

Christof Parnreiter*, Klara Kolhoff, Laszlo Steinwärdner and Christian Obersteller

Uneven development instead of complementarity: how the repatriation of FDI-profits fuels capital accumulation in Germany

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Abstract: Conventional assumptions that outward Foreign Direct Investment (FDI) is moving prosperity abroad have recently been countered by studies showing how they trigger production and income growth in the transnational corporations' (TNC's) home country, albeit regionally uneven. What has largely been ignored in these and other debates on FDI, but represents an essential benefit of it, is the repatriation of profits. Our analysis of FDI-induced dividend payments between German TNCs and their foreign subsidiaries shows the significance of these profit returns. Between 1990 and 2020, German TNCs repatriated around two-thirds of all profits they generated abroad, amounting to €900 billion (€407 billion in net terms). The geographical distribution of net profit inflows to Germany is characterized by the prominence of tax havens and providers of cheap labor, particularly China and the European periphery. Sector-wise, manufacturing is most important. Beyond empirical concerns, we argue that profit repatriation triggers uneven development on two scales: Globally, because it withdraws investment capital from the profit-losing countries and adds it elsewhere, e.g. in Germany, where it has the potential to spark further investment; and regionally, i.e. within Germany, because economically strong federal states, which are home to most FDI-sending TNCs, benefit disproportionately from the profit reflows.

Keywords: foreign direct investment; geographical transfer of value; Germany; profit repatriation; transnational corporations; uneven development

1 Introduction

Regional inequalities or, more generally, uneven development have become core topics of economic geography and international business literature as well as of related disciplines. Of the 3,762 papers on these topics listed on the web of science (2024-09-18), almost 60 % have been published in the last decade. Against the backdrop of the economic, social and political consequences of the crisis of the capitalist world-system on the one hand, and the successful catch-up processes in parts of East and South Asia, particularly China, and the associated shift in global economic dynamics away from the US, the UK and the EU on the other, scholars with different theoretical approaches have convincingly challenged the assumptions of the general equilibrium framework of neoclassical economics by showing that there is increasing, and increasingly multifaceted, socio-economic divergence at all possible scales (e.g. Bathelt et al. 2024; Diemer et al. 2022; Iammarino et al. 2019; Korzeniewicz and Moran 2009; Milanovic and Roemer 2016; Piketty 2014; Stiglitz 2012; Storper 2013).

Neither the worldwide economic restructuring nor the deepening of socio-spatial disparities, can be understood without recognizing the rise of transnational corporations (TNCs) as key “movers and shakers” of the world economy (Dunning and Lundan 2008). Through their foreign direct investments (FDI), which have increased by 710 % over the last 25 years (global outward stock) and which have incorporated a larger number of countries in this process (UNCTAD 2024), they undoubtedly have triggered new geographies of economic development, e.g. in terms of production, knowledge creation, jobs and income. The relationship (and the direction of the relationship) between FDI and economic growth in the FDI-hosting countries is a matter of debate, although in most cases a positive relationship is seen (Hansen and Rand 2006; Iamsiraroj 2016; Saurav and Kuo 2020; World Bank 2009). This, in turn, has sparked major policy debates, often following the line of argumentation that the economic dynamization in the host countries through FDI is paid for with negative effects in the sending regions

*Corresponding author: Christof Parnreiter, University of Hamburg, Hamburg, Germany, E-mail: christof.parnreiter@uni-hamburg.de
Klara Kolhoff, Laszlo Steinwärdner and Christian Obersteller, University of Hamburg, Hamburg, Germany,
E-mail: klara.kolhoff@uni-hamburg.de (K. Kolhoff),
laszlo.steinwaerder@uni-hamburg.de (L. Steinwärdner),
c.obersteller@web.de (C. Obersteller)

with deindustrialization and rising unemployment, which in turn is used as an issue by right-wing and radical right-wing parties in election campaigns. However, precisely the assertion that outward FDI (OFDI) were moving “prosperity abroad” (Bathelt and Buchholz 2019, 442) is increasingly being called into question. The argument goes that OFDI can provide the sending regions with access to new markets and knowledge, thereby stimulating production, income and sometimes also employment at home (Buchholz and Bathelt 2021; Cantwell and Mudambi 2005; Globerman et al. 2000). The flipside of this additional economic development, however, is that it is likely to deepen regional inequalities in the sending countries, because it benefits primarily those large (global) city-regions that are strongly networked globally (Bathelt et al. 2023; Goerzen et al. 2013; Lorenzen et al. 2020).

We tie in with these arguments, but with two reservations. First, in addition to the gains for FDI-sending regions mentioned in the OFDI literature, we add what we believe to be a key factor in benefiting them, namely the *repatriation of profits derived from the FDI-financed activities abroad*. This aspect is rarely addressed in today’s debate on FDI’s potential development impact, although it has been a major issue in critical development theory of the 1950s–1970s (see below) and although the repatriation of profits is by no means negligible: Worldwide, almost two thirds of income from FDI are repatriated (2005–2022), primarily to core countries such as the US, the Netherlands, and Germany. If this geographical pattern already indicates a pronounced unevenness, this finding is further confirmed by the fact that a large proportion of *net* profit outflows (44.1 % between 2005 and 2022) originates from middle income countries, especially those that are integrated into the world economy as providers of *cheap natural resources* (such as the Russian Federation or Nigeria) or *cheap labor* (such as the Czech Republic or Thailand) (IMF 2024; for a more detailed analysis see Parnreiter et al. 2024). For Germany, parallel with and as a result of increasing OFDI and its rising profitability (Hünnekes et al. 2019; Knetsch and Nagengast 2017; UNCTAD 2024), the repatriation of profits has increased steadily since the early 2000s and has risen sharply in the last decade. Between 2018 and 2022 alone, \$422 billion was shifted back to Germany, meaning that of every dollar earned through FDI abroad, \$0.60 was brought home (IMF 2024).

