



POLICY APPROACHES TO DIRECT DIGITAL FRONTIER TECHNOLOGIES TOWARDS INCLUSIVE AND SUSTAINABLE DEVELOPMENT

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towards inclusive and sustainable development

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Executive summary

During the COVID-19 pandemic, digital frontier technologies, such as artificial intelligence (AI) and big data analytics, amongst others, were mobilized to fight against the pandemic. To build back better from the pandemic and meet the ambitions of the 2030 Agenda for Sustainable Development, it is imperative to ensure that these technologies are also directed towards inclusive and sustainable development objectives.

Indeed, digital frontier technologies offer a multitude of opportunities to re-imagine how our economies could serve economic, social and environmental needs. Technologies and innovation are central to long-term economic growth; the adoption of technologies and innovation in production processes increases overall productivity and expands production possibilities. Governments have been using digital technologies to reduce social inequalities and support inclusion. As an example, the Aadhaar technology has enabled the financial inclusion of 1.2 billion people in India. Finally, some countries in Asia and the Pacific have promoted the adoption of state-of-the-art technologies to address environmental impacts. For instance, in the Republic of Korea, the entire smart city of Songdo is built around the Internet of Things (IoT).

Despite such wide-ranging opportunities, the use of digital frontier technologies poses challenges as well. First, the impact of such technologies on the availability of future jobs is uncertain. Second, despite the rapid penetration of the Internet, several billion have been left behind in terms of access to digital technology. As ICT infrastructure is the backbone of digital frontier technologies, there is a risk of it triggering a new digital divide, and compounding an already existing one. Third, digital frontier technologies pose questions about trust and ethics.

In this context, this report reviews the status of digital frontier technologies in the Asia-Pacific region. The report stresses that the impacts of a technologically driven future are far from pre-ordained. Therefore, digital frontier technological breakthroughs require us to think differently about how we have traditionally formulated policies in the use of technology. The policy framework for the next generation of technologies should focus on creating an enabling environment for digital frontier technologies to positively impact the economy, the society, and the environment, and to reduce inequalities. A few pre-requisites for the development and application of digital frontier technologies are:

- 1) Inclusive ICT infrastructure;
- 2) Developing a workforce fit for a Fourth Industrial Revolution future;
- 3) Developing innovative regulatory frameworks;

- 4) Incentivizing responsible frontier technology development in the private sector;
- 5) Catalysing the role of the government in the evolution of frontier technologies;
- 6) Creating a platform for multi-stakeholder and regional cooperation; and
- 7) Making digital frontier technologies serve the poor people and the least developed countries.

Cross-government cooperation, inter-governmental knowledge sharing and consensus building, and honest, open and regular discussions with the civil society and the private sector, specifically technology developers, will be critical to ensure that digital frontier technologies have a positive impact for inclusive and sustainable development.

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