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Jann Lay, Tevin Tafese

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Jann Lay (GIGA German Institute of Global and Area Studies and University of Goettingen)

Tevin Tafese (GIGA German Institute of Global and Area Studies and University of Goettingen)

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Introduction

The promotion of private investment, in particular in the form of Foreign Direct Investment (FDI), has been a key component of economic development strategies since the early 1990s. Recent development policy initiatives, for example the G20 Compact with Africa (CwA) but also Germany's "Marshall Plan with Africa", put re-renewed emphasis on mobilizing foreign private capital for accelerated economic growth and, most importantly, the creation of productive employment at scale.

This emphasis rests on two important assumptions: First, it assumes that FDI is conducive to economic development through technology transfer, increased productivity and additional jobs – at least when it comes as greenfield investment. Second, it assumes that government policies can be successful in attracting FDI to achieve those benefits. Both developed and developing countries have "red-carpet policies" in place, which – in developing countries – are often supported by bilateral donors and multilateral institutions: governments provide special tax treatment and subsidies to foreign investors, have established special economic zones and investment promotion agencies, seek to mobilize private finance through blending[1], and improve the investment climate, for example by negotiating investment treaties.

The present study reviews the empirical evidence that puts to test these two assumptions. After presenting a conceptual framework we systematically review the vast empirical literature on the ramifications of FDI in developing host countries with a focus on employment effects. This part of the study is followed by an assessment of the empirical evidence on the impact of different investment promotion instruments on FDI inflows and subsequent development outcomes, again emphasizing employment outcomes. As the review will show, direct estimates of the cost-effectiveness of FDI promotion policies are scarce. Yet, taken together, the two parts of this study allow for insights as to whether the effects on FDI flows and the subsequent development, in particular employment, effects are quantitatively large enough to justify the costly efforts of governments to attract FDI. In a last part, we therefore discuss the policy implications of the reviewed evidence.

Conceptual framework

The United Nations Conference on Trade and Development (UNCTAD) defines FDI as "an investment involving a long term relationship and reflecting a lasting interest and control by a resident entity in one economy (foreign direct investor or parent enterprise) in an enterprise resident in an economy other than that of the foreign direct investor (FDI enterprise or affiliate enterprise or foreign affiliate, UNCTAD, 2019)." What distinguishes FDI from other forms of investment is the notion that the foreign investor exerts a significant degree of control over the management of the enterprise resident in the host economy – generally assumed if an investor owns at least 10 percent of the shareholders' voting power – or full control over the business operations in the host economy. This is typically the case for greenfield investment, where a foreign parent company creates a subsidiary in a different country, building its operations from scratch.

Different types of FDI will have distinct development impacts. Greenfield investment will, at least in the newly established firm or plant, create employment, but whether this employment is additional depends on whether the new engagement by a foreign firm replaces jobs elsewhere in the economy. It is also well understood that FDI in resource sectors may often not bring the positive development

