engage in knowledge-sharing and capacity-building activities and provide testing services and facilities¹⁰. The Forest Products Research and Development Institute provides non-formal short-term courses and appreciation seminars on forest products utilization¹¹. The Philippine Textile Research Institute laboratories, on the other hand conduct chemicals testing and evaluation of fabric and allied products¹².</p> <p>The DOST, in collaboration with other national government agencies, also pursues strategies to improve local industries' competitiveness through innovation such as harmonizing and strengthening the different elements of a National Quality Infrastructure (NQI). The NQI will, among others, provide access to traceable calibrations and measurement standards through the National Metrology Laboratory, and link internationally recognized accreditation bodies with the national accreditation body (i.e. Philippine Accreditation Bureau under the Department of Trade and Industry).</p>	
<p>Strategies need to respond to economy context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks. <i>What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</i></p>	<p>The Philippine government is focusing its efforts on harnessing science, technology and innovation to boost the country's productivity and innovative capacity. This is complemented with advancements in labor competencies and expansion of industry cluster development.</p> <p>Access to innovative, cost-effective and appropriate technologies is improved through the establishment of innovation centers and provision of state of the art facilities that assist local companies in undertaking</p>	

¹⁰Philippine Nuclear Research Institute <http://www.pnri.dost.gov.ph/index.php/facilities>

¹¹Training topics include: Material properties, working properties, housing and construction, production management and productivity improvements, furniture and handicraft processing, pulp/paper/chemical products and energy <http://www.fprdi.dost.gov.ph/index.php/trainings>

¹²Philippine Textile Research Institute http://www2.ptri.dost.gov.ph/index.php?option=com_content&task=view&id=71&Itemid=100

Public sector governance mechanisms	Current position	Any other comments
	<p>design, prototyping and product development.</p> <p>Formulation of competitiveness roadmap for various professions, development of curricula that emphasize science and technology, entrepreneurship, agribusiness, software and vocational skills, and implementation of the Philippines Qualification Framework all aim to enhance the country's labor competencies. Strengthening of linkage between agriculture and industry and expansion of the industry clustering program are likewise seen to encourage the production of higher-value added products.</p> <p>The strategies related to improving productivity and innovative capacity are complemented by measures to improve the business climate, enforce regulations that enhance consumer welfare, and expand market access to develop a globally competitive and innovative industry and services sectors.</p>	

Appendix A Questionnaire on structural policies and innovation

Table A– Economy context (Optional)

Economy Context Questions	Current position	Any other comments
<p>Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i></p>	<p>Structural and innovation policies in Russia pursue the following objectives:</p> <ol style="list-style-type: none"> 1) Improvement of well-being of the population; 2) Development of the potential of Russia in scientific-innovative areas, economic diversification and securing stable economic development of Russia; 3) Keeping with an acceleration of the technological development of the world economy; 4) Ability to compete for “smart” money and work force at the work market; 5) Mitigation of implication of “middle wage trap” negative effects; 6) Implementation of effective solutions to mitigate consequences of climate change and aging population. 	

Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</i></p>	<p>During past years, Russia develops a wide range of supportive measures to innovation activities. Among them is establishment of special technological-innovative special economic zones (SEZ), where innovative companies are given significant tax incentives.</p> <p>In 2010 the Government of Russian Federation established the innovative centre «Skolkovo». The centre provided resident companies with unprecedented legal regime designed to minimize administrative barriers and tax burden.</p> <p>To support to the development of innovation activities in Russia it has been adopted</p>	

¹ NZIER report (March 2015) to APEC 2015 Economic Report (AEPR) - The role of structural policies in innovation

	<p>a Law that allows to budgetary institutions of education and science to create small innovative enterprises.</p> <p>The export of innovative products is also supported by the Russian regulation.</p>	
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification programme in place and if so how comprehensive is it? Also, is any administrative simplification programme linked to programmes to reduce corruption?</i></p>	<p>Over the past decade, the quality of the tax and customs regulation, and administration of innovative businesses has been improved significantly. In this regard, the following incentives are worth to be mentioned:</p> <ul style="list-style-type: none"> - The Action Plan "Promoting competition and improvement of antimonopoly policy" (designated for the development of competition in infrastructure sectors, including the sphere of natural monopolies); - The Strategy of innovative development of Russia 2020. It stipulates as a priority the following: <ul style="list-style-type: none"> • expansion of methods and procedures for procurement of innovative products; • increase of the transparency of the Federal Contract System (PCS); • introduction of additional requirements for buyers in terms of qualification, so that to avoid cases of conflict of interests; • increase of administrative responsibility. <p>Russia also continues to improve the effectiveness of its service sector through further enhancement of attendance of the public demand in state services through "one window" approach and creation of multifunctional centers (MFC). Up to present more than 1770 MFC have been established (by the end of 2015 their number will increase up to 2500). MFC have already proved their effectiveness showing shorter time in providing public services, reduction of cases of inter-departmental "red tape", and significant anti-corruption effect through avoidance of unnecessary inter-mediators.</p>	
<p>Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. <i>Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any adverse impact on competition and hence innovation?</i></p>	<p>Methodical recommendations on organizing and conducting the procedure of the Regulatory impact assessment (RIA) of draft normative legal acts of the Russian Federation emphasizes that unfair competition is one of the types of misconduct of more informed participants in relation to less informed. The risk of the reduction of the competition (increase of barriers to entry into the market, the selective granting of benefits to business entities, the asymmetry of information) is pointed out among other risks, which may lead to adverse effects of the proposed regulation.</p>	

<p>Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. <i>How easily can skilled people move between firms?</i></p>	<p>There are no barriers for skilled people to move between firms.</p>	
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Table C- Competition policy

Competition policy mechanisms	Current position	Any other comments
<p>Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other. <i>How does competition policy deal with protection of consumers? Does competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and dynamic efficiency?</i></p>	<p>The road map "The development of competition and the improvement of antimonopoly policy" from 2012 stipulated the following provisions for the protection of consumers' rights:</p> <ul style="list-style-type: none"> - The development of a federal law that had to introduce legal mechanisms to protect the rights and legitimate interests of a group of persons in the courts (class actions), including the possibility of participation of legal entities in class actions; - The provision of a possibility to establish an amount of progressive penalties (that are equal to losses) for violating of the legislation on protection of the competition, the creation of a mechanism of passing of collected amounts of penalties from violators of antitrust laws to affected individuals; - The protection of the rights of consumers of natural monopolies: legislative consolidation of commercial quality standards for customer service natural monopolies and the responsibility for their implementation; - Strengthening the responsibility of advertisers and advertisement for improper advertisement. 	
<p>Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to</p>	<p>The Federal Antimonopoly Service of the Russian Federation (The FAS Russia) along with the Ministry of Economic Development of the Russian Federation and the Agency for Strategic Initiatives is charged with introducing the Standard of the development of competition. It is important to note that the requirements embodied in the Standard relate not only to formal and legal issues (definition of the authorized body of the executive power of the subject of the Russian Federation responsible for promoting competition in the region, consideration of these issues at</p>	

Competition policy mechanisms	Current position	Any other comments
<p>factbased rule of reason analysis. <i>Does the competition authority(s) have the legal authority to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i></p>	<p>the meetings of a collegial body under the Senior Official of the subject of the Russian Federation), but also to the issues connected with analytics and prognosis. The main purpose is the approval of the list of priority and socially significant markets and the development of regional "road maps" for promoting competition, monitoring the state and development of regional competition environment, creation and realization of the mechanisms of public control over the activity of monopolies, the ways to ease the access for entrepreneurs and consumers to the information on the state of regional competition environment.</p>	
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or sub-national government?</i></p>	<p>The sector of natural monopolies still exists in Russia. However, the work is underway to define the directions of the development of competition in such sectors as power industry, railway transport, post service, telecommunication, heat supply, gas markets, pipeline transportation, services of ports and airports. The Strategy for the development of competition and antimonopoly regulation in the Russian Federation in 2013 - 2024 prepared by the Federal Antimonopoly Service contains the following provisions on the reform of basic institutes of regulation of monopolies:</p> <p>1) <u>stimulating the reduction of prices for services of natural monopolies, improving the quality of such services and their availability.</u> It is planned:</p> <ul style="list-style-type: none"> - to abolish the federal law "On natural monopolies" and introduce the provision in the Law on protection of competition providing features of state regulation of the activity of natural monopolies; - to fix in the legislation modern methods of tariff regulation of the activity of natural monopolies; - in the sphere of heat supply to carry out pricing on the basis of the tariff calculated for reference (cheapest) sources of thermal energy, thermal networks; - to provide consumers with legal and economic guarantees of availability and quality of services of natural monopolies; <p>2) <u>increasing the efficiency of the reform of natural monopolies.</u> It is planned:</p> <ul style="list-style-type: none"> - to submit proposals to the Government of the Russian Federation on the reforms in the sphere of railway transport and power industry, as well as on the introduction of the pro-competitive stimulating regulation in energy and post service; - to promote the approval of rules of non-discriminatory access in spheres of 	

Competition policy mechanisms	Current position	Any other comments
	<p>functioning of natural monopolies: services of ports, post service, telecommunication, transport terminals;</p> <ul style="list-style-type: none"> - to cancel adjustable tariffs in economic sectors with market competition; <p>3) <u>increasing the transparency of purchases carried out by natural monopolies for decrease in prime cost and increase in efficiency of using limited resources</u>. It is planned:</p> <ul style="list-style-type: none"> - to specify the concept and more detailed regulation of procedures of purchases of goods, works, services by natural monopolies, state corporations and economic societies under the state control; <p>4) to increase the availability of services and infrastructure of natural monopolies. It assumes to prepare and provide for an approval by the Government of the Russian Federation of the rules of non-discriminatory access to the commodity markets and (or) to goods produced or sold by natural monopolies, as well as to the infrastructure objects used by the subjects of natural monopolies directly to provide their services and monitor its application.</p>	
<p>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. <i>Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective decision involving other Ministries? How is any independence established and safeguarded?</i></p>	<p>The FAS Russia has the status of an independent agency. Its financing Russia is carried out separately from the Federal budget. In order to enhance accountability and transparency the FAS Russia cooperates with non-profit partnerships "Promoting Competition" and "Promoting Competition in the CIS countries." This work is coordinated by the Federal Tariff Service of Russia. The FAS Russia has become the first body of the executive power in Russia which is certified under ISO 9001:2008.</p> <p>In its activity the FAS Russia can apply a number of powers (measures) to prevent enforcement of fair competition:</p> <ul style="list-style-type: none"> - initiation of proceedings and examination of violations of the antimonopoly law; - issuing economic entities binding orders to terminate unfair competition, etc.; - carrying out the verification of compliance with antimonopoly laws and prosecution for violation of commercial and non-commercial organizations, officials of the federal executive bodies, executive bodies of subjects of the Russian Federation and local self-governments and officials of state budget funds, individuals, including individual entrepreneurs, etc. 	

Competition policy mechanisms	Current position	Any other comments
<p>There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. <i>Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets with potential for innovation?</i></p>	<p>One of the points of the Strategy of Innovative Development ("Innovative Russia-2020") is a reallocation of funding to active research teams through enhancing the role of competitive mechanisms for allocating funds for science, etc. Competitive selection was used by the Working Group on the development of public-private partnerships in innovation sphere in order to release funds to support the most promising innovative regional clusters.</p> <p>In addition, the focus is on the markets with a low-level competition, as pharmaceuticals, chemical and petrochemical industry. The need to create conditions for the establishment and development of small and medium-sized innovative enterprises is stressed in the strategies of the relevant sectors. It is expected to increase the share of domestic production in total consumption to 50% in value terms in 2020 in pharmaceuticals, as well as to increase the share of innovative products to 60% in value terms. In chemical and petrochemical industry the share of chemicals, rubber and plastic products should increase from 10.2 % in 2006 to at least 12% in 2015 in the total volume of shipped goods of own production. There is also the scenario of innovative development of the chemical complex, whereby the Russian chemical industry should increase three times in the period from 2007 to 2015, and the profit from the production of chemical products should increase 12.1 times in 2015 compared to 2006.</p>	
<p>There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i></p>	<p>The work of Intergovernmental council for the antimonopoly policy within the FAS Russia interacts with antimonopoly services of the CIS countries, serves as the proof that cooperation in investigation of violations of the antitrust law and development of the competition in the markets of air transportation, telecommunications and retail trade can lead to quite positive results:</p> <ol style="list-style-type: none"> 1) tariffs for network communication services with use of roaming in the CIS countries in the certain directions decreased by 1,5–4 times; 2) the volume of a traffic grew by 2-4 times; 3) the volume of passengers air transportation grew twice; 4) thanks to inclusion in bilateral agreements about air traffic of pro-competitive provisions there was a liberalization of air traffic between the State Parties of the CIS; 5) trade-laws were developed and adopted in the number of the CIS countries. <p>In addition, the creation of "the competitive block" within integration group - the</p>	

Competition policy mechanisms	Current position	Any other comments
	<p>Eurasian economic union (EEU) is important for Russia. The Eurasian economic commission deals with actual issues of the prevention and suppression of unfair competition, anti-competitive agreements, abuses of a dominant position in the cross-border markets of EEU, etc. The Department of antimonopoly regulation and Department of a competition policy and policy in the field of government procurements deal with competition issues in EEK in detail.</p>	

Table D- Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i></p>	<p>Currently, Russia continues to develop the legislative base that regulates principles of the corporate behavior, including the managers concerning responsibility to the owners of the companies. It is necessary to underline the following standard precepts of law:</p> <ul style="list-style-type: none"> - In the new edition the Civil Code of the Russian Federation (item 3 of Art. 53 and Art. 53, and also new article 65) responsibility of heads and members of collegial bodies of legal entities amplifies. On their basis the mechanism of protection of property interests is created as corporations in general, and from certain participants, including minority shareholders, from causing them damage by the persons authorized to act on behalf of corporation. - In 2014 the Government of the Russian Federation approved the Code of Corporate Management (CCM) which regulates a number of the major questions of corporate management (it is urged to replace the Code of corporate behavior adopted in 2001). The document provides equality of investors, protection of their interests, forming of corporate directors work, rules of disclosure of information and so forth. 	
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital funds and direct capital raising from the public. <i>Do your economy's financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</i></p>	<p>The Russian companies are not inclined to attract the capital in stock market or to use proceeds of credit for investments into fixed assets. So, according to Rosstat, in 2014 fixed assets were financed as follows:</p> <ul style="list-style-type: none"> - 48,0% - own funds of the Russian enterprises; - 16,2% - budgetary funds; - 12,7% - funds of the organizations with higher position; - 9,3% - proceeds of credit; - 0,1% - the funds received from issue of corporate bonds; - 0,9% – the funds received from issue of shares. 	

The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. *Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing??*

<p>Barriers:</p> <ul style="list-style-type: none"> - Structural problems of the Russian stock market and a high level of nonmarket investment risks; - Insufficient development of collective investment institutions (united investment trusts or private pension funds); - Current level of the key rate of the Central Bank of the Russian Federation is very high that reduces availability of credit instruments for Russian companies; - The lack of tax incentives designed to encourage activities of so-called "Business angels". <p>Incentives:</p> <p>Currently, Russia continues to improve the regulation of stock market. In 2013 it was simplified the issuing of securities, inter-industry capital migration and reorganization procedures of the Russian companies, including banks (this is provided by the new version of Chapter 4 of the Civil Code of Russia, which should greatly simplify the business activities and expand their borders).</p> <p>In 2014 the Russian Government approved the Code of Corporate Management. Although the document has a recommendatory character, the Government intends to apply it in the largest state-run enterprises to improve the quality of management.</p> <p>In 2011 the Federal Law "On economic partnership" was adopted. In particular, it envisages the facilitation of SMEs business activities through the creation of microfinance institutions and guarantee funds, as well as venture capital funds and seed investment funds. To support to SMEs development the JSC "SME Bank" carries out a special program.</p> <p>Russia also created an alternative investments market infrastructure. In particular, since 2014 the special guarantee organization "Agency of loan guarantees" has started its operation.</p> <p>Since July, 2009, the Innovation and Investment Market has started acting in margins of the Moscow Stock Exchange (JSC "Moscow Stock Exchange"). This measure created an exchange market for high-tech companies founded by JSC "Moscow Stock Exchange" together with JSC "RUSNANO".</p> <p>The main objective of Moscow Stock Exchange is to facilitate the attraction of investment, especially in the development of small and medium-sized</p>	
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	<p>businesses of the innovation sector of the Russian economy.</p> <p>Since January, 2015 a new format of investment in the stock market has been put into effect, designed to simplify citizens' access to investments in securities with the help of individual investment accounts (IMS).</p>	
<p>Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However, these also allow poor managers the opportunity to repeatedly start businesses that fail with losses to shareholders and creditors. <i>How is the balance struck between enabling risk taking and protecting shareholders and creditors?</i></p>	<p>The Russian legislation in this field is being constantly improved (in particular, the arbitration of managers' activity, improvement of recovery procedures, management liability, etc.). Currently, it contains all the basic mechanisms of the protection of interests of debtors and creditors.</p>	

Table E- Public sector governance

Public sector governance mechanisms	Current position	Any other comments
<p>The rule of law implies that every citizen is subject to the law, including law makers themselves. Limits to the rule of law occur because of neglect or ignorance of the law, corruption, or the lack of corrective mechanisms for administrative abuse, such as an independent judiciary. <i>Does your system actively protect and enforce the property rights of different stakeholders? If so what sort of legal mechanisms are available and used?</i></p>	<p>The civil legislation of the Russian Federation recognizes the equality of all stakeholders of this regulation. It stipulates the inviolability of property; the freedom of agreement; the inadmissibility anybody's arbitrary interference into the private affairs; the necessity to exercise the civil rights freely; the guarantee of the reinstatement of the civil rights in case of their violation and their protection in the court.</p> <p>The Civil Code of Russia contains special provisions that guaranty the protection of property rights and other proprietary interests.</p>	
<p>State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. <i>In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are there SOEs explicitly tasked with</i></p>	<p>State-owned enterprises produce approximately 50% of Russia's GDP. Formally, they are not protected from competition. However, many of them are natural monopoly that de facto excludes competition. In this regard, the Strategy for the development of competition and the Antimonopoly regulation in the Russian Federation for the period 2013 - 2024 provides a number of measures aimed at the development of competition in these areas.</p> <p>The increase of the innovative activity in the public sector of the economy is one of the directions of the Strategy for innovative development of Russia until 2020.</p>	

Public sector governance mechanisms	Current position	Any other comments
<i>encouraging private sector innovation?</i>	In accordance with the instruction of the President of the Russian Federation in 2011, 46 major state-owned companies have developed and approved their programs of innovative development (the so-called PID), which contains a list of innovative projects as well as areas of research and development activities, etc. planned for the implementation in 2011-2020. Passports of the PID are publicly available.	
A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. <i>Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure?</i>	<p><u>Innovation policy</u>: The presidential Council of the Russian Federation on economic modernization and innovative development; the Ministry of economic development of the Russian Federation.</p> <p><u>Knowledge infrastructure</u>: the Ministry of education and science of the Russian Federation and Russian Academy of Sciences.</p> <p><u>Innovative infrastructure</u>: state established “development institutions” (OJSC RUSNANO and JSC “RVC” and their foundations/centers/companies; Vnesheconombank, Foundation for the industrial development). These patterns are not formally public authorities.</p>	
Strategies need to respond to economy context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks. <i>What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</i>	<p>Directions of the innovation policy in Russia are reflected in the Strategy of innovative development of the Russian Federation for the period until 2020.</p> <p>Common vector: maintaining leading position in some segments of the economy in which there are (or can be quickly created) competitive advantages, but with the implementation of the catch-up option in the most sectors of the economy.</p> <p>The shift of focus from increasing the overall level of support for all the components of the national innovation system to the importance of solving problems which are critical for innovative development.</p> <p>Separate vectors:</p> <ol style="list-style-type: none"> 1. Formation of competences in the innovative activity: preservation and development of human resources, including improving the quality of education as well as supporting formation and the increase the prestige of the creative and entrepreneurial class, etc.; 2. Formation the demand for innovation through: <ol style="list-style-type: none"> A) An increase in investment activity of the public sector, including the 	

Public sector governance mechanisms	Current position	Any other comments
	<p>stimulation of innovative performance of companies with state participation; B) Support innovative programs of businesses and general role of business in innovation, including the use/improvement of all the mechanisms of economic regulation, cluster initiatives and PPPs mechanism (technological platforms), etc.</p> <ol style="list-style-type: none"> 3. Improving the efficiency of the scientific activity. 4. Increasing efficiency/implementing innovations to the state performance. 5. Creating/maintaining the infrastructure of innovation. 6. Promoting regional innovation policy. 7. Ensuring openness of national innovation system and the integration of Russia into global processes of creation and the usage of innovations. 	

