



► ILO brief

► Trade, investment and employment: how they are connected and why it matters for job creation

Christoph Ernst, LEAD, IST, EMPINVEST, Employment

Key messages

- **1** Trade and foreign investment can create jobs, but the benefits are not automatic. Their impact depends on the type of investment and the policies, as well as the regulatory and institutional framework that support it.
- **2** Trade and foreign investment are closely linked. Rather than being separate choices, they usually reinforce each other. Investment can increase trade by connecting firms to global markets (FDI-led exports), while trade opportunities can attract new investment (export-led FDI).
- **3** Investment can improve productivity, skills and wages. These benefits depend, however, on the type of investment and whether the right policies are in place.
- **4** Infrastructure investments are a key driver to overcome bottlenecks in developing countries and support export expansion.
- **5** The benefits are often unevenly distributed. Global value chains tend to favour skilled workers and better-connected regions; this can increase inequality.
- **6** Policy coherence is, therefore, essential. Trade, investment, employment, education and infrastructure policies need to work together to ensure that trade and investment lead to decent work and inclusive growth.

INTRODUCTION

Trade and foreign direct investment (FDI) are at the heart of globalization. Together, they influence both the number and the quality of jobs created through global value chains (GVCs). This brief explains how trade, investment, and employment are connected, and why these links matter for decent job creation. Understanding these relationships can help policymakers design trade and investment strategies that generate more and better jobs.

► 1 The trade–investment nexus

Over the past few decades, trade and foreign direct investment (FDI) have become increasingly interconnected. Economists generally explain this relationship in two ways.

First, trade and investment can act as substitutes. A company may either export goods to a foreign market or invest in that market and produce goods locally. In this case, more investment may mean less trade. Second, trade and investment can act as complements. Investment abroad can generate additional trade by creating demand for intermediate goods, services and cross-border production networks.

The balance between these two effects depends on the context. However, most recent evidence suggests that complementarity has become the dominant pattern, particularly with the expansion of global value chains (Antràs, 2016; Fontagné, 1999).

A- Horizontal versus vertical FDI

A key framework distinguishes between horizontal (market-seeking) FDI and vertical (efficiency-seeking) FDI, based on their different relationships with trade (Dunning, 1985).

Horizontal FDI often substitutes for trade. Firms invest abroad to produce goods directly in the target market rather than exporting them from their home country. This strategy is common when trade costs, such as tariffs or transport expenses, are high and the foreign market is large or attractive enough to justify local production (market-seeking argument, Markusen, 1984). In this view, firms choose between exporting and investing as alternative ways to serve foreign customers. Mundell's (1957) extension of the Heckscher–Ohlin model argues that trade and capital flows can act as substitutes: if one is restricted, the other tends to increase.

Vertical FDI, by contrast, usually complements trade. Firms locate different stages of production in different countries to take advantage of cost differences. As a result, intermediate goods and services move across borders between affiliates and suppliers, creating additional trade flows. By fragmenting production internationally, firms increase trade in both intermediate and final goods, creating additional trade flows. This efficiency-seeking form of FDI often serves as an export platform and is closely associated with the growth of global value chains (Helpman, 1984; Helpman, Krugman, 1985; Yeaple, 2003).

B- Knowledge-capital model: a unified framework

The knowledge-capital model, developed by Markusen (1997, 2002), combines the horizontal and vertical approaches to foreign direct investment (FDI) into a single framework. It highlights the importance of firms' intangible assets, such as technology, management expertise and research and development (R&D), that can be used across different countries.

According to the model, the relationship between trade and FDI depends on factors such as market size, differences in labour and capital endowments, trade costs and the ability of firms to transfer knowledge across locations. The model helps explain when FDI is likely to substitute for trade and when it is likely to complement it.

In general, FDI tends to substitute for trade when the host and home countries are similar in terms of income levels and production structures, often between developed countries. By contrast, FDI tends to complement trade when countries have different factor endowments and production costs (often between developed and developing countries).

C- Proximity–concentration trade-Off, OLI framework and Heterogeneous-Firm models

The proximity–concentration trade-off explains how firms choose between exporting to a foreign market and producing locally through FDI. Exporting allows firms to keep production in one location, but requires them to bear transport costs and trade barriers. Producing locally reduces these costs but requires additional investment in foreign production facilities (Brainard, 1993; Fontagné, 1999).

