

# Updating the Polish economy: how to digitalise and boost productivity

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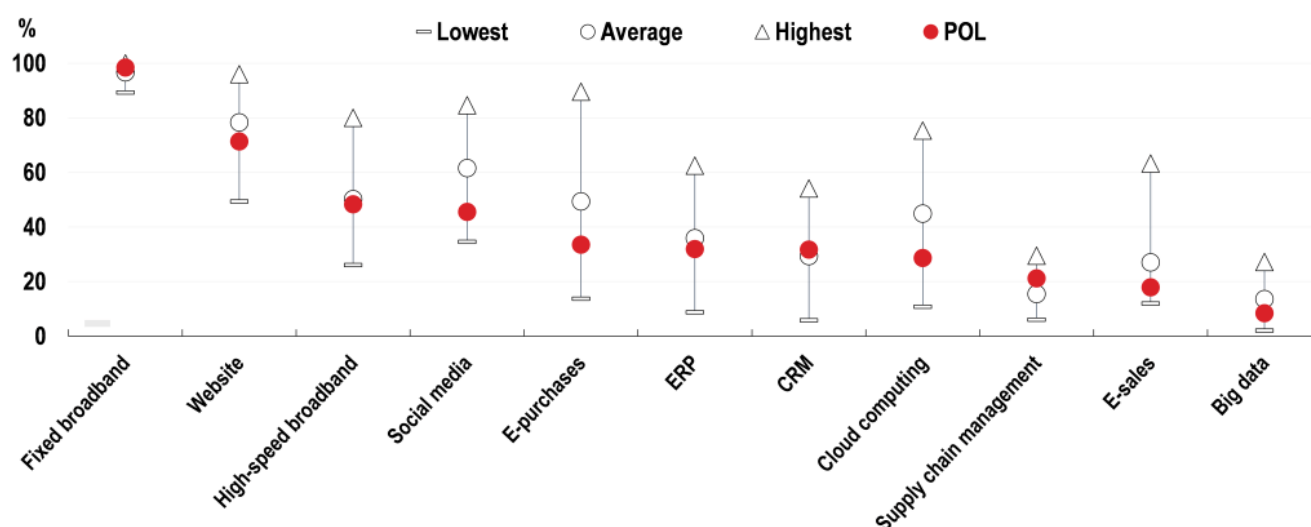
**Poland experienced remarkable economic progress over the last three decades.** Living standards have risen from around half the EU average in 1995 to close to 80% in 2021. Poland has substantially increased educational attainment and boosted skills, and Polish firms have successfully integrated into European and global markets. Digitalisation can help to sustain this success as our recent Economic Survey suggests.

**While most firms in Poland already employ digital technologies, their use could be more extensive.** Total investment in ICT and R&D is well below the OECD average and this is reflected in comparatively lower adoption of individual digital technologies (Figure 1). Most firms have a website, but e-commerce is not widespread. The use of software for managing customer relationships and enterprise resources is average by OECD standards and the adoption of more advanced technologies, such as cloud computing and big data, lags behind most OECD countries. In particular, the use of robots is low compared to other European countries, such as the Czech Republic and Slovakia (Leśniewicz and Świącicki, 2021). Small and medium-size enterprises (SMEs) are less digitalised than larger firms and, given that they account for two thirds of all employment and half of all output, this is where policy should focus.

**Figure 1 – Digital technology adoption is relatively low in Poland**

Diffusion of selected ICT tools and activities in enterprises, 2021 or latest

As a percentage of enterprises with ten or more persons employed



Note: CRM = customer-relationship management. Enterprise resource planning (ERP) systems are software-based tools that can integrate the management of internal and external information flows, from material and human resources to finance, accounting and customer relations. Here, only sharing of information within the firm is considered. Cloud computing refers to ICT services used over the Internet as a set of computing resources to access software, computing power, storage capacity and so on. Supply chain management refers to the use of automated data exchange applications. Big data analysis refers to the use of techniques, technologies and software tools for analysing big data. This, in turn, relates to the huge amount of data generated from activities that are carried out electronically and from machine-to-machine communications. Social media refer to applications based on Internet technology or communication platforms for connecting, creating and exchanging content online with customers, suppliers or partners, or within the enterprise. Radio frequency identification (RFID) is a technology that enables contactless transmission of information via radio waves.