Appendix A Questionnaire on structural policies and innovation

Table A – Economy context (Optional)

Economy Context Questions	Current position	Any other comments
<p>Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i></p>	<p>Singapore is a small country with a lack of natural resources. Hence, Singapore relies heavily on international trade and investment to propel its economy. As a result, Singapore emphasises strongly on creating a conducive environment for businesses to operate in. The results of these efforts have materialised, as can be seen from Singapore’s high rankings across competitiveness indices.</p> <p>Singapore continues to view structural and innovation policies as key for sustained economic progress. Improvements in technology, processes and human capital are necessary for Singapore to maintain her value proposition as a prime location for businesses amidst the rapidly changing and increasingly competitive landscape. Therefore, Singapore has been and will continue seeking ways to build a more robust, innovative and facilitative business ecosystem.</p>	

¹ NZIER report (March 2015) to APEC 2015 Economic Report (AEPR) - The role of structural policies in innovation

Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</i></p>	<p>Singapore aims to create an enabling environment for innovative businesses and institutions to flourish. Nonetheless, balance has to be sought with other important objectives, such as safety, consumer protection, etc., as well. With the rapidly changing landscape and new technological, scientific, economic and societal developments, Singapore has to proactively consider the appropriateness of permitting more flexibility in the regulatory system and be responsive to feedback from industry players. For example, in 2004, previous prescriptive building regulations were repealed, allowing for performance-based building regulations which state clearly the objectives and performance criteria of technical requirements.</p>	
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification programme in place and if so how comprehensive is it? Also, is any administrative simplification programme linked to programmes to reduce corruption?</i></p>	<p>In Singapore, there are two key government platforms responsible for improving the quality of government regulations and removing outdated or unnecessary regulations to foster a pro-business and pro-innovation environment:</p> <ul style="list-style-type: none"> (i) The <u>Smart Regulation Committee (SRC)</u> is set up within the Singapore Public Service to promote good regulation practices within the Government and proactively review rules and regulations. The SRC is currently chaired by the Permanent Secretary of the Ministry of Social and Family Development (MSF) and the Second Permanent Secretary of the Ministry of Trade & Industry (MTI). Its members are senior civil servants from various ministries and statutory boards. The SRC seeks to get agencies within the Singapore Government to change their mind-set, adopt less of a “regulator-centric” approach and shift to one that is more stakeholder-centric. (ii) The Pro-Enterprise Panel (PEP) was formed in August 2000 to actively solicit feedback on rules and regulations that hinder businesses and impede entrepreneurship. The PEP is chaired by the Head of Civil Service and comprises of mainly business representatives from the private sector. Acting on feedback from the public, the PEP engages agencies to review rules and regulations, so 	

	<p>that Singapore businesses spend less time, effort, and money in meeting regulatory requirements for their operations. Since its inception, the PEP has received over 1,800 suggestions and more than half of these have resulted in regulatory or rules changes.</p> <p>There is currently no administrative simplification programme explicitly linked to programmes to reduce corruption.</p>	
<p>Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. <i>Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any adverse impact on competition and hence innovation?</i></p>	<p>The Smart Regulation Committee (SRC) mentioned above promotes the adoption of smart regulatory practices by regulatory authorities to facilitate a competitive and innovative climate in Singapore. When formulating policies, feedback is sought from various agencies on the potential impact in the areas they oversee. The optimal policy will likely require a balance among several goals, and sometimes, there may be trade-offs. While Singapore cannot judge a policy to be the most appropriate purely on the basis of its effect on competition, it is an important angle that Singapore gives due consideration to.</p>	
<p>Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. <i>How easily can skilled people move between firms?</i></p>	<p>Singapore recognises that innovation is critical for us to compete as a knowledge-based economy. Foreign professionals can bring to Singapore invaluable knowledge, experience, skills and connections that help to catalyse the growth of new and strategic industries. In this regard, Singapore’s foreign workforce framework is calibrated along the skills continuum. Highly-skilled foreign professionals, managers and executives may qualify for an Employment Pass depending on their qualifications, income and experience. There is no occupational or nationality restriction.</p>	

Table C - Competition policy

Competition policy mechanisms	Current position	Any other comments
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Competition policy mechanisms	Current position	Any other comments
<p>Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other. <i>How does competition policy deal with protection of consumers? Does competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and dynamic efficiency?</i></p>	<p>Singapore has consumer protection legislations, such as the Consumer Protection Fair Trading Act, Hire Purchase Act, and more. As an example, the Consumer Protection Fair Trading Act (CPFTA) lists specific unfair trade practices and it is the onus of the business to prove that it did not commit the unfair practice. In 2009, CPFTA was extended to cover financial products and services. Other amendments were also made to widen the scope of protection offered to consumers and facilitate a fairer trading environment for both consumers and businesses. In 2012, provisions of the ‘lemon laws’ were added, with related amendments in the Hire Purchase Act, obligating sellers to repair, replace, refund or reduce the price of defective goods.</p> <p>In terms of competition law, Singapore has no specific provisions directly related to consumer protection. However, there are provisions on rights of private action where any person who suffers loss or damage directly as a result of competition law violations can have right of action for relief through proceedings in a civil court.</p> <p>Singapore’s competition law regime allows for the consideration of both allocative efficiency gains (e.g. improving production or distribution) as well as technical and dynamic efficiency (e.g. promoting technical progress or greater innovation) in the assessment of cases relating to competition.</p>	
<p>Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to fact based rule of reason analysis. <i>Does the competition authority(s) have the legal authority</i></p>	<p>Our Competition Act allows for Net Economic Benefits (NEB) and Net Economic Efficiencies (NEE) in competition assessments. This covers considerations for both allocative, as well as technical and dynamic efficiencies.</p> <p>Arguments on the basis of NEB and NEE are assessed by officers in the Competition Commission of Singapore (typically by economists) based on the analytical framework stipulated in “The CCS Guidelines”, which is</p>	

Competition policy mechanisms	Current position	Any other comments
<p><i>to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i></p>	<p>published.</p>	
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or sub-national government?</i></p>	<p>Singapore’s Competition Act applies to all entities engaged in economic or commercial activities, regardless of ownership. Government and statutory boards, or agents acting on their behalf, are excluded. The Competition Act applies to all sectors of the economy, except where there are exclusions or exemptions specified under the Act. An example of such exclusion will be for goods and services are which regulated by other existing sector-specific competition legislation, such as in the sectors of energy, telecommunications, media, etc.</p>	
<p>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. <i>Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective decision involving other Ministries? How is any independence established and safeguarded?</i></p>	<p>While CCS is administratively under the Ministry of Trade of Industry (MTI), for the purposes of enforcement, the Commission is vested with independent powers under the law to investigate, adjudicate and impose sanctions for competition law breaches. The powers of the Commission are defined, and hence, protected by legislation, specifically the Competition Act 2004. This independence maintains the credibility and impartiality of the Commission’s actions and decisions among non-government stakeholders. At the same time, it allows CCS to be able to tap on the available resources, authority and standing of our government. With “buy-in” from the government, the competition authority is able to advocate pro-competition policies among government agencies, which is essential because government agencies are excluded from the Competition Act.</p>	
<p>There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. <i>Does the competition authority(s) proactively and strategically seek to focus</i></p>	<p>The Commission and government agencies work together through roundtable discussions, advisories and market studies to track competition developments and recommend appropriate actions in sectors where there are competition concerns. In addition, the Commission closely monitors markets for potential competition law breaches. The Commission also</p>	

Competition policy mechanisms	Current position	Any other comments
<p><i>its attention on least competitive markets with potential for innovation?</i></p>	<p>reaches out to businesses to raise competition law awareness and encourage voluntary competition law compliance among them.</p> <p>The Commission adopts a light-touch approach towards the private sector, taking actions only in situations where there are competition law violations or significant competition concerns. The focus is to safeguard the competitive processes in the market, thus providing an enabling environment for businesses to become more efficient, innovative, productive and responsive to customer needs.</p>	
<p>There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i></p>	<p>The design and implementation of a competition regime in any country would need to take into account the country's socio-economic developments, political and governance systems, legal and economic policy frameworks and institutions, as well as exposure to and reliance on international trade and investments. Singapore is no exception. Against this backdrop, one can expect regulatory differences in competition laws and the administration of competition policy and law will need to cater for specific national conditions.</p> <p>Singapore's openness to trade and investment contributes to existing as well as potential competitive constraints by keeping entry barriers low. This has implications on Singapore's competition policy setting and the implementation. For example, Singapore has prescribed a higher threshold for market share (>60%) as indicative of dominance compared to other jurisdictions. Furthermore, Singapore adopts a voluntary merger notification regime. It is not mandatory for businesses to notify the Commission of mergers unless these pose serious competition concerns. This eliminates unnecessary regulatory costs on businesses given that most mergers are unlikely to raise substantial competition concerns in Singapore. When it comes to market monitoring for competition law</p>	

Competition policy mechanisms	Current position	Any other comments
	compliance, the Commission tends to devote more attention to non-tradeable sectors that dominated by a few players, since competition concerns in these sectors are unlikely to be mitigated sufficiently through open trade and investment.	

Table D - Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i></p>	<p>A director is required under s157(1) of the Companies Act to, at all times, act honestly and use reasonable diligence in discharging his/her duties. A similar provision for directors to objectively discharge their duties and responsibilities at all times as fiduciaries in the interests of the company is set out in Guideline 1.2 of the Code of Corporate Governance ("Code").</p> <p>The Code also sets out that the Board of each company is collectively responsible for its long-term success. To achieve this objective, the Board works closely with the management staff to:</p> <ul style="list-style-type: none"> • set strategic objectives (including sustainability issues) and ensure that necessary resources are in place to meet these objectives; • establish a framework of controls to assess and manage risks (including safeguarding shareholders' interests and company's assets); • set the company's values and standards to ensure that obligations to shareholders and other stakeholders are understood and met; and review management performance annually, and to align the remuneration of management personnel to corporate performance, interests of shareholders and long-term success of 	

	the company.	
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital funds and direct capital raising from the public. <i>Do your economy's financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</i></p>	<p>Firms in Singapore can raise both debt and equity capital to finance their innovation activities, such as angel and venture capital funds, raising equity through the stock market, and the use of bank loans. In addition, the government ensures that there is adequate financing available for firms by addressing market gaps, e.g. through programmes to promote the availability of financing for early stage start-ups.</p>	
<p>The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. <i>Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing??</i></p>	<p>The legal framework aims to strike a balance among multiple goals, such as facilitating capital raising for companies, ensuring credibility and managing risk of the market, etc. The regulations below provide some illustrations.</p> <ol style="list-style-type: none"> 1. <u>Companies seeking to be publicly listed or to take on private equity partners</u> <p>Companies seeking to be listed on the Singapore Exchange ("SGX-ST") must fulfil the SGX-ST's admission requirements. Under the Securities and Futures Act ("SFA") a person who is making the offer of securities to investors in Singapore must lodge and register a prospectus with MAS, unless otherwise exempted. Exemptions which may facilitate fund raising by small and medium enterprises would include: (i) small offers exemption (total amount raised within any period of 12 months does not exceed \$5 million), (ii) private placements exemptions (offers made to no more than 50 persons within any period of 12 months) and (iii) offers made to accredited and institution investors.</p> 2. <u>Secondary board on the Stock Exchange</u> <p>In Singapore, family or closely owned companies who wish to go public but are unable to meet the listing requirements of the SGX-ST Mainboard may apply for a listing on the SGX-ST Catalist board, a sponsor-supervised listing platform that targets small-medium sized companies where the cost of listing is lower. There are no quantitative entry criteria required by SGX for</p> 	

	<p>issuers seeking a listing on the Catalist board. A company that wishes to list on Catalist must appoint a sponsor and, once listed, must be sponsored at all times. Sponsors are involved in bringing a new company to list on Catalist as well as advising the company on its continuing listing obligations and overseeing its compliance with these obligations.</p> <p>3. <u>Private Equity</u></p> <p>Our licensing and conduct provisions do not have specific provisions dealing with the management of PE firms.</p>	
<p>Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However, these also allow poor managers the opportunity to repeatedly start businesses that fail with losses to shareholders and creditors. <i>How is the balance struck between enabling risk taking and protecting shareholders and creditors?</i></p>	<p>In general, information of insolvency is available publicly, and a potential shareholder or creditor would be able to carry out their own due diligence and should to do so as a matter of prudence.</p> <p>Some other safeguards against managers who repeatedly start businesses that fail can also be found outside the domain of insolvency law.</p> <p>A failed entrepreneur who enters into bankruptcy is barred from getting involved in another business in a management capacity (i.e. director of a company, manager of a limited liability partnership or business etc.). This is provided for under section 148 Companies Act, section 33 Limited Liability Partnership Act, section 29 Limited Partnership Act, and section 26 Business Registration Act.</p> <p>Failed entrepreneurs who are deemed to be unfit may also be disqualified by the Courts from acting as a director of a company or as the manager of a limited liability partnership. This is provided for under section 149 Companies Act and section 34 Limited Liability Partnership Act.</p>	

Table E - Public sector governance

Public sector governance mechanisms	Current position	Any other comments
<p>The rule of law implies that every citizen is subject to the law, including law makers themselves. Limits to the rule of law occur because of neglect or ignorance of the law, corruption, or the lack of corrective mechanisms for administrative abuse, such as an independent judiciary. <i>Does your system actively protect and enforce the property rights of different stakeholders? If so what sort of legal mechanisms are available and used?</i></p>	<p>The Rule of Law is the foundation on which Singapore was built. Singapore has upheld the rule of law and established an effective and well-functioning legal system where no person is above the law. Singapore has good laws to uphold individual and public interests; and an incorrupt and competent judiciary, interpreting and administering laws fairly without fear or favour.</p> <p>Singapore’s legislation protects stakeholders’ real property and intellectual property (“IP”) rights. The Land Titles Act and related rules protect stakeholders’ real property rights by ensuring that the estate and rights of the person named as proprietor on the land register is protected and cannot be challenged, except in the case of fraud. Where there is loss arising out of a mistake or omission by the Registrar of Titles or any member of his staff, compensation is guaranteed by the State. Mistakes can occur when wrong entries are made on the land register, when the registration of a transaction is based on the production of a cancelled Certificate of Title etc. Compulsory acquisition of land in Singapore is governed by the Land Acquisition Act. Lands which are acquired must be for purposes as prescribed under the Act and market value compensation is paid for acquired land.</p> <p>Singapore’s IP laws (Copyright Act, Trade Marks Act, Patents Act, Registered Designs Act, Plant Varieties Protection Act, Geographical Indications Act, and Layout-Designs of Integrated Circuits Act) protect the various IP rights. Singapore’s IP laws conform to standards set by international treaties to which Singapore is a party to, particularly the Agreement on Trade Related Aspects of Intellectual Property Rights. Some of Singapore’s IP laws exceed these standards because of Singapore’s higher obligations under Free Trade Agreements.</p> <p>Stakeholders have access to the judiciary to resolve conflicts relating to such</p>	

