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DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS
INVESTMENT COMMITTEE

Cancels & replaces the same document of 16 May 2025

FDI Qualities: Investment for clean-energy and digital transformation

Background note

This factual background note draws on two draft OECD reports – *FDI Qualities Indicators 2024: Mobilising investment for inclusive green and digital transitions* and *FDI Qualities: Investment Policy Framework for Digital Transformation*. It begins by highlighting recent trends and insights on the broader qualities of FDI, before turning to how governments can better leverage digital-related FDI to build competitive, connected and forward-looking economies. It serves to inform discussions at the OECD Ministerial Council Meeting 2025.

In the absence of comments from Investment Committee Delegates by 23 May, it will be considered approved and declassified.

This cancel and replace version includes the relevant OECD disclaimers on page 2.

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Note by the Republic of Türkiye

The information in this document with reference to “Cyprus” relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Türkiye recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Türkiye shall preserve its position concerning the “Cyprus issue”.

Note by all the European Union Member States of the OECD and the European Union

The Republic of Cyprus is recognised by all members of the United Nations with the exception of Türkiye. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

FDI qualities: Investment for clean-energy and digital transformation

Foreign direct investment (FDI) is central to today's economic transformation – supporting innovation, enabling access to new technologies, reshaping global value chains, and advancing sustainable development. In particular, digital and clean-energy investments are growing rapidly, with these sectors accounting for nearly half of global greenfield FDI between 2019 and 2023.

Yet the benefits of FDI are not automatic. Amid declining global flows and mounting development challenges, policymakers are increasingly focused not only on attracting more investment, but on ensuring that it delivers meaningful impact – on productivity, skills, labour market outcomes and long-term resilience.

This note draws on two draft OECD reports – *FDI Qualities Indicators 2024: Mobilising investment for inclusive green and digital transitions* and *FDI Qualities: Investment Policy Framework for Digital Transformation* – to inform this discussion. It begins by highlighting recent trends and insights on the broader qualities of FDI, before turning to how governments can better leverage digital-related FDI to build competitive, connected and forward-looking economies. It serves to inform discussions at the OECD Ministerial Council Meeting 2025.

Understanding the qualities of FDI

The landscape for international investment is shifting. While global foreign direct investment (FDI) remains a vital channel for financing development and structural transformation, the declining trend in FDI flows since 2015 – marked most recently by a 21% and 7% drop in 2022 and 2023[1] – signals deeper pressures in the global economy. In this context, not only the quantity but also the quality of investment has come under scrutiny.

The 2024 edition of the OECD's *FDI Qualities Indicators* provides fresh insights into how FDI contributes to broader economic, social and environmental outcomes (Infographic 1). The indicators assess the extent to which FDI supports productivity, innovation, labour market outcomes, digitalisation and clean energy growth. They also reveal disparities in the capacity of countries to attract the kind of investment that generates long-term development benefits.

Multinational enterprises (MNEs), owing to their larger scale and access to technology and capital, tend to be more productive than domestic firms – by 70% on average. Foreign firms pay 34% higher wages, a percentage that declined in the OECD in recent years. This may mean that MNEs operate in highly concentrated sectors with large rents. They are also 80% more likely to invest in research and development

