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From Gaps to Growth: Accelerating SME Digitalisation for a Sustainable Digital Future

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Introduction

Digitalisation of SMEs is fundamental for building inclusive and resilient economies and societies. Access to digital technologies provides SMEs with opportunities to innovate, grow, integrate into supply chains, tap into talent and expertise, access new markets and transition to more sustainable business models and practices. However, despite the steady upward trend in the uptake of digital technologies by SMEs over the last decade, and the acceleration in the aftermath of the 2019 the pandemic, the gaps with large businesses remain large, contributing to inequalities among firms, and, in turn, people and places. At the firm level, digital gaps are strongly associated with gaps in productivity, scaling up, innovation and growth, all of which impact aggregate economic growth, inclusion and societal well-being (OECD, 2023[1]; OECD, 2023[2]). The new wave of digital applications, largely driven by Artificial Intelligence (AI), holds the promise of enabling SMEs bridge longstanding gaps, enhancing productivity and easing access to markets. However, it also brings challenges to SMEs, such as in relation to skills, the need for organisational changes to optimise use of digital technologies, and the increasing threats to digital security. In 2023, the OECD D4SME global initiative launched an international survey to gather evidence on SME digital practices across seven OECD countries (France, Germany, Italy, Japan, Korea, Spain and the United States). The survey covered topics such as use of generative AI, data collection and analysis for decision-making and cybersecurity practices, in addition to awareness and use of government support programmes for SME digitalisation. The results are informative of the incentives driving digital adoption, persisting barriers, as well as emerging challenges and op-

portunities. As such they provide valuable insights for policymakers and stakeholders to design effective strategies and measures for inclusive digitalisation (OECD, Forthcoming

Recent trends in SME digitalisation and the Rise of Generative AI: a more levelled playing field?

Digitalisation presents SMEs with opportunities to enhance their resilience to short-term shocks while bringing long-term advantages.

The key role of digitalisation in strengthening SME resilience has been underscored in the context of a series of shocks that hit the global economy since 2020. In the face of unprecedented disruptions, a large share of SMEs was able to continue, expand or pivot their operations by embracing digitalisation (OECD, 2021[4]), including by leveraging government support programmes, or trainings offered by universities, business associations and private sector partners. Beyond enhancing resilience to short-term shocks, evidence suggests that digital adoption can lead to productivity benefits (Gal et al., 2019[5]), as well as growth of employment and revenue (DeStefano, Kneller and Timmis, 2020[6]). Digitalisation can also represent a key enabler for SMEs to scale up. In particular, data is increasingly a strategic asset, with data-driven applications enabling SME scale up through efficiency gains, enhanced innovation capacity, greater potential for diversification, differentiation and specialisation, or network expansion (OECD, 2022[7]; OECD, 2021[8])

SME digitalisation has accelerated over the past years; however sizeable gaps persist for a large number of SMEs.

SME digital connectivity has significantly improved in recent years across most countries and regions, as highlighted by data on SME adoption of high-speed internet since the COVID-19 pandemic. Specifically, in 2019, across OECD countries, 38% of medium-sized firms and 23% of small businesses had access to ultra-fast broadband higher than 100 Mbps. In 2022, these shares increase to 65% and 52% respectively (OECD, 2023[9]). Despite the progress, SMEs have not kept pace with larger enterprises in their digitalisation efforts, as illustrated by the slower adoption of key productivity-enhancing applications. As a case in point, in the OECD area, between 2020 and 2021, the share of small businesses acquiring cloud computing services increased from 38% to 41%. However, the lag with respect to the share of large businesses adopting cloud computing also increased in the same period, from 31% to 33% (OECD, 2023[9]; OECD, Forthcoming[3]).Further adoption gaps can be observed on the use of more advanced digital technologies such as AI. (Calvino and Fontanelli, 2023[10])

The advent of generative AI presents new opportunities, exemplifying how digital tools enable SMEs to achieve more with fewer resources.

