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dr hab. Dorota Ciesielska-Maciągowska, PhD
SGH Warsaw School of Economics
Institute of Markets and Competition
e-mail: Dorota.CIESIELSKA@sgh.waw.pl
ORCID: 0000-0002-6393-9491

PhD Marcin Kołtuniak
SGH Warsaw School of Economics
Institute of Markets and Competition
e-mail: Marcin.Koltuniak@sgh.waw.pl
ORCID: 0000-0002-6613-3688

Outward foreign direct investments and home-country's exports

Wychodzące bezpośrednie inwestycje zagraniczne a eksport kraju macierzystego

Keywords:
OFDI, international trade, MNEs, global value chains, GDP, exports

Abstract: The article reviews the theoretical evolution and empirical evidence on the relationship between outward foreign direct investments and home-country's exports. Classical substitution models present FDI from the perspective of capital mobility that diminishes trade, but the rise of multinational enterprises and fragmentation of global value chains challenge this view. Contemporary framework including New Trade Theory, the OLI paradigm, internalization and transaction-cost approaches and knowledge-based models such as the Knowledge-Capital framework shift attention to firm heterogeneity, intangible assets and the integration of trade with investments. The surveyed evidence reveals heterogeneous outcomes: complementarity is more prevalent in advanced economies, manufacturing sectors and vertical OFDI configurations, whereas substitution appears more often in emerging economies and horizontal market-seeking OFDI. The paper concludes that the OFDI – exports relationships are context-dependent and dynamic. Policy should encourage forms of OFDI that reinforce export capabilities via technology transfer, learning and deeper participation in global value chains.

Słowa kluczowe:
OFDI, handel międzynarodowy, MNE, globalne łańcuchy wartości, eksport, PKB

Streszczenie: W artykule przeanalizowano ewolucję podejścia teoretycznego oraz wyniki badań empirycznych dotyczących związku między wychodzącymi bezpośrednimi inwestycjami zagranicznymi (BIZ) a eksportem kraju macierzystego. Punkt wyjścia przeprowadzonych rozważań stanowią klasyczne modele substytucyjne, w których traktowano wychodzące BIZ jako czynnik ograniczający skalę eksportu kraju macierzystego. Wraz z rozwojem przedsiębiorstw wielonarodowych i fragmentacją łańcuchów wartości podejście to okazało się nie-

wystarczające. Nowsze koncepcje, takie jak: Nowa Teoria Handlu, paradygmat OLI, teoria internalizacji oraz modele oparte na wiedzy przesuwają akcent na heterogeniczność podmiotów gospodarczych, na aktywa niematerialne oraz integrację handlu z inwestycjami. Przegląd literatury zawierającej wyniki badań empirycznych wskazuje zróżnicowane wyniki: zjawisko komplementarności eksportu i wychodzących BIZ dominuje w gospodarkach zaawansowanych, sektorach wytwórczych i w przypadku wertykalnych wychodzących BIZ, natomiast substytucja częściej występuje w gospodarkach wschodzących oraz w przypadku horyzontalnych BIZ. Istniejące badania wskazują, że relacja wychodzących BIZ i eksportu jest dynamiczna, z kolei instytucje publiczne powinny wspierać te formy wychodzących BIZ, które wzmacniają eksport, np. poprzez transfer technologii i integrację w globalnych łańcuchach dostaw.

JEL:
F21, F23, F14, O33

Introduction

Foreign direct investments have been recognized as one of central drivers of globalization, shaping both international trade patterns and development of multinational enterprises. The relationship between FDI and trade has been a matter of ongoing debate in international economics. Early economic theories often treated FDI merely as a subset of portfolio investment or as a form of capital factor mobility. These traditional perspectives, grounded in models such as Mundell's [1957] framework and the Heckscher–Ohlin theory of comparative advantage, emphasized factor endowments and trade barriers as the primary determinants of cross-border capital flows. Within these models, FDI and trade were largely seen as substitutes, implying that the expansion of one would reduce the scope for the other. Over time, however, both empirical evidence and the rise of MNEs demonstrated the inadequacy of such assumptions. Patterns of simultaneous growth in exports and outward FDI across many economies revealed that the strict substitution view could not capture the complexity of real-world internationalization processes. Beginning in the 1970s and 1980s, a new generation of theories emerged, shifting the focus from capital movements to the strategies and structures of firms. Markusen [1983], Helpman [1984], and Helpman and Krugman [1985] integrated imperfect competition, intra-firm trade, and knowledge-based assets into theoretical models, laying the foundation for the New Trade Theory. Dunning's eclectic paradigm further provided a comprehensive explanation of why firms choose to invest abroad rather than rely on market transactions, emphasizing ownership advantages, location-specific factors, and the benefits of internalization. Later developments enriched this perspective by incorporating transaction cost econom-

