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RESEARCH ARTICLE

Foreign direct investments and the dynamics of trade and capital flows: Schumpeterian insights for sustained development

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Abstract

This article analyses the role of foreign direct investment (FDI) in trade and development theory and outlines the resulting implications for economic policy. We propose an alternative model of international trade and development based on absolute, not comparative advantages of firms, which are nested in countries but compete internationally. Applying a Schumpeterian theory of dynamic development, we consider how firms can either increase their competitiveness through productivity gains at a given wage level, or by combining the existing high level of productivity with lower wages in low-income countries. We argue that the aim of competition policy must be to improve the *quality* of economic competition in international markets, limit monopoly rents and disincentivise rent-seeking activities through the mere outsourcing of production. To that end, we propose that economic policy must reinstate rigorous wage bargaining regimes and make FDI subject to wage conditionality, obliging foreign companies to increase their wages in the host economy in line with average national productivity growth and the national inflation target.

1 | SHIFTING PRIORITIES IN INTERNATIONAL TRADE

The economic fallout from the COVID crisis, the war in Ukraine, as well as rising geopolitical tensions, notably between the United States and China, revived a long-standing debate in academia and policymaking on matters of international trade. Increasingly, factors such as security, sovereignty, resilience and also fairness entered the discourse (Baldwin & Evenett, 2020). Overall, therefore, it appears that the priorities of public policy are shifting from an approach mainly based on efficiency towards a more holistic evaluation of 'welfare gains' through trade. We provide a novel theoretical contribution—with significant implications for policymaking—by arguing that a framework for international trade that is fair and conducive to economic development and competition must include the role of foreign direct investments (FDI). Economic theory and policy have hitherto not adequately captured the implications for development that stem from price dumping or monopoly rents, which transnational corporations (TNCs) extract via the internationalisation of production. However, especially the dramatic increase of FDI in China and its huge quantitative effects on global trade flows have shown the game-changing nature of this kind of investment for both domestic developments as well as international trade (Wade, 2010). One can draw a similar conclusion from FDI flows into Eastern Europe and their implications for the dynamics of economic development for the European Union (EU; Bohle & Greskovits, 2012; Győrffy, 2022).

In this article, we outline a new way of conceptualising international trade in a model where absolute instead of comparative advantage is the driving force of change and economic development. The model puts Schumpeter's development theory in an international context, which has major implications for how we think about economic competition and competition policy. Schumpeter describes

development (at the national level) as a function of productivity gains of a single firm, the pioneer, that results (at given wages) in temporary monopoly rents or gains of market shares through lower prices (and absolute advantages). These temporary monopoly rents lead to widespread emulation of the pioneer by competing enterprises, so that overall productivity increases as the new production methods and products replace the old economic structure ('creative destruction'). Since productivity lies at the heart of the Schumpeterian model, the critical question regarding economic competition is whether firms increase their competitiveness through increasing labour productivity or through using a given level of productivity and combining it with low wages (i.e. via outsourcing existing production technologies to low wage countries or lowering wages domestically). Analysing the implications of the internationalisation of production from that perspective, we argue that the Schumpeterian model implies that economic development depends on economic policy that facilitates, on the one hand, catching up processes of economies with a lower development status, while, on the other hand, ensuring that firms in developed economies continue to invest in new technologies.

Spelling out the policy prescriptions, we propose (re-) installing wage bargaining agreements similar to the post-war regimes in order to incentivise productivity-enhancing investments. In both developed and developing economies alike nominal wage growth must follow the golden wage rule, according to which wages increase with overall productivity growth and the national inflation target. Beyond this, however, additional policy tools must limit the absolute advantages that TNCs can retain from their investments in low-income countries. To achieve this, investment agreements have to include a wage conditionality clause, which obliges foreign companies to increase their wages in the host economy in line with the average national productivity growth and the national inflation target. Although this measure will not eliminate monopoly rents, it will have positive knock-on effects on two fronts: first, vis-à-vis the TNCs' home economy, a wage conditionality clause would erode over time the absolute advantages that TNCs obtain through simple outsourcing of existing methods of production. Investments in new technologies thus become again a precondition for firms to increase their profitability and survive in the long run, which spurs domestic innovation and development (Schumpeter, 1942). On the other hand, in TNCs' host economies, the wage policies of international companies would put pressure on domestic companies to follow their lead and regularly adjust wages in line with productivity gains in the economy, which is a prerequisite for economic success and for developing countries to catch up (Flassbeck & Steinhardt, 2018).

The article is structured as follows. First, we review Schumpeter's theory of development to extract the main insights for our argument. Next, we put this argument into a context of international trade and capital flows, showing that firms can obtain absolute advantages in international markets either via higher individual productivity at a given wage level, or by combining their existing productivity and with lower wages through the relocation of production. In both cases, firms obtain an absolute cost advantage vis-à-vis their competitors, but the consequences for economic development are different, as only a competition based on increased productivity engenders creative destruction. Subsequently, we outline our policy prescriptions, arguing that trade and investment agreements should ensure that monopolistic rents from FDI remain limited and temporary. The final section concludes the implications for theory and policy that the Schumpeterian insights entail.