Public sector governance mechanisms	Current position	Any other comments
	<p>real property and IP rights. For civil disputes relating to IP rights, disputing parties are able to bring an action to revoke or invalidate registrable IP rights through various avenues. These include the High Court, or the Registrar of Patents, Trade Marks or Designs (as the case may be). The High Court has developed a dedicated case management system for IP cases (including guides for discovery and production of expert evidence) which enables IP cases to be heard efficiently.</p> <p>In addition, a dedicated unit within the Singapore Police Force, the Intellectual Property Rights Branch, is active in ensuring that counterfeiting activities and sale of counterfeit goods are kept in check. At the borders, Singapore's Customs authorities have ex-officio powers to detain suspected infringing goods which are imported or to be exported, subject to certain procedural requirements.</p> <p>Singapore's legal system also protects property seized by a police officer with a legal procedure governing the disposal of such property. The Criminal Procedure Code lays down the limited circumstances under which a police officer may seize any property relating to an offence. It also provides for judicial safeguards and oversight when such seizures occur.</p>	
<p>State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. <i>In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are there SOEs explicitly tasked with encouraging private sector innovation?</i></p>	<p>There are currently no estimates of the size of the government-owned market sector. There are no SOEs explicitly tasked to encourage private sector innovation. Instead, government agencies and statutory boards work closely with academia and the private sector to drive innovation.</p>	

Public sector governance mechanisms	Current position	Any other comments
<p>A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. <i>Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure?</i></p>	<p>The Research, Innovation, and Enterprise Committee (RIEC), chaired by the Prime Minister of Singapore, provides strategic direction for Singapore’s efforts in Research, Innovation and Enterprise (RIE). It advises the Singapore Cabinet on national research and innovation policies and strategies to drive the transformation of Singapore into a knowledge-based society with strong capabilities in R&D. It also leads the national drive to promote research, innovation and enterprise by encouraging new initiatives in knowledge creation in science and technology, and to catalyse new areas of long term economic growth.</p> <p>Under this, several key government bodies are responsible for different aspects of the RIE system.</p> <ul style="list-style-type: none"> • The Ministry of Trade and Industry (MTI) is responsible for ensuring that our RIE strategies are aligned with our economic strategies, and that our investments in R&D lead to the creation of economic value for Singapore. • The Agency for Science, Technology and Research (A*STAR), which is an agency under MTI, is responsible for mission-oriented research focussed on economic outcomes. The public research institutes under A*STAR directly partner industry and global research leaders to enhance the competitiveness of Singapore’s industry sectors. • The National Research Foundation (NRF) supports the RIEC and is overall responsible for coordinating policies, plans and strategies for research, innovation and enterprise. NRF works with other government agencies to build R&D capabilities, encourage innovation, and grow technology enterprises. 	
<p>Strategies need to respond to economy context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to</p>	<p>In 2011, Singapore launched our Research, Innovation and Enterprise Masterplan (RIE2015), and the Singapore Government committed to invest S\$16.1 billion over 5 years to further support research and innovation activities.</p>	

Public sector governance mechanisms	Current position	Any other comments
<p>underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks. <i>What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</i></p>	<p>The key thrusts were to:</p> <ul style="list-style-type: none"> • Continue to invest in new knowledge and ideas, to seed the intellectual capital for future innovations. • Continue to emphasise the attraction and development of scientific talent to meet the needs of our industry and public sector research institutions. • Place greater emphasis on competitive funding, to spur innovation and bring out the best ideas for further support and development. • Strengthen synergies across our various R&D performers. • Focus a greater proportion of R&D on economic outcomes. • Provide stronger support for our scientists to take their ideas from basic research through to commercialisation. <p>Planning is underway for the next 5-year plan, RIE2020.</p>	

Appendix A Questionnaire on structural policies and innovation

Table A – Economy context (Optional)

Economy Context Questions	Current position	Any other comments
<p>Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i></p>	<p>On December 18, 2014, after hearing a plan proposed by the Board of Science and Technology, Chinese Taipei’s Premier has instructed that, in order to help our young people find jobs, and business opportunities, we must focus on promoting entrepreneurship and has recommended to set up an “Innovation and Startups Taskforce,” which can integrate various government agencies and bring their strengths together.</p>	

¹ NZIER report (March 2015) to APEC 2015 Economic Report (AEPR) - The role of structural policies in innovation

Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</i></p>	<ol style="list-style-type: none"> 1. Considering rapidly changing science and technology, and that innovative R&Ds in engineering materials, technology, and methods mostly help improve functions, efficiency, energy-saving and carbon reduction, Chinese Taipei's Government Procurement Act may be explained as follows: <ol style="list-style-type: none"> (1) Turn-key: When a procurement, in accordance with Article 24 of the Government Procurement Act, consolidates both project design and work into a contract for tendering, the entity may stipulate in the tender documentation the functions or benefits that must be achieved following completion of the work, as well as the information that must be provided by the tenderer when it makes its tender. Furthermore, the tenderer, in accordance with the tender documentation, will itself provide the materials, technology, and engineering methods for evaluation, which need not be stated in the tender documentation. (2) Procurement with Different Qualities to the Lowest Tender and the most advantageous tender: An entity may adopt the lowest tender or the most advantageous tender of qualified suppliers to award procurement with different qualities, and when the tenderer propose new materials, technology, and engineering methods that are of superior quality with regard to the requirements of the tender documentation, the awarded chances of the tenderer will be increased. 2. Statistical data in 2014 shows government procurement that were awarded to the most advantageous tender increased 10% from the year 2000, and the proportion of turn-key projects went to 80% from about 30%. 3. According to Article 35 of the Government Procurement Act, an entity may provide in the tender documentation that a supplier is allowed to submit an alternative technology, methods, materials, or equipment to shorten construction period, save expenditure, or increase the efficiency, provided that the original function requirement is not impaired. Also, to maintain flexibility, the awarded tenderer may, with reference to Item 21 of Essential Requirements 	

	for Procurement Contracts, petition the entity for contract changes when there are new methods and materials superior or more advantageous to the entity.	
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification programme in place and if so how comprehensive is it? Also, is any administrative simplification programme linked to programmes to reduce corruption?</i></p>	<p>To increase administrative efficiency and enhance regulatory transparency, since 2008, Chinese Taipei has launched business environment reforms based on the World Bank's Doing Business, the result of which has been the following:</p> <ol style="list-style-type: none"> 1. Simplification of the Administrative Process: <ol style="list-style-type: none"> (1) Business start-ups have been facilitated by doing away with capital requirement, abolishment of the Unified Certificate System, and an online website for registering a business, and in addition by the total implementation of electronic signatures for business registration. (2) Administrative simplification in accordance with an objective of providing faster and simpler procedures to meet the needs of individuals and businesses. The application process for getting electricity has been simplified, as has business income tax filing and payment, and the Customs, Port and Trade Single Window has been created, as well as the online registration and inquiry of movable property secured transactions. All this has improved the business environment and lessened regulatory obstacles, thus cutting down on business costs and speeding up the administrative process. 2. Increasing Regulatory Transparency and Improving Corporate Governance: amend the Company Act to strengthen the obligation of the Board Chairman to explain conflicts of interest to the Board, amend the Securities and Exchange Act to toughen regulation of related-person trading. 	
<p>Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. <i>Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any adverse impact on competition and hence innovation?</i></p>	<ol style="list-style-type: none"> 1. In accordance with the “guidelines for central administrative agencies in the law-making process”, bills proposed by executive agencies must make a comprehensive regulatory impact assessment, including costs, benefits, human rights and gender impact. 2. Although the above regulation does not have a clause specifically prescribing competition impact, the procedure requires public consultations, including the need to solicit opinions and collect the views of experts and academics or stakeholders during the law-making process. Consultations should be held with relevant agencies or local government agencies on the draft law. If consensus cannot be reached, differing opinions and reasons why they were not adopted 	

	should be illustrated.	
<p>Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. <i>How easily can skilled people move between firms?</i></p>	<ol style="list-style-type: none"> 1. To promote innovation and innovative business, the government has been acting to identify and abolish regulatory obstacles to innovative business creation and the introduction of talent. The latest developments in these efforts are listed below. <ol style="list-style-type: none"> (1) Relaxation of the capital and revenue requirements on hiring foreign technicians and supervisors by innovative startups. (2) Relaxation of work experience requirement on hiring overseas technicians by innovative startups. (3) R&D-related regulations revised to allow income tax deferrals on stocks acquired through exchange of intellectual property rights. (4) Overseas technicians hired for innovative startups who have been trained professionally or have demonstrated outstanding performances may be exempt from the current requirement for postgraduate education. (5) To broaden the definition of "supervisors" for the application of loosened regulations on employment of foreign talent. 2. The government plans to issue "startup visa" to attract overseas entrepreneurs to start an innovative business in Chinese Taipei and combine international creativity with local resources, so as to encourage domestic creative activities and boost economic growth. 3. Chinese Taipei keeps working on relaxing restrictions and barriers for skilled people to move between economies and firms. The Administration has formulated the "HeadStart Taiwan" project, including a startup visa program for global talents or teams to expedite the application process and provide convenience to visit or reside in Chinese Taipei for engaging in innovation and startups. Moreover, to attract foreign graduates to stay in Chinese Taipei for work, a "points- and quota-based mechanism" has been implemented since July, 1, 2014. The newly-launched system provides applicants a much easier way to get their work permit by using "pluralistic review" criteria. Factors include degree, monthly salary, work experience, qualifications, Mandarin Chinese language skill, foreign language skill, residence in foreign country and enterprise's compliance with industry development policy. As long as an 	

	applicant gets 70 points, he/she is qualified to obtain work permit.	
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Table C - Competition policy

Competition policy mechanisms	Current position	Any other comments
<p>Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other. <i>How does competition policy deal with protection of consumers? Does competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and dynamic efficiency?</i></p>	<ol style="list-style-type: none"> 1. The main purpose of competition law and policy in Chinese Taipei is to ensure market competition, consumers’ interests is also one of the purposes set out in the Article 1 of the Fair Trade Act (FTA) though. From a competition enforcer’s perspective, consumers’ interests do not refer to individual interest of every consumer. It means that consumers can benefit from a competitive market with lower price, better quality and increased efficiency and innovation. 2. Efficiency is one of factors that may be taken into account when the Fair Trade Commission (FTC) in Chinese Taipei reviews merger notifications and assesses applications of concerted action (cartel) exemptions. For example, when considering the economic efficiency in assessment of the overall economic benefits in a merger that may raise significant competition concerns, the “Guidelines on Handling Merger Filings” prescribe that economic efficiency needs to be merger-specific, verifiable in short term and be able to pass on to consumers. Regarding exemption of the concerted action, the FTC may consider efficiency as one of criteria for assessing overall economic benefit and public interest in some types of concerted action such as joint research and development, specialization and joint technical innovation. The Paragraph 2 of Article 16 provides that each approval shall specify a time limit not exceeding five years. In this regard, the FTC may not consider the efficiency that may occur after five years. 	

Competition policy mechanisms	Current position	Any other comments
<p>Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to fact based rule of reason analysis. <i>Does the competition authority(s) have the legal authority to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i></p>	<ol style="list-style-type: none"> 1. The FTC may take efficiency into account in accordance with the FTA and relevant regulations. According to Article 15 of the FTA, no enterprise shall engage in any concerted action; but in some circumstances, concerted actions such as joint research and development on goods, services, or markets may be approved with application to the FTC for the purpose of improving industrial development, technological innovation, or increasing efficiency. Besides, dynamic efficiency may also be considered when reviewing mergers in specific markets, such as telecommunication industrial and digital convergence service industry. 2. If there are any cases involving efficiency claims, the case handling department may discuss these cases with the Information and Economic Analysis Office in the FTC. The Information and Economic Analysis Office may evaluate these efficiency claims coming from the parties involved and give some suggestions toward the cases. 	
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or sub-national government?</i></p>	<ol style="list-style-type: none"> 1. According to Article 46 of the FTA, the FTA has precedence over other laws with regards to the governance of any enterprise's conduct in respect of competition. Therefore, the reach of competition policy and its enforcement in Chinese Taipei extend to all goods and services markets except other laws provide relevant provisions that do not conflict with the legislative purposes of the FTA. 2. None of sectors of the economy are excluded from competition regulations in Chinese Taipei. In addition, any competition issues arising from conduct of state-owned enterprises (SOEs) and government agencies that engage in business are fully subject to the FTA. 	
<p>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. <i>Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective decision involving other Ministries? How is any</i></p>	<ol style="list-style-type: none"> 1. The FTC is an independent body and the sole enforcer of the FTA in Chinese Taipei. The FTC can initiate investigations in response to complaints from enterprises, customers or consumers about alleged violations of the FTA. Commissioners are assigned to supervise cases and meet weekly to decide matters which are achieved by majority vote of a quorum of the membership. Thus, the FTC actions are not to be scrutinised by other 	

Competition policy mechanisms	Current position	Any other comments
<i>independence established and safeguarded?</i>	<p>agencies.</p> <p>2. The Fair Trade Act and the Organic Act of the Fair Trade Commission provide safeguards against inappropriate interference with the investigation and decision-making process. In particular, the FTC's operational independence can be guaranteed as a result of fixed tenure system and requirements for commissioners to be politically impartial and beyond party affiliations. In addition, the latest amendments of the FTA reinforce the FTC's independent status. Appeals from FTC's decisions would be taken directly to the Administrative Court, rather than an appeals committee responsible to the Executive Yuan.</p>	
<p>There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. <i>Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets with potential for innovation?</i></p>	<p>The FTC is a sector-based organization, with separate departments dealing with services and agriculture, manufacturing and network industries, and unfair competition. Therefore, the FTC's enforcement covers every sector and market. The FTC may conduct investigations upon complaints or ex officio under the FTA. However, ex officio investigations usually focus on highly-concentrated markets.</p>	
<p>There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i></p>	<p>The main purpose of competition policy in Chinese Taipei is preserving market competition. Openness to foreign investment and eliminating trade barriers are conducive to competition by encouraging new entries and increasing competitors in domestic markets. To some extent, openness to trade and investment and competition law enforcement are complementary to each other. However, openness to trade and investment might not be major concern when enforcing competition law.</p>	

Table D - Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i></p>	<p>To avoid agency problem between shareholders and management, Chinese Taipei has adopted "Corporate Governance Roadmap 2013," which set out five directions and 44 specific action plans to strengthen corporate governance and internal control mechanism in listed companies². There are three major policy measures to solve the potential interest conflict between the owners and the management. They are the following:</p> <ol style="list-style-type: none"> 1. We strengthen the capability and accountability of Board by introducing independent director, audit and remuneration committee regime since 2006 and gradually expand the scope of mandatory establishment of independent director and the two above-mentioned committees between 2006 and 2013 (Ref. Security and Exchange Act §14-2~§14-5). It is believed that a well-functioning board provides effective oversight mechanism to encourage corporations to use their resources well, and improve their efficiency and competitiveness. 2. We promote clear and efficient disclosure requirement on financial and non-financial information to reduce information asymmetry between insiders and outsiders. Regarding the non-financial information disclosure, the authority recently released rules to require specific listed companies to compile Corporate Social Responsibility Reports in November 2014 (Ref. Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies §2). As for financial information, the authority has shortened the preparation period of annual and quarterly financial report to make earlier public disclosure since 2012 and require all public companies to adopt IFRS starting from 2013 (Ref. Security and Exchange Act §36). 3. Corporate governance evaluation system is introduced in 2014. The evaluation will be conducted once a year by Taiwan Stock Exchange, which will release the evaluation results along with those companies being ranked 	

² <http://www.sfb.gov.tw/en/home.jsp?id=99&parentpath=0,8>

	<p>among the top 20% of all companies starting from April 2015. With systematic assessment, investors and companies could understand the implementation results of the company in terms of governance and its overall position in the market. That makes it possible to implement corporate governance via the combination of law enforcement and market mechanism.</p>	
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital funds and direct capital raising from the public. <i>Do your economy's financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</i></p>	<p>Public companies are able to raise capital by issuing bond and equity to the public under Securities and Exchange Act §22 and § 43-6- § 43-8. A series of deregulation have been adopted to simplify capital raising procedure.</p> <ol style="list-style-type: none"> 1. Companies are now offered simpler capital raising procedures. Securities issues, which previously needed prior approval from the competent authority, now require only effective registration after article 22 of the Securities and Exchange Act amended in 2006. 2. Public companies are allowed to carry out private placement of securities which has a simpler review procedure. Specifically, a company which privately issued securities does not have to apply to the competent authority until 3 years have elapsed from the delivery date of the privately placed securities. Instead, they just need to disclose relevant information to the public (such as price of the shares, the methods of selecting the specified persons, the reasons necessitating the private placement) rather than submit registration application in advance. 3. To support further development of the bond market, Chinese Taipei has completed a "Bond Market Development Project" and adopted a set of related measures. Making reference to regulations in neighbouring countries, we eliminated rules that formerly required a prospective bond issue to be accompanied by a credit rating report; instead, an issuer is allowed to decide for itself whether it wishes to obtain a credit rating report. In addition, we adopted multi-tier regulation of bond investors, subject only to the requirement that buyers must be qualified institutional investors. Bond registration procedures and documentation requirements (including prospectus) for issuing professional bonds³ were greatly simplified in order to lower the costs incurred by bond issuers. <p>Under these measures, we intended to help companies raise capital more</p>	

³ The so-called professional bonds means the buyers of bond are professional investors including juristic persons and high-net-worth individuals.

