



## BACKGROUND NOTE

# Information and Communication Technology and Entrepreneurship

Emmanuel Alano and Pilipinas Quising

### DISCLAIMER

This background paper was prepared for the report *Asian Development Outlook 2022 Update: Entrepreneurship in the Digital Age*. It is made available here to communicate the results of the underlying research work with the least possible delay. The manuscript of this paper therefore has not been prepared in accordance with the procedures appropriate to formally-edited texts.

The findings, interpretations, and conclusions expressed in this paper do not necessarily reflect the views of the Asian Development Bank (ADB), its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy of the data included in this document and accepts no responsibility for any consequence of their use. The mention of specific companies or products of manufacturers does not imply that they are endorsed or recommended by ADB in preference to others of a similar nature that are not mentioned.

Any designation of or reference to a particular territory or geographic area, or use of the term “country” in this document, is not intended to make any judgments as to the legal or other status of any territory or area. Boundaries, colors, denominations, and other information shown on any map in this document do not imply any judgment on the part of the ADB concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

# Information and Communication Technology and Entrepreneurship

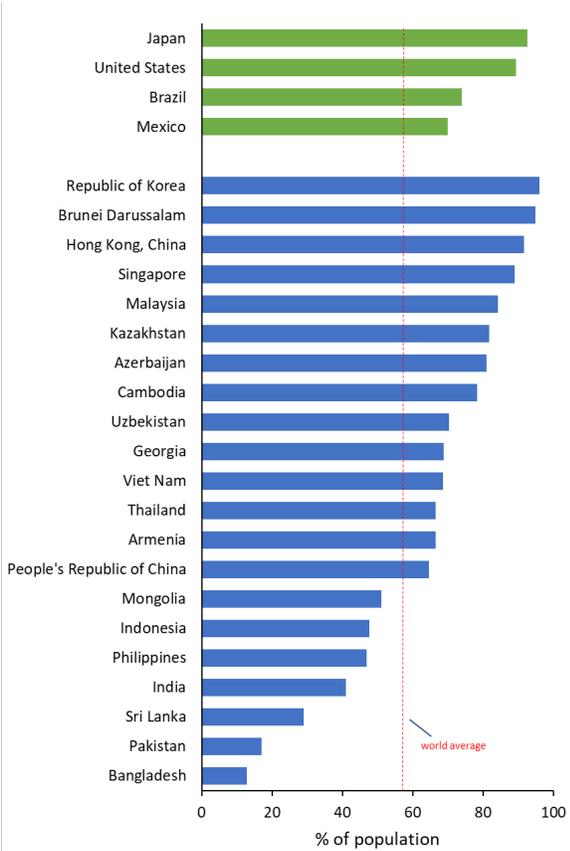
Emmanuel Alano, Consultant  
Pilipinas Quising, Senior Economic Officer  
Asian Development Bank

Information and communication technology (ICT) provides a platform for entrepreneurship. During the pre–coronavirus disease (COVID-19) pandemic years, use of technologies such as mobile banking, online shopping, blockchain, internet of things, and other emerging technologies increased, and this trend has continued in the last 2 years. It has reduced the cost of doing business significantly and is increasingly being used for new ventures. However, these technologies are only useful if the necessary ICT infrastructure is in place to support public access.

In 2019, the majority of developing Asian economies have high internet access in comparison to the rest of the world. According to World Bank data, more than 85% of the population in all newly industrialized economies, such as the Republic of Korea; Hong Kong, China; and Singapore as well as Brunei Darussalam; have internet access. However, access is lagging in South Asian economies, with only 13% of the population in Bangladesh and 17% in Pakistan having access. This digital divide in some of the region’s economies continues to be a significant impediment to ICT-enabled entrepreneurship and development. Despite this, internet usage in most of the Asian economies is higher than the world average (Figure 1).

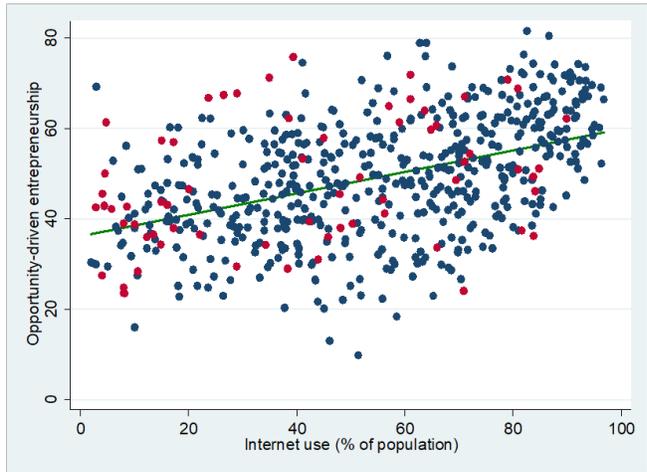
To demonstrate that countries with better ICT infrastructure have higher levels of entrepreneurial activity, the Global Entrepreneurship Monitor’s entrepreneurship indicators were linked with internet access. Data from 2001 to 2019 show a negative relationship between internet access and total early-stage entrepreneurial activity and necessity-driven entrepreneurship, but a positive relationship with opportunity-driven entrepreneurship (Figure 2). Apart from studies that demonstrate how opportunity-driven enterprises drive economic growth, this explains how ICT has provided opportunities for businesses, including start-ups. The majority of innovation, growth, and jobs are provided by opportunity-based or growth entrepreneurs. This relationship can be seen in both advanced and emerging/developing economies, as well as high-income and low-income economies. It is visible in developing Asia, where newly industrialized economies and major economies are leading the way. This shows that businesses are increasingly utilizing ICT, and internet access is now necessary to provide and disseminate products and services through better reach and lower costs.

**Figure 1: Internet Access in Developing Asia, 2019**



Source: World Bank. World Development Indicators database. <https://databank.worldbank.org/source/world-development-indicators> (accessed 25 March 2022).

**Figure 2: Relationship between Internet Access and Opportunity-Driven Entrepreneurship**



Sources: World Bank. World Development Indicators database. <https://databank.worldbank.org/source/world-development-indicators> ; Global Entrepreneurship Monitor database. <https://www.gemconsortium.org/data> (both accessed 25 March 2022).