Openness and digital innovation

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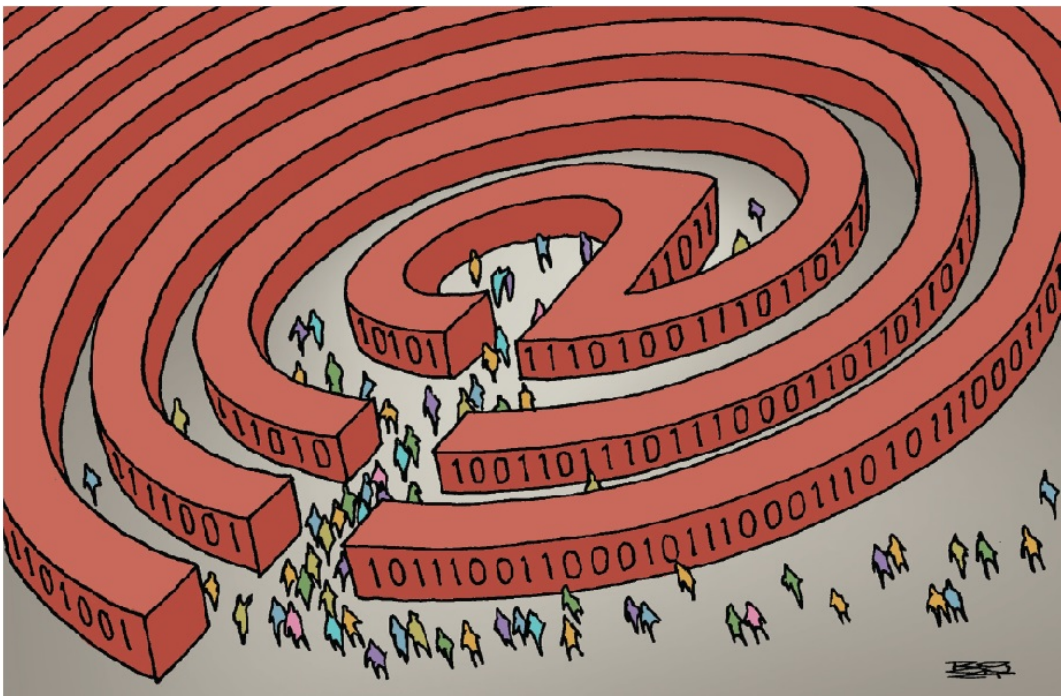

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Now more than ever, the digital economy is the economy. Digital technologies, or Information and Communication Technologies (ICTs), are boosting trade, innovation, entrepreneurship, and with them growth and social wellbeing. Those benefits depend on openness. Openness has technical, economic and social dimensions, from open standards for core technologies and protocols, and competitively priced access for users, to the respect for human rights, freedom of expression and privacy. In essence, openness enables people to access, and do more things with, digital technologies: start a business online, create new products and business processes or revolutionise existing ones, express opinions, raise capital, share knowledge and ideas, conduct research, interact with government, improve skills, and much more.

Openness enhances digital innovation in a number of ways–by boosting knowledge and data flows that support innovation, by underpinning the Internet

as a platform on which entrepreneurs can construct new businesses and commercialise their ideas, and by enabling new avenues for businesses to obtain inputs, thereby lowering entry barriers and freeing up resources for innovative activity. People can share, access and exchange data, knowledge and technologies in ways that were previously not possible, with benefits for collaborative research, public service delivery and business activities. The Internet's end-to-end design principle, in particular, makes it conducive to new applications and, combined with a competitive market and an absence of gatekeeping, means lawful new services can bubble up.

The diffusion of digital technologies, especially advanced ICTs, such as cloud computing, data analytics, and enterprise resource planning software, are associated with higher innovation performance. The share of businesses adopting ICTs is between 20% and 70% higher among innovators compared with other firms, depending on the year, the type of ICTs and the type of innovation considered. Furthermore, OECD work on data-driven innovation (DDI) shows that firms using data are more likely to innovate and to raise their productivity faster than non-users (by around 5-10%). Moreover, the use of open government data among citizens can increase the transparency and accountability of government activities and thus boost public trust.

In short, openness is key, and barriers to openness can stifle innovation, not just by slowing the diffusion of ICTs, but of exchange, ideas, innovative practices, public participation, and more. In terms of the economy, as OECD work has shown, the weak diffusion of technologies and knowledge from firms at the productivity frontier to other less innovative firms may be one of the key reasons behind the slowdown in overall productivity over the past two decades. Indeed the diffusion of advanced ICTs still remains short of its potential, with small- and medium-sized enterprises (SMEs) and the public sector lagging in both adoption and use. For example, while almost 95% of enterprises in the OECD had a broadband connection in 2014, 40% of enterprises with 250 or more employees used cloud computing, compared to less than a quarter of SMEs). Closing this digital divide should be an important of policy efforts not only on the economy, for promoting more inclusive societies, too.

Openness is clearly not helped where access to digital infrastructures at competitive prices is lacking. Mobile broadband and data, the promotion of appropriate open standards to increase competition and transparency, and reduce vendor lock-in, secure information flow systems: these are just some of the goals policy makers should aim for as they set about promoting a strong digital economy. Openness depends on reliability, and privacy and building trust online are essential for people to become confident users in the long run. In addition, the open availability and wide adoption of Internet standards and protocols are essential for providing a foundation on which new and improved products, services and processes can be built.

To promote openness, its benefits, and its challenges, the OECD is proposing a multifaceted and inclusive definition of openness, developing a framework for analysing how relevant actions and conditions affecting openness can boost digital innovation, presenting preliminary quantitative and qualitative evidence on the economic and social effects of more or less openness.

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