	<p>efficiently and cheaply. As of the end of December in 2014, there were 1,538 companies listed on the Taiwan Stock Exchange and Taipei Stock Exchange. The total capital issued was NT\$388.6 billion, among which 27% through stocks, 43% through corporate bonds, 16% through convertible bond, 6% through overseas corporate bonds and 6% through overseas stocks.</p>	
<p>The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. <i>Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing??</i></p>	<p>Capital market plays a vital role in facilitating enterprises of all sizes grow and expand globally, invigorates local economies, and leads to more diverse industrial development. Chinese Taipei has been endeavouring to construct multi-layer capital market. Currently, we have four board markets including TWSE Main Board (for large sized listed companies), TPEX General Stock Board (for medium sized listed companies), TPEX Emerging Stock Board (for pre-listing preparation) and Go incubation Board (for small sized non-public companies). A comparison of listing requirements for the first three main boards is shown in the Table 1.</p> <p>In a move to help foster the multitude of micro and small innovative enterprises in Chinese Taipei and add value to innovation, the TPEX unveiled the Go Incubation Board for Startup and Acceleration Firms (GISA) on January 3, 2014. This new board adds another level to the capital market and emboldens innovative companies to bring fresh vitality to the economy and create more job opportunities. At the same time, it is hoped that the integrative counselling mechanism of the TPEX that comes with the launch of GISA will become an active force that propels industrial transformation and upgrading and further drives the rapid evolvement of the creative industry. At the end of 2014, there had been 62 companies listed on Go incubation Board.</p> <p>To encourage startups, emerging technology, cultural or creative enterprises to enter the capital market, domestic companies may be exempt from the listing requirements of duration of corporate existence and of profitability while applying for listing on the Taiwan Stock Exchange or the Taipei Exchange, if they could obtain an assessment opinion by the central competent authority of the target industry, in accordance with Article 5 of the “Taiwan Stock Exchange Corporation Rules Governing Review of Securities Listings” and Article 3, paragraph 4 of the “Taipei Exchange Rules Governing the Review of Securities for Trading on the TPEX.” The assessment opinion recognizes the company as a “technology company” or a “cultural or creative company” with successfully</p>	

	<p>developed and marketable products or technologies. At the end of 2014, there were 90 domestic listed companies, which were recognized as "technology companies" through the way abovementioned when they applied for listing.</p> <p>Furthermore, we recently took reference of foreign legislative experience and plan to establish Crowdfunding Platform, which would enable non-public micro enterprises raise fund more easily. Accordingly, we have proposed rules on Crowdfunding requirements and the qualification of Crowdfunding intermediaries. The draft of Crowdfunding rule is seeking the public comments now.</p>	
<p>Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However, these also allow poor managers the opportunity to repeatedly start businesses that fail with losses to shareholders and creditors. <i>How is the balance struck between enabling risk taking and protecting shareholders and creditors?</i></p>	<p>In Chinese Taipei's legislation regarding insolvency and bankruptcy, there are three mechanisms to balance risk and protection, including prudent reorganization plan adoption procedure, sound governance structure and adequate information disclosure.</p> <ol style="list-style-type: none"> 1. For reorganization plan, only the company, which suspends due to financial distress but still has possibility for rehabilitation, can apply to court for reorganization. The reorganizers have to submit a clear reorganization plan (which shall be adopted at the meeting of interested parties) to the court for a ruling of approval. The plan shall bind on the company and the interested parties. [Company Act §282, §304, §305] If a listed company is unable to pursue reorganization, a company will enter into a formal bankruptcy procedure under the Bankruptcy Act in order to implement an equitable and orderly repayment scheme amongst its creditors. 2. As for governance structure, the power of business operation shall be transferred from directors (supervisors or audit committee) to reorganizers (reorganization supervisors) after a ruling for reorganization is rendered from the court. Also, the interested parties' meeting, which is composed of shareholders and creditors, shall replace shareholder general meeting as the top authority of a company. In the execution of duties, the reorganizer shall act under the provision of the reorganization supervisors. In case a reorganizer or a reorganization supervisor acts improperly, the court has power to discharge them. [Company Act §289, §290, §300, §301] 3. As for information disclosure, a public company which enters reorganization phase still has to abide by the Securities and Exchange Act to disclose 	

	<p>material information. The material information includes financial report, acquisition or disposal of assets, endorsement and guarantee, an incident sufficient to affect shareholders' interest, etc. [For detailed info, please refer to the "List concerning what information Publicly-held companies should announce to the public or report to the FSC."4]</p>	
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Table E - Public sector governance

Public sector governance mechanisms	Current position	Any other comments
<p>The rule of law implies that every citizen is subject to the law, including law makers themselves. Limits to the rule of law occur because of neglect or ignorance of the law, corruption, or the lack of corrective mechanisms for administrative abuse, such as an independent judiciary. <i>Does your system actively protect and enforce the property rights of different stakeholders? If so what sort of legal mechanisms are available and used?</i></p>	<ol style="list-style-type: none"> 1. Article 15 of Chinese Taipei's Constitution stipulates that the right of property shall be guaranteed to the people. Thus, property rights of the people are the fundamental rights being protected by the Constitution. Lawmakers, who intend to impose legal restrictions upon or deprive the people of property rights, shall abide by Article 23 of the Constitution, which states that all the freedoms and rights enumerated in the Constitution shall not be restricted by law except by such as may be necessary to prevent infringement upon the freedoms of other persons, to avert an imminent crisis, to maintain social order or to advance public welfare.. 2. The Judicial Yuan is one of five branches of the Government and serves as the highest judicial organ of Chinese Taipei. Its grand justices, being nominated by the Leader of Chinese Taipei and approved by the Parliament, serve eight-year terms. The grand justices, via forming collegial panels, are to interpret the Constitution and unify the interpretation of laws and orders. The interpretation of a Grand Justice may invalidate laws or orders in case of violating the Constitution and bind all administrative organs throughout the country and the people, so as to prevent improper laws or orders from infringing people's fundamental rights (including property rights). 	

⁴ <http://goo.gl/gVtf3t>

Public sector governance mechanisms	Current position	Any other comments
	<p>3. To protect property rights of the people, Chinese Taipei also enacts various laws and orders to serve the purpose, which can be classified into two categories: civil code and criminal code. If the offenders wrongfully infringed the property rights of others, through civil law rights-holders can request return of the property concerned or claim for damages from the offender. The case can also be settled via alternative dispute-resolution mechanisms such as mediation, settlement, arbitration, etc. Rights-holders can also initiate civil action against offenders to court and the court is to adjudicate the case and make a judgement on the case accordingly. If the unlawful infringement constitutes a criminal offense, the offenders will be punished in accordance with the criminal code.</p> <p>4. Chinese Taipei has a three-tiered court system made up of the Supreme Court, the High Courts, and the District Courts. The Constitution of Chinese Taipei states that judges shall be above partisanship and shall, in accordance with law, hold trials independently or in collegial panels, free from any interference. Furthermore, the Constitution states that judges shall hold office for life. No judge shall be removed from office unless he has been guilty of a criminal offense or subjected to disciplinary measure, or declared to be under interdiction. No judge shall, except in accordance with law, be suspended or transferred or have his salary reduced.</p>	
<p>State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. <i>In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are</i></p>	<p>According to the “2013 Performance Evaluation Report of State-owned Enterprises (SOEs)⁵,” the gross productivity of the current 19 SOEs accounts for 3.64% of the total GDP in the year 2013. Like other private enterprises, the SOEs of Chinese Taipei must abide by the general business operations rules, such as the Company Act, along with other laws and regulations for specific industries, such as the Electricity Act, the Petroleum Administration Act, and the Natural Gas Enterprise Act, etc. In the financial aspect, both SOEs and private enterprises, in accordance with the relevant government tax code, are subject</p>	

⁵ The “2014 Performance Evaluation Report of State-Run Enterprises” would be published in August of 2015.

Public sector governance mechanisms	Current position	Any other comments
<p><i>there SOEs explicitly tasked with encouraging private sector innovation?</i></p>	<p>to tax payments of income taxes, sales taxes, tariffs, etc., without any subsidy or enjoying more favourable regulatory treatment.</p> <p>The Industrial Development Bureau of the Ministry of Economic Affairs is currently drafting a new amendment to the Statute for Industrial Innovation, with the intention of raising the R&D expenses of the SOEs so as to bring about innovative R&Ds for related industries.</p>	
<p>A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. <i>Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure?</i></p>	<p>Based upon the above-mentioned top-down instruction from the Premier and the global trend toward innovation and entrepreneurship, the Cabinet has set up the “Innovation and Startups Taskforce (ISTF).” In accordance with the “Organizational Goals and Policies for Innovation and Startups Taskforce (The Cabinet)” being announced on December 31, 2014, Vice Premier is to act as the Convenor of the taskforce to supervise the related matters, along with other Ministers without Portfolio acting as Deputy Convenors to coordinate inter-ministerial efforts. And the mission of the ISTF is to integrate the innovation and startups resources of relevant ministries and agencies and to coordinate the inter-ministerial efforts, via performing the functions of reviewing major innovation and startups programs and coordinating cross-ministerial innovation and startups development affairs.</p>	
<p>Strategies need to respond to economy context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks. <i>What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</i></p>	<p>Chinese Taipei has two competitive advantages internationally. Firstly, Chinese Taipei is home to many dreamers. In the 2015 Global Entrepreneurship Index released by the Washington-based Global Entrepreneurship and Development Institute (GEDI), Chinese Taipei ranked eighth among 130 nations surveyed, topping all other countries in Asia and boasting advantageous criteria for attracting investments from all over the world. Secondly, Chinese Taipei is also home to many manufacturers that can speedily provide customers comprehensive services from across the supply chain, ranging from design and manufacturing to logistics and marketing.</p> <p>It is hoped that through these efforts, Taiwan will become the Silicon Valley of</p>	

Public sector governance mechanisms	Current position	Any other comments
	<p>the Asia-Pacific and an ideal base for the youth to achieve their startup dreams. This is done via five major strategies: creating an online one-stop startup resource platform and offering mobile startup tour services, implementing deregulation, creating global innovative startup parks, encouraging creative thinking and accelerate youth business incubation, and funnelling in international capital and professional knowledge.</p>	

Table 1: Main Listing Requirements

Application Requirements	TWSE Main Board	TPEX General Stock Board	TPEX Emerging Stock Board
Company Size	Its paid-in capital shall be not less than NT\$600 million, and the number of its offered and issued common shares shall be not less than 30 million shares.	Its paid-in capital shall be not less than NT\$50 million, and the number of its offered and issued common shares shall be not less than 5 million shares.	No restriction.
Duration of Corporate Existence	It shall have been incorporated and registered under the Company Act for at least 3 years.	It shall have been incorporated and registered under the Company Act for at least 2 years.	No restriction.
Profitability	It does not have any accumulated deficit for the most recent fiscal year, and the ratio of income before tax to paid-in capital shall meet one of the following requirements: In each of the last 2 fiscal years > 6%. The average in the last 2 fiscal years > 6%. And the ratio for the most recent year is better. In each of the last 5 fiscal years > 3%.	Its net income before tax shall not be less than NT\$4 million in the most recent fiscal year, and the ratio of income before tax to paid-in capital shall meet one of the following requirements: Most recent fiscal year > 4%, and there shall be no accumulated deficit. In each of the last 2 fiscal years > 3%. The average in the last 2 fiscal years > 3%. And the ratio for the most recent year is better.	No restriction.

[Note: TWSE is an abbreviation of Taiwan Stock Exchange; TPEX is an abbreviation of Taipei Exchange.]

Appendix A Questionnaire on structural policies and innovation¹

Table A – Economy context (Optional)

Economy Context Questions	Current position	Any other comments
<p>Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i></p>	<ul style="list-style-type: none"> - Sustaining strong economic performance by upgrading production and services through science, technology and innovation (STI) is one of the major objectives reflected in Thailand’s current 11th National Economic and Social Development Plan. Thailand will encounter more complicated both global and internal changes, which affect the overall economic strategy as well as approaches to structural and innovation policies of the country. - There are both global contextual factors as well as internal contextual factors that shape the overall economic strategy and approaches to structural and innovation policies. These global contextual factors are, for example, changes in global rules and regulations, a multi-polar economy in the new world order, effects of global warming and climate changes, intense threat of food and energy security, and vital role of advanced technologies including ICT and digital economy in economic and social development. - The internal contextual factors, on the other hand, include; the current stage of the economy, engine of growth; age structure of the population, as for Thailand, the country is becoming an ageing society; the natural resources and environmental aspect; and the political situation in the country and the administrative aspect. - The Thai governments have adopted export-led policies for several decades. Foreign direct investment (FDI) has become the key factor driven Thai economy and multinational corporations play important role in technology development in the country. As a result, Thailand is crucially a technology-dependent country, and most of successful manufacturing firms in Thailand are original equipment manufacturers (OEMs). Policies on innovation in Thailand have been focusing mainly on technology transfer from foreign entity, yet with limited success. Only after the country facing the Asian Financial Crisis 1997 that the country started to focus more on strategic sectors 	<ul style="list-style-type: none"> - Thailand’s National Reform agenda has been currently enacted. One of the Reform agenda is focusing on the structural changes on the development of science technology and innovation (STI) and STI for development. - For Thailand to emulate some of the more successful economies in the region, it must embrace the challenge of achieving sustainable growth by enhancing productivity of products and services through technological innovation. - Thai firms must improve processes and business practices based on STI in order to enhance their competitiveness.

¹ NZIER report (March 2015) to APEC 2015 Economic Report (AEPR) - The role of structural policies in innovation

	<p>which are more innovative and have higher value added. Currently, Thailand has been under the first National Policy and Plan to Science Technology and Innovation, which is the first development plan of the country that the term “innovation” has been systematically provided.</p>	<p>- Some enabling factors, in particular, STI and quality of infrastructure need to be improved in order to achieve the targets in economic restructuring stated in the 11th Plan.</p>
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Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</i></p>	<ul style="list-style-type: none"> - Innovation is much more than R&D, it also involves the actions taken by various actors to upgrade their technological level, enhance their organisation and production methods, develop new activities and enter new markets. Innovation systems are not static and can be influenced by policy actions including government regulations. - In recent years, Thailand’s governments have launched many key policy initiatives and regulations that have contributed to improve innovation capabilities. Major efforts to introduce incentive measures to support innovation have been made. The lists of key examples can be seen here below. <ul style="list-style-type: none"> • “300% Tax Incentives” (Implementing) – Enhancing tax deduction for research, development and innovation expenditures from 200% to 300% as well as expanding the scope of expenditures such as innovation expenditure. • “Revising Public Procurement System” (Underway) – Allowing government organisations to use at least 10 percent (not exceeding 30 percent) of Thai innovation listed on Thailand Innovation Account on public procurement. • “Fund of Funds” scheme (Underway) – Setting up the Fund of Funds under Ministry of Science and Technology in order to invest in venture capital and private equity fund as well as the private fund given to research organisations and university. The government will provide initial capital of 500 Million Baht annually in four-year period (2017-2020). • “Revising the National Metrology Development Act” (Underway) – Improving metrology system in Thailand to achieve global standards. Aligning the demands of private sector with metrology system in a strategic manner. • “Revising the Research and Innovation Commercialization Act” (Underway) – Allowing company with less than 51 percent of Thai shareholders to be funded (with conditions). • “The Revise of the National Science, Technology and Innovation Act” (Underway) 	

	<p>– to enhance STI governance and management by 1) establishing Science Cabinet 2) establishing STI Advisory Committee for the Prime Minister 3) moving the National STI Policy Office from Ministry of Science and Technology to the Prime Minister’s Office and 4) setting up a Programmed-Based Budgeting System.</p> <ul style="list-style-type: none"> • “The Innovation Systems Development Committee” (Ongoing) – Setting up in February 2015 and chaired by the Prime Minister. The main objective is to drive Thailand towards “security, prosperity and sustainability” with innovation. <p>- In terms of law and regulation, the Intellectual Property system encourages innovation development and innovation creativity which lead to economic wealthy for creators and state. The regimes of Thai’s IP laws are subject to support and develop innovation according to the international standard. However, there are no regulations concerns the use of alternative approaches in innovation development.</p>	
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification programme in place and if so how comprehensive is it? Also, is any administrative simplification programme linked to programmes to reduce corruption?</i></p>	<ul style="list-style-type: none"> - There is currently an administrative simplification programme in place in Thailand, which is called “Thai Licensing Facilitation Act, B.E. 2558” (referred to hereafter as the Law). It was promulgated in January 2015, and will become effective on 21 July 2015. - Prior to the Law, the Office of the Public Sector Development Commission (OPDC) recognizes the importance of results-based management, with a focus on efficiency, value-for-money, work process and cycle time reduction and rightsizing in the Thai public agencies. The shift in process improvement from a focus on individual activity to improvement of an entire process by eliminating non-value-added activities has resulted in shorter, cheaper, and faster processes of government service provision. In 2014, OPDC has developed an indicator for Service Level Agreements (SLA) which will be the agreement between service providers and clients (customers) in order to ensure standardized public services are delivered and meet citizens’ needs. - In 2015, the Royal Thai government endorsed Licensing Facilitation Act, B.E. 2558 in which the SLA is a tool that will be institutionalized to continuously improve efficiency and service quality after implementation of the Law. - The Law aims to make dealings with the government faster, easier, and cheaper by focusing on: <ul style="list-style-type: none"> • Convenient and Modern Channels - improving access. • Clear and Consistent Information - easy to understand and consistent information 	

	<p>made readily available to everyone.</p> <ul style="list-style-type: none"> • Zero Touch - reduce need to appear in person. • Commitment to Service Delivery - stating consideration time. • Clear Decision Making Criteria - having clear criteria for consideration and publicizing them. • Automated Processing - increase use of ICT system to speedup processing time. • Ask for Less - reduce documentations requirement and not requesting information the public sector already has. • One Time Data Request - can only request additional documents once. • Reducing Duplication in Decision Making - reduce steps in consideration process. <p>- The Law also takes into account the problems uncovered during the on-going Doing Business program. As a result, many Doing Business indicators are being addressed via the Law; such as starting a business, obtaining construction and other permits, registering property, paying taxes, and trading across borders (particularly important are customs and immigration procedures).</p> <p>- Based upon this Law, public agencies as a service provider have required to deliver their services that is faster, easier, and cheaper with greater transparency, responsiveness, convenience, and openness for all citizens, as well as to promote better governance and curb corruption at all levels of government.</p> <p>- Moreover, the current government has reaffirmed its strong support to the trade and investment communities by reducing trade and investment barriers. In terms of administrative simplification through the reduction of procedures and time, Department of Business Development (DBD) has taken 7 steps to offer business operators convenience and in line with the Government's policy on public service improvement through reducing time, red tape, and also anti-corruption. Enhanced procedures are as following:</p> <ol style="list-style-type: none"> 1) Expanding the Registration Service: Allowing Registration of New Business All Around the Country-This service has been launched since 2nd June 2014. 2) Moving Forwards to the "e-Registration" Service - It is expected that this e- 	
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	<p>Registration service will be in operation by 2017.</p> <p>3) From e-Service to e-Certificate Service</p> <ul style="list-style-type: none"> - In 2012, six allied banks entered into co-operation. It is expected that this e-Certificate service will gradually be expanded to cover all branches of banks all over the country to meet the growing demand of service users <p>4) English-Language Certificates Relating to Juristic Persons in Preparedness for ASEAN Economic Community - This service will be put in place from January 2015.</p> <p>5) Business Data Warehouse</p> <p>6) DBD e-Service on Smart Phones</p> <p>7) Receiving Financial Statements</p> <p>8) Electronically (e-Filing) - The e-Filing system is scheduled to be in full operation by 2015.</p> <ul style="list-style-type: none"> - The Thai Government has also realized the need to simplify process in order to support innovation. For example, the cabinet has just approved the alterations in R&D tax program. Under the old program, it takes quite a long process to approve tax deduction due to expenses related to R&D. The new system will allow private companies to file tax deduction more conveniently and more timely. Also, Thailand has been working on revising its Intellectual Property Rights systems to make it more efficient. 	
<p>Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. <i>Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any</i></p>	<ul style="list-style-type: none"> - In Thailand, Regulatory Impact Assessment (RIA), as described in the Regulation on Criteria and Procedure for Submission of the Matter to the Cabinet, B.E. 2548 (2005), which is also known as “checklist”, requires government agencies, in relation to the proposed legislation, to assess the overall impact regarding to economic and social condition. - This checklist comprises 10 questioning criteria, developed from the Organisation for Economic Co-operation and Development (OECD) and proposed to Thailand by the Office of the Council of State. - In the RIA or checklist, the responsible agencies must answer the following questions: <ol style="list-style-type: none"> 1) What are the objectives and goals of the mission? 	<ul style="list-style-type: none"> - Thai Institution should enforce The Regulatory Impact Assessment on emergency decree, ministerial regulations, ministerial announce and announcement of sectorial regulatory agencies which significantly involve private and public sectors. - Thailand should have public