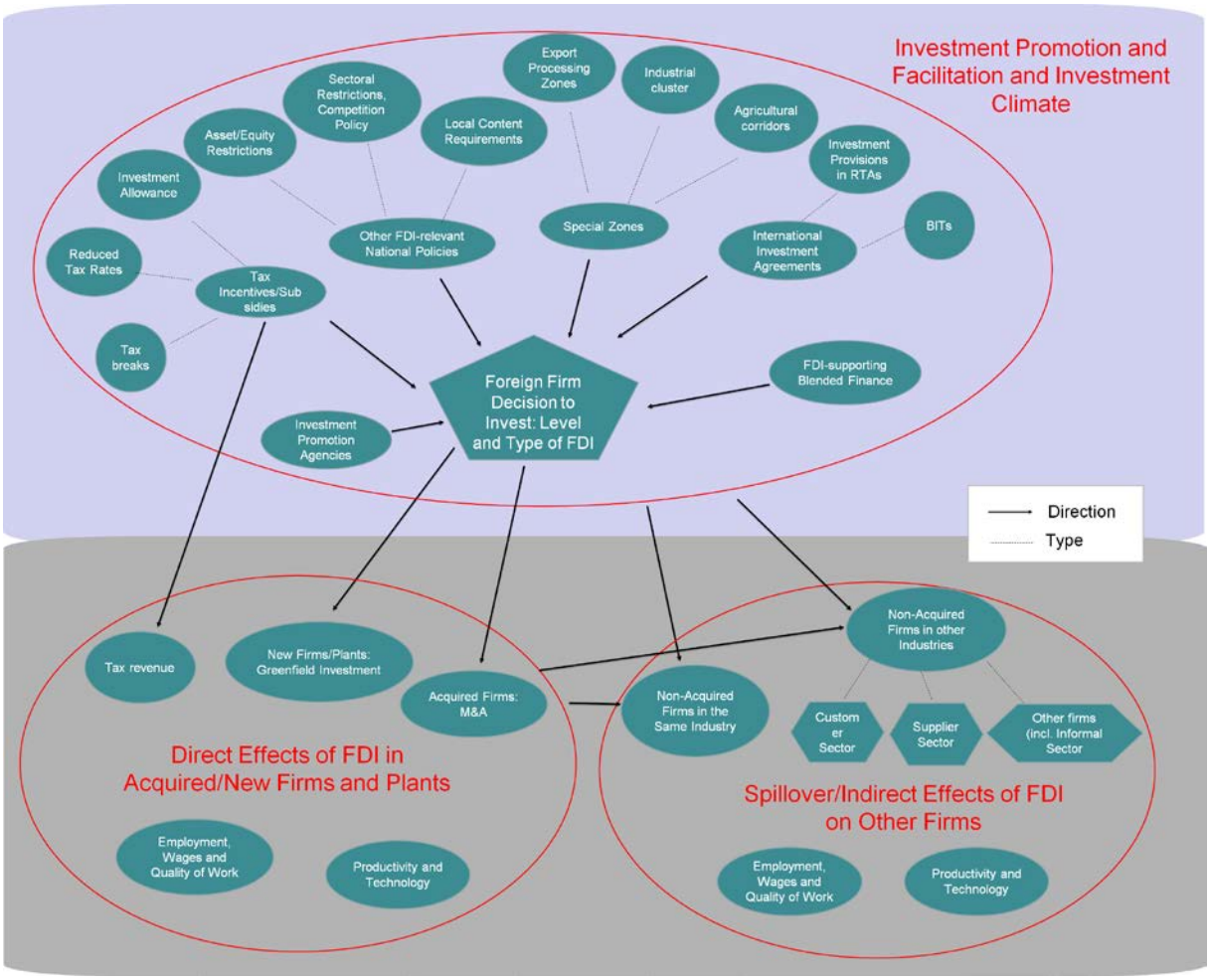
[1] While "blending" is understood by Development Finance Institutions (DFI) as blending of concessional and non-concessional DFI financing, we refer to blending as blending of DFI (or other public) and private funds.

impacts – be it in terms of employment or linkages to the rest of the economy – that are typically associated with manufacturing FDI. In particular the latter is deemed to lead to integrating (part of) the economy into global value chains (GVC) allowing developing countries to participate in global markets, exploit comparative advantages, and, eventually, upgrade within GVCs.[2]