Our second reservation arises from this great, but mostly disregarded importance of profit repatriation, but goes beyond the quantitative aspect. While we recognize that FDI has been used to successfully drive the economic catch-up process in East and South Asia, particularly in

China,¹ the uneven geography of profit reflows casts doubt on the notion that FDI sets in motion a process that benefits all stakeholders equally, especially when it is realized between countries with significant socio-economic disparities. We contend that in such cases FDI is not complementary in the sense that it creates additional value for all parties involved. Rather, it benefits the FDI-sending region at the expense of the FDI-hosting one, because through profit repatriation the former appropriates of the latter investment capital *without having produced it*. Paraphrasing the World Bank (2024a, xv–xvi), which ascribes a certain “magic” to investment accelerations, we contend that the real magic of FDI therefore unfolds in the home countries of the TNCs: There, accumulation is additionally fueled without having to work for it (and, for that matter, without having to exploit domestic labor and nature). This is well grasped by Ilja Nothnagel, member of the *Executive Board of the German Chamber of Industry and Commerce*, who points out that “foreign investments by German companies have always benefited Germany as a business location” (DIHK 2024; own translation).

Our skeptical approach to FDI is based on critical development theory which has long seen FDI and subsequent profit repatriation as drivers of *uneven* development, pushing economic development in some areas at the expense of others (Baran [1957] 1973; Baran and Sweezy 1966). However, although such notions have become common ground in both dependency theory and world-systems analysis, no comprehensive empirical studies on the repatriation of profits have been conducted in the past to substantiate this claim. Our research is beginning to fill this gap. Building on our work on global patterns of profit repatriation (Parnreiter et al. 2024), this paper focuses on Germany’s role in it. Germany lends itself as a case study because the country records disproportionately high profit reflows, having the eight largest outward stock of FDI in the world (UNCTAD 2024), but the fifth-highest profit inflows, and the third highest *net* profit inflows, after the US and the Netherlands (2005–2022; IMF 2024). Relatedly, profits generated abroad are of big, *and increasing*, importance for domestic investment and accumulation. Entire industries, and in particular the automotive industry, are heavily reliant on the profits that are made abroad thanks to local markets and *cheap labor*.

1 The statistical correlation between net FDI inflows and gross domestic product growth can no longer be proven if China is excluded from the data. Such a thought experiment may be justified as China is “a sui generis case without precedent” (Hudson 2016, 284) due to its very unique political constitution.

We begin this paper by reviewing literature on FDI and profit repatriation, outlining our theoretical framework, and discussing the data. We then offer an overview of global profit reflows, before we turn our attention to the German case and provide the first comprehensive analysis of the scope, geography, and sectoral distribution of profit repatriation. We then discuss the potential impact of profit reflows on the dynamics of accumulation and growth in Germany by relating it to total surplus and investment. We pay particular attention to profit repatriation in the manufacturing sector, and here in the automotive sector, due to its importance for the German economy. In the conclusion, we summarize key points and highlight areas for further research.

2 Literature review

The development potential of FDI is subject to various academic fields. Particularly scholars from economic geography and international business and economics have long explored the strategies, determinants and impacts of multinational cross-border investments for sending and receiving regions (e.g. Beugelsdijk et al. 2010; Dunning and Lundan 2008; Villaverde and Maza 2015). Debates revolve, among other things, around the innovative potential and technological spill-over effects of FDI-induced knowledge transfer (e.g. Branstetter 2006; Jha et al. 2024), inward and outward FDI's impact on income or exports (e.g. Sahoo and Dash 2022; Yang and Bathelt 2023) and the formation of regionalized industrial clusters (e.g. Bathelt and Li 2014). Despite the generally positive view on FDI expressed therein, the literature is increasingly concerned with the downsides of multinational activities, more specifically, with the resulting reproduction of socio-spatial inequalities at different scales (e.g. Bathelt et al. 2023; Pavlínek 2022).

What is largely neglected in this literature, however, is an investigation of the repatriation of profits generated through FDI. Where discussed, studies on the effects of these profit outflows mostly focus on the current account balance of the countries receiving FDI and often arrive at the conclusion that the outflows of profit lead to fiscal challenges that weaken the supposedly positive FDI effects (e.g. Mencinger 2008; Zélity 2022). A systematic empirical analysis of FDI-induced profit repatriation and its influence on uneven development is, however, limited to a small number of studies (Akkermans 2017; Artner 2017; Parnreiter et al. 2024). While Akkermans (2017) describes the “drain of wealth” from non-core countries through centripetal global profit flows, Artner (2017) concretizes this process for the CEE-countries, contending that the exploitation of cheap labor via FDI there and the subsequent repatriation of

profits promote development in Europe's core at the expense of its periphery.

The literature in which profit repatriation receives most attention, but which is only of marginal relevance for our purpose, comes from finance and accounting. It discusses TNC's internal strategic determinants for profit repatriation as well as external political ones, such as accounting rules and taxation (e.g. Altshuler and Grubert 2003; Graham et al. 2011; Hasegawa and Kiyota 2017). Special attention was paid to two major US “tax holidays” in 2004 and 2017 (policy reforms which allowed to bring profits from abroad back to the US at a reduced tax rate or without tax payment), when the use of repatriated profits was analyzed with the result that most of these were paid out to shareholders (Blouin and Krull 2009; Gale and Haldemann 2021).

For the case of Germany, profit repatriation is sometimes addressed in the context of FDI drivers (Camarero et al. 2019), but barely discussed in isolation. The few existing studies address the influence of dividend taxation on the repatriation behavior of German TNCs (Bellak and Leibrecht 2010) and the impact of FDI income on the German current account (Fiedler et al. 2018; Knetsch and Nagengast 2017). Beyond that, Jungbluth et al. (2023) analyze the impact of German investors' profits from China on the domestic economy. Besides confirming a growing relevance of the Chinese market, the authors note a lack of empirical evidence on the question of the ultimate use of repatriated profits at home. Although this paper cannot remedy this shortcoming, we can at least show the potential influence of profit repatriation to Germany on the acceleration of investment and accumulation there.