<p><i>adverse impact on competition and hence innovation?</i></p>	<ol style="list-style-type: none"> 2) Who should be responsible for the mission? 3) Is legislation required for the achievement of the mission? 4) Does the proposed legislation duplicate others? 5) What are burdens on individuals caused by the proposed legislation and is that legislation value for money? 6) Are responsible agencies ready for the enforcement of the proposed legislation? 7) Which agency should be responsible for the proposed legislation? 8) What are working process and audit method? 9) Is there a guideline for the enactment of subordinate legislation? 10) Is there public consultation on the proposed legislation and what are the results and responses?" <ul style="list-style-type: none"> - However there is no specific requirement for identifying the impact on competition and hence innovation - Recently, the Ministry of Justice and the Office of the National Economic and Social Development Board are running the project: "ANSSR: Developing Regulatory Impact Assessment (RIA) Guidelines as an Anti-Corruption Tool" under the APEC New Strategy for Structural Reform (ANSSR) which, on December 18th 2014, the Economic Committee approved the fund of USD 189,755 supporting the project for the development of the Regulatory Impact Assessment, both ex ante and ex post (before and after) regulatory process. The expectation is that the project will drive Thailand's regulatory process to grow effectively and truly support and stimulate the genuine competition in the society. 	<p>hearing or public dialogue before and after drafting in order to collect and exchange information, receive the relevant comments and conduct the creative discussions from all sector, such as proponents of draft legislation, government agencies and stakeholders.</p>
<p>Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. <i>How easily can skilled people move between firms?</i></p>	<ul style="list-style-type: none"> - Skill shortage (especially for S&T) is cited as one of the constraints that Thai firms face. Enhancing the supply of S&T skills in particular and other technical skills more broadly is essential to Thailand's future development. Although business sector in Thailand seeks improvements in the form of increased spending on training, as well as greater utilisation of public training facilities such as science parks, these initiatives are not commensurated with the perceived extent of the shortages. In order to cope with this problem, one of the key policies from the government is to facilitating the mobility of researchers from higher education institutions and public laboratories to 	

	<p>the industrial sector, the so-called “Talent Mobility Scheme”.</p> <ul style="list-style-type: none">- The scheme aims at addressing the problem of R&D personnel shortage in industrial sector, through mobilising personnel from the public sector (government, academic and research organisations) to work either full- or part-time in private companies. This scheme was recently approved by the cabinet on the 18th of February 2015 and the potential impacts of the scheme are currently under close monitoring.- For the firms, there are no interventions from the government in moving skilled people across private company. The Thai government strongly supports market-driven economy, in which individuals can have their own choices and decisions.- According to the Immigration Act, B.E. 2522 (1979), the free flow of skilled labour is limited by the law. This Act allows temporary stay in the Kingdom of Thailand for skilled labour under the restricted period and other conditions which are prohibited other employment, restricted the place of stay as indicated to competent official. (Chapter 4)	
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Table C - Competition policy

Competition policy mechanisms	Current position	Any other comments
<p>Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other.</p> <p><i>How does competition policy deal with protection of consumers? Does competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and dynamic efficiency?</i></p>	<ul style="list-style-type: none"> - Product and service markets in Thailand have characteristics of both monopolistic competition and oligopoly, that goods and services pricing depends on dominant firms, which lead to higher prices for consumers. - Thai Trade Competition Act B.E. 2542 (1999) is the law that govern the behaviour and control structure of entrepreneurs in markets, in order to promote good environment of trade and investment and to enhance the production efficiency of entrepreneurs to compete internationally. - Its main objective is to counter trade monopoly and enhances independently business operation. This Act aims to greatly benefits to consumer in selecting products and service at reasonable price. According to this Act, there is no term focus on short term allocative efficiency or longer term technical competency but only against monopoly. 	<ul style="list-style-type: none"> - Thailand has law about consumer protection which protect consumers from defective, dangerous or inferior goods, fraudulent and other unfair selling practices and at ensuring quality and safety, fair pricing and advertising, availability of credit. - Indirectly, the Trade competition law protects consumers against unfair business practices through preventing unfair behavioural patterns that would lead to controlling of the prices and product volumes in the market.
<p>Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in</p>	<ul style="list-style-type: none"> - The Trade Competition Act, B.E. 2542 (1999) established the Trade Competition Commission (the Commission) to apply and enforce competition law and assigns the Office of Trade Competition Commission, Department of Internal Trade as the secretariat body to carry out administrative tasks of the Commission. In this matter, the Commission has the power to make any recommendation to the Minister with regard to the issuance of Ministerial Regulations under the Act to gain technical and 	<ul style="list-style-type: none"> - There are no rules or guidelines with respect to the provisions, then Thailand should empower the Commission to prescribe unfair trade

Competition policy mechanisms	Current position	Any other comments
<p>technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to fact based rule of reason analysis. <i>Does the competition authority(s) have the legal authority to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i></p>	<p>dynamic efficiency.</p> <ul style="list-style-type: none"> - The Commission also has the power to issue Notifications prescribing the market share, sale volume, amount of capital, number of share, or amount of assets in order to disallow business mergers which may result in monopoly or unfair competition. - In addition, the Commission has the power to enforce through administrative processes by giving instruction to business operator who has market domination or who violates the anti-monopoly under the act for the suspension, cessation, correction or variation of activities - The Commission can appoint the specialized sub-committees to investigate specific cases, consider and provide opinions to the commission on the matter concerning the conduct indicative of market domination, a merger of businesses, the reduction or restriction of competition and other matters as entrusted by the Commission. 	<p>practices and guidelines for relevant authorities to increase enforcement of the Trade Competition Act and to prevent the entrepreneur without market domination from any act which is amounting monopoly, reducing or restricting competition.</p>
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or sub-national government?</i></p>	<ul style="list-style-type: none"> - The Trade competition act shall not apply to the act of: <ol style="list-style-type: none"> 1) Central, provincial or local administration 2) State enterprises under the law on budgetary procedure 3) Farmer's groups, co-operatives or co-operatives societies recognized by law 4) Businesses prescribed under the Ministerial Regulations - The definitions of business types according to the Trade Competition Act B.E. 2542 (1999) are agricultural, industrial, commercial, financial, insurance and service including but not limited to other trade determined by ministerial regulations. (Section 3) Therefore, this Act is to be construed as covering all types of products and services. Nevertheless, as mentioned above, this law refrains from forcing the businesses owned by the Government, State Enterprises as identified in Budget Procedures Act, B.E. 2502 (1959) (Section 4). 	<ul style="list-style-type: none"> - The state enterprises might be considered to be monopolist without offense. Thus, Thailand should consider what kind of state enterprises that the act should enforce on, such as the state enterprises that compete with private sector.

Competition policy mechanisms	Current position	Any other comments
<p>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. <i>Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective decision involving other Ministries? How is any independence established and safeguarded?</i></p>	<ul style="list-style-type: none"> - As described above, The Trade Competition Act, B.E. 2542 (1999) established the Trade Competition Commission responsible for the implementation of the law. The Commission is chaired by the Minister of Commerce with both Permanent-Secretaries for the Ministry of Finance and Ministry of Commerce as the Commission’s Vice Chairpersons. It consists of representatives of various government agencies, and can include 8 to 12 experts and the experts appointed as member must not be political officials (Section 8). The commission members are also from private sectors, who only work on a part-time basis. - The Office of the Trade Competition Commission, the secretariat body, is an integral part of the Department of Internal Trade, Ministry of Commerce, with the Director-General as the superior official. - According to the law, the Competition Commission should be independent when exercising their functions and their decisions should be based on the application of competition rules, supported by legal and economic arguments. There is no term focus on the rule of safeguarded. 	<ul style="list-style-type: none"> - The Office of the Trade Competition Commission should be upgraded to become an independent organization, as well as, have the freedoms on personnel management and Budget Execution. - The trade competition commission members could be seen as overrepresentation of private sector should be reduced and the commissions no less than half should work full-time.
<p>There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. <i>Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets with potential for innovation?</i></p>	<ul style="list-style-type: none"> - In an open and competitive environment firms have every incentive to raise their productivity by absorbing and developing new technologies and pursuing opportunities for innovation, especially in the face of rising competition. - Definitely, openness to competition in goods and services (including the least competitive markets), openness in financial markets, and efficient labour market are substantial policies to create a more favourable environment for firms’ innovation. - The Royal Thai Government strongly believed that it is through an increase in openness of goods and services (especially financial sector) that a highly efficient and productive national innovation system can be forged in order to effectively support the actions of producers in the private sector. This pronounces the high priority of the government in supporting the free-market economy. - In order to protect the least competitive market, The Trade Competition Act, B.E. 2542 (1999) generally regulates all restrictive trade practice among business 	

Competition policy mechanisms	Current position	Any other comments
	<p>operators that might create a monopoly or unfair competition. In this regard, the Trade Competition Commission is empowered to determine the market that would constitute a dominant position (Section 25).</p> <ul style="list-style-type: none"> - Since around 2000, Thailand has been realized its global position and competitive environment. Therefore, Thailand has been focusing on strategic sectors e.g. automotive and food that can become “global niche”. For example, on the automotive industry, Thailand has keen to become the world’s leader in the production of pick-up truck and small eco-cars. - Thailand also focuses on the development of innovation and creative products based on local wisdom from rural villagers. The program called “One Tambon, One Product (One district, one product)” focuses on the blue-ocean strategy by trying to develop and commercialize local products that are very unique. Therefore, innovation has been recognized not only to provide economic benefit but for Thailand’s inclusive development. 	
<p>There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i></p>	<ul style="list-style-type: none"> - There are several Free Trade Agreements that contain the competition article or fair conditions of competition. Moreover, the ASEAN Economic Community blueprint contains the competition policy and operational guidelines for competition policy in the region. - Thai competition authority continuously cooperates with international organization and other competition authorities in terms of technical and academic cooperation, especially, the countries succeeding in enforcing the competition law. 	<ul style="list-style-type: none"> - The effective enforcement of Thai Trade Competition Act would positively effect FTA negotiations, especially between Thailand and the EU, and would help Thailand improve the competition law to a clear and transparent one.

Table D - Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i></p>	<ul style="list-style-type: none"> - In addition to encouraging listed companies to have good corporate governance (CG), the Securities and Exchange Commission (SEC) announced sustainability development roadmap for listed companies in 2013, which included the implementation of CG practices, corporate social responsibility (CSR), and anti-corruption. The CSR and Anti-corruption Progress Indicators for Thai Listed Companies were developed and launched, respectively. - Moreover, according to the Securities and Exchange Act, B.E. 2535 (1992), any company would like to expand his business by raising capital in the market should be allowed to sell property or financial products i.e. bill of exchange, debenture or other instruments specified by the Securities and Exchange Commission. However, this regulation does not contain restriction that raising capital must be for innovation promotion purpose. 	<p>Government procurement is public mean to promote innovation. Innovative public procurement can include acquiring innovative products and services, promoting research and development and innovation activity, and measures for encouraging innovation-friendly private procurement.</p>
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital funds and direct capital raising from the public. <i>Do your economy's financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</i></p>	<ul style="list-style-type: none"> - The Securities and Exchange Commission (SEC) Thailand has provided various capital raising channels to finance the development of innovations through, Venture Capital fund, Private Equity trust and the newly launched equity crowdfunding (effective since May 16 , 2015) . All of those are alternative fundraising channels for business sector, including newly established business, small and medium enterprises (SMEs) as well as innovative and creative businesses. - For established firms, they can raise fund through the Stock Exchange of Thailand (SET) and Market for Alternative Investment (MAI). - In addition, the Ministry of Science and Technology (MoST) recently initiated the draft of "The Technology Business Promotion Act B.E.") The drafted Act is intended to enhance innovative industry which contribute to economy growth. The Act is created to support research, conducted by universities and research institutes, to commercialization through allowing them to set up VC fund. The budget of VC fund will come from a donation and a university. The donors can claim tax deduction for 200%. For the purposes of fund, it shall be invested in technology business in order to 	

	<p>eliminate the risk of the research commercialization. The Act prescribes that the fund shall set up a good governance and management system and shall be monitored by the Ministry of Science and Technology.</p>	
<p>The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. <i>Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing??</i></p>	<p>The legal framework in Thai capital market provides enablers for firms to raise capital via various instruments, not only private equity partners and public listing, but also other tools such as VC fund, PE trust, equity crowdfunding, SME bond, corporate bonds.</p>	
<p>Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However, these also allow poor managers the opportunity to repeatedly start businesses that fail with losses to shareholders and creditors. <i>How is the balance struck between enabling risk taking and protecting shareholders and creditors?</i></p>	<p>- Thai Bankruptcy Law has concerned about balancing between debtor taking risk in business and its creditors' interest. Categorizing into two processes, bankruptcy process and business reorganization process, debtor and creditor can select the process that is most suitable for its situation in relation with the law requirements.</p> <p>1. Business Reorganization</p> <p>It allows debtor, who doing business, faces financial distress due to poor management or external crisis but its business potentially rehabilitates and ultimately benefits to its creditors and shareholders. The debtor and creditor are able to file reorganization the business.</p> <p>1.1. Enabling risk taking</p> <p>Thai Bankruptcy Law enables the automatic stay to the debtor since the debtor has filed the petition to the Bankruptcy court. The automatic stay protects the debtor to keep running its business and, except otherwise the court's order, limits the creditors to exercise their rights over the debtor such</p>	<p>Currently, Legal Execution Department has proposed two Drafts amendment of Bankruptcy Act.</p> <p>The First Draft Amendment of the Bankruptcy Act, focusing on 5 main issues, namely,</p> <ol style="list-style-type: none"> 1. specifying requirements in a motion to composition (debt arrangement) and the authority of official receiver to examine the motion;

	<p>as enforcing the collateral, executing the judgment, and suing against the debtor.</p> <p>1.2. Protection of Creditor</p> <p>1.2.1. Reliving from the stay</p> <p>The creditors can file the court to lift or adjust the stay, if such limit is not necessary to the debtor’s reorganization, or the debtor did not protect the secured creditor’s right properly.</p> <p>1.2.2. Monitoring the process</p> <p>They are also entitled to monitor the proceeding by voting the plan and the amendment of the plan, if any.</p> <p>1.2.3. Getting higher payment</p> <p>The creditors have right to file their claims to get payment under the plan. To be confirmed by the court, the plan must provide to the creditors the payments in the amount greater than they would have been received if the debtor liquidated.</p> <p>1.3. Benefit of shareholder</p> <p>The shareholders are likely to benefit more because of an increase in value of their shares when the plan consummated.</p> <p>2. Bankruptcy</p> <p>In the bankruptcy case, the individual who has business but not incorporated can be filed bankruptcy by its creditors. The trustee will collect all debtor’s assets and claims in order to make the payments to the creditors.</p> <p>2.1. Enabling risk taking</p> <p>Debtor will be discharged automatically in three years after filling.</p> <p>2.2. Protection of Creditor</p> <ul style="list-style-type: none"> - The secured creditors must receive dividends not less than the collateral. They can choose either enforcing its collateral or waiving such right and file the claim against the estate. The unsecured creditors may have priority 	<ol style="list-style-type: none"> 2. allowing creditor who fails to file a claim within designated time in section 91, to file a claim in case of force majeure; 3. authorizing official receiver to examine the creditor’s claim; 4. prioritizing creditor rights; and 5. updating the criminal penalties especially fines. <p>This Draft will be deliberated by the National Legislative Assembly on 28 May 2015.</p> <p>The Second Draft Amendment of the Bankruptcy Act regarding Business Reorganization that allows SMEs to enter into the business reorganization procedures through prepackaged measures.</p> <p>The main issues of this Draft Amendment are;</p> <ol style="list-style-type: none"> 1. for commencing the business reorganization, the
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	<p>under the law. The other creditors would receive payments pro rata.</p> <ul style="list-style-type: none"> - Moreover, the Securities and Exchange Commission (SEC) has enhanced opportunity for entrepreneurs to access market based financing through different instruments suitable for the firms' growth stages while maintaining effectiveness of investor protection. - The SEC has promoted investor education/ financial literacy to empower and protect investor by ensuring that the disclosure of information is adequate for the public to make their investment decision. - The SEC has also developed specific risk mitigation tools for risky financial products; for example, knowledge test before investing in complex debt securities/ equity crowdfunding, as well as risk disclosure in filing documents for high risk equity instruments. 	<p>debtor, with reference to the Office of SMEs Promotion (OSMEP), must be indebted with no less than 3 million baht for natural person debtor, not exceed 10 million baht for corporate debtor, and such debt must be business related;</p> <ol style="list-style-type: none"> 2. allowing creditor to file for business reorganization; 3. applying an unable to pay test, instead of a balance sheet test; <p>This Draft is under the consideration of the Committee to consider the drafting laws of Ministry of Justice.</p>
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Table E - Public sector governance