FDI therefore allows firms to overcome trade barriers and serve foreign consumers more efficiently by locating production closer to the market.

The Proximity-Concentration Trade-off (Brainard, 1993) and Dunning's OLI Framework (1988), which distinguishes between Ownership, Location and Internalization advantages, are complementary ways to explain why firms expand abroad.¹

¹ Why own and control the foreign operation instead of licensing or outsourcing?

While the trade-off focuses on a specific choice (exporting versus producing locally), OLI provides a comprehensive checklist of all requirements for successful Foreign Direct Investment (FDI). The proximity-concentration trade-off essentially zooms in on the Location (L) advantage of the OLI framework. It asks: Does this specific location offer trade barriers or transport costs high enough to make a local plant better than a home-country plant?

Heterogeneous-firm models add another dimension by recognizing that firms differ in productivity. The most productive firms tend to invest abroad, moderately productive firms export, and less productive firms serve only the domestic market. As a result, trade and FDI can act as either substitutes or complements depending on the characteristics of firms and markets (Helpman, Melitz and Yeaple, 2004).

D- The trade–investment nexus in services (GATS mode 3)

In services, the relationship between trade and investment is particularly close. Under the WTO's General Agreement on Trade in Services (GATS), Mode 3 refers to the supply of services through a commercial presence in another country, such as establishing a subsidiary, branch or affiliate.

In this case, foreign investment is itself a form of international trade in services. As a result, trade and investment are not treated as separate activities but as part of the same process of delivering services across borders (WTO, 1995).

E- The key role of infrastructure investment in supporting trade and FDI

Infrastructure investment—whether public or private, domestic or foreign—is a major driver of trade and investment. This is particularly important in developing countries, where gaps in transport, energy and digital infrastructure often limit economic activity and international competitiveness.

Infrastructure supports trade and investment in several ways:

- **Lower trade and transaction costs** (Anderson and Wincoop, 2004; Williamson, 1985, and OLI (Dunning, 1988): Better roads, ports, railways and logistics systems reduce transport costs and delivery times, making it easier for firms to export and participate in global value chains (GVCs).
- **Improved trade facilitation:** Infrastructure investments combined with customs and digital reforms improve logistics performance and reduce barriers to trade.
- **Greater market access and productivity** (Krugman, 1981 and OLI by Dunning, 1988): Better connectivity expands market opportunities, encourages specialization and supports productivity growth.
- **Digital connectivity** (Portugal-Perez, 2012): Digital infrastructure facilitates services trade, cross-border e-commerce and access to information, while increasing the benefits of physical infrastructure.
- **Reliable energy supply:** Investments in energy infrastructure reduce production disruptions, lower costs and strengthen export competitiveness.

Overall, infrastructure investment has a positive impact on competitiveness, trade and economic development, although the scale of these benefits varies across countries and sectors, as noted by UNCTAD (2026), Han and Li (2022), and Foster et al. (2025). High-quality transport, energy and digital networks also make countries more attractive destinations for the foreign direct investment. They improve the business environment, facilitate the operations of multinational enterprises and help domestic firms integrate into global value chains. By reducing transport and communication costs and improving connectivity, infrastructure strengthens the links between trade, investment and economic growth.

Infrastructure investment also creates jobs directly through construction and maintenance activities, especially when employment-intensive and locally sourced approaches are used. In the longer term, improved infrastructure supports employment growth in sectors, such as transport, logistics, energy and communications.

► 2 Global value chains, trade and investment

Globalization is increasingly organized through Global Value Chains (GVCs), as trade and FDI are jointly determined (Milberg & Winkler, 2013). Gereffi (1994) argues that globalization is increasingly driven not by trade in finished products, but by trade in intermediate goods and services (or even trade in tasks) (Milberg & Gereffi, 2014), which is organized through global production networks. Lead firms, often multinational enterprises, coordinate production across multiple countries, with each location specializing in specific stages of the value chain according to its comparative advantages. In GVCs, firms organize different stages of production across several countries using both trade and foreign direct investment (FDI). Rather than treating trade and investment as separate activities, this approach views them as part of a single production system.

In this context, trade and investment are generally **complementary**. FDI creates production links across countries, while trade enables the movement of intermediate goods, services and final products between different stages of production. As a result, trade and investment jointly shape the structure and performance of global value chains (Markusen, 2002; Kox, 2022).

