

EXECUTIVE SUMMARY

Data and growth

- Advancements in information and communication technologies (ICT) including broadband, cloud computing and the Internet of Things (IoT) have lowered the cost of adopting data analytics on a large scale and along with it, the benefits and possibilities brought about by the adoption.
- The importance of data in business will only accelerate as more and more people and devices are connected to the internet. Indeed, increasing number of literature are indicating the importance and contribution of data to economic growth as well as employment although it should be recognized that limitations means such statistics are often incomplete and may only provide rough estimates.
- APEC recognizes the importance of digital economy including e-commerce in linking their member economies. Recent initiatives include the APEC Framework on Cross-border E-commerce Facilitation, the APEC Internet and Digital Economy Roadmap (AIDER), and the establishment of the Digital Economy Steering Group (DESG).
- This study aims to better understand the role of data in the business models of various firms and the challenges they face pertaining to data utilization through case study approach. 39 firms from 12 economies have participated in this project. They come from a diverse group of industries, including aviation, logistics, shipping, payment services, encryption services, and manufacturing.
- Data plays an important role to firms in both the traditional as well as new industries. Firms across different sectors collect and/or use significant volumes of data for a wide range of purposes. In the transport and logistics sector, for example, these include tailoring attractive loyalty schemes for their customers as well as monitoring and assessing the safety, capacity and efficiency of asset deployment. In the manufacturing sector, data are used across the various stages of the value chain from pre-production to post-production (including post-sales). For example, firms use data analytics to reduce machine downtime, track inventories and process reordering when levels fall below certain threshold among others.
- For payment services providers, data is integral in every step involved in processing a transaction, but such data is only one component of the whole spectrum of data collected and used. In fact, firms carry out data analytics to glean valuable information coming from various and diverse sources. Specifically on electronic invoicing, data captured in electronic invoices can facilitate transparency and hence authorities' expanded use of tax, accounting as well as various data sources to ensure compliance. Other uses of data analytics include detecting anomaly, combating fraud and providing enterprise solutions.
- Firms generally recognize the important role of data in ensuring the viability of their businesses and to this end, have undertaken various activities to ensure the privacy and security of data collected and managed by them. These include ensuring that their policies, procedures and practices are consistent with international quality assurance instruments governing data security and privacy; undertaking regular and systematic review of various laws and regulations on data privacy and security to ensure compliance; and applying sophisticated and comprehensive in-house data governance framework covering areas such as hardware, cyber protection teams and encryption.

Challenges across economies

- The importance of data as a new asset has brought to the fore concerns on how firms use and protect the data that they have. These fears in a data age are not unfounded. News articles abound with hacking incidents and data leaks. Furthermore, the practices of some well-known firms have left more to be desired.
- In support of public policy objectives such as ensuring better data protection and security, rapid access to data and benefitting more from the digital economy, governments across the world have put in place or are in the midst of enacting various regulations aimed at data such as those regulating data collection, storage, processing and transfer; and those requiring disclosure of intellectual property (incl. source code), building back-doors to applications and use of mandatory encryption standards.
- While these regulations have been enacted for legitimate public policy objectives, some of them may not be the best way forward. For example, as security is a function of several elements including technical, financial and personnel, the association between data localization and data security may not be a given. Furthermore, some data-related regulations including localization may have the unintentional effect of increasing the cost of doing business. Literature has also shown the limited impact of some data-related regulations on employment and investment creation as well as in enhancing innovation and productivity. Moreover, some data-related regulations may be a second-best option of addressing domestic security/concerns.
- Alternative, middle-ground approaches to data-related issues (i.e. with relatively minimal impact on firms' access and use of data and at the same time, supportive of legitimate public policy objectives) are available. These approaches include recognizing voluntary standards, reviewing potential and existing domestic regulations against privacy guidelines/framework, complementing lighter touch regulations with effective enforcement, and enhancing cross-border data flows through various mechanisms such as adequacy status, mutual recognition system and free trade agreements among others. Specifically on enhancing domestic security, alternative mechanisms can include reforming mutual legal assistance treaties (MLAT), signing Memorandums of Understanding (MoU) on bilateral and multilateral data sharing, and unilateral approaches which focus on mandating access to specific types of data.

Challenges across organizations

- Data-related issues, in particular data sharing are not confined only to between economies, but also between organizations. Despite being an important factor for unlocking innovation and realizing the potentials of digital economy, the practice of data sharing is not widespread for various factors including data privacy regulations, anticompetitive behavior and lack of interoperability of data formats and standards.
- Facilitating data sharing between organizations could be enhanced through approaches such as introducing open data policies, promoting data commons, developing data sharing standards as well as guidelines.

Way forward

- APEC can build on the insights from the study and contribute to the endeavor of improving data-related regulations among its members by:
 - Facilitating information and experience sharing/exchange on these middle-ground approaches. These can include how to operationalize these approaches, how to monitor and evaluate their impacts as well as how they can be further improved in terms of implementation and awareness among others.
 - Organizing dialogue sessions to identify ideas and ways to overcome bottlenecks that have led to standstill or little progress in some middle-ground approaches such as those pertaining to regulatory alignment, multilateral rules on data flow facilitation and MLAT reform.
 - Developing capacity-building activities to assist member economies in enhancing and improving on their existing data-related and complementary regulations including those pertaining to IPR protection. These can include workshops and technical training assistance on establishment of competent data protection authorities and on enhancing cross-border enforcement among others.