ics [Williamson, 1975; 1985], internalization theory [Buckley, Casson, 1976], and microeconomic models such as the Uppsala model [Johanson, Vahlne, 1977; 2013]. Together, these approaches underscored the heterogeneous nature of firms, the role of intangible resources, and the importance of sequential internationalization. They also opened the door to dynamic interpretations, such as the Knowledge-Capital model [Carr et al., 2001] and the Trade Development Path [Dunning et al., 2001]. Despite these advances, significant questions remain regarding the interaction between outward FDI and home-country exports. The empirical literature offers mixed results, with evidence ranging from strong complementarity to substitution effects, depending on the sector, country context, and stage of development. The aim of this article is to analyze the theoretical evolution and empirical evidence on the relationship between outward foreign direct investments and home-country's exports. By examining the shift from traditional substitution-based models toward more nuanced frameworks that emphasize firm heterogeneity, global value chains, and knowledge-based resources, the article seeks to clarify why the OFDI–export nexus remains context-dependent. It further aims to provide insights into the conditions under which OFDI complements or substitutes for exports, thereby contributing to both academic debate and policy formulation in international economics.

Theoretical perspectives on FDI and international trade

Before the 1950s, foreign direct investments were treated as a subset of portfolio investment, and only later began to be considered in terms of capital factor mobility. Mundell's model [1957] conceptualizes FDI as equivalent to international trade in physical resources, such as production factors or final goods. The neoclassical Heckscher-Ohlin general equilibrium international free trade model, based on Ricardo's concept of comparative advantage, also considers FDI solely in terms of capital factor mobility between national economies. Such movements, including FDI flows, are driven mainly by substantial differences in regional factor endowments and by trade obstacles such as tariffs, non-tariff barriers or transportation costs. International convergence in these factors would theoretically eliminate almost all FDI flows. However, empirical data on foreign operations disproves this assumption. More importantly, both of these international trade models assume the existence of perfect substitution between FDI and foreign trade. As a result, Mundell's and the Heckscher-Ohlin models cannot explain the simultaneous growth of outward FDI and the home country's export performance. They also ignore differences among firms, assuming homogeneity regardless of industry characteristics, and they neglect the existence of multinational enterprises. They are therefore unable to account for international fragmentation of intra-firm value chains,

focusing only on the decision of whether a particular type of production should remain in the home country or be relocated abroad.

Markusen [1983] demonstrated that Mundell's model [1957], which assumes that international factor movements and trade in goods and services are perfect substitutes, represents only a special case that holds true when international operations are driven by substantial differences in relative factor proportions, as in the Heckscher-Ohlin model [Leadmer, 1995]. Despite existing trade patterns, general equilibrium theories of international trade were developed until the late 1970s without explicitly addressing horizontally or vertically integrated MNEs [Helpman, 1984], or the international exchange of intangible, knowledge-based resources. Their scope was thus limited to physical movements of tradable assets. Markusen [1983] developed a simplified general equilibrium foreign trade model that incorporated horizontally integrated MNEs. The existence of horizontal outward FDI reduces trade flows between home and host countries and, in line with neoclassical trade theory, implies that equity and non-equity modes of internationalization act as substitutes. However, Markusen's model does not consider production fragmentation processes that result in arm's-length or captive offshoring of business processes at the international level, driven by cost advantages, or outsourcing at the domestic level. These processes lead to global or regional value chain fragmentation, producing both positive and negative knowledge spillover effects in host and home countries, as well as far-reaching structural changes on both micro- and macroeconomic scales. At the macro level, such processes give rise to vertical outward captive FDI by home-country MNEs, which are complementary to intra-firm and intra-industry exports from the home country.