A- From trade versus FDI to global production networks

Traditional theories focus on whether firms serve foreign markets through exports or through local production via FDI, often treating the two as substitutes or complements (Fontagné, 1999).

The GVC approach shifts the focus from individual markets to the firm's entire global production network. In this perspective, exports, intra-firm trade and sales by foreign affiliates are different ways of organizing production and serving markets across countries (export platform FDI).

Different types of FDI play different roles within global value chains. Firms may establish foreign affiliates to produce goods for local markets (horizontal FDI), carry out specific stages of production (vertical FDI), or serve as export hubs for other markets (export-platform FDI). FDI creates and manages production networks across countries, while trade connects these networks through the exchange of goods and services.

Recent GVC research further integrates trade and investment by examining how firms make decisions about ownership, outsourcing, production locations and sourcing strategies. These decisions are influenced by factors such as production costs, trade barriers, the political, regulatory and institutional framework, coordination costs and the capabilities of suppliers and firms. As a result, trade and investment are increasingly viewed as two interconnected elements of a single global production system (Antràs, 2016; Bottini et al., 2007).

B- The core links between trade investment and GVCs

The relationship between trade and investment in global value chains (GVCs) can be understood as a self-reinforcing process.

► Investment creates production networks.

Multinational enterprises (MNEs) invest abroad to establish production facilities and organize different stages of production across countries (OECD, WTO and World Bank Group, 2014).

► Trade connects these production networks.

Once production is spread across countries, firms trade intermediate goods, components and services between affiliates and suppliers. As a result, trade increasingly involves inputs used in production rather than only final goods (UNCTAD, 2013).

► Global value chains serve as the structure to coordinate these activities.

GVCs link investment, production and trade across countries, allowing firms to combine capital, technology and labour in ways that improve efficiency and competitiveness (Cadestin, 2018).

C- Mutually reinforcing trade–FDI dynamics

From a GVC perspective, trade and investment often reinforce each other. Greater trade openness can reduce the cost of entering new markets and encourage firms to invest abroad. In turn, foreign investment can attract suppliers, transfer knowledge and expand local production capabilities, generating additional trade in goods and services.

This creates a dynamic relationship in which trade encourages investment, and investment generates further trade. As a result, policies affecting trade or investment can have wider effects throughout global value chains by influencing firms' decisions on where to invest, source inputs and organize production. Countries should aim not only to increase exports of final goods but also to upgrade within value chains, specializing in specific production tasks, whether through process, production, functional or inter-sectoral upgrading (Crescenzi and Harmann, 2022; Humphrey, 2002; Gereffi & Fernandez-Stark, 2016).

► 3 The multinational production perspective: cost minimization, export platforms and reallocation

A complementary way of understanding the trade–investment nexus places the multinational enterprise (MNE) at the centre of the analysis. In this multinational production (MP) perspective, the key decision is not simply whether to trade or invest, but where to locate activities to serve global demand at the lowest cost. This framework underlies recent quantitative models of multinational production (Ramondo and Rodríguez-Clare, 2013; Arkolakis et al., 2018) and forms the basis of the analysis in this brief.

A- Cost minimization and location choice

In the MP framework, an MNE chooses production locations by comparing the total cost of serving a market from each possible site; These costs include production costs in the host country – wages, capital and intermediate inputs – as well as the trade costs of reaching final markets. Firms locate production where this combination is lowest, subject to the fixed costs of establishing and operating foreign affiliates. Differences in technology, factor prices and market access shape the geography of production, while trade and investment frictions determine which locations are viable.

Because firms minimize the cost of serving all markets jointly, trade and investment decisions are made together rather than as alternatives. A single affiliate may supply its host market, export to the parent country and serve third markets simultaneously. Horizontal, vertical and export-platform investment therefore emerge as outcomes of a common cost-minimization problem rather than distinct strategies.

B- Export-platform FDI

A central feature of the MP framework is export-platform FDI, whereby an MNE establishes an affiliate primarily to serve third markets rather than the host market itself. The host country is selected because it offers an attractive combination of production costs and market access through trade agreements, low tariffs or geographic proximity. Much of the FDI flowing to emerging economies, which are integrated into regional production networks, follows this logic, making it an important source of geographically dispersed trade flows.

Export-platform investment is particularly relevant for employment, because jobs created in the host economy depend largely on demand in external markets. As a result, employment becomes linked to trade policies, demand shocks and the relative competitiveness of alternative locations, helping explain why such jobs can be both numerous and volatile.

