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How Can a Tertiary Education Strategy Drive Economic Growth?

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Discussion note: How Can a Tertiary Education Strategy Drive Economic Growth?

Purpose

This discussion paper identifies some key strategic issues of interest to APEC when considering the relationship between tertiary education and economic growth. The strategic issues explore some of the challenges and thinking shifts required to shape the organisation of tertiary education to cater for the needs of individuals and countries in the context of an increasingly global and technological environment. Examples of policy approaches in New Zealand have been used to illustrate current policy responses.

Shaping for the future

Success in education is at the very heart of economic well being and social capability– both at an individual and national level. Education systems have a critical role to play in ensuring that individuals are able to achieve through participation in lifelong learning but also in contributing to overall economic and social performance through research and innovation capability.

The New Zealand response has been a call from government to set a new strategic direction for the tertiary education system focussed on excellence, relevance, access and enhancing capability. Overall, the New Zealand reforms are designed to increase the relevance of tertiary education provision to New Zealand's current and future needs through enhanced alignment with national goals, more future-focused strategies, and improved quality. A more strategic system also requires better co-operation, collaboration and co-ordination between agencies with a consistent approach to tertiary education across all agencies, including enhanced differentiation, identification of strategic contribution and limited duplication of functions and activities. [1]

Central to achieving these goals is ensuring a stronger fit between what individual tertiary organisations are focusing on, what the system as a whole is delivering and the needs of the economy and society. The Tertiary Education Commission has the responsibility for drawing out the views of different economic and social stakeholders to make overall judgements about strategic priorities.

The New Zealand Tertiary Education Strategy 2002-2007 emphasised the considerable influence of tertiary education in driving economic growth. In its Economic Survey of New Zealand, the OECD indicates support for the broad approach of the tertiary reforms outlined in the Strategy:

> "Even though the government's tertiary strategy calls for developing skills forecasting capabilities and for the tertiary system to deliver highly specialised technical skills in "high priority development areas" (presumably, the three sectors identified in the GIF), and although several elements of the above described funding system could in principle be used to steer resources towards those areas, the government has so far refrained from taking an explicit "manpower planning" approach. Rather, it is addressing these issues through a number of initiatives that include, for example, gathering and disseminating information on existing skills shortages, encouraging

1 Tertiary Education Strategy 2002-2007

> tertiary providers to use closer contact with local employers to select the mix of courses offered and course contents more in line with labour market needs, and providing students with better information on employment and earnings outcomes for tertiary graduates in the different fields. This approach is commendable, since it focuses on enabling participants to make more informed choices, while it is not clear that the government can have superior information on where future skills shortages are going to arise nor would it be in a position to address them effectively in the face of rapid structural change and a high international mobility of graduates."

A number of other Government strategies, including the Employment Strategy and Growth and Innovation Framework, have informed the development of the Tertiary Education Strategy. They focus on the need to build human capability for improved productivity, innovation and economic growth through and support the education outcomes of: strong learning foundations; high levels of achievement by all school leavers; engagement in learning throughout their lives and developing a highly skilled workforce; and education making a strong contribution to our knowledge-base, especially in key areas of national development.

Ensuring that tertiary education systems make the desired impact depends on increasing the quality, relevance and connectedness and of the system. This paper explores the following strategic issues in more detail:

- The alignment of educational organisations priorities to national goals and outcomes;
- Improving pathways for all learners, including an increased focus on pathways for disadvantaged learners; and
- Stronger focus on quality enhancement and quality assurance arrangements to support better learning outcomes.

Key Strategic Issue 1: Alignment to national goals and outcomes

Aligning the tertiary sector and stakeholders to national goals and bringing about collaborative linkages across the system, were the key reasons for the tertiary reforms in New Zealand. With the development of the Tertiary Education Strategy every five years, and the establishment of the Tertiary Education Commission, the reforms are supporting the development of a more strategic sector that is focused on the role it can play in leading our nation as a knowledge society.

Improved capability and a focus in spheres of national importance, including in science and technology areas, is vital for economic wellbeing. However, it should also be acknowledged that the desired outcomes of education are broader than the acquisition of subject knowledge. While employers do want specific skills, they also want higher order generic skills including, for example, metacognition which is at the heart of adapting competencies to new contexts. We need to work to ensure that there is improved provision of, and better systems of recognition for, high-level generic skills for now and the future.

Challenges

Some of the challenges faced include:

- Developing a common framework for identifying and describing key competencies.
- Fostering a better understanding of the nature of generic skills, how to define and communicate them, how they are related to foundation learning, and how best to teach and assess them.
- Developing linkages and partnerships with key stakeholders including stronger connections between providers and end-users of tertiary education.
- Increasing the responsiveness of the tertiary system to the skill needs of the labour market and the needs of communities.