Source: OECD ICT Access and Usage by Businesses Database.

**Digital investment in firms is relatively low for a number of reasons.** Firms in Poland tend to overestimate their own technological sophistication (World Bank, 2022). When they consider digital investments, they often undervalue the benefits and overestimate the costs. A lack of time and

adequate skills are also cited as obstacles.

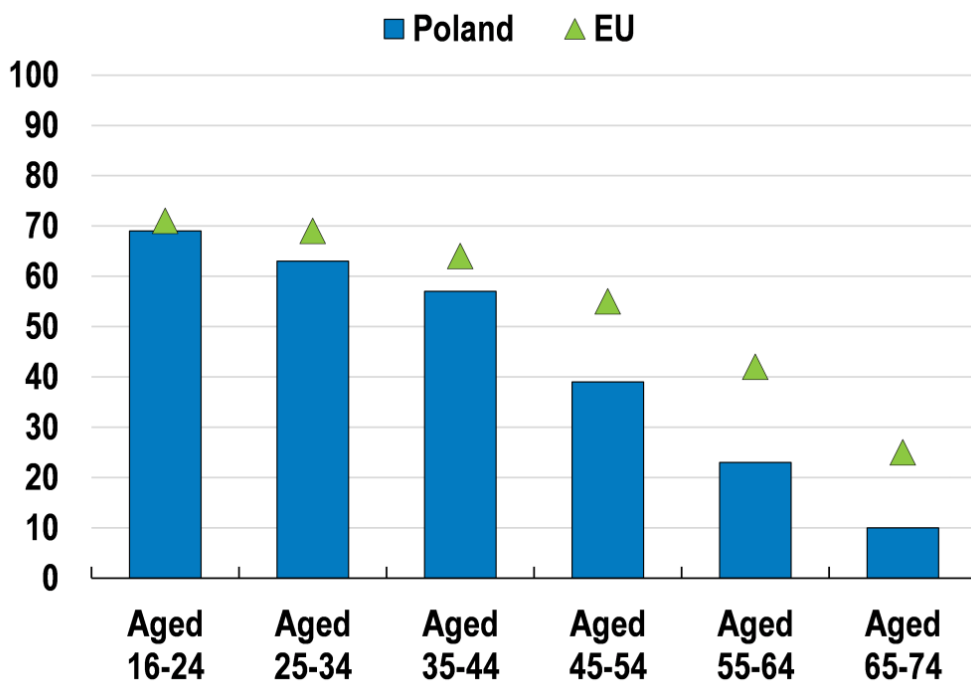
**The government is already taking action.** The 'Future Industry Platform' foundation was set up to accelerate the digital transformation of industry through promotion of and technical support for new technology adoption. The Polish Agency for Enterprise Development, known in Poland as PARP, is currently running several pilot programmes to support digitalisation.

**To facilitate digital investment in firms, the authorities should consider expanding targeted technical and advisory support.** Many ICT investments can be profitable, but SMEs often lack the knowledge and skills to choose the appropriate ICT tools, which results in low investment demand. Thus, there is a need for proactive consultancy and advisory services. For example, Denmark and Austria operate programmes for SMEs that help them to identify digital opportunities and then to implement the new technologies.

**Digital technologies require skilled people to use them.** Skilled managers are important in identifying new technologies and implementing them (Zadura-Lichota, 2015). Management skill levels are broadly average in Poland, relative to other European countries, but could be increased. Managers also need workers with digital skills to install and operate new digital technologies. However, adults' digital skills, particularly among older adults, are relatively low (Figure 2). People in Poland tend to use ICT for simple tasks, such as searching for information and using social media, while the use of ICT for work purposes is less widespread.

