

# Understanding Digital Economy

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Digital transformation is now on the cusp of the Fourth Industrial Revolution. The worldwide trend to welcome this new revolution, including the internet, big data, cloud computing, FinTech, and several new digital technologies recently has triggered a curiosity of the term '*digital economy*'. Primarily thanks to the "always-on" internet, the Internet of Things (IoT) and hyper-connectivity between people, business, and data are no longer a nice-to-have, but immensely become a significant part of our lives more than ever. From buying food online to learning and working online, the digital transformation has evolved to be an appendage to business and made living easier. Companies like Apple, Huawei, Microsoft and other supergiant platforms such as Google, Amazon, Alibaba, Airbnb, Uber, and Facebook are the examples of the so-called smart working and success stories of the digital economic ecosystem. In this sense, what is the digital economy? What digital has ever done to us? What are the real effects with the digital boom in the 21<sup>st</sup> century? What we know about digital economy is that it has been permeating almost every aspect of people's lives and societies, including how things work digitally and how people interact and communicate online. Yet what we do not really know is by which way the changes around us are taking place. This article will thus briefly introduce a birds-eye-view of the digital economy and its implication in Cambodia's context.

## What is Digital Economy?

The First—fueled by iron, steel, and steam engines—and the Second Industrial Revolution—

powered by the electricity, telecommunications, and assembly lines—have paved the way for the production boom. In the 1960s, the Third Industrial Revolution, also known as Digital Revolution, arrived and heralded the information age, comprising of the development of the internet, information technologies (IT), semiconductors, computerization and much more. The digital ICTs in the Digital Boom era had smoothed the path for the coming of the Fourth Industrial Revolution and underpinned the most advanced technologies for doing business in the new era, commonly known as the 'digital economy'.

Digital economy is the form of economic activities and processes that traffic on the internet, with the assistance from information and communication technologies (ICT), resulting in greater connections between and among people, businesses, devices, and data. Information and knowledge are utilized to advance production activities. Digital economy is also referred to as Internet Economy, New Economy and Web Economy attributed to its heavy reliance on internet connectivity.

The term 'Digital Economy' was coined by Don Tapscott in 1995 in his 'The Digital Economy: Promise and Peril in the Age of Networked Intelligence'. However, the definition itself is vague, broad, and not limited to a single activity and process. Because of this vague concept, there have been different views on what a digital economy is. Below are varying definitions of digital economy used by renown organizations.

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## Various Conceptions of the Digital Economy



### Australian Government

“A global network of economic and social activities that are enabled by information and communications technologies, such as the internet, mobile and sensor networks”.

“A broad range of economic activities that uses digitalized information and knowledge as keys factor of production based on the internet, cloud computing, big data, and FinTech to collect, store, analyze, and share information digitally and transform social interaction”.



“A market based on digital technologies that facilitate the trade of goods and services through e-commerce”.



UNCTAD

“The application of internet-based digital technologies to the production and trade of goods and services”.



“An economy which functions primarily by means of digital technology, especially electronic transaction made using the internet”.



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“System of economic, social and cultural relations based on the use of digital ICT”.

## Core Elements of the Digital Economy

What lies at the core of the digital economy in the modern era is the combination of 1) advanced robotics, drones and factory automation; 2) Internet of Things; 3) cloud computing; 4) big data analytics; and 5) artificial intelligence (AI) (UNCTAD, 2017). Such characteristics represent the features of the new modern business model which distinguishes it from the ordinary economy. Thomas Mesenbourg has identified three main components of Digital Economy, namely electronic business (e-business) infrastructure, e-business, and electronic commerce (e-commerce) (Mesenbourg, 2001).

The Digital-enabling infrastructure/ e-business infrastructure lies as the foundation of digital economy that is grounded on the computer-mediated network. It comprises of basic physical materials and organizational arrangements to support the e-business processes and conduct e-

commerce including computer hardware, software, telecommunication equipment and services, structure, IoT, and support services. E-commerce on the other hand is any process of online retail and electronic transaction digitally-ordered, digitally-delivered, or platform-enabled transactions. Those include:

- Business-to-business (B2B): transactions of goods and services by business to another business via the internet or other electronic means;
- Business-to-consumer (B2C): conducting the sale of goods and services by business to consumers or any retail e-commerce via the internet or other electronic means.
- Peer-to-peer (P2P): the ‘sharing economy’ aka platform-based e-commerce, involves the exchange of goods and services between consumers through a digital application.
- E-business: The process in which a business organization conducts over computer-mediated

networks. Though it is similar to e-commerce, it encompasses the simple selling and purchasing of services and products online. E-business covers a wider range of business process like supply chain management, sales and marketing, customer relationship management (CRM), enterprise resource planning (ERP), and so on.