3 Uneven development through surplus transfers

While we recognize that FDI has been used to successfully drive the economic catch-up process in East and South Asia, particularly in China, we also note that the geographies of net profit flows show pronounced unevenness (Parnreiter et al. 2024). We therefore contend that FDI, especially when made between countries with significant socio-economic disparities, creates asymmetric relationships that deepen global inequality because it allows profit-appropriating countries to drive economic growth at home through the exploitation of labor and nature elsewhere.

This view is based on a long tradition of analyses of surplus transfers across space (of which profit repatriation is an important component) as drivers of uneven development, albeit usually with little corresponding empirical

evidence. Baran and Sweezy (1966, 104) insisted, for example, that FDI is, *because of the reflows it generates*, “a method of pumping surplus out of underdeveloped areas”. Building on such notions, dependency theory and world-systems analysis attributed to surplus transfers a central role in the polarizing dynamics of capitalism. While Frank (1969, 9) contended that the “development of underdevelopment” occurs because “the metropolis expropriates economic surplus from its satellites and appropriates it for its own economic development. The satellites remain underdeveloped for lack of access to their own surplus”, Wallerstein (1983, 30, emphasis added), maintained that surplus transfers have “led to an ever greater polarization between the core and peripheral zones of the world-economy, not only in terms of distributive criteria (real income levels, quality of life) but even more importantly *in the loci of the accumulation of capital*”. From a more traditional Marxist perspective, Hadjimichalis (1984, 338) argued that profit repatriation is a direct mechanism of the geographical transfer of value which occurs when value produced by workers at one locality is realized there, but the resulting profits are geographically shifted and “added to the accumulation process enjoyed by other capitalists in other areas”.

Accordingly, profit repatriation serves to *geographically* separate the two central elements of the expanded reproduction of capital, namely the extraction of profits from workers and the reinvestment of these profits for further accumulation. Profit repatriation stretches accumulation over space – the growth that growth begets *occurs elsewhere*. As a result, capitalist relations of production assume a specific “*spatial* problematic” (Soja and Hadjimichalis 1979, 4; emphasis added) – the class antagonism between capital and labor is expanded and reinforced by a geographical antagonism between core and peripheral areas. Exploitation is organized vertically through the “appropriation of the surplus-value by an owner from a laborer”, and horizontally, across space, through “the appropriation of surplus of the whole world-economy by core areas” (Wallerstein 1974, 401).

Firstly, profit repatriation drives uneven development by withdrawing surpluses from certain regions, which means that the profits generated there are not available neither for accumulation nor for social development. This sets a process of peripheralization in motion or keeps it going, all the more so as a considerable part of the withdrawn profits originate from production relations in which labor and nature are extremely exploited. By this we mean that wages are lower relative to those in the core countries than the corresponding productivity differences (and often even

so low that they are not sufficient to ensure the reproduction of the workforce), which is why additional or *excess* profits can be appropriated by the firms employing these workers. As studies on the imperialist nature of contemporary capitalism suggest, the sharp increase in FDI in regions outside the traditional centers (i.e. mainly in middle-income countries, but also in some high-income countries, such as Eastern Europe) is largely due to the search for (and finding of) pools of cheaper and disenfranchised labor. The high proportion of repatriated profits worldwide that we note (Parnreiter et al. 2024) is precisely related to this – to FDI into regions “where they [workers] can be *superexploited*” (Suwandi 2019, 95; emphasis added).

Secondly, profit repatriation drives uneven development because the withdrawn profits are used in TNCs’ home or third countries, either as *additional* investment funds (which can be used domestically or re-exported as FDI) or for distribution to the owners and shareholders of TNCs. They serve, thus, as means of “corification” (Arrighi 1990, 14). While an analysis of the exact routes and final recipients of the repatriated profits is still pending, the fact that the six largest net profit recipients (the US, the Netherlands, Germany, Japan, France and the UK) have long been part of the “core of the core” of the world-system points to the critical role that geographical surplus transfers have played and continue to play in the polarization of the world economy (cf. Baran [1957] 1973; Cope 2019; Hickel et al. 2021). This is an aspect that, even if it is theoretically framed differently, ties in well with the OFDI literature: OFDI may, at first glance, shift wealth abroad, but as a result wealth is shifted back.

4 Data and method

For an overview of global profit flows we use data on distributed *dividends and withdrawals from income of quasi-corporations* under the direct investment income in the current account of the IMF’s (2024) Balance of Payment statistics. The IMF data are derived from the respective central banks, to which, in turn, TNCs with subsidiaries abroad as well as subsidiaries of foreign TNCs based in the country must report dividend distributions. Overall data coverage is good, although there are some countries, most importantly China, that do not provide (complete) information. For the analysis of profit repatriation by German TNCs, we draw on bilateral (1990–2020) and sectoral (2010–2020) data on dividends (analogous to global data) from the Balance of Payment statistics of the *Bundesbank* (2022). Firms based in Germany that invest abroad or in which a foreign investor holds a share of 10 % or more, are obliged to report all cross-border dividend payments above the reporting exemption

limit of three million euros. *Bundesbank* datasets were provided to us on request and are not publicly available.²

Our focus on dividends implies a narrow understanding of profit repatriation, which increases the consistency of the data but also leads to an underestimation of the phenomenon: first, TNCs often resort to more tax-friendly mechanisms for bringing profits home such as royalties, transfer pricing, or service fees and thereby make some profits disappear from the statistics. Second, the geographical and sectoral distribution of the profit flows is distorted – or to be precise, *made opaque* – as FDI and its profit reflows are often diverted through holding firms in third countries with tax-friendly jurisdictions (see below). Third, there are grey areas in data presentation. Some countries, for instance, treat exceptional payments made out of accumulated reserves (“super-dividends”) as equity withdrawals rather than dividends. In Germany, this is the case for all profits that were generated more than two years ago. Finally, some values are missing in the datasets, either because they are classified as confidential or because they are below the reporting limit.