Thinking shifts

Some of the thinking shifts required to embed change include:

- Change management - embedding the many activities already underway to achieve these outcomes. These strategies need to be developed recognising that change takes time and ongoing commitment from all stakeholders.
- Shift in thinking from competitive view of other providers to a preparedness to innovate, collaborate and take risks.
- A paradigm shift from a focus on attracting students and developing competitive advantages to a strategically focused system driven by quality that maximises relationships and connections to national, state goals, and other sectors.

New Zealand Policy Approaches

Examples of policy approaches in New Zealand include:

- The OECD Defining and Selecting Key Competencies project is being used as a basis for the development of a shared framework to help tertiary educators to shape the way they specify key competencies and incorporate them into tertiary programmes and qualifications.
- High level generic skills are needed in partnership with technical or specialist skills to meet the needs of the economy. The school curriculum has a strong role in setting expectations for achievement. For instance, the technology curriculum in schools has considerable relevance in developing students' technological knowledge and capability in a range of technologies including those important to New Zealand's future economy such as creative industries and biotechnology.
- Provider accountability through charters and profiles for improved outcomes for disadvantaged learners is an important element of the tertiary reforms. Charters articulate a tertiary organisation's strategic direction and how it aligns with the government's focus on particular target

groups. Profiles will provide the basis for funding and will describe in much more detail how the organisation's goals will be implemented.

- In a dynamic economy, there are important issues about the effectiveness of the mechanisms in place to develop and utilise skills. The new secondary school qualification, National Certificate of Educational Achievement (NCEA), is already providing both educators and employers with much better information about what students are achieving and how well they are achieving. At a system level this will help us to judge where we are weak and where we are strong and take corrective action, as we need to do so.
- The timelags between participation in tertiary education and changes in the labour market make it challenging to meet the changing demands of the economy. New competitive scholarships are available to students from low and modest income families studying in the health and animal sciences where we have particular shortages. Other initiatives to assist with matching include a new labour market public access website, a six monthly skills report, and better stakeholder engagement through charters and profiles.
- A recent stocktake of the New Zealand school curriculum 1990s reform experience, has analysed the quality of the curricula in contributing to improved student outcomes, meeting the expectations of a range of stakeholders and against comparable international curricula. One key finding was the need to reconsider the specification of essential skills to place more emphasis on meeting economic challenges and the on-going acquisition of new competencies to meet changing demands.

Implications for the work of APEC

As part of the overall themes being addressed in relation to Human Capability, how can future skill sets required for science and technology be made more visible to planners and leaders in tertiary education systems?

Key Strategic Issue 2: Improving pathways for all learners

In supporting the development of growth and innovation, there also needs to be an increased focus at a system level on improving pathways for all, including disadvantaged learners. For instance, in New Zealand, the need to improve Maori and Pacific educational performance is not just a question of social equity – demographic trends mean that it is also an economic imperative. Successful outcomes for all students require a range of learning pathways. How students learn the pace at which they learn and their interests vary between individuals. The current system needs to continually look for ways to provide flexible pathways, especially for learners with diverse needs.

Challenges

Some of the challenges faced include:

- Improving the provision of high quality career advice and guidance for all, but in particular disadvantaged learners to reduce the risk of attaining

qualifications that may not secure employment outcomes that make the investment worthwhile.

- Developing a body of evidence on what is effective practice around successful learning pathways.
- Lifting the accountability of providers for staircasing and for the facilitation of pathways for all students, including disadvantaged learners, and encouraging greater collaboration between providers.
- Need for tertiary providers to address foundation skill issues and improve the compulsory/ tertiary interface.
- Responsibility and accountability for improved outcomes for 'at risk' learners.
- Developing nationally sustainable, locally appropriate, pathways from secondary schools to tertiary studies regardless of curriculum options selected by students.

Thinking shifts

Some of the thinking shifts required to embed change include:

- Industry and tertiary organisations being more open to providing opportunities for senior school students to participate in work based learning or tertiary type courses whilst enrolled at school.
- A need for tertiary organisations to more directly address foundation skill issues and focus on improving linkages with other sectors including schools and businesses.

New Zealand Policy Approaches

Examples of policy approaches in New Zealand include:

- A number of Government strategies, including the Tertiary Education Strategy and Growth and Innovation Framework, have prioritised the need to lift the skill levels through the provision of better pathways for those who are underachieving.
- An inter-agency work programme on youth transitions is currently being progressed consisting of three strands: including better co-ordination of services for young people at risk, and alignment of services, institutions, agencies, and policy frameworks; improving our understanding of youth transitions to better direct future investments; and the development of initial priorities to make measurable progress.
- A clearer understanding of foundation competencies, descriptive standards and learner progressions measures are currently under development as part of the Tertiary Education Strategy. This work is concentrated on raising foundation competencies so that all people can participate in a knowledge society. For this to be achieved there need to be opportunities for adults to undertake high quality foundation learning in contexts that are

meaningful to them. For many adults who are in employment, the most effective foundation learning would be in the workplace.