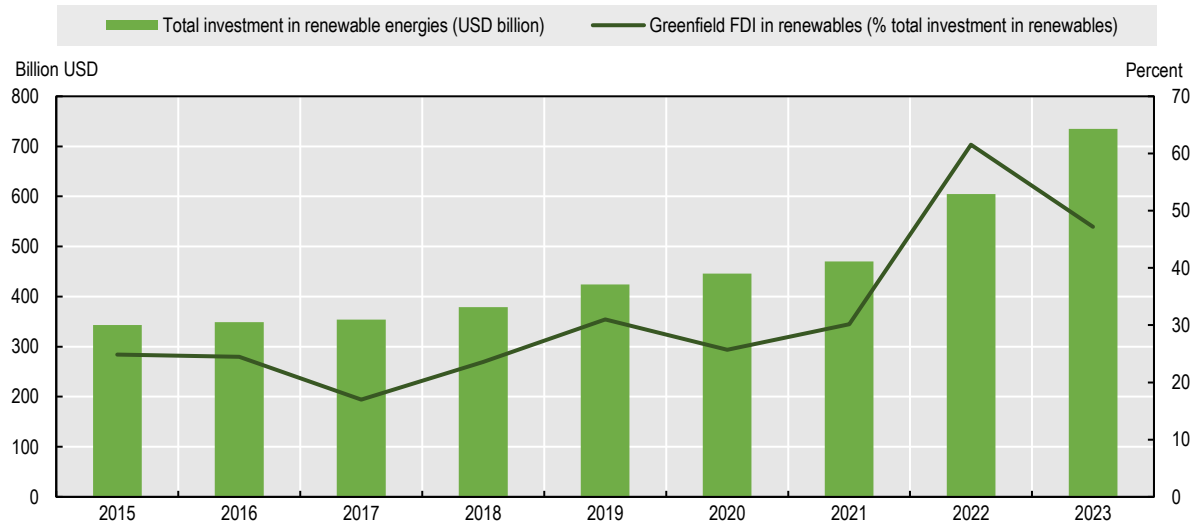
[1] In 2024, global FDI flows were up 1% from 2023. However, when excluding large fluctuations in selected European economies, global FDI flows were down by 9%. See: https://www.oecd.org/en/publications/fdi-in-figures-april-2025_d5a76fd0-en.html

and to make greater use of digital tools and technologies. This reinforces their role in spreading new technologies and upgrading industrial capabilities in host countries. Yet, there are caveats. Foreign firms in developing economies often operate in more polluting sectors, with carbon intensity 16% higher than that of domestic firms. Despite being 70% more energy-efficient, their environmental impact can be significant where regulation is weaker.

The nature of FDI is evolving, particularly under the influence of digitalisation. From 2019 to 2023, digital and clean-energy sectors attracted nearly half of global greenfield FDI. Greenfield investment in renewable energy jumped from 1% in 2003 to 26% in 2023, while investment in digital sectors rose from 12% to 22%. The importance of greenfield FDI as a source of financing for renewable energies has also increased: Greenfield FDI represented 47% of global investment in renewable energies in 2023, a significant increase from only 25% in 2015 (Figure 1). These trends reflect both strategic shifts in global value chains (GVCs) and the reorientation of policy priorities.

Figure 1. FDI accounts for almost 50% of total investment in renewable energies worldwide

Greenfield FDI and total investment in renewable energies (billion USD), 2015-23



Source: OECD FDI Qualities Indicators 2024 based on Financial Times fDI Markets and International Energy Agency.

However, as FDI flows increasingly target capital-intensive sectors such as AI, semiconductors, and green technologies, their job creation intensity is declining. The number of jobs generated per dollar of investment has dropped by 17% over the past decade, pointing to potential long-term impacts on inclusion and employment. This trend is particularly pronounced in regions such as Africa and the Middle East, where job creation per billion invested is 60-70% below the global average.

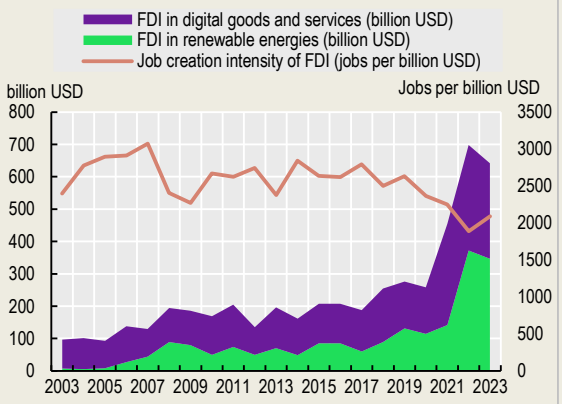
The role of foreign investment in supporting a fair and sustainable transformation hinges on more than market dynamics. It requires policies that shape FDI in ways that align with national development goals. The OECD's work on FDI Qualities provides the analytical foundation to understand these dynamics and identify policy levers that can make investment work better for people, productivity and long-term progress.[2]