While Artificial Intelligence has long been harnessed by industry giants to dissect data and streamline operations, the advent of affordable and accessible Large Language Models (LLMs), commonly referred to as "generative AI" (e.g., ChatGPT, Copilot, Claude, Gemini) has now put that potential in the hands of SMEs. By helping automate manual and repetitive tasks, they free up human resources for tasks that demand greater complexity and creativity (Eapen et al., 2023[11]). Recent studies find that the implementation of generative

AI in businesses leads to improvements in productivity, particularly among new and low-skilled workers (Brynjolfsson, Li and Raymond, 2023[12]). In this regard, generative AI presents great potential to "level the playing field" between SMEs and large businesses. As digital tools integrate generative AI functionalities in their offering, SMEs gain easier access to AI capabilities, enabling a direct and simpler adoption of AI technology.

Findings from the 2023 OECD D4SME survey across seven countries (France, Germany, Italy, Japan, Korea, Spain and the United States) show clear momentum among SMEs in adopting generative AI services with 18% of SMEs reporting they are experimenting with them within a year of its public release.

Among other critical areas, the survey enquires about SMEs' perception and use of generative AI, the most widespread application of this technology among respondent businesses. 57% of these consider that the potential associated with the use of digital tools integrating generative AI functionalities outweigh the associated risks. However, only a small share of SMEs (6%) undertake some direct investment to create or acquire tailored machine learning algorithms (produced by either internal or external experts) to be applied in their business functions Further, (OECD, Forthcoming[3])

The accelerated uptake of generative AI also brings about new risks for SMEs, including a potential widening of digital divides.

OECD D4SME survey findings show that uptake of generative AI was the most widespread among SMEs that had digitalised most of their activities, 23% compared to

13% of their less digitalised peers. Concerns related to the uptake of generative AI also emerge among respondent SMEs, including risks of misinformation and inaccuracies in the content generated by AI systems, ensuring data privacy and security or loss of control over decision making processes (OECD, Forthcoming[3]).

Asymmetric uptake of SME digital practices: widespread use of data but fragmented cybersecurity adoption

A large majority of respondents (72%) use data to support decision-making, underscoring the pivotal role of data-driven insights in modern business strategies.

Also, businesses that make decisions supported by data tend to be more satisfied with the results of their broader digitalisation efforts. (OECD, Forthcoming[3])

Access to and use of data are becoming increasingly important for SME transition to more sustainable business models and practices, but progress is uneven.

The emergence of software-based energy efficiency technologies facilitates the pursuit of more sustainable business practices. The most popular applications are energy monitoring systems or smart meters, which facilitate the gathering of data on energy consumption and automated resource optimisation (OECD, Forthcoming[13]). However, while 59% of surveyed businesses in EU countries (France, Germany, Italy and Spain) report they have some environmental monitoring in place, this is only the case of 38% of Japanese businesses and 31% of businesses in Korea or the US (OECD, Forthcoming[3])

Few SMEs adopt robust digital security practices, making them vulnerable to cyberattacks.

Across all surveyed geographies, 19% of respondent businesses admit to not implementing any cybersecurity measures and 44% have only one or two measures in place. However, divergent adoption rates are observed across surveyed countries, with 41% Korean respondent businesses indicating they do not have any measures in place, compared to 17% in the US, 11% in Japan and 4% in the EU. Conversely, 54% of US businesses and 60% of businesses across surveyed EU countries implement three or more cybersecurity measures. The most widely adopted cybersecurity measures are anti-virus or anti-malware software (67%) and two-factor authentication (48%). Despite the prevalence of human error as a leading cause of security breaches, only 11% of respondent businesses invest in cybersecurity training, and 6% conduct regular cybersecurity assessments (OECD, Forthcoming[3])

No one-size-fits-all solution: addressing the diverse needs of SMEs based on operational practices

Increasing domestic sales, expanding customer reach and automating processes stand out as main catalysts for SME digital adoption, with variations based on businesses' operational practices.