- Career Services is a government funded agency, which provides the bulk of external careers information, advice and guidance services to schools and students. This should be combined with tertiary information for students and their families.
- There are examples of curriculum alignment initiatives that involve identifying curriculum strands to define pathways between school and tertiary institutions in New Zealand. However, curriculum alignment projects have been mainly been limited to exploring the curriculum interface in more vocationally oriented or 'non-traditional' subject options.

Implications for the work of APEC

As part of the overall themes being addressed in relation to Human Capability, how can difficulties faced in encouraging young people to pursue careers in science and in recruiting and retaining sufficient people with research and scientific skills be overcome? How can APEC countries facilitate the active participation of under-represented groups in the Science and Technology workforce? How can the flow of information on changing skill requirements be communicated more effectively between business, tertiary organisations and schools?

Key Strategic Issue 3: Stronger focus on quality

Focussing on quality enhancement and quality assurance arrangements to support better outcomes for all learners is important for economic growth. This includes improving system quality through innovation, differentiation, specialisation and collaboration. The OECD has argued that a key mechanism whereby skills impact on growth is through enhancing processes of innovation and the ability to adopt and gain greater productivity from new technologies. Given the size of the New Zealand economy, there are questions about the extent to which we should focus on pursuing cutting edge innovation or research and development as opposed to focusing on being 'early adopters' or adapters of ideas or innovations emanating from offshore.

Challenges

Some of the challenges faced include:

- A stronger focus on quality teaching and learning in tertiary education involving key stakeholders.
- Ensuring that quality assurance and quality enhancement arrangements efficiently and effectively manage at-risk providers.
- Encouraging providers to draw on evidence of what makes a difference to learning outcomes.
- Maximising the ability of the education system to shape overall attitudes in less tangible areas such as risk-taking, innovation and entrepreneurship.

Thinking Shifts

Some of the thinking shifts required to embed change include:

- Lifting the expectations of learners and shifting the mindsets of educators to one of embracing innovation and to continually look to improve what they do and how they do it.
- Tertiary teaching moving to a culture of quality, including enhancing peer review, self-review, and quality assurance arrangements.

New Zealand Policy Approaches

Examples of policy approaches in New Zealand include:

- The Enhancing Quality Project is one part of a package geared towards ensuring that we have the appropriate infrastructure, systems and processes to support and encourage excellence in tertiary education with a strong focus on quality teaching and learning.
- The quality of research within the tertiary education sector will be boosted with the introduction of a new performance based approach to funding (PBRF). The government is phasing in a system of funding to reward tertiary institutions for research excellence. By 2007 funding under the PBRF will be derived from a contestable fund. The government expects that, in aligning research funding to research performance and in separating it from tuition funding, it will be creating a climate that rewards innovation and excellence in research and hence, it will foster and enhance the sector's research capability and consequently, its performance.
- Seven Centres of research excellence (CoREs) have been established since March 2002 and each is hosted by a tertiary institution. CoREs are inter-institutional research networks with researchers working together on a commonly agreed research plan. They have been established to support word-class research that will contribute to New Zealand's development as a knowledge society and to encourage a greater concentration of financial and intellectual resources in the tertiary sector.

Implications for the work of APEC

As part of the overall themes being addressed in relation to Human Capability, how can greater collaboration between researchers to achieve a shared vision with society over ethical aspects and the value of their work be supported? Can APEC play a more proactive role in leading international discussion around the role of innovation in education?

Summary

The role of tertiary education in raising skills has substantial benefits not only for individuals, but also for social outcomes, productivity and economic growth. Tertiary education systems face a number of challenges in supporting individual achievement and contributing to overall economic and social

performance. This paper has explored some of the challenges, thinking shifts and policy approaches in 3 areas identified for tertiary education systems to focus on. These are:

- The alignment of educational organisations priorities to national goals and outcomes;
- Improving pathways for all learners, including an increased focus on pathways for disadvantaged learners; and
- Stronger focus on quality enhancement and quality assurance arrangements to support better learning outcomes.

These issues raise a number of strategic questions for APEC to consider as part of the overall themes being addressed in relation to human capability. Key considerations include:

- How can the future skill sets required be more visible to planners and leaders in tertiary education systems?
- How do we to increase the participation of under-represented groups in areas where there are skill shortages?
- Should APEC have a more proactive role in leading international discussion around the role of innovation in education?