[2] https://www.oecd.org/en/topics/sub-issues/foreign-direct-investment-qualities-and-impact.html

Infographic 1. Key facts and figures

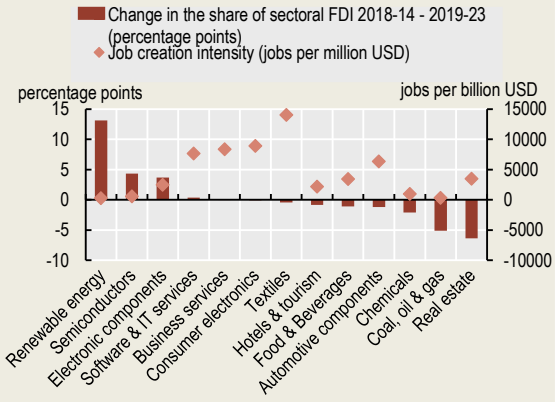
The rapid expansion in FDI in green and digital-enabling sectors has reduced the job creation intensity of FDI

Greenfield FDI and job creation intensity of FDI



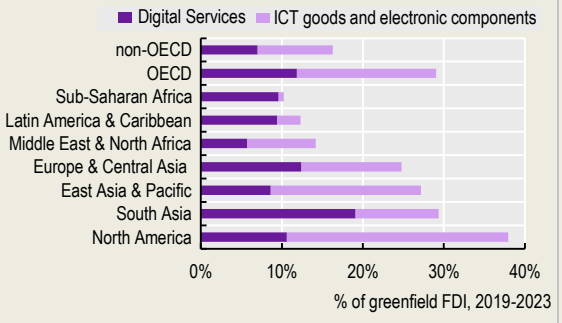
Sectors that have experienced an expansion in FDI have low job creation intensities

Change in share of FDI and job creation intensity, selected sectors



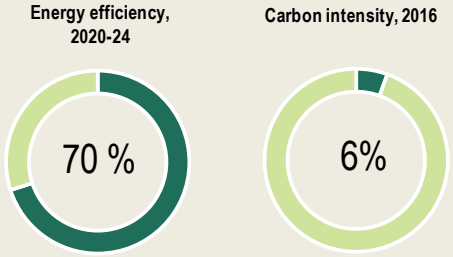
FDI in digital sectors is nearly twice more important in OECD than in non-OECD economies

Greenfield FDI in digital goods and services, 2019-23



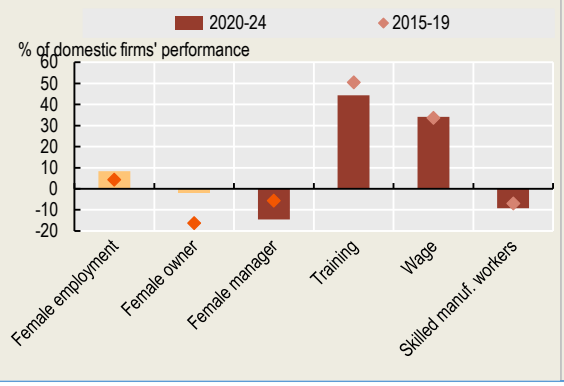
Foreign firms are 70% more energy efficient but also 6% more carbon intensive than domestic firms

Foreign firms' performance gap (% of domestic firms' performance)



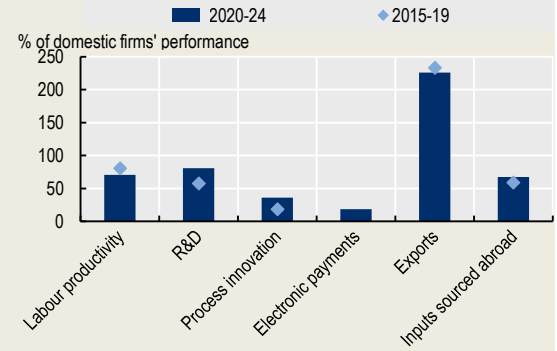
Foreign firms pay 34% higher wages and employ 8% more women but not necessarily in management positions

Foreign firms' performance gap (% of domestic firms' performance)



Foreign firms are more productive, innovative and better integrated into GVCs than domestic firms

Foreign firms' performance gap (% of domestic firms' performance)



Source: OECD FDI Qualities Indicators 2024 based on Financial Times fDI Markets, World Bank Enterprise Surveys, 2024, IMF Climate Change Data 2024.