Public sector governance mechanisms	Current position	Any other comments
<p>The rule of law implies that every citizen is subject to the law, including law makers themselves. Limits to the rule of law occur because of neglect or ignorance of the law, corruption, or the lack of corrective mechanisms for administrative abuse, such as an independent judiciary. <i>Does your system actively protect and enforce the property rights of different stakeholders? If so what sort of legal mechanisms are available and used?</i></p>	<p>Thailand gives precedence on the rule of law. As shown in many legislative acts relating to assets protection. One of the specific property right protection Act, Immovable Property Expropriation Act, B.E. 2530 (1987), this Act empower state to expropriate private immovable property for necessary public utility. Nevertheless, an owner or any legally possession person have the right to take compensation accordance with the law.</p>	
<p>State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. <i>In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are there SOEs explicitly tasked with encouraging private sector innovation?</i></p>	<ul style="list-style-type: none"> - In principle, the key objective of SOEs in Thailand is to provide the essential infrastructure for public and related services which are vital to the national security and social well-being (i.e. railway system, airports, electricity). SOEs partake in commercial activities on the government’s behalf, with no intention of fully compete with private sector. - However, in the case where there are SOEs competing with private companies in some key sectors such as Energy and Telecommunication sector, government aim to provide suitable environment for competition (rule and regulation /licensing process /reduction of SOEs privileges) in order to encourage a “level playing field” in the market. - For example, in operating the telecommunications business, <u>section 21</u> of Telecommunications Business Act B.E. 2544 (2001) specify that the National Telecommunications Commission shall, in addition to the law on business competition, prescribe specific measure according to the nature of telecommunications business, to prevent the licensee from committing any act that leads to monopoly, reduction or restriction of competition in supplying the telecommunications service. - Currently, Government through State Enterprise Policy Office (SEPO) supervises 56 SOEs, 	

Public sector governance mechanisms	Current position	Any other comments
	<p>which are categorized into 9 sectors i.e. transportation, energy, telecommunication, utilities, industry and commerce agriculture, natural resource, social and technology, and specialized financial institutions (SFI). Their operation and performance become one of the key factors for the Thai economy. For the last 10 years(2014 – 2005) , total revenue of SOEs has grown from 1.5 trillion Baht to 5.1 trillion Baht, and total asset has grown from 4.8 trillion Baht to 12.3 trillion Baht. These numbers indicate that the size of SOEs tend to increase over time. <u>And these SOEs revenue account for 42 per cent of the GDP.</u> Total disbursement of SOEs spending during year 2014 (cost of operation and capital expenditure) was approximately 18 per cent of GDP.</p> <ul style="list-style-type: none"> - Some SOEs have explicit role in encouraging private sector innovation. Some example cases are shown below: <p><u>Thailand Institute of Scientific and Technological Research (TISTR)</u> -Healthy beverage and snack products TISTR conducted a research project granted by the office of National Research Council of Thailand to develop the high vitamin and mineral rice beverage and snack products by using fruit sweetness to replace sugar. The project aims to increase nutritional values of the products while gaining consumer’s acceptability in terms of appearances and tastes. This will lead to the appropriate and high potential production technology in private sector in the future.</p> <p><u>PTT Public Company Limited (PTT)</u> - The PTT Hyforce Premium Diesel</p> <p>The PTT Hyforce diesel fuel is a premium grade synthetic which can help improving engine ignition and reducing the pollutant emission to the environment. Moreover, the PTT Hyforce diesel is the first diesel fuel in the country that meets Euro 5 standard (International Emission Standard) and fully compatible with high power diesel engine vehicles. This SOE innovation certainly stimulates and encourages private companies to improve their innovation and product quality before entering into the market.</p> <p><u>Electricity Generating Authority of Thailand (EGAT)</u> - LED light bulb EGAT has play a key role in promoting and supporting the usage of LED light bulb in Thailand. LED light bulb is the high-quality bulb with long lifetime energy efficient and environmental friendly. The support from EGAT in this case will save the energy consumption level in long run and help improving environmental condition in Thailand. Together, it creates the motivation for</p>	

Public sector governance mechanisms	Current position	Any other comments
	<p>improving LED technology in the light bulb production in private sector.</p> <ul style="list-style-type: none"> - In addition, the cabinet has passed the resolution in 2013 that SOEs can retain 3% of their profit to work on innovation projects. Some of the largest SOE in Thailand start to turn their business into innovative ones. Currently, we are in process to form the management platform of the 3% profit fund to support competition and innovation in the country. 	
<p>A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. <i>Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure?</i></p>	<p>National Science Technology and Innovation Policy Office (STI) was established in 2009 and committed to provide support to the government in terms of science, technology and innovation policy formulation, coordination, as well as policy promotion. The STI Office just launched Thailand's first Science, Technology and Innovation Policy and Plan for 2012-2021 which is systematically introduced following issues;</p> <ul style="list-style-type: none"> - Address STI for development and development of STI - Provide national direction for the next 10 years with periodic adjustments - Identify Focuses and Balance between Economic and Social Development and Context for Thailand - Preparedness for Future Changes that will have major impacts to Thai Society - Plan derived from Intensive and Widespread Public & Stakeholders Participatory Process with Implementation Strategies Incorporated <p>Beside from formulate the national STI policy, STI has major responsibilities as follows;</p> <ul style="list-style-type: none"> - to develop standard measurements, indicators, database, and conduct policy research on STI - to provide support and advice to other government agencies in formulating their own STI implementation plans - To coordinate and monitor the development of national S&T manpower - To monitor, evaluate and report the national STI implementation to the Committee and the Cabinet <p>In terms of knowledge infrastructure, Thailand has various research university and</p>	<p>There are the proliferations of R&D bodies in charge of R&D financing and management in Thailand, which results in an overlapping of tasks and responsibilities.</p>

Public sector governance mechanisms	Current position	Any other comments
	<p>research institution as our knowledge infrastructure, namely,</p> <ol style="list-style-type: none"> 1. Research University: The Office of Higher Education Commission (OHEC) has launched the National Research University Development project in order to develop academic excellence at universities so as to enhance national competitiveness. OHEC has granted extra financial support to encourage National Research Universities to dedicate themselves towards the intended objectives. Currently, there are 9 higher education institutions under the NRU located across the country. 2. Research institution: Thailand has research institutions which focus on industrial development such as National Science Technology Development Agency (NSTDA) and The Thailand Institute of Scientific and Technological Research (TISTR). <ul style="list-style-type: none"> - NSTDA executes 4 mandates missions: research and development, technology transfer, human resources development and infrastructure development. NSTDA is comprised of 4 national R&D centers; NECTEC, BIOTEC, NANOTEC and MTEC. Additionally, NSTDA works collaborative with other research organizations and universities through joint collaboration, contract research, and other mechanism to capture the best resources. - TISTR has long been a knowledge infrastructure over 30 years. TISTR has responsibilities to develop research and development, science and technology service, technology transfer and maximise the utilisation of technology and innovation both for commercialization and social benefits. <p>In addition, the Cabinet has passed a resolution establishing Science Park Promotion Agency (an innovation infrastructure), of which the Science Park agency committee is shared by the Minister of Science and Technology. The STI Policy Office works as a part of the collaborative with MoST and NSTDA to draft the country's first policy of science park promotion. Currently, there are 1 National Science Park, Thailand Science Park and 4 regional Science Parks which are Northern Science Park, North Eastern Science Park, Southern Science Park, and Eastern Science Park. In order to promote science park development, there are 3 packages which are 1) Privileges and Incentive, 2) Capacity Building and 3) Science Park Investment.</p>	

Public sector governance mechanisms	Current position	Any other comments
<p>Strategies need to respond to economy context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks. <i>What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</i></p>	<p>Science, technology and innovation capability is considered a major driver of the nation toward the future growth and sustainability, STI Office is extremely committed to fulfil the mission and assist the nation towards a better future. STI Policy Office has formulated plan and policy to assist the country in moving towards knowledge-based economy as well as to improve country's competitiveness and enhance socio-economic sustainability.</p> <p>For the purpose of enhancing STI capability, STI has developed policies and specific measures related to manpower and infrastructure to remove the obstacle and improve the incentive to enhance STI capability.</p> <p>STI manpower policy:</p> <p>Talent Mobility Program is a project aims to facilitate the mobility of researchers in governmental agencies and higher education institutions to industrial sector. The researchers are authorized to work full-time or part-time for the industry (3 months to 2 years). This policy is to solve the R&D personnel shortage in private sector and to the increase the proportion of business expenditure on R&D and to promote private sector to invest more in research and develop on science technology and innovation.</p> <p>STI infrastructure policy:</p> <p>Science Park development Program is to enhance the creation of new entrepreneurs in technology-based business, promoting private sectors to invest more in research and develop on science and technology, promoting and enhancing service provided in science parks including incubation centres, intellectual property support and management, testing labs, equipment, and consultancy services.</p> <p>STI incentive policy:</p> <p>IP policy to promote the country's competitiveness, aims to reduce the gap and promote technology commercialization. It consists of 4 key areas;</p> <ol style="list-style-type: none"> 1. Incentive for IP commercialization by giving IP ownership to funding recipient; STI currently proposes the draft of Thai Bayh-Dole Act to improve the incentive for funding recipient who proves to have technology transfer capability, which is 	

Public sector governance mechanisms	Current position	Any other comments
	<p>entitle to retain IP ownership of the government sponsored research results. This will lead to fulfil the gap between researches to commercialization.</p> <ol style="list-style-type: none"> 2. Reform IP registration system; STI proposed the measures to improve the registration to Department of Intellectual property (DIP) which are increasing in a number of substantial examiners and increasing in an investment on IT system. Currently, DIP has been allocated more budget to improve IT system and proposed to the Office of the Public Sector Development Commission to increase the number of examiners. 3. RDI Tax Incentive for private sectors; STI collaborative with Ministry of Finance propose the RDI Tax incentive by increased R&D tax deduction from 200% to 300% and expand the scope of R&D to RDI. This will lead to increase the private sector capability to conduct RDI. <p>Strengthening TTO capability; STI has been developing a network of Technology professional (innovation managers) to strengthen and share knowledge/practice through trainings and meetings. Also, build up the career path of innovation manager through accreditation.</p>	

Appendix A Questionnaire on structural policies and innovation

Table A – Economy context (Optional)

Economy Context Questions	Current position	Any other comments
<p>Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i></p>	<p>Following the global financial crisis, the United States has recovered faster than many other developed economies. Over the past two years, the U.S. economy grew at an annual rate of 2.8 percent, compared with 2.1 percent in the first three-and-one-half years of the recovery. The U.S. private sector has created 11.8 million new jobs over 59 straight months, the longest streak on record. 2014 was the best year for overall job growth since 1999, ushering in 3.1 million new jobs, and the unemployment rate fell 1.3 percentage points between 2013 and 2014, the largest decline in three decades. A reduction in long-term unemployment, one of the economy’s major post-crisis challenges, accounts for most of the fall in the unemployment rate. As the U.S. recovery has progressed, the economy has grown in a more sustainable way than before the global financial crisis began. In fact, the United States has improved several structural imbalances that jeopardized the economy’s stability prior to the crisis. The domestic energy production boom has reduced U.S. dependence on foreign oil, helping to narrow the current account deficit and reduce U.S. dependence on foreign borrowing. Health-care prices have been growing at the lowest rate in nearly 50 years. Real wage growth, however, still falls well short of what is needed to make up for decades of sub-par growth. Real median family incomes were at mid-1990s levels in 2013. (Source: Council of Economic Advisors, 2015 Economic Report of the President)</p>	<p>The U.S. is ranked 6th in the 2014 INSEAD Global Innovation Index and 3rd in the 2014-15 WEF Global Competitiveness Index.</p>

¹ NZIER report (March 2015) to APEC 2015 Economic Report (AEPR) - The role of structural policies in innovation

Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</i></p>	<p>President Obama issued an Executive Order on “Improving Regulation and Regulatory Review” in January 2011, which requires regulators to “identify and use the best, most innovative, and least burdensome tools for achieving regulatory ends.” The Office of Information and Regulatory Affairs (OIRA) within the Office of Management and Budget (OMB) has published detailed guidance on conducting RIA, which aims to “standardize the way benefits and costs of Federal regulatory actions are measured and reported.” (OMB, Circular A-4 of September 17, 2003, Regulatory Analysis). Regulators are required to “Identify and assess alternatives to direct regulation, including economic incentives and information, and use performance standards to the extent possible if regulation is chosen.” The kinds of alternatives that should be considered are listed in the RIA guidance:</p> <ul style="list-style-type: none"> • Different Choices Defined by Statute • Different Compliance Dates • Different Enforcement Methods • Different Degrees of Stringency • Different Requirements for Different Sized Firms • Different Requirements for Different Geographic Regions • Performance Standards Rather than Design Standards • Market-Oriented Approaches Rather than Direct Controls • Informational Measures Rather than Regulation <p>The options should be ranked using both benefit-cost analysis (BCA) and cost-effectiveness analysis (CEA), which “provide a systematic framework for identifying and evaluating the likely outcomes of alternative regulatory choices.”</p>	
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification programme in place and if so</i></p>	<p>Yes. The Paperwork Reduction Act (PRA), which was signed into law in 1980 and reauthorized in 1995, provides the statutory framework for the Federal government’s collection, use, and dissemination of information. The goals of the PRA include (1) minimizing paperwork and reporting burdens on the American</p>	

<p><i>how comprehensive is it? Also, is any administrative simplification programme linked to programmes to reduce corruption?</i></p>	<p>public and (2) ensuring the maximum possible utility from the information that is collected.</p> <p>In support of these goals, the PRA requires Federal agencies to take specific steps before requiring or requesting information from the public. These steps include (1) seeking public comment on proposed information collections and (2) submitting proposed collections for review and approval by OMB. Within OMB, the Office of Information and Regulatory Affairs (OIRA) carries out the information collection review.</p>	
<p><i>Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any adverse impact on competition and hence innovation?</i></p>	<p>Trade and competition impacts are not explicitly included in the regulatory analysis. When reviewing draft regulations with potential impacts on competition or international trade and investment, OIRA involves the relevant competition and trade agencies in its centralized review process.</p>	
<p><i>Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. How easily can skilled people move between firms?</i></p>	<p>U.S. law enables a U.S. employer to transfer a professional employee with specialized knowledge relating to the organization's interests from one of its affiliated foreign offices to one of its offices in the United States. Additionally, current U.S. law allows workers to change jobs within the U.S. without jeopardizing their ability to seek lawful permanent residence, but only if the new job is in a "same or a similar" occupational classification as their old job. Unfortunately, there is uncertainty surrounding what constitutes a "same or similar" job. To help eliminate this uncertainty, the U.S. Department of Homeland Security intends to issue a policy memorandum this year that provides additional agency guidance, bringing needed clarity to employees and their employers with respect to the types of job changes that constitute a "same or similar" job under current law. (See: http://www.uscis.gov/working-united-states/temporary-workers/l-1b-intracompany-transferee-specialized-knowledge)</p>	

Table C - Competition policy

Competition policy mechanisms	Current position	Any other comments
<p>Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other. <i>How does competition policy deal with protection of consumers? Does competition law in your economy focus largely on shorter term allocative efficiency or does it allow for longer term technical and dynamic efficiency?</i></p>	<p>U.S. competition law allows for consideration of longer term technical and dynamic efficiencies. For information regarding the approach of the U.S. Department of Justice (DOJ) and the Federal Trade Commission (FTC) (“the U.S. Agencies”) see the response to the question below.</p>	
<p>Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to fact based rule of reason analysis. <i>Does the competition authority(s) have the legal authority to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i></p>	<p>The DOJ and FTC have the legal authority to take into account gains in technical and dynamic efficiency. “[M]ost antitrust claims are analyzed under a ‘rule of reason,’ according to which the finder of fact must decide whether the questioned practice imposes an unreasonable restraint on competition, taking into account a variety of factors, including specific information about the relevant business, its condition before and after the restraint was imposed, and the restraints history, nature, and effect.” <u>State Oil Co. v. Khan</u>, 522 U.S. 3, 10 (1997). Courts accept various efficiencies in weighing effects, including technical or dynamic efficiencies such as making a new product available to consumers or improving the quality of a product or service. See, e.g., <u>Broadcast Music, Inc. v. CBS</u>, 441 U.S.1, 23 (1979); <u>NCAA v. Board of Regents</u>, 468 U.S. 85, 117 (1984).</p> <p>Both the FTC and DOJ have large staffs of experienced competition lawyers and economists to assist in this analysis. In addition, the U.S. Agencies have helped to develop a large body of case law and have published guidelines on which they and parties rely in factoring efficiencies into determining the effect of the agreement or conduct. For example, the 2010 Horizontal Merger Guidelines (“HMGs”), issued by DOJ and the FTC, in particular, provides helpful guidance on the role of efficiencies, focusing on merger analysis (http://www.justice.gov/atr/public/guidelines/hmg-2010.html#10). With respect to dynamic efficiencies, for example, the HMGs state that: “The Agencies also consider whether the merger is likely to enable innovation that would not otherwise take place . . .” (HMGs at §6.4). The HMGs recognize that</p>	

Competition policy mechanisms	Current position	Any other comments
	<p>these efficiencies may be longer term considerations. “Efficiencies also may lead to new or improved products, even if they do not immediately and directly affect price.” (HMGs at §10). They also address technical efficiencies such as the combination of complementary assets. (HMGs at §10).</p>	
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or sub-national government?</i></p>	<p>The general rule is that U.S. competition laws extend to all goods and services. National policy favors competition. See, e.g., <u>California Retail Liquor Dealers Association v. Midcal Aluminum, Inc.</u>, 445 U.S. 97, 106 (1980); <u>North Carolina Board of Dental Examiners v. FTC</u>, ___ U.S. ___, 135 S.Ct. 1101, 1110 (2015). Some specific markets, sectors, or conduct within markets, are exempted or excluded. Many conditions and limitations apply to qualify for these exemptions and exclusions. Among the markets, sectors or conduct that may meet the conditions to qualify for exemptions are the following:</p> <ul style="list-style-type: none"> • organized labor; • conduct within one of the 50 states which that individual state clearly articulates is exempt from the competition laws and actively supervises (State Action Doctrine); • efforts to influence or petition the government for policies or legislation that may limit competition (Noerr-Pennington protection); • associations formed solely for the purpose of engaging in export (Webb-Pomerene Act and Export Trading Company Act of 1982); • agricultural cooperatives; • some conduct by private parties engaged in regulated industries (e.g., insurance, transportation) and certain aspects of professional sports (e.g., baseball and football broadcasting). 	
<p>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. <i>Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective decision involving other Ministries? How is any</i></p>	<p>Both the DOJ and the FTC have strong and well-established histories of independent decision-making, and both Agencies exercise operational independence in selecting cases for enforcement action. The U.S. Agencies may consult informally with other parts of government, but both implement their enforcement programs independently.</p>	