Helpman [1984] proposed an alternative model based on the assumption that foreign subsidiaries of MNEs participate in intra-firm transfers of intermediate or final goods and services and are supplied with services from remote headquarters. This framework highlighted the internalization of certain MNE business processes and introduced vertical outward FDI into trade theory. Helpman and Krugman [1985] further developed a coherent theoretical integration of international trade and MNE activity, known as the New Trade Theory. Unlike traditional neoclassical trade theory NTT assumes market structures beyond perfect competition, including monopolistic competition. It also shows that complementary relationships outweigh substitutionary ones between outward FDI and trade, because substantial international factor cost differences lead to value chain fragmentation. This, in turn, produces a predominance of vertical over horizontal outward FDI, requiring overall comparative cost advantages that drive the relocation of production abroad, including export-oriented production. The NTT thus incorporates all the main elements of Dunning's OLI paradigm [Dunning, 1980]. It should also be noted that the Heckscher-Ohlin model has been extended to account for oligopolistic interdependence among MNEs [Lahiri, Ono, 2011].

Carr, Markusen, and Maskus [2001] proposed the Knowledge-Capital model, which explains both vertical and horizontal FDI simultaneously. All the models described so far present static views of the trade-off between outward FDI and exports. Dunning, Kim, and Lin [2001] suggested that this trade-off can be incorporated into the Trade Development Path (TDP) framework, which parallels the Investment Development Path [Dunning, 1981; 1988; 1993]. Their theoretical conclusion was supported by empirical evidence from Korea and Taiwan between 1968 and 1997.

Hymer [1976] offered one of the earliest distinct FDI theories, arguing that FDI arises not from simple capital flows but from firms exploiting monopolistic advantages (e.g., technology, brand reputation, scale economies) abroad. His perspective shifted attention to firm-specific advantages and control as central to international production, laying the foundation for later MNE theories. Internalization Theory [Buckley, Casson, 1976] explained FDI as the internalization of imperfect markets. Firms choose FDI when organizing transactions within the firm is more efficient than relying on external markets. This explains why MNEs internalize R&D, distribution, or knowledge transfers instead of licensing them to foreign firms. Eclectic Paradigm [Dunning, 1980] synthesized earlier insights into the OLI framework, which argues that FDI occurs when three conditions are met: firms possess Ownership-specific advantages, host countries offer attractive Location advantages, and Internalization is more efficient than market-based transactions. This paradigm became one of the most influential theories of FDI. Transaction Cost Economics [Williamson, 1975; 1985] also supports FDI theory, suggesting that firms expand abroad via FDI to minimize contracting, monitoring, and enforcement costs, particularly in industries where knowledge or quality is difficult to safeguard through market exchanges.

It should be stressed that the models discussed so far do not account for the phenomenon of export platforms or firm-level decision-making. Microeconomic models of enterprise internationalization, such as Johanson and Vahlne's Uppsala model [1977; 2013] and Lundan and Dunning's framework [2008], emphasize the sequential nature of internationalization. In developed economies, this process often begins with exports and is followed by non-equity and equity modes of internationalization, including contractual agreements, mergers and acquisitions (M&A), and greenfield investments. These evolutionary models are rooted in the behavioural theory of the firm [Cyert, March, 1963] and Vernon's product life cycle theory [1966]. Resource-Based and Knowledge-Based Views further highlight that FDI can be explained by firms leveraging their unique tangible and intangible resources abroad. They emphasize the importance of technological capabilities, learning, and dynamic capabilities in shaping MNE internationalization paths.

Outward foreign direct investments and home-country's exports

Research on the relationship between outward foreign direct investment and home-country exports has produced a diverse range of findings across countries, time periods, and methodological approaches. Early evidence from Pfaffermayr [1994; 1996], based on time-series analyses of the Austrian manufacturing sector, indicated that OFDI and exports should not be regarded as substitutes. Instead, the study found that these two activities were complementary, with bidirectional causality between them during 1980–1994, a result that aligned with the predictions of the new trade theory [Helpman, Krugman, 1985]. Similar conclusions were reached in Spain. Bajo-Rubio and Montero-Muñoz [1999], applying a vector autoregressive model and Granger causality tests for 1977–1992, confirmed the existence of a long-run complementary relationship running from OFDI to exports. Alguacil and Orts [2002], drawing on quarterly data for 1970–1992, went further by identifying unidirectional causality from OFDI to exports, while also highlighting positive co-movements between the variables. Their results suggested that Spanish firms expanded abroad predominantly through vertical strategies, which in turn reinforced home-country export flows.

The complementarity view was nuanced by later research. Blonigen [2001] and Türkcan [2007] emphasized that the OFDI–export link depends on the type of goods considered. Whereas intermediate goods are typically linked to vertical operations and therefore to complementary effects, finished goods are often associated with horizontal expansion and substitution. Türkcan's [2007] panel analysis of U.S. data for 1989–2003 confirmed this duality: OFDI produced weak substitution effects for exports of finished goods, but stronger complementarity in the case of intermediate goods. These findings pointed to the importance of production fragmentation processes in shaping the aggregate relationship.