Both IMF and *Bundesbank* data are only available at the national scale. Accordingly, capital and profit flows that cross borders, but within a corporation’s network, are presented as if they were an interstate phenomenon. While we recognize that this problem harbors the danger of methodological nationalism, we argue with Baran (1973 [1957]) and Hadjimichalis (1984) that the firm level is insufficient to fully capture the role of repatriated profits in uneven development. While it is true that profits are owned by a firm and not a country, the moment in which they are reinvested, they contribute to *regionalized* accumulation processes, i.e. to what is normally referred to as “national growth”. This then goes beyond the scale of individual firms, affecting, for example, other companies’ investment behavior, the labor market, or state tax revenues. The same applies, only the other way around, for the countries that are losing profit. Accordingly, working with data on the national level is not only justified by data availability reasons but also by theoretical reflections.

However, the OFDI literature draws attention to the fact that uneven development through FDI can take place at several scales, and especially at the regional one, where there is greater polarization between strongly networked global-city regions and more cut-off regions (Bathelt et al. 2023;

Lorenzen et al. 2020). Consequently, we assume that profit repatriation is likely to deepen asymmetric core-periphery relationships within nations, because the effect of additional investment funds described above does not occur at the scale of entire nation states, but rather in economically strong cities, and in particular those in which the TNCs have their headquarters. Although breaking down the analysis to the subnational and even city would be worthwhile, the available data do not allow for an analysis at this scale.

5 Global profit flows

Profit repatriation is a phenomenon of significant economic importance, because of its size and the centripetal patterns that global net profit reflows adopt. Between 2005 and 2022, TNCs repatriated \$18.6 trillion in profits. This is equivalent to 1.4 % of global gross domestic product, 72.6 % of FDI outflows, and 46.7 % of the FDI outward stock in 2022. Moreover, repatriated profits amount to 172.1 % of reinvested earnings, implying that of every dollar earned through FDI, \$0.63 are taken out (IMF 2024; UNCTAD 2024; World Bank 2024b). While a majority of gross profits, similar to FDI, are shifted between core countries, the issue’s high relevance comes from the uneven distribution and direction of *net profit flows*: as illustrated in Figure 1, net profit is mainly appropriated from non-core, in particular middle-income countries and shifted to a few high-income countries. Just six core countries capture 87.6 % of the total net amount, with the US alone accounting for 41.2 % (Netherlands 14.4 %, Germany 8.8 %, Japan 8.3 %, France 8.0 %, and UK 6.9 %). Crucially in terms of uneven development is that this profit appropriation allows them either to expand their investible funds (repatriated profits amount to 7.5 % of their gross operating surplus [GOS]) and their actual investment (9.9 % of their gross fixed capital formation [GFCF]) or to increase the wealth of the owners and shareholders of TNCs (IMF 2024; UNSD 2024; World Bank 2024b).³

The geographical concentration of net profit outflows is less pronounced but still remarkable as 30 countries account for 84.0 % of the losses world-wide. There are clear-cut patterns regarding the net profit exporting countries’ integration into the world economy, functionally and in

² IMF data are in \$, those of the Bundesbank in €. Bundesbank’s sectoral data are classified according to NACE Rev. II and were provided for 64 countries that represent over 90 % of the German foreign trade. The classification is based on the main economic activity of the investor and not the investment object in the FDI host country.

³ GOS is gross output less the cost of intermediate goods and services to give gross value added, and less compensation of employees and taxes and subsidies on production and imports; GFCF consists of resident producers’ investments, deducting disposals, in fixed assets and intangible assets (Eurostat 2024). GOS and GFCF show how much capital is potentially available to an economy for investment and how much is actually invested.

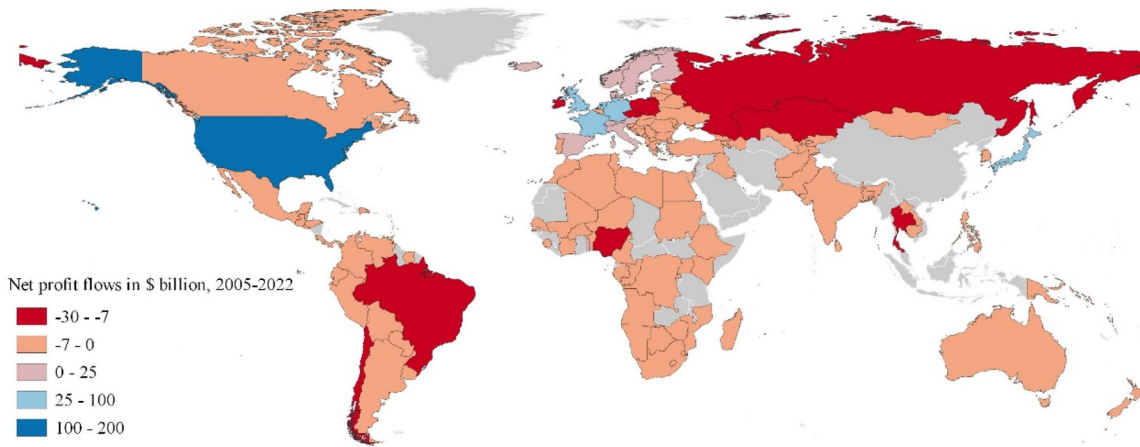


Figure 1: Average net profit flows per year in \$ billion between 2005 and 2022 (grey = no data; WGS84 – EPSG 4326 projection); own illustration based on IMF (2024).

terms of their hierarchical position (Parnreiter et al. 2024).⁴ The main profit exporting countries can be classified into three groups: first, providers of *cheap nature*, i.e. natural resources such as oil, gas, agricultural raw materials, ores and metals. This group accounts for 44.2 % of all net profit outflows between 2005 and 2022 and includes fuel and gas suppliers such as the Russian Federation (8.8 %) and Nigeria (4.5 %), mining countries such as Chile (3.0 %) and Australia (2.2 %), and countries with a pronounced agrarian economy such as Brazil (7.3 %). The second group of profit losing countries are providers of *cheap labor* (18.1 % of all net outflows), i.e. extended workbenches integrated into global commodity chains mainly through the manufacture of industrial products and low-skilled services. This group includes Eastern European countries such as the Czech Republic (3.7 %), Poland (3.2 %), or Hungary (1.6 %), as well as “newly industrialized countries” such as Thailand (3.6 %) or Mexico (1.9 %). With regard to uneven development, it is important to note that the countries in these two groups have in common that the relations of production are characterized by poor labor rights, low wages and highly environmentally damaging conditions of resource extraction. Accordingly, the profits made there exceed the “standard”, because the differences with the core countries are greater in terms of wages than in terms of productivity. This is different for the third group of net-profit senders, which for the sake of a uniform terminology we call providers of *cheap money* (20.7 % of all net outflows). These are tax havens through which profits (partly generated in countries belonging to the first or second group) are diverted. This group consists of well-known tax havens such as Ireland (11.3 %) or

Hong Kong (3.1 %) and other tax-friendly jurisdictions such as Malta (3.2 %) or Belgium (2.5 %).