Policy implications

- Embedding foreign direct investment (FDI) flows in a wider development strategy: merely a reliance on foreign capital can lead to a middle-income trap and create international market distortions. Embedding FDI in a development strategy necessitates giving developing and emerging economies more industrial and financial policy space.
- National economies must reinstall post-war wage bargaining systems: this policy is a necessary requirement to set up a competitive regime that incentivizes companies to increase their competitiveness via higher productivity, not lowering wages. Wage policy must hence function again as a productivity whip and high unionization rates ought to limit the firms' ability to increase their competitiveness through lowering wage bills.
- Foreign direct investment must be tied to a wage conditionality: the minimum requirement is to force foreign investors to increase their wages in line with the average productivity growth achieved at the national level and the national inflation target in the host economy. As with environment protection or social protection rules, which are part of international trade and investment agreements, the negotiating parties should make the wage rule a mandatory part of the agreement.
- Integrated economic areas, such as the European Union, should equally apply this wage rule to the free movement of capital, to smooth out development across a diverse range of economies and provide a better institutional framework for productivity-enhancing competition.

2 | THE SCHUMPETERIAN THEORY OF DEVELOPMENT

Conceptualising economic development as a dynamic process, characterised by a sequence of disequilibria, requires a departure from conventional equilibrium approaches (Gräbner & Strunk, 2020). Austrian economist Joseph Schumpeter provided such a theoretical foundation by putting innovation—and with it, the changing nature of the productive structure of the economy—at the centre of his analysis. His very definition of economic development is that of a 'spontaneous and discontinuous change in the channels of the flow, disturbance of equilibrium, which forever alters and displaces the equilibrium state previously existing' (Schumpeter, 2017, p. 64). In this context, it is critical to understand that in Schumpeter's view, economic development is *change*. Without qualitative changes in the economic sphere itself, 'there is *no* economic development' (ibid., p. 63, italics in the original).

Central to his analysis is the role of the entrepreneur who disrupts the familiar and widely used methods of production through innovation, that is, a new combination of input factors, which leads to new production processes or to new products that allow the pioneering entrepreneur to reap temporary monopoly rents or to use his/her ability to produce at lower prices and to increase his/her market shares. In other words, the entrepreneur obtains an absolute advantage vis-à-vis the competitor by doing something *different* and *new*, rather than merely optimising existing products and production methods. This is where Schumpeter most significantly diverges from conventional neoclassical theory, whose theoretical framework relies on optimisation processes (intertemporal or otherwise).

In Schumpeterian theory, the pioneer's absolute advantages obtained through successful innovation remain temporary. This is, according to Schumpeter, because the success of the entrepreneur leads to wider emulation and consequentially to a replacement of old products and/or production methods on a broad scale through the innovation itself and the numerous copies and spinoffs it induces. This is the mechanism behind what is often referred to as 'creative destruction'. The factors engendering creative destruction are knowledge and technological progress. Both are endogenous variables in his framework—arising 'by its own initiative, from within' (ibid., p. 63). Yet, at the same time, it requires certain conditions for innovation to take place and bear fruits.

Implementing knowledge and ideas in the productive sphere requires investments and therefore adequate financial conditions. The availability of cheap credit, created out of thin air by the banking system, is a precondition for economic development as it allows to produce the additional capital goods to foster the process of creative destruction. As the introduction of new methods and products is always a risky endeavour, often met with resistance ('Reibungswiderstände'), the pioneer cannot break out of the stationary cycle and implement the innovation without access to such *ex-nihilo* financial capital. This access also has to be cheap. As innovations are, by definition, something new, it implies that they come with a high degree of uncertainty and certain inefficiencies. In many cases, the application of new inventions is identified *after* the innovation is out in the public (Mazzucato, 2021). Consequently, in an environment of high interest rates, the mechanism of creative destruction does not materialise, as high borrowing costs discourage investments that *ex ante* entail unknown outcomes. Schumpeter's emphasis on the availability of cheap credit gives the banker a special role in the process of economic development, as it is her/him 'who makes possible the carrying out of new combinations, authorizes people, in the name of society as it were, to form them.' (ibid., p. 74) This makes the banker 'the ephor of the exchange economy.' (ibid.) The reliance on credit and the concomitant expansion of the money supply is essential to allow a potentially inflationary process, which, however, does not become inflationary when the creation of new income is successfully completed. In later stages of economic development, Schumpeter stresses that reinvestments of retained profits and/or accumulated capital (e.g. investments from 'business angels') can equally stimulate creative destruction. However, prior economic development is a sine qua non condition for this financing method to exist. We shall return to this question when we address the role of FDI.

Once the process of creative destruction kicks in, there is no return to a new equilibrium. Instead, innovative disruptions lead to further disruptions, which generates a setting in which new income creates new investment. Schumpeter thereby departs from the neoclassical paradigm in several ways. First, while technological development in neoclassical theory is exogenous, he stresses the importance of the *endogenous* nature of development. Secondly, Schumpeter rejects the Walrasian idea of an 'entrepreneur ne faisant ni bénéfice ni perte' (an entrepreneur making neither profits nor losses) as a starting point for economic inquiry. In a reference to Marx, who regarded profits as the most important driver of capitalist production, but who lacked an appropriate theorisation of capitalist entrepreneurship, Schumpeter develops a theoretical framework in which the widely palpable phenomenon of corporate profits is an integral part of the *normal state* of capitalism—even if 'turmoil' were to describe this 'normal' state more appropriately.