Competition policy mechanisms	Current position	Any other comments
<p><i>independence established and safeguarded?</i></p>	<p>The Antitrust Division is part of the U.S. Department of Justice, and thus is part of the Executive Branch. The Antitrust Division’s enforcement decisions are solely those of the Department of Justice.</p> <p>The FTC is an independent agency within the Executive Branch that is subject to oversight by the U.S. Congress. The FTC’s organizational structure helps to ensure its independence. The FTC has five Commissioners with tenures for fixed terms. Commissioners cannot be removed over disagreements about enforcement decisions or policy, and no more than three of the five Commissioners can be from the same political party.</p>	
<p>There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. <i>Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets with potential for innovation?</i></p>	<p>DOJ and FTC make decisions on how to deploy investigative resources based on the markets at issue and anticompetitive behavior that will cause significant consumer harm. Determining which matters are significant is a flexible, matter-by-matter analysis that involves consideration of a number of factors, including the volume of commerce affected, the geographic area impacted, and the impact of the investigation.</p> <p>In 2014, the FTC and Antitrust Division addressed significant law enforcement and policy issues throughout the economy, targeting areas in which they could provide the greatest benefits to consumers. For the FTC, the focus of its competition mission was on merger and non-merger enforcement in a variety of industries, including health care, pharmaceuticals, high technology, energy, and retail. The Antitrust Division’s civil and criminal enforcement programs preserved competition in a wide range of industries, including airlines, e-books, health care, ocean shipping and auto parts. For a more complete discussion of the Antitrust Division’s and FTC’s enforcement in 2013-2014, see: Antitrust Division Update 2014, available at http://www.justice.gov/atr/public/division-update/2014/ and FTC Annual Highlights 2014, available at https://www.ftc.gov/reports/annual-highlights-2014.</p>	

Competition policy mechanisms	Current position	Any other comments
<p>There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i></p>	<p>The policies of the U.S. Agencies are premised on the belief that the United States' economic well-being is linked to competitive markets; competition in the U.S. markets, in turn, is greatly enhanced by open and free trade and investment policies. At the enforcement level, the role of imports and foreign investment are often critical to an accurate definition of markets and an assessment of market power and the likelihood of entry. Trade and investment often contribute to the realization of important dynamic efficiencies that translate into substantial consumer benefits.</p> <p>The Agencies work on issues at the intersection of trade and competition policies, including in trade agreements. The U.S. Agencies participate in U.S. delegations that negotiate possible competition chapters in bilateral and regional free trade agreements (FTAs). In recent years, the Agencies have participated in competition policy discussions associated with the Trans-Pacific Partnership ("TPP") and the Transatlantic Trade and Investment Partnership ("TTIP") negotiations.</p>	

Table D - Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i></p>	<p>The corporation laws of the 50 states of the United States (and the District of Columbia) are enabling statutes that provide for the formation and incorporation of corporate entities and the terms of governance among shareholders, the board of directors, and management. State corporate law is embodied in both the enacted statutory provisions and judicial decisions interpreting those provisions. In the United States, several key facets of corporate governance, such as directors' duties of loyalty and care, are derived from judicial decisions instead of legislation. This response focuses on the Delaware General Corporation Law (DGCL) as the reference point for the state law discussion because more than 60% of the Fortune 500 companies are incorporated in Delaware, and Delaware corporate law statutes and related jurisprudence are well-developed.</p> <p>Two general fiduciary duties imposed on directors are the duty of care and the duty of loyalty. DGCL Section 141(a) provides that the business and affairs of a corporation are to be managed or under the control of its board of directors. In furtherance of the basic concept contained in DGCL Section 141(a), the duty of care is aimed at a director's responsibility to exercise an appropriate degree of diligence when managing the corporation's business or affairs and requires that a director remain fully informed about the corporation's activities.</p> <p>The duty of loyalty requires that the best interests of the corporation and its stockholders take precedence over any direct or indirect personal interest not shared by stockholders generally. Directors should watch for and be aware of any interests that could potentially be considered to conflict with the corporation's interests.</p> <p>Shareholders are able to bring class actions on behalf of themselves and other shareholders and derivative actions on behalf of the corporation to enforce breaches by directors of these fiduciary duties. The business</p>	

	<p>judgment rule is an established judicial standard of review ordinarily used by the judiciary if a director’s satisfaction of the duty of care is challenged in court. It allows courts to analyze a director’s behavior and determine whether a board decision can be successfully challenged or whether a director should be personally liable.</p> <p>In addition to these state corporate law provisions, U.S. federal securities laws and regulations contain a number of disclosure requirements that relate to corporate governance, including disclosures regarding management, executive compensation, security ownership, related party transactions, and ethics. These laws and rules derive from a simple and straightforward concept: all investors, whether large institutions or private individuals, should have access to certain basic facts about an investment prior to investing and on an ongoing basis. To achieve this, the SEC requires public companies to disclose meaningful financial and other information to the public. This provides a common pool of knowledge that investors can use to assess whether to buy, sell, or hold a particular security.</p>	
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital funds and direct capital raising from the public. <i>Do your economy’s financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</i></p>	<p>Yes. The Securities and Exchange Commission’s (SEC) mission is to protect investors, maintain fair, orderly and efficient markets, and facilitate capital formation. In the United States, a company may raise capital in an offering that is registered with the SEC or in a transaction that is exempt from the SEC’s registration requirements. Please refer to the discussion of registered and unregistered offerings on the “Small Business and the SEC” web page, available at: http://www.sec.gov/info/smallbus/qasbsec.htm#eod6.</p> <p>Examples of registered offerings include the registration of a company’s initial public offering (IPO) or a follow-on offering. Securities laws and SEC rules allow certain smaller companies and newly public companies to prepare their disclosures using rules designed to make compliance easier. If a company qualifies as a smaller reporting company, it may choose to prepare the disclosure in the prospectus relying on disclosure requirements that are scaled for smaller companies. The Jumpstart Our Business Startups Act (JOBS Act) was enacted in 2012 to improve access to</p>	

	<p>the capital markets for emerging growth companies, and created a new category of issuers that may comply with scaled disclosure requirements in their IPO and subsequent periodic reports. Please refer to the SEC’s discussion of the JOBS Act, available at http://www.sec.gov/spotlight/jobs-act.shtml and http://www.sec.gov/divisions/corpfin/guidance/cfjobsactfaq-title-i-general.htm.</p> <p>In addition to registered offerings, a company may elect to offer its securities in an unregistered offering on the basis of an exemption from the Securities Act of 1933. Private investment vehicles such as venture capital funds frequently rely on these exempt offerings to raise capital for their investments. Section 4(a)(2) of the Securities Act provides an exemption for transactions by an issuer not involving a public offering. This is the “private placement” exemption under which issuers may sell securities in nonpublic offerings without registration under the Securities Act.</p> <p>The JOBS Act also directed the SEC to develop new rules permitting capital raising by “crowdfunding.” The SEC must adopt rules that govern how companies can use JOBS Act crowdfunding to raise money from investors and set out the responsibilities of intermediaries. Companies cannot use JOBS Act crowdfunding to raise funds from investors until the SEC adopts these rules. The SEC issued proposed rules concerning crowdfunding in 2013. Final rules have not yet been issued.</p>	
<p>The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. <i>Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing??</i></p>	<p>The legal framework in the United States facilitates capital formation for companies as discussed above. In addition to state laws which serve as the primary source of corporate governance requirements, the rules adopted by the various stock exchanges that apply to listed companies provide an additional source of corporate governance requirements. In order to maintain a listing of a security on one of the stock exchanges in the United States, a company must comply with various corporate governance requirements, as well as other requirements. Some stock exchanges in the United States have second boards where listing fees and listing requirements are lower. The corporate governance listing requirements of</p>	

	<p>the several stock exchanges, including the NYSE and NASDAQ, the principal markets in the United States, are broadly similar, but they do vary in some respects. Both the NYSE and NASDAQ have exceptions to certain governance matters, such as independence, compensation committee, and nominating/corporate governance committee or oversight of director nominations requirements, for controlled companies which may apply to companies that are family or closely owned or those that have private equity investors.</p>	
<p>Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However, these also allow poor managers the opportunity to repeatedly start businesses that fail with losses to shareholders and creditors. <i>How is the balance struck between enabling risk taking and protecting shareholders and creditors?</i></p>	<p>Federal bankruptcy laws govern how companies go out of business or reorganize their debt obligations, including the resolution of competing creditor claims. Federal securities laws, on the other hand, aim to protect investors and foster capital formation through disclosure.</p> <p>There are two primary routes through business bankruptcy in the United States. Under Chapter 11 of the Bankruptcy Code, a company usually attempts to reorganize its business and restructure its debt obligations. Management often continues to run day-to-day business operations, but all significant business decisions must be approved by a bankruptcy court. Under Chapter 7, the company stops all operations and goes out of business. A trustee is appointed to liquidate the company's assets, and the money is used to pay off creditors and investors in accordance with the federal bankruptcy rules.</p> <p>A company's securities may continue to trade even after the company has filed for reorganization under Chapter 11. Since its securities are still trading, a company must continue to file SEC reports and disclose material information to shareholders. In most instances, companies that file under Chapter 11 are generally unable to meet the listing standards to continue to trade on NASDAQ or the NYSE. However, even when a company is delisted from one of these major stock exchanges, its shares may continue to trade on over-the-counter securities markets. There is no federal law that prohibits trading of securities of a company solely because it is in bankruptcy.</p> <p>In a Chapter 11 bankruptcy, the company's plan of reorganization will</p>	

	<p>often cancel the existing equity shares. This happens because secured and unsecured creditors are paid from the company's assets before common stockholders. Thus, although a company may emerge from the process as a viable entity, the creditors and the bondholders generally become the new owners of the shares. And in situations where pre-bankruptcy shareholders do participate in the plan, their shares are usually subject to substantial dilution.</p> <p>The SEC's disclosure rules require a company that has registered a securities transaction or a class of securities to provide disclosure about the company's and its directors', director nominees', executive officers', promoters' and control persons' involvement in bankruptcy or state insolvency proceedings. The disclosure of this information permits an investor to make an informed investment decision about whether to invest or divest its holdings in a company in which the company or its directors, director nominees, executive officers, promoters or control persons were involved in bankruptcy or state law insolvency proceedings.</p>	
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Table E - Public sector governance

Public sector governance mechanisms	Current position	Any other comments
<p>The rule of law implies that every citizen is subject to the law, including law makers themselves. Limits to the rule of law occur because of neglect or ignorance of the law, corruption, or the lack of corrective mechanisms for administrative abuse, such as an independent judiciary. <i>Does your system actively protect and enforce the property rights of different stakeholders? If so what sort of legal mechanisms are available and used?</i></p>	<p>Protection of property rights is enshrined in the U.S. Constitution. The 5th Amendment states that: "No person shall be...deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation." All government officials of the U.S. federal government, including the president, vice president, the justices of the Supreme Court, State judges and legislators, and all members of Congress, pledge first and foremost to uphold the Constitution. These oaths affirm that the rule of law is superior to the rule of any individual leader.</p>	
<p>State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. <i>In your economy, how large is the government-owned market sector</i></p>	<p>The term "state-owned enterprise" (SOE) is not used or defined in U.S. law or legislation. A range of entities linked to federal, state, and local governments exists with varying degrees of government ownership, control, and participation in governance and funding. Many of these entities have responsibilities that are nearly indistinguishable from traditional government functions; others pursue governmental policies where legislators have</p>	

Public sector governance mechanisms	Current position	Any other comments
<p><i>(as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are there SOEs explicitly tasked with encouraging private sector innovation?</i></p>	<p>concluded that a market-based approach is not appropriate or has failed to achieve governmental objectives. In the United States, the role of such enterprises is usually specialized and the extent of competition between the government and private sector is at most indirect, and often negligible or non-existent. The applicability of constitutional and statutory rules, including antitrust law, and the availability of sovereign immunity defenses, vary depending on the nature of the entity, including the level of government (federal, state, or local) to which it is linked, and the entity's conduct. For a more complete discussion of this topic see: OECD Competition Committee Working Party No. 3, Roundtable on the Application of Antitrust Law to State-owned-Enterprises, submission of the United States, 20 October 2009, DAF/COMP/WP3/WD(2009)40, available at http://www.ftc.gov/sites/default/files/attachments/us-submissions-oecd-and-other-international-competition-fora/antitrustlawroundtable.pdf.</p>	
<p>A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. <i>Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation infrastructure?</i></p>	<p>Within the Executive Office of the President, the National Economic Council, the Council of Economic Advisers, and the Office of Science and Technology Policy are involved in the development of broad innovation policies. These policies are implemented by departments and agencies within the Executive Branch that have statutory authority in the areas covered by the innovation policies.</p>	
<p>Strategies need to respond to economy context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks. <i>What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</i></p>	<p>In February 2011, the National Economic Council, the Council of Economic Advisers, and the Office of Science and Technology Policy issued a Strategy for American Innovation (https://www.whitehouse.gov/sites/default/files/uploads/InnovationStrategy.pdf). The strategy focuses on efforts in three key areas:</p> <ol style="list-style-type: none"> 1. Invest in the Building Blocks of American Innovation. Spurring the innovations that will drive America's future economic growth and competitiveness requires critical investments in basic foundations: our workforce, our scientific research, and our infrastructure. <ul style="list-style-type: none"> • Educate the next generation with 21st century skills and create a world-class workforce. At the elementary and secondary levels, the 	

Public sector governance mechanisms	Current position	Any other comments
	<p>Educate to Innovate campaign harnesses public-private partnerships to enhance STEM education, complementing continuing efforts such as Race to the Top, which uses competitive grants to leverage state and local reform. At the college level and beyond, the Administration is committed to restoring America’s global leadership in college graduation rates (by, among other strategies, improving affordability), and making investments in community colleges.</p> <ul style="list-style-type: none"> • Strengthen and broaden American leadership in fundamental research. The commercial innovations that drive economic progress often depend on breakthroughs in fundamental science. Sustained science investments will lay the foundation for new discoveries and new technologies that will improve our lives and create the jobs and industries of the future. These investments will help the United States establish a leadership position in areas such as robotics and data-intensive science and engineering. • Build a leading 21st century infrastructure. Building on historic investments through the Recovery Act, the Administration continues to address transportation challenges through investment in high-speed rail, the next generation of air traffic control, and a new proposal for a National Infrastructure Bank, which will promote competition and innovation to maximize the return on our infrastructure investments. <p>2. Promote Market-Based Innovation. It is imperative to promote a national environment ripe for innovation and entrepreneurship that allows U.S. companies to drive future economic growth and continue to lead on the global stage.</p> <ul style="list-style-type: none"> • Support innovative entrepreneurs. In addition to patent reform, which will accelerate patent issuance and better enable new companies to succeed, and the <i>Startup America</i> initiative, which will promote entrepreneurship across the country, the Affordable Care Act removes obstacles to entrepreneurship by making it easier for Americans to start and join new businesses without giving up health coverage. 	

Public sector governance mechanisms	Current position	Any other comments
	<ul style="list-style-type: none"> • Promote innovative, open, and competitive markets. The revised Horizontal Merger Guidelines, released in August 2010, bring innovation considerations forcefully into antitrust evaluation. <p>3. Catalyze Breakthroughs for National Priorities. Priorities include developing alternative energy sources, reducing costs and improving care with health IT, catalyzing advances in educational technologies, and ensuring that the U.S. remains on the leading edge of the bio- and nanotechnology revolutions.</p> <ul style="list-style-type: none"> • Clean energy. New and improved energy technologies will play central roles in the 21st century global economy. Through the proposed Clean Energy Standard, expanded investments in research through the Department of Energy’s Office of Science, ARPA-E, three new Energy Innovation Hubs, and other means to accelerate research, development, and deployment of clean energy technologies, the Administration will shift the American economy toward global leadership and a clean, secure, and independent energy future. • Drive breakthroughs in health care technology. Innovations in health care delivery, harnessing the power of data and technology, promise to help prevent medical errors, improve care quality, and reduce costs. The Administration is continuously engaged in projects to promote health IT adoption, reform payment incentives to reward value instead of volume, and liberate an unprecedented amount of health information. In combination, these trends will facilitate fundamental improvements in national health and harness American ingenuity in solving our health care challenges. 	