C- Reallocation across locations

The defining implication of the MP framework is that changes in costs, policies or frictions lead to a reallocation of production—and employment—across countries. When a location becomes more attractive, for example, through lower trade costs, better infrastructure or a more competitive labour market, MNEs shift activity towards it. Output and jobs expand in the host country and may contract elsewhere. The overall effect on global employment is often smaller than the effect on its distribution: lower trade costs and investment liberalization tend to relocate jobs more than create them.

This reallocation mechanism makes the MP perspective particularly useful for policy analysis. It suggests that the employment gains from attracting multinational production are real but relative, often reflecting activity diverted from competing locations. These gains depend on a country's ability to compete on costs, capabilities, and connectivity. The framework also highlights the importance of complementary policies on skills, infrastructure and the business environment, which influence whether countries attract and retain multinational activity and whether the jobs created are durable and of good quality. Counterfactual simulations within this framework make these effects explicit by quantifying how output, exports, employment and welfare respond to changes in costs or policies (Caliendo and Parro, 2015; Ramondo and Rodríguez-Clare, 2013).

► 4 Impact of trade and investment on employment

Trade and investment influence employment by affecting the demand for goods and services, the organization of production and the productivity of firms. Trade expands market opportunities by allowing firms to sell beyond their domestic market. This can increase local production, create more and better jobs in export-oriented sectors and ultimately contribute to poverty reduction. At the same time, imports give consumers and firms access to goods and services that may not be available or competitive domestically. However, increased imports can also expose domestic firms to stronger competition, which may lead to job losses in less competitive industries. The overall employment impact therefore depends on how economies adapt to changing patterns of trade.

Foreign direct investment (FDI) can affect employment in different ways depending on the type of investment. Greenfield investment is the most interesting form of investment from an employment perspective. It mostly results in capital accumulation and the creation of new production facilities, leading to direct job creation and generating additional employment through supplier and service linkages (Harms & Méon, 2014, WB, 2020, EBRD, 2021)). The effect, however, is not immediate and comes with a time lag. Brownfield investment, which means that a company buys or leases an existing facility or business, may have a mixed impact, which can be more immediate. It can support business expansion and job growth, but it may also lead to restructuring and workforce reductions. In addition, foreign firms are often more capital-intensive than domestic firms and may create fewer jobs relative to the size of their investment (Saurav, 2020).

FDI can also influence domestic investment. It may stimulate additional investment by local firms through new business opportunities and supply-chain linkages, or crowd out domestic firms in some sectors. Public and private investments in infrastructure, education and skills development can help attract further investment and strengthen these positive effects. However, the crowding-out or crowding-in effect of foreign investment on variables such as employment or technological spillover is often contested and resulted in mixed results, depending on the timing and the country context (Kosová, 2010, Alfaro et al., 2006).

Infrastructure investment plays an important role. It creates jobs directly through construction and maintenance activities and generates wider employment effects throughout the economy. By improving transport, energy and digital connectivity, infrastructure also supports trade and attracts investment, contributing to job creation over the longer term (Ernst and Nübler, 2013).

Beyond employment, trade and investment can increase productivity and wages. Foreign firms often introduce new technologies, management practices and production methods that can spread to domestic firms. Evidence suggests that domestic firms often improve their productivity, although not always, as seen in the case of Venezuela (Aitken and Harrison, 1999) in response to foreign competition and through learning from multinational enterprises (Agwu, 2014, Ahn et al., 2024, Javorcik, 2004). Productivity spillovers occur primarily through backward linkages with local suppliers, but are not automatic and depend on local conditions (Joordan, 2020). Foreign-owned firms also tend to pay higher wages and employ more skilled workers than domestic firms as they have to acquire firm-specific skills, contributing to productivity growth and skill development (Lipsey and Sjöholm, 2004, Fosfuri, 2001).

However, the benefits of trade and investment are not always shared equally. Participation in global value chains (GVCs) can raise productivity, incomes and economic growth. However, the gains often accrue disproportionately to skilled workers, productive firms and better-connected regions. As a result of skill bias of technology, trade and investment can increase wage inequality and widen regional disparities if complementary policies are not in place (Acemoglu, 2003). Nevertheless, Couto, 2018, analyzing a large number of countries of different levels, could not find a FDI-induced inequality effect for low-income countries and a less strong effect for high-income countries, in comparison to middle-income economies.