6 Geographies of profit flows to Germany and their sectoral distribution

German firms are strong profit repatriators: with the eighth-largest outward stock of FDI in the world, the country has the fifth-highest profit inflows (gross), implying that an above-average amount is shifted back home. Profit inflows amounted to €900 billion between 1990 and 2020, which is equivalent to 1.0 % of Germany’s gross domestic product, 39.0 % of its FDI outflows, and 64.5 % of its 2020 FDI outward stock. German firms’ repatriation strategy is even more visible in *net* profit flows: with a total of €407 billion (a majority of which in the last decade), Germany is the world’s *third-largest* net profit appropriator, behind the US and the Netherlands. Accordingly, the country’s repatriation rate (repatriated profits as share of all FDI-generated income on equity, i.e. repatriated and reinvested) is with 72.1 % also well above the global average of 63.2 % (Bundesbank 2022; 2024; DeStatis 2024a; IMF 2024). These figures are all the more remarkable given that in the case of Germany, profit repatriation is neither influenced by extraordinary events, as is the case with the US, which had two tax holidays in 2004 and 2017, nor by the fact that being a tax haven (as the Netherlands) creates a special constellation.

The high tendency of German TNCs to repatriate profits suggests a particular profitability of foreign investment compared to domestic investment. In fact, real returns on FDI have risen constantly since the mid-1990s and have

⁴ No global data are available for China.

become more profitable than domestic investment since around 2008 (Hünnekes et al. 2019; Knetsch and Nagen-gast 2017). Against this background, it is not surprising that since the 1990s, German firms are shifting ever more invest-ment abroad (including FDI), in absolute terms, and, more remarkably, in relation to domestic investment. Accord-ingly, Germany has turned from being *Exportweltmeister* (world's leading exporter of goods) into the world's largest exporter of capital. Since 2011, Germany's financial account shows capital exports of almost \$3,100 billion, or 8 % of its gross domestic product (World Bank 2024b).

The geographical pattern of net profit reflows to Ger-many as shown in Table 1, is characterized by a high pro-portion of EU countries (39.7 % of all net inflows) and by the prominent role of China as the most important single profit-sending country (15.9 %, excluding Hong Kong). Sev-eral things stand out: First, economies that on the global level are net recipients of profits are profit exporters to Germany, such as Great Britain (9.8 %),⁵ the US (6.5 %) and the Netherlands (5.1 %). While the differences between the global and German patterns are partly due to the different geographical levels of analysis,⁶ they can, at least in the cases of Great Britain and the US, also be explained by the fact that these countries are among Germany's most impor-tant trade and investment partners. The Netherlands serve as important investment location, too, though mainly for tax reasons. Second, the high importance of tax havens and fur-ther tax-friendly jurisdictions as profit senders to Germany is striking. Almost a third of net inflows stems from them, with Luxembourg (9.3 %), Austria (6.5 %), the Netherlands and Ireland (3.2 %) being the most important ones. These countries serve as locations for holdings *through which Ger-man TNCs redirect FDI and the corresponding profit reflows* (Mintz and Weichenrieder 2010; Schanz et al. 2017). Because such ownership chains are used to *make opaque* capital flows, both actual FDI destinations and the origins of repa-triated profits are difficult to determine. Presumably, how-ever, many of the profits repatriated from tax-friendly juris-dictions actually originated elsewhere, partly in the coun-tries classified as providers of *cheap labor* and *cheap nature* (Parnreiter et al. 2024).

Thirdly, countries that are integrated into the global and European divisions of labor as providers of *cheap labor* for manufacturing and the supply of low-skilled services are of crucial importance for German TNCs as senders of net-profits. This applies in particular to China (15.9 % of

Table 1: Top20 origins of German net profit inflows (1990–2020) and share in total net inflows; own calculations based on Bundesbank (2022).

Country	Net profit inflows in € billion	Share in all net inflows in %
China	61.7	15.9
Great Britain	37.9	9.8
Luxembourg	36.3	9.3
Austria	25.4	6.5
United States	25.3	6.5
Netherlands	19.8	5.1
Russian Federation	17.3	4.4
Poland	12.8	3.3
Ireland	12.3	3.2
Belgium	11.7	3.0
Spain	11.6	3.0
Czech Republic	11.6	3.0
Singapore	10.8	2.8
Hong Kong	8.0	2.1
Brazil	8.0	2.1
Hungary	7.7	2.0
Australia	7.3	1.9
Canada	5.9	1.5
Korea	5.1	1.3
Portugal	5.0	1.3

all net inflows), but also to countries of the Eastern and Southern periphery of the EU, which together account for almost as much repatriated profit as China (12.6 %).⁷ Within the EU, it is above all the former COMECON economies that are important profit senders (e.g. Poland 3.3 % and the Czech Republic 3.0 %). Although neither China nor Eastern or Southern EU countries are pure extended workbenches with exclusively low-skilled labor, they *are* still low-wage countries compared to Germany (see below). China in par-ticular plays an outstanding role for German firms, espe-cially in manufacturing, what is illustrated by the fact that just four German TNCs accounted for 34.0 % of *European* (here EU + UK) outward FDI to China between 2018 and 2021, namely the automotive giants Volkswagen, Daimler, and BMW and the chemical firm BASF (Kratz et al. 2022). The enormous importance of China for German firms stems from the high profits and high profit reflows from there. Profit returns from China have grown steadily in the last two decades, to increase even more in recent years. Due to geopolitical tensions, German TNCs began to withdraw

⁵ IMF data refer to the UK, *Bundesbank* data to Great Britain.