Evidence from Europe further demonstrated the complexity of the relationship. Falk and Hake [2008], investigating seven EU countries over 1973–2004, found that causality often ran from exports to OFDI rather than the reverse, a result consistent with the early stages of sequential internationalization models such as the Uppsala framework [Johanson, Vahlne, 1977] but inconsistent with their later-stage assumptions. Similarly, Martínez-Martín [2010], using a vector error correction model (VECM) for Spain (1993–2008), confirmed complementarity between OFDI and exports in the long run, both for goods and services. Interestingly, the study revealed that in the short run the positive relationship applied only to goods, consistent with the idea that services follow different value chain dynamics [Kokko, 2006].

Beyond Europe, evidence from emerging economies has been equally varied. Amann and Virmani [2015] showed that Indian OFDI stocks per capita were positively and significantly associated with exports per capita over 1980–2010, confirming comple-

mentarity. Yet their causality tests revealed the opposite direction to earlier studies: exports were found to drive OFDI, echoing Falk and Hake's [2008] findings for developed economies. Bhasin and Paul [2016], examining ten Asian emerging economies from 1991 to 2012, similarly detected a long-run unidirectional causality from exports to OFDI. Crucially, they found that in these countries the relationship was predominantly substitutionary, in line with neoclassical trade theory and raising concerns about negative impacts on the balance of payments. Complementarity, therefore, may not be universal but rather dependent on the stage of economic development. Methodological diversity has also produced contrasting outcomes. For example, Goh, Wong, and Tham [2012] using a gravity-model approach for Malaysia, found no statistically significant link between OFDI and exports, attributing the result to the predominance of service-sector investment rather than manufacturing.

More recent contributions have further enriched the debate. Li, X., Zhou, W., & Hou, J. [2021] demonstrated that Chinese OFDI supports the upgrading of the country's position within global value chains. By fostering technology transfer, learning, and stronger integration into production networks, OFDI indirectly stimulates export growth and helps economies move into higher value-added activities. Spanish evidence shown by Maza and Gutiérrez-Portilla [2022] pointed to heterogeneity: while in some destinations OFDI reinforced exports, in others its effect was weak or insignificant, underscoring the importance of host-country characteristics. Hou, Cheng and Gong [2022], focusing on China's relations with East and Southeast Asia, found that OFDI initially boosted exports but that the effect diminished over time, while inward FDI suppressed Chinese exports, illustrating the dual nature of international capital flows. At the micro level, Yan, Sui, Wu and Cao [2023] showed that OFDI enhances product quality and thus strengthens export competitiveness, particularly for less productive firms. Ciesielska and Kołtuniak [2017] examined the relationship between Polish OFDI and economic growth, unveiling that the direction of causality consistently ran from OFDI to growth, which contradicts the fundamental assumptions of Dunning's Investment Development Path. Their time- and frequency-domain analyses further revealed that OFDI permanently preceded and influenced economic growth, thereby challenging the universality of the IDP framework.

The below table constitutes a systemic review of the past research empirical results in terms of the OFDI and exports complementarity - substitutionarity nexus. The presented review addresses also the empirical compliance with the NTT or a traditional (especially neoclassical) international trade theory, as well as with the Uppsala's evolutionary path model of the empirical cases mentioned in the current research article.

Finally, Goldar [2024] reviewed the state of the field and concluded that while complementarity remains the dominant pattern, outcomes are highly context-dependent, varying by country, sector, and methodology.