Overall, 47% report that increasing domestic sales is a key objective of digital adoption and 41% aim to broaden their customer base. Automation is a significant goal for 40% of businesses, especially within the professional services sector (48%) and more digitally advanced businesses, with

48% of businesses digitalising most of their activities reporting automation as an objective against 33% of businesses that have only digitalised some of their activities (OECD, Forthcoming[3])

Lowering costs and exploring new revenue streams are also key incentives for digital tool adoption, yet variations arise based on how businesses interact with customers.

While 26% of hybrid businesses – operating both online and onsite - prioritise exploring new revenue streams, 18% of online businesses and 15% of exclusively in-person SMEs share this focus. On the other hand, hybrid SMEs are less inclined to prioritise cost reduction (19%), with 29% of online businesses and 25% of in-person businesses highlighting this objective (OECD, Forthcoming[3]).

In fact, there are sectoral variations in the type of online activities undertaken, while differences by size are apparent in businesses' digitalisation processes. While over 60% of businesses in wholesale trade, manufacturing and the professional service sectors implement hybrid practices – engaging with customers both online and in physical locations – 52% of retailers operate exclusively online. In contrast, the food and beverage sector predominantly rely on traditional in-person interactions, with 52% of businesses engaging exclusively on-site with customers. Furthermore, while most businesses (34%) follow a top-down digitalisation approach, spearheaded by executives or business owners, a significant portion (29%) – primarily self-entrepreneurs – rely on online platforms. Notably, 32% of self-employed entrepreneurs utilize online platforms to structure their digital strategies, compared

to a mere 9% of medium-sized enterprises (OECD, Forthcoming[3]).

Support for SME digitalisation: an awareness gap?

Various programmes support SME digitalisation across surveyed geographies. To name a few examples, the EU's "Digital Europe" programme aim to enhance SMEs' adoption of technologies like AI and cybersecurity. Japan's "IT Implementation Subsidies" intend to boost productivity through IT tools. Korea's "Data Value Evaluation Support Project" aims to help SMEs leverage data assets effectively. Finally, the U.S. Small Business Administration's Small Business Digital Alliance provides tech resources to expand e-commerce and competitiveness.

However, few SMEs are aware of public support for digitalising.

 Overall, only 18% of SMEs report being knowledgeable about available government supports for adopting digital tools, with some differences across countries (27% in surveyed EU countries, 26% in Korea, 14% in Japan and 5% in the US) (OECD, Forthcoming[3]).

Among the SMEs aware of government support, uptake remains relatively low.

Fewer than 31% in Korea and only 25% in Japan take advantage of these measures (OECD, Forthcoming[3]). This trend mirrors findings from earlier studies, such as the OECD D4SME survey of retail businesses, where few respondents reported benefiting from online selling supports, reflecting an overall low awareness of such programmes (OECD, 2023[14]). The rather low uptake among those aware of digitalisation sup-

ports suggests additional barriers, such as burdensome application processes or misalignment with SME digital needs. Furthermore, some businesses express concerns about maintaining digital tools and systems after the support programme ends, citing a lack of skills to operate and maintain these solutions.

Conclusion

The 2023 OECD D4SME survey highlights the momentum in generative AI adoption, the pivotal role of data-driven decision-making, the fragmented nature of cybersecurity practices among SMEs and their different needs across size, sector and operational practices. While SME digitalisation has made important strides since the COVID-19 pandemic, sustained efforts are required to close the gap with larger enterprises and address the diverse needs of SMEs.

Often barriers to digital adoption are specific to the sector or firm type, which suggests that policy makers need to carefully balance structural and targeted policies to support SMEs, while boosting awareness of available government programmes to enhance uptake. Co-operation between governments, large and small digital service providers, SMEs and entrepreneurs is essential to ensure the continued digital transformation of SMEs and their fundamental contribution towards a more productive and sustainable economy.

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