In stark contrast to Marx, whose theory is based on Ricardo's labour theory of value and therefore predicts that lower marginal costs inevitably lead to monopolistic and oligopolistic markets (Harvey, 2010), Schumpeter adheres to the idea of competition, because he

suspends it merely temporarily. In Schumpeter's view, a company makes a profit because—under conditions which are otherwise the same for all competitors in the market—it achieves a relative cost advantage as an outcome of its investment and the deviation of the 'stationary norm'. Such cost advantages can either originate in more efficient production processes or through the launch of a new product, which succeeds in subtracting demand from the existing market offer. This allows the pioneer to either increase his/her margins and/or to lower prices to gain market shares with an existing product. Or alternatively, the pioneer can also reap monopolistic rents from the sales of a new product, for which there is no competing offer at this stage. In any case, the pioneering firm has an absolute advantage over its competitors.

In Schumpeterian theory of development, these absolute advantages do not last indefinitely. As competitors seek to emulate the successful pioneer, this process may ultimately lead to the disappearance of the pioneer's profit once all competitors have increased their productivity and lowered their prices. The profiteer is the consumer class, which now reaps the benefits of higher real income and living standards. This is precisely the driver behind what is commonly referred to as economic development: The risky action of one pioneer to break out of the norm triggers a movement that eventually succeeds in raising the standard of living of all those who participate in the productive and reproductive economy.

In a more stylised form, Schumpeter's theory states that the pioneer increases its productivity through a new combination of input factors at a given wage level, leading to lower unit labour costs and thus an absolute advantage over competing enterprises. This holds regardless of whether the firm's advantage originates from the introduction of a new product or new production processes. In the first case, due to its monopolistic advantage, the pioneering company will be able to charge higher prices and reap monopoly rents. In case of more efficient production processes, the pioneer will be able to lower their prices to gain market shares and/or increase his/her margins. Either way, relative to its original input, the pioneer's output increases vis-à-vis previously employed production techniques.

3 | THE SCHUMPETERIAN THEORY IN AN INTERNATIONAL CONTEXT

While Schumpeter's insights are primarily derived from individual entrepreneurial conduct on individual markets, it is possible, also by drawing on a broader tradition of heterodox economics, to integrate his theory into a framework of international production and trade. As it is primarily firms *nested in* national economies that compete on international markets, the starting point is to adhere to Schumpeter's idea that absolute advantages determine market outcomes. This is a different approach compared to conventional theories of comparative advantage, which consider differences in labour productivity or factor endowments, that is, the relative abundance of labour and capital in a given economy, as the main driver of international trade (cf. Feenstra, 2016; Krugman et al., 2018; Leamer, 1995; Ohlin, 1967; Ricardo, 1981; Samuelson, 1948, 1949).

Our point of departure is the observation that the main objective of enterprises in market economies is to create and exploit absolute advantages in their markets in order to grow and be profitable (Robinson, 1962, 1971). As 'the central mechanism of accumulation is the urge of firms to survive and to grow' (Robinson, 1962, p. 38), firms will exploit every domestic and international opportunity to lower their unit labour costs and to push competitors out. In the context of the classical comparative advantage model, it would imply that, if producers of cloth and wine in Portugal have absolute advantages vis-à-vis the producers of cloth and wine in England, the Portuguese firms will use these advantages to conquer the latter's market share. Portuguese companies would export both cloth and wine, and England would become a net importer for as long as it is able to finance the resulting trade deficit.

As the environment in which companies operate is marked by fundamental uncertainty, the primary business objectives are growth and profits, which increase the resilience and planning capacities of corporations (Galbraith, 1975; Lavoie, 2014). Uncertainty also affects the way in which firms organise production. Given the uncertain outcome of investments and inefficiencies that are part of the innovation process, it will always appear easier and safer for companies to use existing methods of production and try to push down their wage bill (Kaczmarczyk, 2022). This logic holds especially in highly financialised markets, which are oriented towards maximising short-term returns (therefore not allowing for 'inefficiencies'). Often, spending on research and development (R&D) is the first cost block that companies cut when they find themselves under pressure from capital markets (Aghion et al., 2020). We will return to these issues when discussing the policy implications.

Beyond above considerations, there is also a third dimension of uncertainty and imperfect information that orthodox economists often overlooked. For firms to adjust production efficiently based on the relative prices of input factors, that is, labour and capital—as it is assumed by neoclassical theory—the prices of these factors must be known and transparent for each market participant. Under objective uncertainty, this is not the case. In a dynamic market economy, in which actors operate in a fundamentally uncertain environment, predefined real national factor prices that could guide firms in their choice of input factors in any given country do

not exist (Lee & Jo, 2018). Take the price of capital: Firstly, it is heavily influenced by monetary policy, set by a public institution. Secondly, it is co-determined on a global market—with certain discounts and premiums due to currency risks.

Moreover, companies are not adjusting their production technology in relation to this price, especially if demand is weak and the conventional way to increase competitiveness remains via outsourcing production and putting pressure on wages. For example, firms in industrialised economies have not increased the capital intensity of their production, even though the price of capital has been near zero for a long period of time. Figure 1 shows this in relation to the US economy, where for the past 30 years, the change in capital intensity was not related to the given interest rate. The slowdown in productivity growth in most parts of the industrial world points into the opposite direction: It is a sign of weak investment and innovation dynamics.