Why investment in digital matters

Digital transformation is a powerful enabler of economic progress. It enhances productivity, promotes knowledge spillovers and fosters business innovation. When channeled effectively, foreign investment can be a key source of capital, technology, and expertise needed to scale up digital infrastructure and services. For many countries, especially those with limited domestic capabilities, FDI is essential to accelerate digital catch-up.

Global FDI in digital sectors grew considerably in recent years, particularly in cloud computing, data services, semiconductors, and AI. FDI in digital sectors accounted for 28% of greenfield FDI in OECD countries and 16% in non-OECD countries in 2023 (Figure 2, Panel A); although these shares vary considerably across countries (Figure 3). Few MNEs have driven this expansion: the top 20 parent companies account for nearly 60% of capital invested in the digital sector over 20214-23 (Figure 2, Panel B).

In some developing economies, digital FDI has catalysed the rise of export-oriented tech clusters, as in the case of semiconductor packaging. Moreover, foreign firms are 19% more likely to use digital payment solutions than domestic peers, reinforcing their role in driving digital and operational modernisation.

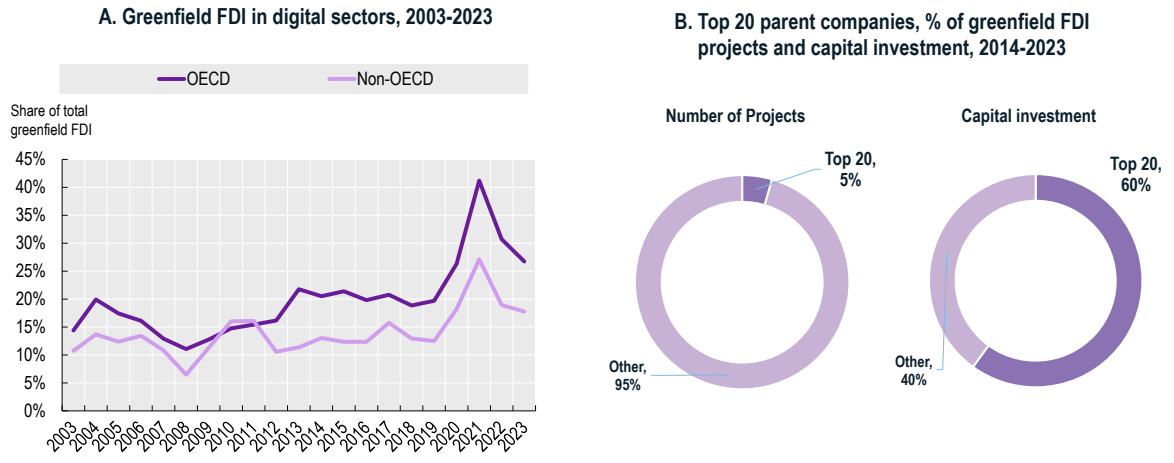
These investments have wider economic effects. Digital FDI creates 3,600 jobs per USD billion invested, compared to 2,200 in non-digital sectors (Figure 4). Jobs are often more skill-intensive and better paid. Foreign firms are more likely to offer digital training and are 30–60% more likely to invest in worker upskilling compared to domestic peers.

Foreign investors are instrumental in building digital ecosystems. They invest in infrastructure, share knowledge across borders, and integrate domestic firms into global digital value chains. These activities support local capacity development and can spur broader economic transformation.

In manufacturing, finance, logistics and services, foreign firms are more likely to adopt and deploy digital technologies. They enable traditional sectors to evolve through the use of automation, digital platforms, and data-driven business models. This leads to higher productivity and often faster innovation cycles.