⁶ Bilateral flows cannot match the overall global picture because they are not balanced out by flows to or from other countries.

⁷ The actual volume of profit reflows particularly from Eastern Europe, is most likely higher as German TNCs often use holding con-structions in Austria or go “treaty shopping” in the Netherlands to reroute FDI and profits (Mintz and Weichenrieder 2010; Nerudová et al. 2020).

rather than reinvest large parts of the profits made. Therefore, profit returns from China have exceeded German FDI flows to China by a factor of three between 2017 and 2020 (Bundesbank 2022; 2024).

Along with the desire of German manufacturing TNCs to tap into the Chinese market, the high profits due to the availability of cheap labor (and, as a result, the high profit repatriation) are important reasons for the high level of FDI in China. Average annual wages in 2019 corresponded to around a quarter of those in Germany (NBS 2024; OECD 2024a) and labor standards are very poor (ITUC 2023). For the countries of the European periphery, and in particular the former COMECON economies, it is also true that they serve as a source of *cheap labor*. In manufacturing, mean nominal hourly labor cost per employee are between 37 % (Spain) and 59 % (Hungary) lower than in Germany (in 2022, in purchasing power parities \$; ILO 2024), and workers' rights are, at least in the CEE countries, significantly worse (ITUC 2023). Labor productivity, however, is, at least in high-tech sectors such as the automotive industry, high – German manufacturing firms can thus source skilled labor at lower costs than at home (Pavlínek 2020). As a result of comparable productivity but lower wages, profitability (share of GOS in value added) in many FDI-receiving countries is significantly higher than in Germany: In China, overall profitability is 1.5 times higher than in Germany (UNSD 2024), while in the Eastern EU-periphery, namely in Hungary, the Czech Republic, and Poland, profitability in the manufacturing sector is twice as high (OECD 2024b).

The high importance of *cheap labor* providers for profit reflows to Germany is also evidenced by their sectoral distribution. TNCs from only three sectors account for 87.5 % of all profit inflows (2010–2020): manufacturing (29.9 %), financial and insurance activities (29.0 %), and professional, scientific and technical activities (28.6 %).⁸ The latter two sectors also include holding firms, which is significant in that they often make industrial investments, which are, however, considered to be non-industrial “in the books” (Bundesbank 2023). Accordingly, the importance of the manufacturing sector in profit reflows both in relation to other sectors and other countries⁹ is even higher than the 30 % evident from the data. To put it differently: A significant part of the profits repatriated to the sectors of financial and insurance and of professional, scientific and technical

activities do not come from their foreign counterparts, but from workers in manufacturing.¹⁰

However, even without considering these profits *made opaque* by a distorted presentation, German manufacturing TNCs repatriated a total of €170.6 billion between 2010 and 2020, with a doubling of annual returns over time. Geographically, they repatriated most profits from China (29.3 % of all repatriated profits to manufacturing), from where reflows grew 4.6-fold between 2010 and 2020. Second come other EU countries (28.3 %), with tax havens such as the Netherlands (7.5 %) or Luxemburg (4.3 %) being particularly prominent, although they have little manufacturing relevant for Germany. Significant profit reflows in manufacturing also come from the US (7.5 %), the Russian Federation (6.6 %), and Great Britain (4.5 %; Bundesbank 2022). Once again, the importance of China as profit sender indicates that German manufacturing TNCs seek not only sales markets with their FDI, but also *cheap labor* in order to generate extra high profits for subsequent repatriation. Within the manufacturing sector, the production of automobiles stands out. Its total reflows of €70.4 billion translate into 41.3 % of the manufacturing sector's and 12.3 % of all reflows. More than half of these profit inflows come from China (52.7 %), which far outstrips both the EU (17.9 %) and the US (11.5 %).

7 Repatriated profits' impact

Our argument that profit repatriation drives uneven development is informed by the notion that the appropriated and geographically shifted profits push economic development in some areas at the expense of others (Arrighi 1990; Baran [1957] 1973; Baran and Sweezy 1966; Hadjimichalis 1984). The situation is somewhat different for Germany, however, in that its economy has lost ground to the US, the OECD and China since the 1990s. Key economic metrics such as gross domestic product (in constant 2015 US\$), gross domestic product per capita, exports of goods and services (in current US\$) and GFCF as percentage of gross domestic product have been growing more slowly (or, as in the case of investments, decreased) than those of competing economic powers (World Bank 2024b). We therefore conceptualize

⁸ From here on we use gross data for data availability reasons.

⁹ In the US, for example, manufacturing accounts for only 11.4 % of profit reflows (2000–2022; BEA 2024).

¹⁰ That this is highly plausible is shown by a break-down of the data. When German FDI are classified according to the sector of the investing firm in Germany, manufacturing would account for 26.8 % of all stocks abroad. However, when classifying FDI according to the firms in the FDI-hosting countries, manufacturing's share goes up to 33.5 % (2010–2020; Bundesbank 2024). Accordingly, around a quarter of FDI in manufacturing “disappears” from the FDI accounts.

the repatriation of profits to Germany less as a means of “corification”, as Arrighi (1990, 14) did, and more as a means of *defending* the country’s core position, both in terms of the profit levels of German firms as well as the opportunities for further investment and accumulation. To put it simply: Although gross domestic product and GFCF are growing relatively slowly in Germany, it must be assumed that they would grow even more slowly without the appropriation and use of foreign profits. As a consortium of industry-affiliated organizations concedes, profits from abroad, in this case China, can help to “cross-subsidize and thus maintain existing, otherwise loss-making activities in Germany” (Jungbluth et al. 2023, 75; own translation).