Additionally, Barefoot et al., (2018) listed out similar components but added another one which is digital media as the key components of digital economy. Digital Media is the content that people create, access, store, or view on digital devices includes Direct sale digital media (digital products sold directly to consumers in exchange for a fee); Free digital media (revenue earned by advertising space on the margin of the digital products); and Big Data (a mechanism for gathering information about consumer behavior and preferences).

### **The Impacts of the Digital Economy**

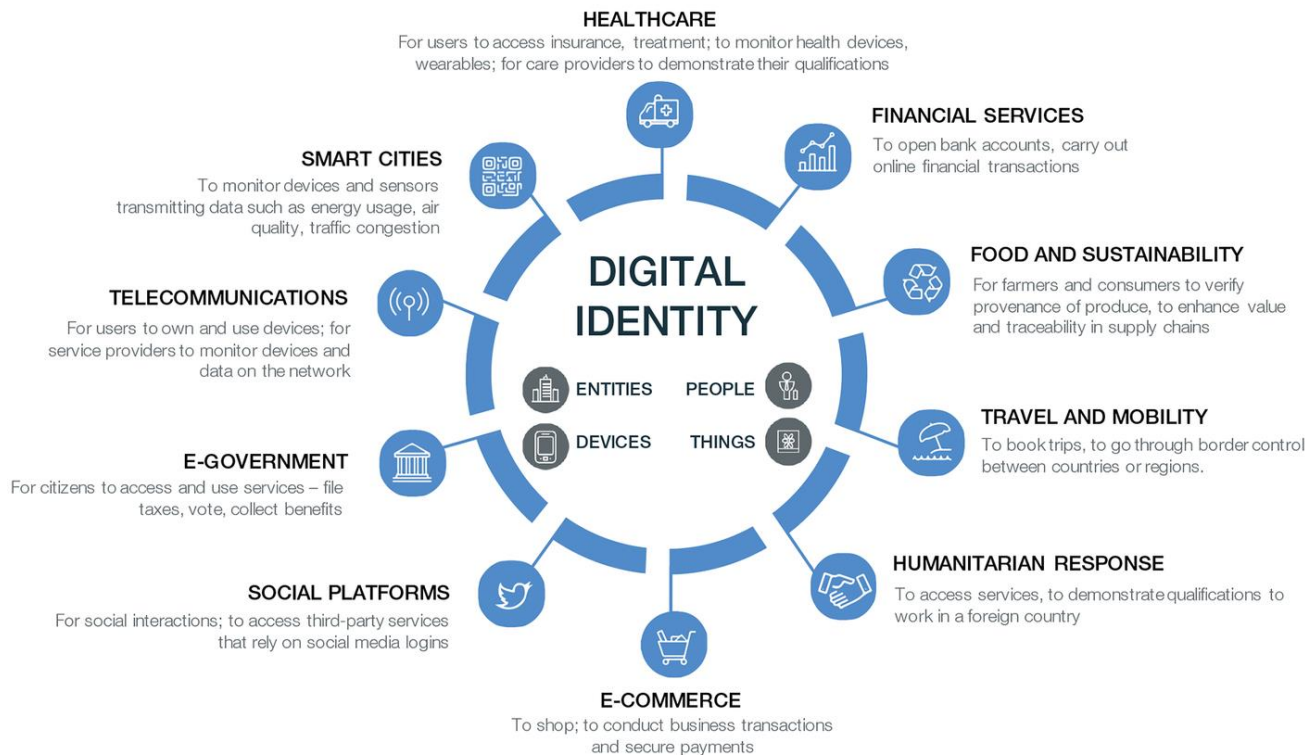
The emergence of the latest cross-cutting edge technologies such as cloud computing, augmented and virtual reality, additive manufacturing (3D printing), machine-to-machine communication, sensor technology, block chains, Big Data, the IoT, artificial intelligence (AI), 5G and the Distributed Ledger Technologies have proved the role of the digitalization in cultivating an environment that benefits both the economic and social aspects. The application of those advanced technologies has enabled the contemporary production processes and business management systems to produce a wide-ranging benefit better and faster surpassing what were provided by the traditional ways of business operation. The digital economy has restructured a new business model based on the intranet and internet, which slowly but surely become superior in performance and efficiency. More importantly, its more interactive and participatory processes between the sellers and consumers enlarge a lot of consumers benefits such as price transparency, choices, reviews, and conveniences. Since it requires a higher consumption of concepts and high-skills, digital economy plays a crucial role in upgrading industry and fostering more productivity

as well as the competitiveness. Last but not least, while promoting mass entrepreneurship, it contributes to innovation, creation of new services and employment for the people with abilities and talents adapted to it.