FDI also plays a vital role in expanding access to key digital public goods. For example, investments in mobile connectivity and broadband networks have extended digital access in many developing countries. Cloud services, supported by foreign investments in data centres, now underpin e-commerce, digital finance, and digital health services.

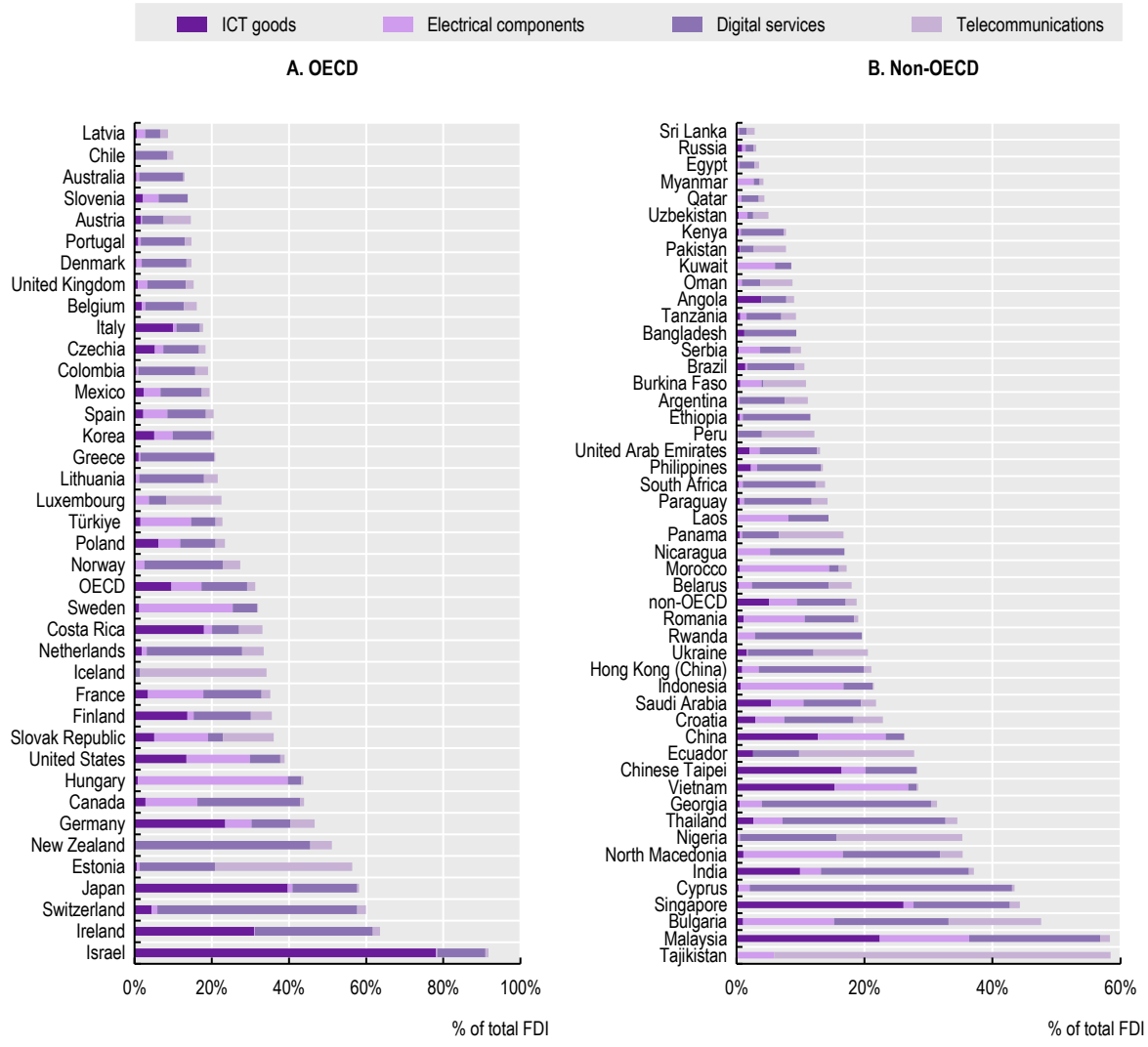
Figure 2. Investment is a key driver of digital transformation amid growing industry concentration



Source: OECD FDI Qualities Indicators 2024 and Financial Times fDI Markets.