At the same time, we do not observe that the production of firms in developing countries, which produce world marketable products, is necessarily more labour-intensive compared to similar production in rich countries (Nubukpo, 2019). Some production methods simply cannot be adjusted to lower wage costs. Technologically advanced products, for example, require high inputs of capital and/or skilled labour. The automotive industry is a prime example of this, as the outsourcing of production to low-wage economies is not marked by different production technologies (Kaczmarczyk, 2022). Rather, firms combine productive technologies that they use in developed economies in combination with lower wages (ibid.).

The same shortcomings apply to the 'real' price of labour, which requires information on actual and future inflation rates. Again, this would require information which is not available at the time of hiring—neither to the firm nor the worker. Hence, each firm operating in a market under fundamental uncertainty cannot know the 'real' factor prices of its input factors. As both the real interest rate and real wage rate are *endogenous* results of a highly complex economic process and continuous adjustment of a whole set of nominal prices in the economy, they can only be determined in an *ex post* analysis. In other words, it is impossible for any entrepreneur at any given point in time to know the 'real' prices of his/her input factors, so that an adjustment of production methods, based on the relative prices of labour and capital, cannot be taken into consideration.

Examining and understanding international trade flows and production therefore cannot rely on conventional assumptions of adjustments of production factors. Instead, the theoretical point of departure ought to be that in a dynamic market economy, profit- and growth-seeking enterprises continuously create and exploit absolute advantages while operating based on limited information. As the markets on which the exchange of goods and services takes place are rarely confined to national borders, it is useful to conceptually approach the questions at hand from the perspective of companies, which are nested in different economies. The resulting business conduct subsequently determines trade flows and international production. This can lead to a certain convergence between the standards of living in developed and developing countries, but the reasons for it are different to those assumed by factor price equalisation theorems. The same applies to the emergence of a certain specialisation or international division of labour.

The latter is particularly relevant, as global value chains (GVCs) have become an important driver of international trade since the 1990s (Antràs, 2020;

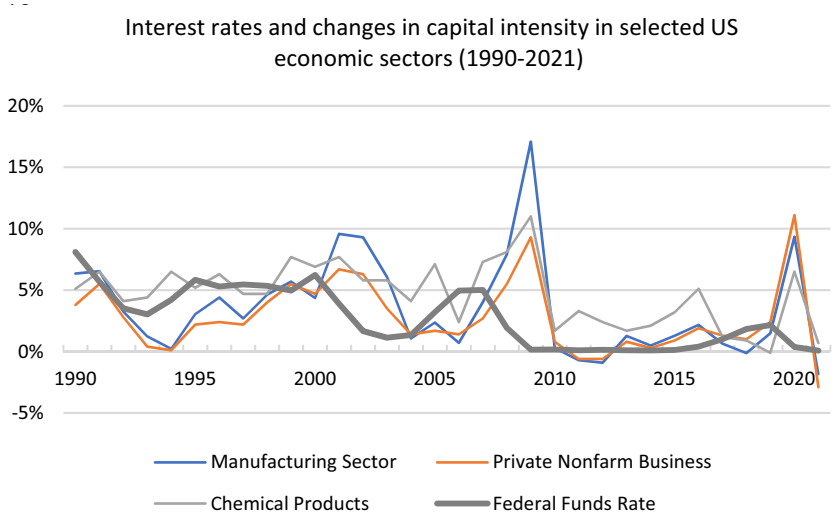

FIGURE 1 Interest rates and changes in capital intensity in major US economic sectors (1990–2021). *Source*: Federal Reserve Bank of St. Louis.

Baldwin & Lopez-Gonzalez, 2015; Gereffi et al., 2005; Gereffi, 2014; Grossman & Rossi-Hansberg, 2006). Contrary to the original idea of trade as the exchange of final goods between two partners, which was advanced by Ricardo in 1817 and dominated trade theory for nearly two centuries (Grossman & Rossi-Hansberg, 2006), the evolution of the global economy was increasingly characterised by the 'unbundling of supply chains into finer stages of production' (Baldwin, 2013, p. 27). The ICT revolution, lower transportation costs and trade and investment liberalisation incentivised companies to outsource activities, which were not related to their core business, so that an international division of labour emerged (ibid.).

The principal mechanisms behind this international division of labour are technically the same as depicted in our Schumpeterian model above and coherent with the premise of the approach to put the firms' rent-seeking activities as well as fundamental uncertainty centre stage: As it is a lot simpler and less risky for firms in industrialised economies to use the existing method of production (including the same intermediate input products) and try to cut the wage bill to increase competitiveness, the goal remains to combine high productivity with cheap labour. This can occur either via setting up entire production facilities in low wage economies or by merely outsourcing a part of the supply chain. Either way, the firm lowers its unit labour costs without essentially employing a new combination to increase its competitiveness. In Europe, for example, it was essentially the Eastern European Enlargement that contributed to strengthening the German manufacturing core. Firstly, the threat of relocating production to low-wage economies increased the bargaining power of industrial capital vis-à-vis labour, which was used to slash wages and water down collective wage bargaining agreements domestically. Secondly, outsourcing the lower value-added parts of the value chain increased the price competitiveness of German production sites, without incentivising new combinations (Kaczmarczyk, 2022).