A key factor is the skill premium. Trade and technological upgrading tend to increase demand for skilled workers, who often benefit from higher wages and better job opportunities. Export-oriented and internationally integrated firms typically pay higher wages than firms serving only domestic markets, particularly for skilled workers (Brambilla et al., 2014; Burstein and Vogel, 2016; Hummels et al., 2014). Without adequate investments in education, skills development and labour market policies, the benefits of trade and investment may remain concentrated among a relatively small share of the workforce.

► Conclusion:

Policy Implications

Trade and investment can create jobs, raise productivity and support economic growth, but these outcomes are not automatic. To maximize the benefits for employment and ensure that they are widely shared, governments should focus on five priorities.

► 1 Align investment promotion with employment and skills objectives

Investment promotion should focus on attracting investments that create quality jobs, develop local skills and strengthen productive capacities. Incentives should be linked not only to investment volumes but also to commitments on training, local sourcing, and decent working conditions.

► 2 Invest in infrastructure that connects people, regions and markets

Public investment in transport, energy and digital infrastructure can improve competitiveness, attract investment and support trade. Particular attention should be given to regions and communities that are poorly connected and risk being left behind. Infrastructure investment also creates jobs both during construction and through its long-term economic benefits.

► 3 Strengthen labour protection in globally integrated sectors

As production becomes increasingly organized across borders, labour institutions must keep pace. Effective labour inspection, social protection and respect for freedom of association are essential to ensure that participation in global value chains improves working conditions rather than undermines them. Integration into global markets can also support the formalization of enterprises and employment.

► 4 Invest in skills and capabilities to broaden the benefits

Trade and investment often benefit skilled workers first. Expanding access to quality education, vocational training and lifelong learning can help more workers benefit from new opportunities. Recognition of prior learning and skills across borders can further support labour mobility, formalization and inclusion.

► 5 Promote policy coherence and international cooperation

Trade, investment, industrial, infrastructure, education and labour-market policies should be designed as part of a coherent strategy. Greater coordination across policy areas, supported by the multilateral system international cooperation, can help ensure that trade and investment contribute to productive employment, decent work and inclusive development. As trade and investments affect the whole society, workers, employers and consumers, a well-functioning social dialogue, including the interests of all, would lead to policy coherence and ultimately to inclusive development.

Table 1.
Theoretical frameworks on trade, investment and employment

Framework	Author(s)	Main implications for employment
Factor mobility / substitution (Heckscher–Ohlin extension)	Mundell (1957)	Trade and investment act as substitutes. Firms may invest abroad instead of exporting, which can shift jobs from one country to another rather than increase overall employment.
Vertical / efficiency-seeking FDI	Markusen (1984, 1995, 2002); Helpman (1984)	Firms locate different stages of production across countries to reduce costs. This can create jobs in host countries and along supply chains, although job quality depends on the activities performed locally.
Knowledge-capital model	Markusen (1997, 2002); Kox (2022)	Firms transfer technology, management practices and know-how across borders. This can increase productivity, skills and wages, particularly where local firms and workers can absorb these benefits.
Proximity-concentration trade-off	Brainard (1993)	Firms choose between exporting and producing locally. FDI can create jobs in host countries but may reduce export-related employment in the home country.
Eclectic (OLI) paradigm	Dunning (1988)	Firms invest abroad when they have ownership advantages, attractive locations and incentives to internalize production. FDI can create jobs, support skill development and promote more formal employment relationships, although benefits vary across countries and sectors.
Heterogeneous-firm model	Helpman, Melitz and Yeaple (2004)	The most productive firms invest abroad, moderately productive firms export and less productive firms serve domestic markets. Better jobs and higher wages tend to be concentrated in the most productive firms.
Global value chains (GVCs) / firm-organized production	Antràs (2016); Bottini et al. (2007); Crescenzi and Harmann (2022); Acemoglu (2003)	Trade and investment are part of the same production system. GVCs can create jobs, increase productivity and support skill upgrading, but the gains are often uneven and tend to favour skilled workers and better-connected regions.

Note: The frameworks are presented in roughly the order in which they increasingly integrate trade and investment into a common analytical framework.

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Contact details

International Labour Organization
Route des Morillons 4
CH-1211 Geneva 22
Switzerland

T: +41 22 799 7239
E: meti@ilo.org
W: www.ilo.org/meti
DOI: <https://doi.org/10.54394/EWRN7458>