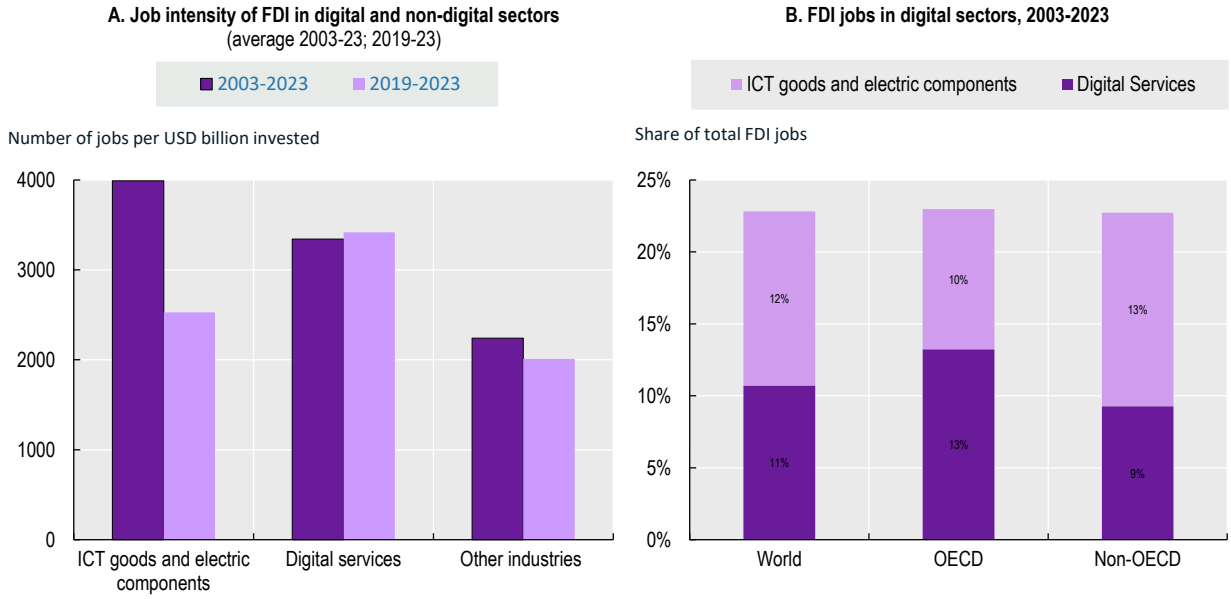
Figure 3. Greenfield FDI in digital sectors is more prevalent in OECD economies

Greenfield FDI in ICT goods, electrical components, digital services and telecommunications OECD and non-OECD economies, 2019-2023, % of total FDI.



Source: OECD FDI Qualities Indicators 2024 based on Financial Times fDI Markets.

Figure 4. Investment in digital sectors creates many but less jobs than before, requiring narrowing skills gap in ICT



Source: OECD FDI Qualities Indicators 2024 based on Financial Times fDI Markets.