Table 1. Systemic review of the past research empirical results

Publication year	Research Authors	Scope / sector	OFDI / exports relationships' type	Causality type (direction)	Compliance with the NTT	Noncompliance with the Uppsala path model
1994; 1996	Pfaffermayr M.	Austrian manufacturing sector (1980–1994)	Complementary	Mutual	+	-
1999	Bajo-Rubio O., Montero-Muñoz M.	Spain (1977–1992)	Complementary	OFDI to exports	+	+
2001	Blonigen B.A.	Japanese automobile parts for the US market	Complementary / substitutionary depending on a product type	NA	+ / –	NA
2001	Blonigen B.A.	Japanese-produced final consumer goods	Substitutionary	NA	-	NA
2002	Alguacil M.T., Orts V.	Spain (1970–1992)	Complementary	OFDI to exports	+	+
2006	Kokko A.	Developed economies	Depending on a project characteristics both for host and home countries	OFDI to exports	NA	+
2007	Türkcan K.	U.S. intermediate goods (1989–2003)	Complementary	NA	+	NA
2007	Türkcan K.	U.S. final goods (1989–2003)	Weak substitutionary	NA	-	NA
2008	Falk M., Hake M.	Seven EU countries (1973–2004)	Complementary	Exports to OFDI	+	-
2010	Martínez-Martín J.	Spain (1993–2008)	Complementary both for goods and services in the long run	NA	+	NA
2010	Martínez-Martín J.	Spain (1993–2008)	Substitutionary for services in the short run	NA	-	NA
2010	Martínez-Martín J.	Spain (1993–2008)	Complementary for goods in the short run	NA	+	NA
2012	Goh S.K., Wong K.N., Tham S.Y.	Malaysia (1991–2009)	No statistically significant link	NA	-	+
2015	Amann E., Virmani S.	India (1980–2010)	Complementary	Exports to OFDI	+	-

Publication year	Research Authors	Scope / sector	OFDI / exports relationships' type	Causality type (direction)	Compliance with the NTT	Noncompliance with the Uppsala path model
2016	Bhasin N., Paul J.	Ten Asian emerging economies (1991–2012)	Substitutionary	Exports to OFDI	-	-
2021	Li X., Zhou W., Hou J.	64 countries (2005–2015), incl. China	Complementary	OFDI to exports	+	+
2022	Hou J., Cheng Z., Gong Y.	China's relations with East and Southeast Asia (2006–2020)	Initially [in terms of the investment development paths] (in the past) complementary	Only initially OFDI to exports	Initially +	+
2022	Maza A., Gutiérrez-Portilla P.	Spain and its OFDI' 50 recipients (1995–2019)	Complementarity or substitutionarity depends on a type of host country's economy	NA	+/-	NA
2023	Yan Z., Sui S., Wu F., Cao L.	Current Chinese enterprises' microdata	Complementary	OFDI to exports	+	NA / +

Source: own study.

Discussion and implications

Taken together, the theoretical and empirical evidence demonstrates that the relationship between OFDI and exports is neither uniform nor stable. The early substitution view has proven to be too restrictive, as both theory and evidence now show that FDI can strengthen exports under specific conditions. Complementarity tends to dominate in advanced economies, in manufacturing sectors, and where vertical integration and value chain fragmentation are significant. Substitution, on the other hand, is more common in emerging economies, in horizontal FDI involving finished goods, and in earlier stages of development.

These findings carry several implications. For theory, they highlight the importance of moving beyond homogeneous models of capital flows toward frameworks that integrate firm heterogeneity, intangible resources, and dynamic internationalization processes. For empirical research, they underscore the need for more nuanced, sector-specific analyses that can account for heterogeneity across industries and development stages. For policy, they suggest that governments should encourage OFDI in sectors where

complementarities with exports are likely to emerge, while monitoring substitution effects that may harm domestic industry. Advanced economies may benefit from promoting OFDI as a means of technological upgrading and export competitiveness, whereas emerging economies may need carefully sequenced strategies to avoid premature substitution of exports.

Conclusion

The relationship between outward FDI and home-country exports continues to be one of the most debated issues in international economics. Classical theories that framed FDI as a substitute for trade are no longer adequate to capture the complexity of contemporary globalization. More recent frameworks including New Trade Theory, the OLI paradigm, and the Knowledge-Capital model highlight the ways in which FDI and exports may operate as complements, particularly in the context of multinational enterprises, intra-firm trade, and increasingly fragmented global value chains.

Empirical research reinforces this complexity by revealing outcomes that vary across countries, industries, and stages of development. Evidence from advanced economies and technology-intensive sectors tends to confirm complementarity, with OFDI supporting export growth through vertical integration, learning, and knowledge transfer. By contrast, substitution effects appear more frequently in horizontal expansion strategies, especially in emerging markets where firms relocate production abroad to serve foreign demand directly.

Taken together, these insights suggest that the OFDI–export nexus is not uniform but highly context dependent and dynamic. A comprehensive understanding requires both theoretical refinement and richer empirical analysis at the firm and sectoral level. Future research should place particular emphasis on the role of intangible assets, innovation capabilities, and the fragmentation of global and regional value chains. Such an integrated approach will be essential for explaining how OFDI reshapes trade patterns and influences competitiveness in an increasingly interconnected and knowledge-driven world economy.

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