In the process of the internationalisation of production, TNCs were playing a key role. The same applies to the state in facilitating and regulating the emergence of GVCs (even though its role is often neglected in the GVC literature, cf. Mayer & Phillips, 2017). The knock-on effects of corporations exploiting the possibilities of international production on trade flows were imminent. Looking at world trade and the degree of control of TNCs over both regional and global trade and production patterns, we find that, according to UNCTAD (2013), TNCs are involved in 80% of global trade in goods. Of this 80%, around 40% is imputable to intra-firm trade, that is, simple outsourcing and re-importing of foreign production. As around a third of world trade in goods is therefore taking place within firms, this large-scale employment of FDI as a competitive tool in international markets implied severe distortions of market prices, as internal transfer pricing can substantially differ from the pricing we observe in anonymous exchange (Ylönen & Teivainen, 2018).

For some developing economies, FDI flows had a substantial impact on trade flows. In China, for example, 60%–70% of national exports were exports of western firms (Flassbeck & Steinhardt, 2018). It is moreover often a rather small number of TNCs, which exploits absolute advantages to reap monopolistic rents in world markets (UNCTAD, 2017). UNCTAD (2018) calculations, using the Exporter Dynamics Database (covering 45 countries, seven developed and 38 developing economies), show that, in the overall sample, the share of the top 1% of exporters amounts to about 57% of total national exports. Within this 1% of top exporters, there is an even more pronounced concentration at the top. Freund and Pierola (2015) find that 'export superstars', that is the largest 5 or 10 firms in an economy, which are usually TNCs, account respectively for an average of 30% or 42% of national exports. In their sample of 32 countries, most of which were developing and emerging economies, the largest firm alone accounts for almost 15% of total national exports.

The rent-seeking motivation of TNCs in their organisation of production, that is, the exploitation of absolute advantages in international markets, is all pervasive. Since the 2000s, manufacturing GVCs were, with few exceptions (notably China), concomitant with higher capital and therefore lower labour shares, especially for lower and medium-skilled labour (UNCTAD, 2017, 2018). This indicates that the balance of power is skewed towards TNCs, which appropriate the largest share of efficiency gains. This insight is further substantiated by the literature that shows how TNCs, even though they often pay higher wages than domestic firms in a given industry, frequently insist on regulations that weaken labour union bargaining power and labour standards (Davies & Vadlamannati, 2013). In numerous Export Processing Zones, weakened standards are even institutionalised (Neveling, 2015).

The extent to which the host country overall benefits from FDI and participation in GVCs depends on its policy space to ensure that the productivity gains from investments spillover into the wider economy and thereby stimulate the process of creative destruction (Wade, 2010). However, this industrial policy space is in practice often limited for developing countries, including those economies dependent on foreign capital, by the new constitutionalism of trade and investment agreements (Chang, 2002; Gill, 1998; Oqubay et al., 2020) as well as constraints from the international financial system (Flassbeck, 2001; Fritz et al., 2018). Developing countries therefore often end up in a middle-income trap, as the source of power and highest value-added activity remain in the TNCs' home economy (Bohle & Greskovits, 2012).

4 | ABSOLUTE ADVANTAGES, INTERNATIONAL TRADE FLOWS AND FOREIGN DIRECT INVESTMENTS

The key to understand trade flows, market structures, production and employment therefore lies in the absolute advantages that corporations can exploit nationally and internationally. Assuming that each firm produces what it does best, the specialisation of production will be organised between market participants depending on their respective absolute advantage. While it is *ex ante* impossible to predict how each country, which is involved in trade, will (or will not) benefit as a whole, domestic production can be, to some extent, determined by the surrounding conditions in which the companies are embedded. If a region has raw materials, for example, it is likely that there are companies that will be able to switch to exporting these raw materials if there is a strong demand for them on world markets. Other companies may shift to the production of machinery and equipment because they may have an experienced and specialised workforce in this field.

Market participants can easily agree to exchange goods and services because one side produces what the other one needs. If there is a functioning supra-regional or international market for both product groups in our example above (raw materials and machinery and equipment), the exchange can take place either bilaterally or as an anonymous market transaction. If different products with regionally specific characteristics are involved, such cooperation, exchange and specialisation are relatively widespread. The literature on co-opetition, that is, the widespread phenomenon of competition and cooperation among market actors, provides a wealth of case studies and analyses in this regard (Devece et al., 2019). In some cases, it might be that some firms, similar to the capacity constraints outlined in comparative advantage theory, *may* agree to cooperate due to capacity bottlenecks and leave the production of the good, in which its absolute advantages are smaller, up to other companies.

Although in international market exchanges, the benefiting regions cannot be identified ex ante, absolute advantages at the level of the firm cannot be easily attributed to regional factors alone, even if the latter might play a role (as the example of access to natural resources indicates). The overall level of diversification and productivity of an economy depends on the state's policy space and design, ensuring that a constant renewal of productive structures takes place (Burlamaqui, 2020). If economic policy is crafted towards investment dynamics that engender creative destruction, even resource-rich countries, such as China, can develop leading high-tech sectors that are among the most competitive in the world (ibid.). A dynamic market development, in turn, also tends to draw in further foreign investments. In emerging markets, the data show that FDI often follows rather than leads development (Gunby et al., 2017).

