

EDITORIAL

How technology is transforming the global economy? _____

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“Any sufficiently advanced technology is indistinguishable from magic.”

- **Arthur C. Clarke,**

Profiles of the Future: An Inquiry into the Limits of the Possible

Technology is having profound effects on multiple facets of our societal fabric. The current developments, if we were to take them back in time, might appear to the earlier generations like magic. However, these seemingly magical developments are built upon hundreds of years of generated knowledge along the innovation funnel: invested by states and research centers along the basic research and development, commercialized by the industry and lately advanced by the users themselves as they act as innovators. This is nothing new in and of itself. What is new is the rate of change. According to the techno-optimist Ray Kurzweil, we will experience twenty thousand years of technological change over the next one hundred years. This, often described as an exponential rate of change combined with increasing complexity, makes even more important the need for social scientists of all fields, and economists in particular, to reflect on the changes that are about to occur.

So, how is technology changing the global economy? Digital technologies will significantly reduce trade costs and reshape the composition of trade, favoring services and time-sensitive products. Developing countries will potentially gain a larger share of global trade. International cooperation is essential to harness the benefits of digital trade and promote inclusive economic development.

In terms of the labor markets, news and media have inundated the readers with ominous titles such as “the end of labor”. However, according to state-of-the-art research, it appears that automation has shifted labor demand away from routine

middle-level jobs to non-routine ones, commonly denoted as the routine biased technological change (RBTC). Hence, researchers seem to be more concerned about the “decaying middle” and the quality of jobs, as opposed to the end of labor. Until recently, it was believed that Polanyi’s paradox (named after the famous economist Karl Polanyi) could not be surpassed, the simple idea that “*you know more than you can tell*” inferring that not all our tacit knowledge can be fully explicitly articulated and codified.

Nevertheless, this paradox now seems, at least at first glance, to be challenged by the developments in Artificial Intelligence and more specifically its subfield Machine Learning. It remains unclear how that will impact the labor force. Also, in the face of a challenging decade, technology can be a critical tool in the transition to a cleaner, safer and more inclusive world. The rapidly emerging technologies of the 4IR have the potential to reduce emissions by up to 20% of the net-zero goals and allow billions of individuals to enjoy access to health, education or financial services for the first time. However, given the widely forecasted recession in 2023, the realization of this potential can only be achieved through sustained investment.

Those companies that are adopting AI are still gaining a competitive advantage; a shortage of tech talent is still a pressing issue for companies, so half of them are reskilling existing employees instead. To further ease concerns among the workers and companies alike, the private and public sectors need to work in close collaboration on skills investment from upskilling to reskilling, to make use of these new technological tools. Besides the upskilling of workers, recent research shows that organizations may need to reconfigure their allocation of tasks and their organizational routines to take full advantage of the up-and-coming technologies. Digital technology can indeed be considered as a key enabler for the broad set of challenges business and governments alike face. However, it brings its own set of issues related but not limited to the historical biases permeating datasets, the matters of liability and ownership, particularly for generative AI, possible job displacements, disruption to particular industries etc.

Competition policy must be modernized for the digital age, focusing on strengthening antitrust laws. Regulation should address data, competition, and market concentration challenges. Innovation ecosystem needs updating, including patent systems and investment in research and development. Bridging the digital divide requires enhancing digital infrastructure and access, particularly in developing economies transitioning from low-skill manufacturing.