This is why governments do not only try to influence the level, but also the type – or quality – of FDI. Figure 1 shows – in the upper part –the many different approaches of developing (and developed) countries to "rolling out the red carpet" for FDI. The decision of foreign firms to invest in a host country is determined by many factors, including the characteristics, economic policies, and macroeconomic conditions of the host economy.[3] Many national regulations and policies affect the decision of firms to invest in the host economy.[4] Gradually (sometimes less so as part of structural adjustment programs in the 1980s and 1990s) developing countries have opened their economies to FDI. Yet, there are still important regulations and policies, for example restrictions on purchasing land and residential property by foreign firms, local content requirements, and sectoral entry regulations, that restrict, limit or discriminate against foreign investment. At the same time, governments directly promote and facilitate foreign investment, for example through special economic zones, in particular export processing zones, and tax incentives. In addition, there is hardly a developing economy that has not established an investment promotion agency (IPA) to inform and attract potential investors. Many countries have tried to improve investor confidence by signing bilateral investment treaties (BITs), and regional trade agreements (RTAs) have been augmented to include provisions on FDI. Finally, and most recently, public development finance engages ever more in attempts to "leverage" private resources for economic development, increasingly so through instruments (partly) aimed at mobilizing FDI. Development agencies and multilateral organizations have long supported national "FDI-friendly" policies in host countries, but these recent efforts increasingly reach-out to potential investors from developed economies. We will discuss more details of selected policies and their development impacts later in this report.

[2] See, for a recent review of the literature on GVCs in development, Taglioni and Winkler (2016).
[3] The literature distinguishes between market-, efficiency- and resource-seeking FDI. See, for example, Blonigen (2005) for a detailed review of the, typically, cross-country evidence.
[4] Figure 1 focuses on government interventions that directly affect foreign investment. These interventions are part of the business enabling environment that includes many other policy, legal, institutional and regulatory conditions that govern business activities. See Japan International Cooperation Agency (2019).

Figure 1: Conceptual framework



Source: Authors' compilation

The development impact of FDI is shaped by various transmission channels and conditions. The lower part of Figure 1 distinguishes between the effects of FDI in acquired or newly established firms or plants (the left red circle), on the one hand, and indirect or spillover effects to other firms (the right red circle) in the host economy, on the other. In particular the direct effects of FDI are likely to differ according to the mode of entry of FDI: Greenfield investment or foreign acquisitions (Nocke and Yeaple, 2007). While cross-border acquisitions allow foreign investors to access the country-specific capabilities of the acquired firm, foreign investors bring their own capabilities to the host country in the case of greenfield FDI. As our literature review below demonstrates, the potentially different effects between acquisitions and greenfield FDI are often not properly accounted for in empirical studies. Although direct effects through greenfield FDI and foreign acquisitions are often more visible and changes in the acquired firms (or the establishment of a new plant) clearly traceable to the foreign investment, potential spillover effects of FDI to other non-acquired local firms are arguably FDI's most valuable input to development. This is because non-acquired domestic firms typically account for the bulk of production and employment. When examining spillover effects, the literature often focuses on and distinguishes between domestic firms that operate in the same sector as the multinational enterprise (MNE) and firms that operate in supplier and customer sectors. However, all other

firms may also be affected by the presence of foreign investors, including those in the informal sector.[5]

As for direct effects, foreign acquisitions are generally expected to improve the efficiency of target firms. Efficiency gains through foreign ownership may arise in acquisition targets in various ways through the restructuring of business operations. Restructuring may entail, for instance, a more efficient allocation of resources because of improved management techniques, economies of scale and scope, and the combination of the knowledge of the investor and the acquired firm. Higher productivity and higher profits in turn are often put forward as a major reason for higher employment and higher wages in foreign affiliates. Other reasons for foreign wage premia are that foreign affiliates pay higher ("efficiency") wages to prevent the loss of firm-specific assets, and to obtain superior knowledge of the business environment and the labor market in the host country by hiring specific local employees. Yet, positive labor market effects may not always materialize. Restructuring processes in acquired firms may involve upsizing and salary rises, but may also lead to downsizing and salary cuts. Moreover, workers with different skill levels may be affected differently by foreign takeovers if, for example, low-skilled workers are laid off and high-skilled workers are hired after the acquisition.

In the case of greenfield FDI, the effects on labor market outcomes seem more straightforward and are generally deemed to be positive, as investors need to hire new workers for their newly established production facilities. Furthermore, as greenfield investors are presumably less well connected in the local economy and have less knowledge about local labor markets, paying higher wages may be necessary for foreign investors to attract good workers. Especially in developing countries, both greenfield FDI and foreign acquisitions are generally assumed to bring about positive effects on employment and wages due to large technological gaps between foreign investors and domestic firms.