Appendix A Questionnaire on structural policies and innovation

Table A – Economy context (Optional)

Economy Context Questions	Current position	Any other comments
<p>Economies differ in their levels of economic development and government capabilities. <i>Are there particular contextual factors that shape the overall economic strategy and approaches to structural and innovation policies?</i></p>	<p>Vietnam started comprehensive economic reforms in 1986 and has then been in transition to a market-oriented economy. Vietnam then underwent a period of continuous high economic growth (till 2010), induced by: (i) relatively stable macroeconomic environment; (ii) institutional reforms, including regulatory reforms; and (iii) pro-active international economic integration.</p> <p>Since 2011, facing economic downturn due to global financial crisis and domestic macroeconomic instability, Vietnam embarked on bolder measures to structurally reform the economy. The key areas of reforms include public investment, commercial banks, and State-owned enterprises (SOEs). Underlying these reforms are a number of measures and changes in laws, regulations, regulatory bodies to: (i) ensure more efficient allocation of resources across sector; (ii) enhance market competition; (iii) promote innovation for improved competitiveness and efficiency.</p> <p>At the same time, Vietnam continued with pro-active economic integration. The key ASEAN-centred FTAs, such as the ASEAN+1 FTAs and the RCEP, have shaped and will continue to drive trade and investment liberalisation in Vietnam. Other efforts have also been extended toward establishing the ASEAN Economic Community by 2015. Even at this stage, the country is actively engaged in negotiating several ambitious FTAs, such as the Trans-Pacific Partnership (TPP), EU-Vietnam FTA, the Regional Comprehensive Economic Partnership (RCEP), etc. The depth and scope of FTAs have been continuously expanded, from trade in goods to services trade and other new issues such as trade and investment facilitation, intellectual property right, etc.</p> <p>Acknowledging the need to facilitate business and production activities, Vietnam promoted reforms in a number of Ease-of-Doing-Business aspects (in line with the World Bank survey) in 2014, with the target of reaching average level of ASEAN-6 (i.e. Brunei Darussalam, Indonesia, Malaysia, Philippines, Thailand, Singapore) by the</p>	

¹ NZIER report (March 2015) to APEC 2015 Economic Report (AEPR) - The role of structural policies in innovation

	<p>end of 2015. Among the key areas for reforms are protection of minority shareholders, starting businesses, getting electricity and resolving insolvency, etc. Investment in innovation has been largely funded by the State budget. Nonetheless, the budget revenues experienced difficulties in recent year due to the slower economic growth (between 5.2-5.5% in 2012-2014), reduction and exemption of tariffs (due to trade liberalization under FTAs, while imports were close to 80% of GDP), and fall in oil prices since 2014 (as crude oil is a major export product).</p>	
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Table B - Regulatory policy

Regulatory policy mechanisms	Current position	Any other comments
<p>Innovation is enabled through the use of alternative approaches and solutions under either prescriptive input based or outcome/performance based regulation. <i>Does the regulatory system permit innovations by allowing alternative approaches and solutions? In practice how often is this flexibility used?</i></p>	<p>Yes, the regulatory system permits innovation by allowing new approaches, new methodologies and solutions to each regulatory issue. Even before 2005, the practice of regulatory impact assessment (RIA) was introduced in drafting the Enterprise Law (approved in 2005), though it was not stipulated as a requirement in the lawmaking process. Success of RIA and the Enterprise Law in 2005 then induced revision of the Law on Normative Documents in 2008, which requires RIA during the drafting of different types of regulations. More importantly, the regulatory reforms are still on-going in Vietnam, with incorporation of positive changes and/or best practices in other economies. As an example, public consultation via the Internet has been increasing and offered essential inputs to the lawmaking process. In this regard, Vietnam has ample flexibility to adopt innovation in the lawmaking process.</p>	
<p>Administrative simplification including cost of doing business programmes can assist innovation by removing barriers that slow the speed of innovations to markets. <i>Is there an administrative simplification programme in place and if so how comprehensive is it? Also, is any administrative simplification programme linked to programmes to reduce corruption?</i></p>	<p>The first Government’s Master Plan for Administrative Reform for the period of 2001-2010 (issued by Decision No. 136/2001/QD-TTg dated 17/9/2001) noted about the situation of administrative procedures in 2001 as follows: “administrative procedures in many sectors are cumbersome and complicate”. Though administrative procedures in a number of sectors, such as procedures to set up a private enterprise were substantially simplified thanks to new appreciation on importance of citizens’ freedom of business stipulated in the Enterprise Law in 2005 (replacing the former Law on Private Enterprises and Law on Companies of 1990), such simplification was not comprehensive.</p> <p>In 2007, following the WTO accession, the Government promulgated “the Project to Simplify Administrative Procedures in all Sectors of State Management for the Period of 2007-2010” (usually named as the Project 30 due to the fact that this number of the decision issued by the Prime Minister is 30 and the target of this project is to reduce compliance costs for businesses and citizens by 30 percent). This attempt built on the recognition that this systemic red tape fosters corruption, inhibits the delivery of essential goods and services, and slows the disbursement of investment capital (thereby limiting job creation).</p> <p>“Project 30” aspires to create a simpler, more efficient, and more transparent</p>	

administrative system. Concretely, the Project has the following goals:

- Simplify at least 30% of administrative procedures and reduce administrative costs by at least 30%;
- Reduce the implementation gaps in the domestic regulatory system with WTO and international trade agreements through the establishment of a modern and better regulatory system;
- Greater systematic transparency in compliance with WTO principles;
- The first unified database of all regulations at the central level in Vietnam with quality control and consultation mechanisms for simplifying administrative procedures;
- Stimulating investment and productivity gains across the economy by reducing costs and risks for large and small businesses;
- Improving Vietnam's competitive position among WTO economies;
- Helping to meet the economic commitments of the five-year plan (2006-2010) for job creation.

The Project 30 brought about remarkable results. First, an electronic database consisting all more than 5,000 existing administrative procedures was created and made available to all interested parties. The existence of the database provided a baseline for more effective control of proliferation of administrative regulations. Second, the Project induced a reduction of administrative burdens on businesses and citizens. For example, regarding invoicing procedures, businesses in Vietnam were allowed to print and circulate their own invoices from January 1, 2011 and they are required to merely notify the Ministry of Finance of their invoice forms. This move is expected to save businesses around VND400 billion (\$20 million) a year. Third, Project 30 enhanced investors' confidence in the Vietnamese Government's effort of reform. During the years 2007-2009, business communities, including not only domestic business communities but also foreign investor communities were widely consulted by the Vietnamese Government to solicit their suggestions for improving the regulatory environment in Vietnam.

Building on the success in the years 2007-2010, a new Project 30 is then approved for implementation in 2011-2020. Substances of administrative procedures were then re-emphasized in the Government Resolution 19 (in both 2014 and 2015), focusing on a number of areas such as construction permits, paying taxes, starting

	businesses, etc.	
Competitive barriers can inhibit innovation, for example, by creating barriers to entry to new and young firms. Regulatory regimes often create barriers to entry by restricting entry into the market as well as conduct once entry has occurred. <i>Does the regulatory development process such as the RIA explicitly require the identification of the effect of a specific regulation on competition? Does it encourage the selection of the policy that minimises any adverse impact on competition and hence innovation?</i>	<p>The scope of RIA has been rather wide in Vietnam. Accordingly, RIA does not exclude the consideration of adverse impacts on competition. Nonetheless, such consideration is not easy due to the unavailability of statistics at firm level, lack of consensus on definition of “sector”.</p> <p>Recently, the Enterprise Law and Investment Law (amended in 2014) have reduced the conditions for investment and business activities for a range of sectors, thus maximizing the freedom of doing business for the people. The amended Investment Law stipulates a list of 267 conditional business activities. The new laws consider conditional business and respective business conditions as forms of restraining people’s rights in doing business. All legal risks related to "doing unregistered business activities", "doing business activities which are unlisted in business registration certificate", etc. have now been eliminated.</p>	
Innovation often relies on tacit knowledge held by skilled people. Immigration policies can place barriers on the movement of skilled people between economies, and occupation regulation imposes barriers on movement between firms within economies. <i>How easily can skilled people move between firms?</i>	There is almost no constraint against movement of people between firms in Vietnam. However, Vietnam has very limited commitment to liberalize the movement of natural persons under international arrangements. For labour to move intra-firms from another economy to Vietnam, a work permit is required.	

Table C - Competition policy

Competition policy mechanisms	Current position	Any other comments
Competition policy can increase the adoption of innovations by allowing reallocation of output to higher productivity firms. This raises issues about the balance in competition law between technical and dynamic efficiency on the one hand over allocative efficiency and consumer protection on the other. <i>How does competition policy deal with protection of consumers? Does competition law in your economy focus largely on shorter term</i>	<p>In Vietnam, the Competition Law is separated from the Law on Consumer Protection. Vietnam Competition Authority, under the Ministry of Industry and Trade, acts as the authority for both competition and consumer protection issues.</p> <p>The Competition Law focuses mainly on protecting competition and prevent anti-competitive practices, aiming for improved short-term allocative efficiency. Nonetheless, the Competition Law is only part of the</p>	

Competition policy mechanisms	Current position	Any other comments
<p><i>allocative efficiency or does it allow for longer term technical and dynamic efficiency?</i></p>	<p>competition policy which also considers issues such as longer term technical and dynamic efficiency.</p>	
<p>Competition policy needs to be able to respond to changes in market structure and technology. The ability to deal with those challenges depends in part upon the legal authority and capability of competition authorities to take gains in technical and dynamic efficiency into account. This requires that competition authorities move beyond black letter of the law approaches (deemed unlawful per se) and subject cases to fact based rule of reason analysis. <i>Does the competition authority(s) have the legal authority to take into account gains in technical and dynamic efficiency? Does the authority(s) have the capability (i.e. the tools, procedures, staff and other resources) to allow for technical and dynamic efficiency gains in decision making?</i></p>	<p>Yes, Vietnam Competition Authority has the legal authority to consider gains in technical and dynamic efficiency. However, documenting and quantifying such gains is not easy due to lack of detailed statistics and unavailability of (time, human and financial) resources.</p>	
<p>Comprehensive coverage of competition policy is important not only to ensure competition in specific markets but also competition in downstream markets. <i>Does the reach of competition policy (and its enforcement) extend to all goods and services markets? Or are there significant exclusions, for example, particular sectors of the economy or for businesses owned by national or sub-national government?</i></p>	<p>The competition policy applies to all entities, including SOEs, State monopolies and foreign firms in Vietnam, covering all goods and services markets. In practice, the enforcement is almost universal (except for sectors of national security and defense, etc.). As per the Competition Law, exemptions may also be approved by the Prime Minister, Minister of Trade (currently Minister of Industry and Trade) depending on cases.</p>	
<p>Effective competition policy enforcement requires that the competition authority(s) have the legal authority and the capability to independently undertake their role. <i>Does the competition authority(s) have statutory independence in the cases it selects for enforcement action or is this a more collective decision involving other Ministries? How is any independence established and safeguarded?</i></p>	<p>Vietnam Competition Authority (VCA) has statutory independence to select the cases to investigate, to undertake enforcement actions. The independence is established by the Competition Law and by the participation of VCA leaders in the National Competition Council. Head of the VCA is appointed by the Prime Minister, so having certain independence from other ministries.</p>	

Competition policy mechanisms	Current position	Any other comments
<p>There is evidence that structure and innovation hold a concave relationship so moderately competitive markets generate the most innovation. Therefore, there is much to be gained by boosting competition in the least competitive markets. <i>Does the competition authority(s) proactively and strategically seek to focus its attention on least competitive markets with potential for innovation?</i></p>	<p>Vietnam Competition Authority acknowledges this relationship. Nonetheless, due to unavailability of relevant statistics (especially at firm level), identifying the least competitive markets is not easy. Accordingly, VCA could only investigate the cases with reasonable access to details and evidences, rather than strategically focusing on markets with ample potential for innovation.</p>	
<p>There is growing evidence of the positive link between innovation and openness to trade and investment. <i>How is openness to trade and investment factored into competition policy settings and the practices of the competition authorities?</i></p>	<p>The Authority pays more attention to the enhancing competitive neutrality between SOEs and private firms. At the same time, the Authority focuses more on anti-competitive practices of foreign firms (notwithstanding preferential treatment to them) which may threaten the livelihood of domestic counterparts.</p> <p>The authority also accounts for changes in market share (as firms can both serve domestic market and export to foreign markets) and differential in competitive practices between Vietnam and other economies. For instance, a certain practice might be compliant in other system but may not be legitimate in Vietnam, which necessitates thorough consideration and/or follow-up reforms in Vietnam.</p>	

Table D - Corporate governance

Corporate governance policy mechanisms	Current position	Any other comments
<p>Different corporate forms have to grapple with the problem of how to reward good management and discipline poor management. While competition in product markets helps discipline poor managers, those (such as Directors) responsible for corporate governance also have an important role. <i>What mechanisms exist in your economy's corporate governance legislation to ensure that managers act in the interests of owners including by investing in innovation?</i></p>	<p>The basic regulation is on remuneration of managers depending on the performance of the firms. Apart from that, eligible shareholders may request suspension of BOD's decisions that are contrary to the laws or the company's charter (article 108.4 of Enterprise Law). Apart from that, the shareholder may request the supervisory board to, or personally, take legal action against the board of directors for failure of compliance or abuse of power, among other cases (article 25.1 of Decree 102/2010/ND-CP).</p>	
<p>Securities law, by enabling capital raising from the public, allows investment in innovation. These investments can take a variety of forms including venture capital funds and direct capital raising from the public. <i>Do your economy's financial markets facilitate capital raising to finance the development of innovations? If so what are the major forms of capital raising that are used in your jurisdiction?</i></p>	<p>Yes, the financial market was quite enabling to the finance of innovations. Venture capital is emerging as a source of funds. Despite constraint, the State Budget also sets out funds for innovations (including research institutes and R&D firms). However, as most enterprises in Vietnam are small- and medium-sized, they have difficulty in accessing formal finance. Accordingly, they have to mobilize funds informally (via borrowing from relatives, making use of own savings, etc.)</p>	
<p>The legal framework for corporate governance provides the means for new firms to be created and, once they mature, enables changes in the corporate governance. Examples of enablers include provisions that allow family or closely owned firms to take on private equity partners or go public, a second board on the Stock Exchange where the cost of listing is lower, and specific legal vehicles that can raise capital from the public for investing in start-ups. <i>Does the legal framework provide specific enablers or barriers to taking on private equity partners or public listing??</i></p>	<p>Vietnam does have a separate Stock Exchange. UPCoM (Unlisted Public Company Market) is the market at Hanoi Stock Exchange (HNX) for public companies that are not yet listed (largely because of small scale and failure to meet requirement of formal stock exchange). UPCoM was built with consultation from foreign experts based on the development demands of Vietnam's Securities Market. With a full legal framework, UPCoM is operated under a flexible mechanism for the interest of companies and investors. The birth of UPCoM has sped up the participation into securities market of public companies. After all shares of public companies must be registered for depository at the Vietnam Securities Depository, many companies have chosen UPCoM for trading.</p>	
<p>Insolvency and bankruptcy laws enable innovation by allowing entrepreneurs to take risks even if these lead to failure. However,</p>	<p>The insolvency and bankruptcy laws are still being improved. The Bankruptcy Law was just amended in 2014. The regulations have been</p>	

these also allow poor managers the opportunity to repeatedly start businesses that fail with losses to shareholders and creditors. <i>How is the balance struck between enabling risk taking and protecting shareholders and creditors?</i>	quite strict in terms of protecting shareholders and creditors, but the process of resolving insolvency is quite lengthy. As another problem, some managers decide to let the poorly-performing enterprises become inactive, and set up new ones.	
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Table E - Public sector governance

Public sector governance mechanisms	Current position	Any other comments
The rule of law implies that every citizen is subject to the law, including law makers themselves. Limits to the rule of law occur because of neglect or ignorance of the law, corruption, or the lack of corrective mechanisms for administrative abuse, such as an independent judiciary. <i>Does your system actively protect and enforce the property rights of different stakeholders? If so what sort of legal mechanisms are available and used?</i>	Vietnam does not have private ownership over land (the State only grants land use rights for the people which are protected and can be traded). For other assets, property rights are protected by different laws. For instance, intellectual property rights are protected under the Law on Intellectual Property. Dispute over certain industrial property rights can be settled at Vietnamese courts (eg. Dispute over right to register inventions, industrial designs, layout designs; dispute arising from infringement of industrial property rights, etc.)	
State-owned enterprises (SOE) often form a large part of a developing economy. Sometimes SOEs play a positive role in encouraging private sector innovation. However they are often sheltered from competition which reduces innovation both in the immediate and in downstream markets. <i>In your economy, how large is the government-owned market sector (as measured by SOE value added as share of GDP) and how much (approximately) of it is sheltered from competition? Are there SOEs explicitly tasked with encouraging private sector innovation?</i>	The State economic sector has rather large size in Vietnam. The sector accounted for over 32.2 percent of GDP in 2013; corresponding figure for SOEs is estimated at around 25 percent. There are claims of competitive non-neutrality between SOEs and domestic firms, largely because advantage to SOEs in terms of access to land, finance, information, etc. Nonetheless, there is no concrete evidence on anti-competitive practices in the sectors where SOEs operate.	
A national innovation system includes an innovation policy, a knowledge infrastructure and an innovation infrastructure. <i>Does your jurisdiction have public sector bodies tasked with and capable of delivering: (a) an innovation policy, (b) a knowledge infrastructure and (c) an innovation</i>	Vietnam has a system of bodies responsible for promoting innovation. The National Assembly has a separate Committee on Science, Technology and Environment responsible for developing and monitoring laws, regulations on promoting innovations (including science and technology issues). The Government of Vietnam has a Ministry of Science and Technology to formulate	

Public sector governance mechanisms	Current position	Any other comments
<p><i>infrastructure?</i></p>	<p>and implement innovation-related policy. Depending on their authority, the National Assembly and Government of Vietnam approve different strategies and plans related to science and technology innovation. These bodies receive cooperation from a range of other Government agencies at both Central and local levels.</p> <p>However, Vietnam's innovation system in the modern sense is only emerging. Current science, technology and innovation capabilities are weak and the national innovation system is claimed to be in a nascent and fragmented state. Research and development both in the public and private sectors still have a lot of room for improvement.</p>	
<p>Strategies need to respond to economy context, level of capability development and the binding constraints. For some the priority is getting the basic building blocks in place to underpin a national innovation system. For others the priority is to refine how the system is operating and focus on removing bottlenecks. <i>What are the current areas of focus for innovation policy? What are the future directions for innovation policy?</i></p>	<p><i>Current areas of focus:</i></p> <ul style="list-style-type: none"> - Reform of public research institutes and universities for better R&D capacity, with autonomy in finance and personnel; - Development of research capacity in both natural and social sciences; - Marketizing science and technology services; - Mobilization of private resources for science and technology development; - Development of human resources for innovation; - Improving enforcement of IPR. <p><i>Future directions for innovation policy:</i></p> <ul style="list-style-type: none"> - Improving policy conditions and treatment to enable innovation; - Strengthening public governance of the innovation system; - Upgrading human resources for innovation; - Enhancing Government-universities-business linkages in innovation; - Re-incentivizing the contribution of public research. 	



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