## **Figure 2 – Digital skills lag behind most European countries**

% of individuals who have basic or above basic overall digital skills, by age group, 2021

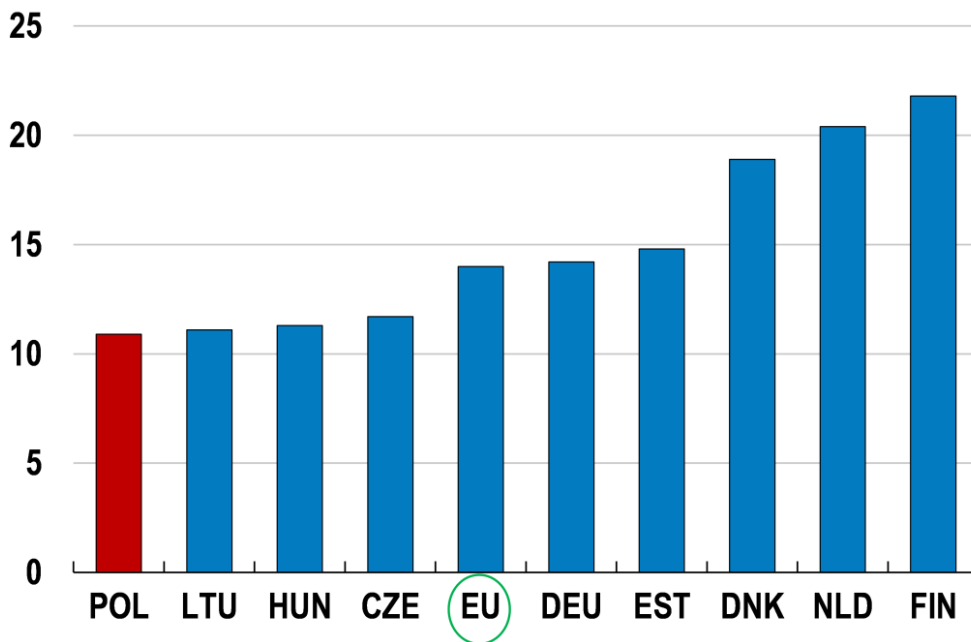


Source: Eurostat.

**Lifelong learning is key to developing digital skills.** Adults need to continue to learn digital skills, but participation in formal adult learning is low as firms tend to underinvest in training (Figure 3). This is mainly due to little perceived need for further training, as well as family responsibilities and scheduling issues. Better awareness of the benefits of adult learning, coupled with more extensive and detailed counselling, could encourage adults to develop their digital skills. Adult learning also needs to be made more flexible and modular so that it fits around work and personal duties. Many Polish people learn in less formal ways, such as from colleagues or by themselves. Recognising prior learning and making more use of short learning training certifications, such as micro-credentials, could help identify digital skill gaps, but also encourage workers to profit from their skills in the labour market. Individual training accounts, such as those introduced in France in 2015, can facilitate adult learning.

**Figure 3 – Participation in formal adult learning is low**

% of the 15-54 population, 2021



Source: Eurostat.

**Poland needs more ICT specialists.** The ICT sector has some of the highest vacancy rates. To increase the number of ICT specialists, it is essential that schools have adequate ICT equipment and that teachers are appropriately trained to teach digital skills. As young people progress with their schooling, they should be able to specialise in ICT. Within vocational education, new ICT programmes have been introduced, which should partly address digital skill shortages in the economy. But universities can also boost the number of ICT graduates through more flexible programmes that allow students from other disciplines to also specialise in ICT. Moreover, Poland should encourage more women to study ICT by raising awareness and through scholarships.

**Further digitalising the economy can boost productivity.** Closing a quarter of the gap with best performing OECD countries in terms of more ICT adoption in firms and better managerial and digital skills could raise the long-run level of GDP by around 6% (Sorbe et al., 2019). Public policies can support and facilitate this transition but they need to be comprehensive and inclusive to ensure the benefits are shared

by all.

## **References:**

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