As for spillover effects, broadly speaking, there are two main ways in which domestic firms may be affected by an MNE: First, through knowledge/technology spillovers, which may arise (a) from contractual linkages between domestic firms and the MNE, (b) from demonstration-imitation effects if domestic firms learn superior managerial and organizational techniques or imitate technology from the MNE, and (c) from the movement of skilled labor from the MNE to domestic firms. Second, through pecuniary spillovers/externalities, which are also referred to as competition effects that occur when the action taken by the MNE affects other domestic firms through changes in market prices. While knowledge/technology spillovers are often expected to increase domestic firms' productivity and workers' wages, the effects of pecuniary spillovers are ambiguous. On the one hand, a MNE may increase the demand/competition in factor/product markets leading to increases/decreases in input/output prices and thereby causing some local firms to exit the market. On the other hand, MNEs may make available cheaper and higher quality inputs, or their presence may be associated with complementary investments, for instance in infrastructure, thereby increasing the productivity of and employment in local firms.

The direct effects of FDI on jobs

Despite a downward trend in global FDI flows in 2018, flows to developing countries continue to rise, accounting for a record 54 percent in global FDI (UNCTAD, 2019). Especially FDI flows to Asia and Africa are on the rise, increasing by 11 and 4 percent, respectively, in 2018. The above conceptual framework indicates that the role of these large FDI flows for productive employment cannot be

[5] Note that informal sector firms may also be suppliers and customers of foreign investors, but this is not common in most industries.

easily quantified, as FDI affects the host countries' economies and labor markets through various channels. These channels may have conflicting employment effects, for example the direct job creation effects of greenfield investment versus the competitive pressure on domestic firms, which may lead the latter to fire workers.

Aggregate employment effects: Stylized facts

A first approximation of the direct job creation through FDI comes from the number of jobs that are created in SEZs. For many developing countries, especially from Asia, SEZs are an important destination for FDI, accommodating much of total FDI inflows.[6] Although not all the investments in SEZs are FDI, as we will show in detail later, the share of foreign-controlled investment projects is typically well above 50%. According to UNCTAD (2019), the number of people that are directly employed in SEZs and free-zone programs amounts to 90-100 million worldwide.

At first glance, this figure appears at odds with a large body of (multi-) country studies that document, at best, only modest employment effects of FDI in transition and developing countries. Studies, for instance, on China, India, and Pakistan (Rizvi and Nishat, 2009), Malaysia (Pinn et al., 2011), Vietnam (Jenkins, 2006), Turkey (Hisarciklilar et al., 2014), Mexico (Nunnenkamp and Bremont, 2007; Sharma and Cardenas, 2018), Nigeria (Inekwe, 2013), and Eastern Europe (Jude and Silaghi, 2016; Onaran, 2008) all find no or only small effects of FDI on employment. There are several reasons that may explain the lack of evidence on the employment effects of FDI in these studies. First, the econometric analyses in these studies are conducted either on the national (macro-) or the industry-level, making it difficult to estimate a causal effect of FDI by constructing a credible counterfactual, i.e. how would employment have behaved without FDI inflows. Second, as hypothesised in the conceptual framework, FDI is likely to affect different firms in different ways. On the aggregate, these distinct effects may (partially) cancel each other out and the studies the above studies only capture net employment effects. Firm-level evidence, which dominates the empirical FDI literature today – as will become apparent in the below review – can shed light on the importance of the different transmission channels, for example on foreign affiliates vis-à-vis domestic firms. Third, and perhaps most importantly, as a balance-of-payments concept, country- and industry-level data on FDI do not distinguish between the different modes of entry of foreign firms. As a result, when estimating the effect of FDI on employment, studies that use FDI data typically cannot distinguish the potentially very different employment and wage effects of cross-border M&As and greenfield FDI.[7]