Based on the above considerations, we can now turn towards formalising our implications for trade theory and, subsequently, trade and investment policy. First, if the Schumpeterian mechanism is valid, firms embedded in national economies compete on international markets and try to generate profits to secure cash flows, out of which they can pay their workers, service their debt, pay out dividends and so on. Ideally, all firms operate in an environment of given prices for raw materials, labour, capital and any other input factor. In a functioning market economy, that is, in the absence of a monopolist that merely exploits its market power, the *only* mechanism through which firms can obtain an advantage is through increasing their productivity. This characterises the Schumpeterian dynamic competition, in which temporary monopoly rents are the outcome of innovation. This mechanism holds regardless of whether the firms are embedded in a developing or in a developed country. In an international economy, however, differing nominal levels of wages offer an additional opportunity for firms willing to relocate their production site (or parts of their value-chain) from a high-income to a low-income country. It allows companies to lower their unit labour costs without an innovation.

Avoiding the emergence of imbalances thus requires certain conditions. Firstly, it is important to note that if absolute advantages of firms, measured as unit labour cost differences, are key to succeed in international markets, international trade can be beneficial for developing countries *even if* their firms face competition from companies in more advanced and more productive economies. To use a simple example: If the level of labour productivity per hour worked is EUR 100 on average for all the companies in an industrialised economy and the level of wages, including all non-wage labour costs, is EUR 50, the level of unit labour costs is 0.5 (corresponding to a 50% wage share at the level of total income). If the level of productivity in a developing country is only a fifth of that of the industrialised country, that is, EUR 20, its wage level consequentially determines the overall competitiveness of the economy. If the developing country also has a wage ratio of 50%, then the wage level would be EUR 10 per hour and unit labour costs would stand, as in the developed economy, at 0.5. We thus have a case in which, in terms of the macroeconomic conditions, companies in the poorer country could trade and compete on an equal footing with companies in the industrial country. The intertemporal dynamics created through investments and profits of pioneering firms could function in developing countries in the same way as in industrialised economies (Flassbeck & Steinhardt, 2018). This also includes

dynamics that can be engendered through participation in GVCs.

This is an important finding: Although the capital stock in the poorer country is smaller, which limits the amount of goods that its firms can produce for world markets, the prevailing macroeconomic conditions allow the firms in poorer economies to compete internationally beyond some arbitrary natural advantages that they may have, such as in the production of raw materials or tourism, for example. One big advantage that they have vis-à-vis firms from industrial countries is that, unlike the latter, which ought to rely solely on further developing technologies that lead to an increase in productivity and (intertemporal) advantages over their competitors, firms in developing countries can import technical solutions that, in combination with their cheap labour, allow them to reduce their absolute costs dramatically. In our example above, importing the production technology of the industrialised economy with its average productivity of 100 Euro per hour would reduce the unit labour costs from 0.5 to 0.1 for firms in developing countries. Even if this technology is not used by the domestic workforce with the same efficiency, it is likely that the competitiveness of individual companies can be improved radically this way. For firms in the developing economy, the import of the production technology from the industrialised economy can contribute to a dynamic development in which new and more productive methods replace the old—hence setting in motion the process of creative destruction in the wider economy and allowing a catching-up process.

Yet, with free movement of capital, this option of lowering unit labour costs via combining productive technologies with nominally cheap labour is also available to companies in the industrialised economies, if they are able and willing to outsource production to the developing country (Dunning, 2009; Hymer, 1976; Kindleberger, 1969; Polanyi-Levitt, 1970). China and Japan are examples for each of the two different ways to employ Western technology (high productivity incorporated in Western machines) and to combine it with the low wages of their workers: China's development was driven by foreign capital, Japan's by domestic capital, provided by the state (Huang, 2013). The dramatic fall of unit labour costs for their products vis-à-vis the goods produced in industrialised countries helped both countries to overcome their poor country status. The key question is therefore whether there is a mechanism in place, which would ensure that, in the medium to long term, nominal wages in the developing country rise with national productivity gains that are pushed upwards by the import (or copying) of Western technology (plus the inflation target). This is a sine qua non condition for widely spreading the fruits of technological progress, increasing living standards and generating a dynamic development process (Flassbeck & Steinhardt, 2018).

In addition to its relevance for trade flows, in many developing and emerging economies, FDI flows play a substantial role for the development of the capital stock, and therefore for the very basis of future economic development in the wider economy. Although the data ought to be interpreted with caution, since much FDI is either tied to tax avoidance, tax evasion (Damgaard et al., 2019; Zucman, 2013) or mergers and acquisitions (M&A; Carril-Caccia & Pavlova, 2018), which do not entail a renewal of productive structures as genuine investments do, we refer in Figure 2 based on conventional reasons to the share of FDI in gross fixed capital formation (GFCF) for the world economy, as well as for the groups of developed and developing economies. It does not provide us with exact figures, but rather magnitudes and trends, which are nonetheless revealing. According to the data, we find that while FDI played a minor role until 1990, its importance took off significantly since, and remained on an elevated level