Not only financing, but the wave of digital transformation is also reshaping, impacting and advancing our daily life to create the so-called digital society, which is expected to be further inclusive, sustainable, safe and innovative environment to live, by mitigating and resolving the social challenges as well as addressing the existing unequal economic benefits. To tackle the inequality and the exclusion, the digitalization has the potential to increase the accessibility to marginalized groups in the market by lowering the transaction costs and reducing information asymmetries. The spread of ICTs brought by the digitalization can empower individuals and firms and lead them to a greater well-being environment by creating the access to a free and fair retail trades, transports and logistics, financial services, manufacturing and agriculture, education, health care, broadcast media, and so on. Brought by the digital economy, digital identity is believed to pave the way for the digital future, which is more secure and resilient for every area of life.

Equally noteworthy, while digitalization has produced a wide range of potential benefits to the economy and society, it also raises certain concern. In spite of the growing trends of the digitalization, the digital divide remains a challenge as the uneven distribution of access to, use of, and impact of ICTs among the populations. For instance, instead of the widespread usages of technology, problems such as high costs to purchase a smartphone and the access to the internet still exclude the individual from obtaining the same level of benefits brought by the digital economy. While the digital technology is entirely adopted, the demand for digital skill is needed and the digitalization process would disrupt the labor market and altering the composition of the existing jobs. Moreover, developing countries have to devote more efforts to advance the level of ICT infrastructure and involve in strategic planning to maximize the benefits from the digitalization.

## Identity in the Digital World



Source: World Economic Forum

### Where is Cambodia now in the Digital Economy?

With the rise of the Fourth Industrial Revolution, the digital transformation will inevitably be the new model of key growth engine if Cambodia needs to realize its long-term vision of becoming upper-middle-income country 2030 and high-income country by 2050. Realizing such monumental status, the Royal Government of Cambodia has announced its plan to transform the country into a digital economy by 2023. Dr. Aun Pornmoniroth, Minister of Economics and Finances, stated that,

*For developing countries like Cambodia, new technologies provide an opportunity to leapfrog, bypassing traditional phases of development, ... it will take the country at least 10 years to complete the transition into a full-fledged digital economy (May, 2019).*

Most importantly, to prepare for the fourth industrial revolution, the RGC has laid out in the Rectangular Strategy Phase IV the essence for the economic diversification in the Rectangle 2. The preparation for the readiness for digital economy and the industry 4.0 are also recognized in the Side 3 of the stated Strategy. The RGC has recognized the

importance of the digital economy as key driver of the growth which results in creating new jobs and businesses, giving a great opportunity for Cambodia to improve its economic structure (Rectangular Strategy Phase IV, 2018). On this basis, the RGC has developed and put into force a long-term digital economy strategic framework and other relevant policies such as the telecommunication and ICT development policy, Master Plan for Information and Communication Technology, Law on Telecommunication and a long-term ICT strategic framework. Legal frameworks such as digital government and information security strategy, E-commerce law and cybercrime law has been promoted to enable a preferable digital ecosystem as well as to support the digital development.

In Cambodia, on-demand services, BookMeBus, Pass App and Nham 24 are among the most recent influential tech start-up, which offer wide range of service on-demand from transportation to food delivery and other services which Cambodian people need. Besides this, the financial technology, so-called FINTECH has also emerged as a crucial role in Cambodian people's life in just a short period of time. For instance, ABA mobile banking

and PiPay are the well-depicted examples of how the online mobile payment service has gradually promoted a cashless environment in Cambodia. E-commerce has replaced the traditional way of shopping in the actual market. The number of online shops continues to expand and enlarge into various types of products from foods and beverage to clothing and accessories through the internet and social media platforms, particularly Facebook and Instagram in the past several years. These emerging and growing trends have illustrated how the digitalization has affected the behavior of Cambodian consumers and their ways of living.

Regardless of how, the digital divide among the Cambodian population, especially between the elders and the younger generation, still persists as a challenge, making it hard for the government to integrate each and every person to fully obtain the equal distribution of benefits. Hence, it is necessarily important to address such issues by ensuring that everyone can have equal access to technology and the internet. More importantly, as part of maximizing the benefit from the digital transformation, media literacy through the education and training program focusing on the broadly use of digital technology shall be developed to enhance people's understanding in regard to it. Doing so will not only contribute to a digital-enabling environment but will also equip people with a new skill needed for the advanced technological era and the fourth industrial revolutions.

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