Our argument that the profits made abroad and brought home to Germany help German firms to defend their position in the world market is most clearly demonstrated in the manufacturing sector. There, the impact of brought-home profits on domestic accumulation is most pronounced because manufacturing (and, in particular, automotive) TNCs are heavily reliant on foreign production (unlike, for example, real estate activities), for which reason they invest a lot abroad and record high profit reflows. Unlike the other two major profit receiving sectors (financial and insurance activities and professional, scientific and technical activities), manufacturing TNCs also make high domestic investment. Manufacturing is therefore the sector in which it is most likely that the high foreign and repatriated profits will (can) be used to increase domestic investment. Relating profit reflows to GOS and GFCF as measures for the amount of capital available for investment and for the investment actually made, substantiates this assumption. The €896 billion in profits that have been returned to Germany (1991–2020) correspond to 3.1 % of the country’s total GOS, with an increasing importance of foreign profits: between 2010 and 2020, their share of GOS was 4.0 % (see Table 2; DeStatis 2024a). In manufacturing, however, the share of repatriated profits in the GOS amounts to 6.3 %, and in the automotive industry even to 9.8 %, i.e. more than three times as much as in the economy as a whole. These figures show the great importance of profits generated abroad (especially in China) and flowing back to Germany for German manufacturing, which is also recognized by industry representatives themselves. Former Volkswagen CEO Herbert Diess contends, for example, that it is often underestimated in Germany “how much our prosperity is co-financed by China” (Hage and Klusmann 2022; own translation). It should be added that prosperity in Germany and the high profits of Volkswagen AG (at least until 2023) and other firms are not co-financed “by China”, but primarily by workers there, who, because they are poorly paid and, according to the ITUC (2023), almost without rights, enable

the corporations to make extra profits. To varying degrees this also applies to other countries. It is well documented, for example, that the high profitability of the German automotive industry in Poland, the Czech Republic and Hungary is largely a result of low wages (Pavlínek 2020) and the disenfranchisement of workers compared to Germany (ITUC 2023).

While the high level of repatriated profits relative to the GOS proves their *potential* impact on investment and hence on accumulation, there is no empirical evidence (neither for Germany nor in general) as to what use is *actually* made of the repatriated profits. In order to nevertheless offer an approximation to the impact repatriated profits can have on domestic investment, we assume that the average pay-out ratio of German listed stock corporations, which was 42.0 % between 2003 and 2022 (Jungbluth et al. 2023), also applies to repatriated profits. Accordingly, we suppose that 58.0 % of the repatriated profits are reinvested sooner or later, either domestically or abroad. To further specify this, we assume in the next step that the ratio that generally applies to investments (around 12.0 % of all investments will be made abroad [operationalized by the average ratio of FDI to GFCF between 1991 and 2020; Bundesbank 2024; DeStatis 2024a]) also applies to investment capital originating from repatriated profits. Consequently, we estimate a domestic reinvestment rate of repatriated profits of approximately 50 %. In other words, half of the €896 billion that German TNCs repatriated between 1991 and 2020 was invested in Germany at some point and thereby triggered additional growth.

This €448 billion in *additional* investment capital, for which, it should be remembered, neither labor nor nature had to be exploited in Germany, is equivalent to a share of 2.8 % of the GFCF between 1990 and 2020. Again, the proportion of repatriated profits has risen significantly in the last decade, namely to 4.0 % between 2010 and 2020 (DeStatis 2024a; see Table 2). The sectoral analysis analogous to that of GOS shows that in manufacturing the assumed ratio (50 % of repatriated profits are reinvested domestically) would mean that profit reflows account for 6.6 % of total GFCF, and in the production of automobile and motor vehicles even 7.9 % (2010–2020). Moreover, over time there is a clear upward trend in the proportion of profit inflows in GFCF. While half of the repatriated profits in the automotive industry were equivalent to only 4.6 % of GFCF in 2010, it was already 10.7 % in 2020. If this trend continues, an ever-greater proportion of domestic investment will be made possible by capital generated abroad, which means that the well-being of German industry will increasingly be fed externally. Accordingly, the accumulation of capital in Germany, the distribution of profits to shareholders and the

Table 2: German gross profit inflows by selected economic sectors and their share in gross fixed capital formation and gross operating surplus (2010–2020); own calculations based on Bundesbank (2022) and DeStatis (2024a).

Economic sector	Profit inflows in € billion	Share in GFCF in %	Share in GOS in %
All sectors	570.3	8.0	4.0
Mining and quarrying	5.9	43.1	18.6
Manufacturing	170.6	13.2	6.3
<i>Manufacture of food products; beverages; tobacco products</i>	6.2	8.7	4.4
<i>Manufacture of coke and refined petroleum products; chemicals and chemical products; basic pharmaceutical products and pharmaceutical preparations; rubber and plastic products</i>	32.6	13.6	5.1
<i>Manufacture of basic metals; fabricated metal products, except machinery and equipment; computer, electronic and optical products; machinery and equipment</i>	31.9	9.0	4.1
<i>Manufacture of motor vehicles, trailers and semi-trailers; other transport equipment</i>	70.4	15.9	9.8
Wholesale and retail trade; repair of motor vehicles and motorcycles	11.4	4.2	1.0
Financial and insurance activities	165.4	126.7	29.1
Real estate activities	2.6	0.1	0.1
Professional, scientific and technical activities	163.4	65.3	22.3

Subsectors are shown in italics.

in a global comparison relatively high wages of employees will become *increasingly* dependent on the exploitation of labor and nature elsewhere – and especially in China.

While this is a serious issue for industrial policy, especially against the backdrop of increasing geopolitical and geo-economic tensions (Parnreiter 2018), our focus is on profit repatriation's impact on uneven development. We have argued elsewhere that it creates or deepens disparities at a global level, namely between a few high and middle-income economies (Parnreiter et al. 2024). In addition, profit reflows have the potential to exacerbate regional imbalances within Germany as well. This can again be shown in an ideal-typical way in the example of the manufacturing sector, which is highly concentrated in only four federal states, namely Bavaria, Baden-Württemberg, North Rhine-Westphalia and Lower Saxony. Using the regional distribution of gross value added in manufacturing as a proxy (DeStatis 2024b; no regional data on repatriated profits are available), these four federal states would receive 71.4 % of all repatriated profits in manufacturing (or, in absolute terms, €121.9 billion), while the five eastern German states (Brandenburg, Mecklenburg-Western Pomerania, Saxony, Saxony-Anhalt, Thuringia) together would account for just 9.3 %. Accordingly, investment potential from the additional profits from abroad benefits the already wealthier federal states (with the exception of Lower Saxony) and within these states, most likely, the already wealthier cities and *Landkreise* (comparable to counties) where headquarters are located, with the consequence that the regional disparities (e.g. west-east) on various scales would deepen. While a more detailed analysis of these dynamics is still pending,

first results are clearly in line with the findings of Lorenzen et al. (2020) and Bathelt et al. (2023) that OFDI, while giving some regions an additional development boost, may at the same time exacerbate regional economic and political problems.