Challenges and structural gaps related digital FDI

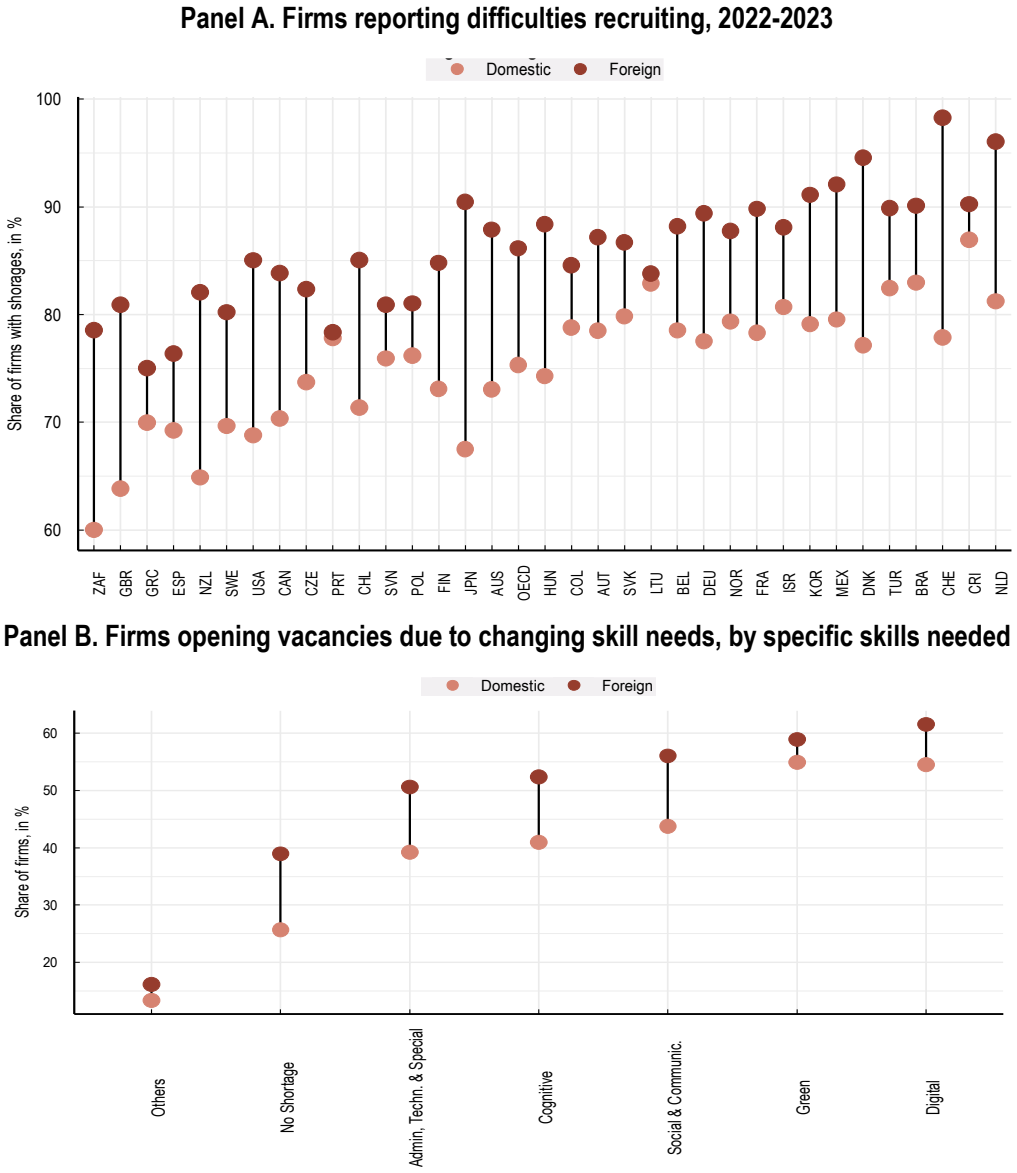
There remain significant disparities across countries and regions in terms of digital infrastructure, literacy, and innovation capabilities. For instance, 40% of small firms in Europe still lack access to fast broadband, compared to only 16% of large firms, and AI adoption is four times higher among large enterprises than small ones. These gaps reduce the transformative potential of digital FDI and risk exacerbating existing inequalities.

Foreign firms also often rely heavily on imported technologies and source fewer inputs locally, limiting the integration of domestic firms into global value chains. Moreover, the concentration of digital FDI in a small number of multinational enterprises raises dependency risks and reduces the scope for broader knowledge spillovers (Figure 2, Panel B).

The environmental footprint of digital infrastructure is another important consideration: data centres and transmission networks now account for 2–3% of global electricity use and around 1% of energy-related greenhouse gas emissions. As the digital economy expands, addressing the resource intensity of these systems becomes increasingly urgent. Investment in both digital and clean energy sectors is growing rapidly – together accounting for about 50% of global greenfield FDI between 2019 and 2023.