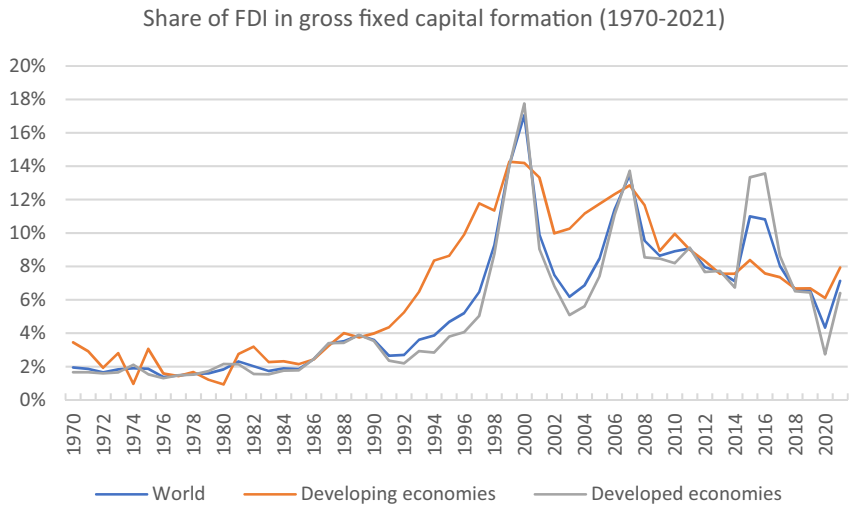

FIGURE 2 Share of FDI in gross fixed capital formation (1970–2021). *Source*: UNCTADstat.

(despite its high volatility and decreasing tendency in developing countries).

Individual country experiences are equally illuminating and highlight some of the diversity within above groups. Those economies described in the literature as 'reliant' on FDI, such as Brazil, Malaysia, Mexico or Poland, saw their share of FDI to GFCF increase substantially. Today, it is still at a persistently high level of between 10% and 20%. In China, where the share of FDI in GFCF reached more than 15% in the 1990s, we find a continuous decline over the past two decades to <3% in 2018. This is consistent with China's overall development trajectory, which initially relied on foreign capital, but which has become less FDI-dependent and increasingly technologically advanced through domestic investments (Flassbeck et al., 2020). In countries such as Japan or Korea, which protected their domestic economies and merely imported advanced technologies, FDI played a negligible role in GFCF throughout the past 30 years (<5%).

Summing up above insights, the reflections on international development and trade through the lens of absolute advantages put the renewal of productive structures centre stage. Both the import of foreign technology, financed by cheap access to capital, and FDI can play an important role in implementing new combinations and innovations that are sine qua non to the process of catching up. The question that remains, however, is how to ensure that (1) the monopoly rents of TNCs remain temporary, (2) benefits of FDI spill over to the wider economy and (3) the host economy gets access to information and knowledge, so that enduring power imbalances are avoided. In short, there must be an appropriate regulatory framework in place to create a more level playing field for companies to compete on an international level and to ensure that national economies as a whole benefit from trade and FDI.

5 | POLICY IMPLICATIONS

The exploitation of unit labour costs differentials through FDI has stark implications for trade and investment policies. To support a framework that is conducive to economic development and mutually beneficial trade, FDI and the operations of TNCs require regulation. No doubt, FDI *can* have positive effects on the development of low-income countries, as it may help to quickly increase their overall productivity and real wages. In other words, it may facilitate the process of catching up and the convergence of the living standards. Yet, it is equally clear that governments must embed FDI in a wider development strategy and put a regulatory framework in place to ensure that domestic firms also benefit from foreign knowledge and technologies (Wade, 2010). In the absence of such a regulatory framework, developing countries risk to perpetuate a dependency on and subservience to foreign capital, as, for example, in Central and Eastern Europe and certain economies in Southeast Asia (Nölke & Vliegenthart, 2009; Wade, 2010).

Overall, there are two fronts that require regulation. On the one hand, industrial countries need to ensure through economic cooperation and policy that the firms nested in those economies will know that the only way to survive in the long run is through investments and higher productivity. This requires bringing back some of the post-war wage bargaining systems, in which wages served as a productivity whip and high unionisation rates limited the firms' ability to increase their competitiveness through lowering their wage bills. Wage policy followed the golden rule: Nominal wages increased in line with expected productivity growth and the national inflation target. This allowed to stabilise prices, while the coordinated adjustments of exchange rates prevented the emergence of large and persistent trade imbalances, which are so common in the post-Bretton Woods era (Flassbeck et al., 2022). These wage agreements also ensured that productivity gains were shared widely in the economy, which kept inequalities in check and stimulated demand. If firms are to be forced to invest to survive, policymakers ought to re-install a modernised version of such wage bargaining regimes.

As the more convenient way for firms to increase their competitiveness is via offshoring production, the regulatory framework must ensure that host economies can benefit from foreign investments, but that the firms' gains of competitiveness remain temporary. In other words, governments must ensure that TNCs do not indefinitely reap monopoly rents, as this would greatly impede economic development in industrial and developing countries alike. Therefore, if firms invest in low-wage economies, the minimum requirement is to force the foreign investor to increase their wages in line with the average productivity growth achieved at the national level and the national inflation target in the low-income country.