Finally, theory suggests that the repatriation of profits has an adverse impact in the countries from which they originate. For China, the largest profit sender to Germany, it is difficult to assess this effect, because no information is available for the country's global profit flows. We suppose, however, that despite the high outflows to Germany, profit repatriation is less of a problem for China because the country has always strategically used FDI as a means of its *own* economic development through its industrial policies (Hudson 2016). Moreover, China is no longer dependent on inward FDI due to high domestic investment (World Bank 2024b). Accordingly, even China's aggregate negative net FDI income (of which repatriated profits are just one component), corresponds to only 1.4 % of its GFCF (2005–2022; IMF 2024; World Bank 2024b). This is much lower than in the European periphery and the CEE countries in particular. The drain of surplus from there not only negatively impacts the countries' current account balance, but also broader dynamics of capital accumulation (Artner 2017; Zélicity 2022). In Poland, the Czech Republic, and Hungary, profit outflows correspond to 13.7 % of GFCF and 11.5 % of GOS (2005–2022; IMF 2024; UNSD 2024; World Bank 2024b). Although FDI has been an important factor for economic growth in these countries (Próchniak 2011), two limitations remain. First, regional inequalities within these countries might increase due to the clustering of FDI in host countries' economic

centres, as happened in other semi-peripheral regions (for Latin America see Herzer et al. 2014). Secondly, profit outflows mean that accumulation, even when economic growth is present, is slowed down because capital that is exported from Poland, the Czech Republic and Hungary is not available there to firms for further investment, to workers for job creation and wages, and to the state for tax revenues. This has set a vicious circle in motion: the loss of profit leads to a shortage of investment capital, which is to be compensated for by courting FDI, which in turn leads to an increased drain of profit. In this sense, profit repatriation *reinforces* inherited disparities within the EU by taking away potential investment capital from the peripheries and adding it in the core. Accordingly, as Artner (2017, 167) concludes, “CEE countries serve global capital as markets, a source of labor, and value added which can be repatriated and used for the development of the core economies”.

8 Conclusions

In this paper, we have presented the first comprehensive empirical analysis of FDI-related profit repatriation to Germany. Its main features are, firstly, that German TNCs are repatriating relatively high profits both in global comparison and in relation to their OFDI. This applies, and this is the second characteristic, in particular to manufacturing (and here above all to the automotive industry), which is nourished by foreign profits to a greater extent than manufacturing in other countries. Thirdly, almost two thirds of these foreign profits flowing into manufacturing stem either from China or from the EU's eastern and southern periphery. Fourth, in manufacturing and, again, particularly in the automotive industry, the share of profits repatriated from abroad in total profits and in investments is so high (and rising) that a veritable dependency on production abroad can be observed. A final striking feature of profit repatriation to Germany is the great importance of tax havens and other tax-friendly jurisdictions as a source of profit flows to Germany, although, as we have shown, this is primarily due to corporate tax avoidance strategies (use of holding firms, rerouting).

Although a comparison of these patterns with those at global level (Parnreiter et al. 2024) is only possible to a limited extent due methodological issues resulting from to the different scales of analysis (see footnote⁶), the special role of German manufacturing TNCs stands out. For at least a decade, they appear to have been pursuing a strategy of compensating with profits earned abroad for their declining competitiveness, which can be deduced from global data such as Germany's declining share in global gross domestic

product or global exports, from country-specific data such as Germany's shrinking export surpluses since 2015 (both in relation to gross domestic product and in absolute terms), and from industry-specific data such as the loss of German car manufacturers' share in the global market (OICA 2024; World Bank 2024b). In other words, Germany's prosperity, i.e. the high profits and high wages by global standards, are increasingly being paid for out of the pockets of workers in China and the Eastern and Southern European countries where a lack of or limited workers' rights allow lower wages (with comparable productivity) and thus higher profits.

Our findings that the accumulation of capital in Germany, the distribution of profits to shareholders and the comparably high wages of workers in German manufacturing are increasingly fed by the exploitation of workers (and nature) in European or global peripheries support the long-standing, but so far only anecdotally empirically proven notion that FDI, when realized between countries with significant socio-economic disparities, establishes asymmetric rather than complementary relationships due to the repatriation of profits associated with it. This gives rise to research desiderata with regard to both the profit-losing and the profit-appropriating countries. With regard to the former, empirical – and in this case qualitative – studies are needed that examine the effect of profit outflows on domestic investment and growth, in each case for specific sectors and regions. On the other hand, the example of China in particular shows that profit repatriation and the associated negative economic effects do not necessarily have to be a consequence of FDI. A more detailed political-economic analysis of FDI in terms of how countries regulate foreign investment and what room for maneuver they have or can create would be appropriate. With regard to the profit-appropriating countries, three tasks seem urgent to us: Firstly, there is a need for a precise mapping of profit reflows, i.e. revealing their actual origins, (re)routes and recipients. This is also linked to a science policy aspect: data transparency is a central demand in order to be able to counter the TNCs' concealment tactics. Secondly, we need knowledge about the use of repatriated profits. Are they distributed or reinvested, and if so, where? Answers to these questions are central to a more accurate assessment of whether, how much, and, in particular, in which geographies profit repatriation promotes uneven development. This leads to the third research task with regard to profit-appropriating countries, one that could contribute to debates in the OFDI literature: through a more precise regionalization of both the profit returns to the home countries of the TNCs and knowledge about the use of these profits, the debate on the dynamics of the

development of socio-spatial disparities in FDI-sending countries could be stimulated.

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