Labour market pressures further compound the challenges. Firms in the OECD face severe labour shortages, with 86% of foreign firms struggling to find talent, compared to 76% of domestic firms (Figure 5, Panel A). Across OECD countries, labour shortages in digital sectors are twice as high as in other industries, with the demand for advanced digital skills such as AI development, cybersecurity, and cloud engineering far outstripping supply. Among foreign firms opening vacancies due to changing skill needs in the OECD area, more than 60% are looking for skills related to digital activities, compared to 55% of domestic firms (Figure 5, Panel B).

Figure 5. In the OECD area, 86% of foreign firms face labour shortages relative to 76% of domestic firms



Note: Panel A: OECD is computed the unweighted average of the member countries shown on this graph. Panel B: Weighted averages over 36 countries. Green skills are defined as skills needed to improve the carbon footprint of the company. Digital skills are basic and advanced ICT skills and skills needed to develop and/or use AI in the company.
Source: OECD FDI Qualities Indicators 2024 based on Global Forum on Productivity's Employer Survey data.

While digital sectors tend to generate more skilled and higher-paid jobs, the intensity of job creation from digital FDI is falling. From 2014–2018 to 2019–2023, the number of jobs created per dollar of greenfield FDI declined by 17%, reflecting the capital-intensive nature of digital technologies and the rising role of automation (Infographic 1). This trend has implications for labour inclusion, particularly in emerging markets and developing economies with young and growing workforces.

Regulatory fragmentation further complicates the investment landscape. Divergent rules on data localisation, digital trade, and national security screening can increase compliance costs, deter cross-border investments, and create uncertainty for long-term investors.

Towards an enabling investment environment for the digital transformation

Governments have an essential role to play in shaping a policy environment that attracts and retains high-quality digital FDI. This does not mean one-size-fits-all solutions, but rather targeted, evidence-based policies that promote competition, reduce barriers, and support long-term development objectives.

Drawing on the OECD FDI Qualities Policy Toolkit, the forthcoming OECD *FDI Qualities: Investment Policy Framework for Digital Transformation* proposes a flexible structure based on four interconnected pillars:

1. Governance

- Strengthen institutional coordination on digital investment by integrating digital infrastructure and innovation priorities into national investment strategies.
- Develop sector-specific digital roadmaps (e.g. AI, cloud computing, cybersecurity) linked to investment promotion efforts.
- Align governance frameworks to ensure coherence between data policy, connectivity goals and investment incentives.

2. Domestic and international regulation

- Promote competition-friendly and non-discriminatory rules in digital markets.
- Provide legal certainty on data protection, cybersecurity and emerging technologies.
- Consider multilateral cooperation to reduce regulatory fragmentation and promote cross-border data flows.

3. Financial and technical support

- Target public support measures to overcome barriers to digital infrastructure deployment and skills acquisition.
- Develop incentives that address market failures without distorting competition.
- Encourage foreign firms to build partnerships with local digital firms and contribute to workforce upskilling through vocational training in key areas such as AI, coding and digital compliance.

4. Information and facilitation services

- Tailor investment promotion strategies to digital investors by providing clear, sector-specific intelligence on regulatory conditions, infrastructure readiness and talent availability.
- Facilitate partnerships between foreign technology investors and domestic innovation ecosystems.
- Simplify and digitalise administrative procedures to attract agile tech investors and early-stage ventures.

Investment for a future-ready economy

FDI continues to be a powerful lever for sustainable development and digital transformation in particular. It supports infrastructure development, technology diffusion, and the emergence of new digital industries. When guided by coherent policy frameworks, it can unlock productivity, enhance resilience and enable more dynamic, competitive and connected economies.

The digital economy is evolving rapidly. As technologies advance, global production reorganises, and investment patterns shift, policy frameworks must keep pace. Governments will need to address new

challenges – from digital security to environmental sustainability and social equity – while remaining open to international investment and innovation.

The OECD's work on FDI Qualities provides evidence, data, and policy guidance to support countries in making strategic choices. The policy framework presented in *FDI Qualities: Investment Policy Framework for Digital Transformation* (forthcoming) offers a practical and adaptable approach to ensure that investment contributes to broad-based development in the digital age.