This wage conditionality has to be part of the investment agreements that TNCs and governments from the global north negotiate with the governments of developing countries. As with the environment or social protection rules, which are generally part of international trade and investment agreements, such as, for example, the ASEAN-China Free Trade Area (ACFTA), the Trans-Pacific Partnership (TPP) or the EU-Mercosur agreement, the negotiating parties should make the wage rule concomitant to the existing and all future agreements. The same applies to the narrower International Investment Agreements (IIAs) and Bilateral Investment Treaties (BITs) that offer foreign investors various protections from host government interventions. Worldwide, there are currently around 3.300 of such agreements in place without any such wage provisions (UNCTAD, 2023).

Adding the suggested wage clause would not only tie foreign investors deeper into the host economy's development, but it would also give governments more space with regard to its domestic policies. Since IIAs usually protect investors from regulations that would violate their 'legitimate expectations', the threat or the actual lawsuit of investors against governments and the recourse to Investor-State Dispute Settlement (ISDS) exerts constraining pressure notably on wage policy (Cagnin, 2017; Choiniere & Maksimov, 2022). With the suggested wage conditionality, governments would introduce a clear rule concerning future wage growth, so that an important uncertainty for the investor would be removed from the outset.

Integrated economic areas, such as the European Union, should equally apply this wage rule to the free movement of capital, to smooth out development across a diverse range of economies and provide a better institutional framework for productivity-enhancing competition. The introduction of the wage conditionality would still allow TNCs to reap temporary monopoly rents. However, their profit margins vis-à-vis its home country would decrease over time, if the developing country achieved higher average productivity growth than the industrialised economies. Moreover, the example of international companies would put pressure on domestic companies to follow their lead and regularly adjust wages in line with productivity gains in the economy at large, which is missing in many developing regions (like Latin America) but forms *the* critical prerequisite for overall economic success and for the developing countries to catch up.

At the same time, such wage conditionality would prevent that TNCs outcompete and suffocate the rest of the host economy in times of emigration and concomitant labour market shortages. Especially in Central and Eastern European economies, this poses an existential threat to many domestic firms (Flassbeck et al., 2022). Since Central and Eastern Europe experiences wide-ranging emigration of labour towards the west—due to high nominal wage differences and economic crises—strong labour market shortages emerge. Western firms producing with highly productive technologies in Central and Eastern Europe have a lot more leeway in their margins to offer substantial wage increases (way above productivity growth and the national inflation target) to attract workers. Domestic firms, however, relying on less capital-intensive and thus less productive methods, must try to keep up with the wage increases to offer competitive terms, as otherwise, scarce workers would move to the TNCs or try to migrate to western economies. The resulting wage dynamics not only erode the competitiveness of domestic firms, but more broadly that of the domestic economy through high inflation (ibid.). The wage conditionality agreement would limit the scope of TNCs to outcompete domestic firms and therefore reduce the wage pressures in such circumstances.

Hence, overall, the idea is that trade and investment agreements must tie foreign firms deeply into a nation's economic development. From the firm's perspective, simple outsourcing of existing production methods would not suffice to sustain monopolistic advantages over time, so that investments in new technologies would be incentivised. It would set the basis for sustained development through real wage increases in poorer economies, in which TNCs set up production facilities. Therefore, rather than leading to a race to the bottom in labour standards and wages, as well as monopoly rents for a few TNCs, such an approach would enable to create a more level playing field for international competition in the long run and support development in both TNCs' home and host economies.

The final policy conclusion that emerges from above analysis is that for trade to be beneficial to all participating economies, countries, especially low-income economies, must be given industrial policy space to ensure that investments and the concomitant renewal of productive structures engender a process of continuous development. If FDI remains an enclave within the foreign economy and/or firms will be merely assigned a specific task in the value chain, further development prospects are highly limited, since the main sources of operative control, power and knowledge remain outside the host country's borders and no spillover takes place.

6 | CONCLUSION

Based on the Schumpeterian theory of development, the role of creative destruction and FDI for international trade must be reconsidered. Schumpeter provides a theoretical framework that explains dynamic development and corporate profits in market economies. According to his framework, pioneering firms secure temporary monopoly rents via a new combination of input factors, which gives them an absolute cost advantage over their competitors. The latter will subsequently seek to emulate the pioneer's new production process or product, so that monopoly rents will disappear over time. The only mechanism for firms to increase profits thus remains to invest to increase their productivity, which generates a process of constant creative destruction and development, benefiting the economy as a whole.

If companies from industrial countries internationalise their production, however, they are combining their existing sophisticated technology and high productivity with low wages in the developing country, thereby reaping high monopoly rents. The same applies to offshoring parts of the production, as the actual method of production does not change—since companies merely source their intermediate inputs more cheaply. Therefore, the minimum regulation necessary to retain the pressure to invest is, in addition to a productivity-oriented wage bargaining regime in developed economies, to tie FDI

to a wage conditionality so that foreign investors have to increase their wages in the host economy in line with the average national productivity growth and the national inflation target. Developing countries would thus benefit from a dynamic domestic wage development and more equitable conditions vis-à-vis firms from advanced economies. In short, such a policy would be one important step towards an international framework for trade that is conducive to technological development and a more level playing field in international markets.

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DATA AVAILABILITY STATEMENT

The data used stem from UNCTADstat and FRED St. Louis and they are publicly available.

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