Yet, for a few years, UNCTAD has been reporting cross-border M&As and greenfield investments separately in its World Investment Reports, using cross-border M&A data from Thomson Reuters and greenfield data from the Financial Times' fDi Markets. The fdi Markets data, in particular, lend itself to analysing the employment effects of FDI as they additionally report job creation in cross-border greenfield projects. However, these data on job creation need to be treated with caution, as companies are under no obligation to report figures truthfully, and may, in some circumstances, have incentives to report higher values.[8] Moreover, as the data do not contain information on the equity participation by investors, they may include investments that are, strictly speaking, not qualified as FDI.[9]

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[6] In China and Vietnam, for instance, about 80 and 60-70 percent, respectively, of all FDI is located in SEZs (UNCTAD, 2019).

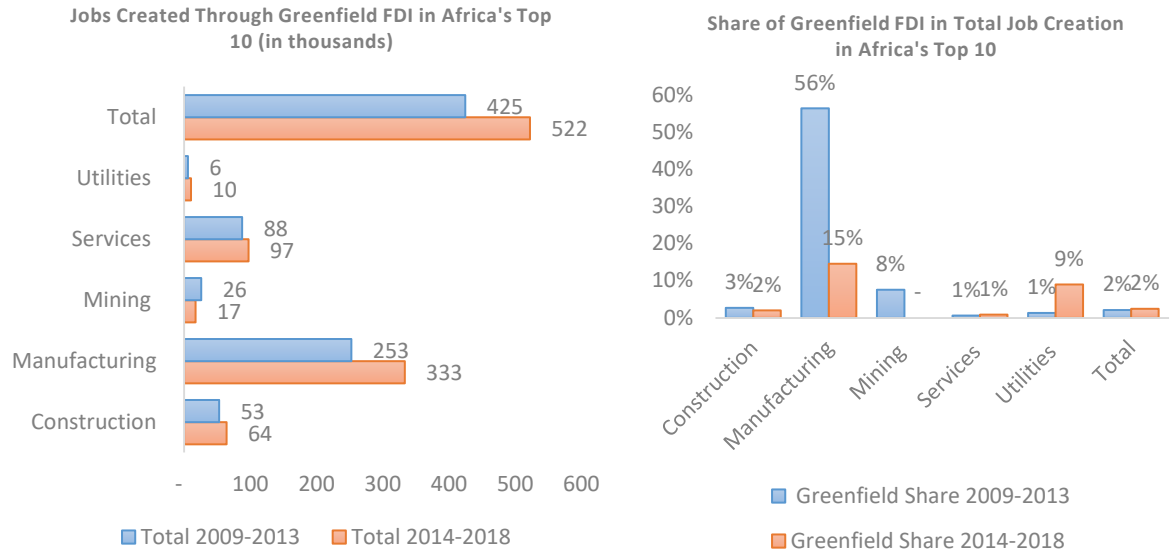
[7] Further, labor force surveys, which would allow for a more details assessment of direct and indirect labor market impacts of FDI, typically do not distinguish whether the employer is a foreign or domestic firm.

[8] Additional concerns which need to be kept in mind are that, at times, firms report planned employment instead of actual employment and that the number of created jobs is estimated if this information is not released by the company.

[9] The fDi Markets data relies on (voluntary) corporate information and media reports. It may therefore be biased towards bigger projects and those in industries that attract more attention. Where reports on job creation and the investment

Despite these limitations, we think that it is worthwhile undertaking to use the data to obtain rough estimates of the magnitude of job creation in greenfield projects, focusing on Africa (Figure 2) and Asia (Figure 3). We include the top 10 greenfield FDI destinations on the two continents in terms of job creation, in Asia including only low- and middle-income countries and excluding China and India.[10] Figures 2 and 3 each present two panels that depict the total number of jobs created through greenfield projects and the share that these greenfield jobs made up in total job creation, respectively, over the periods 2009-2013 and 2014-2018 – also disaggregated at the sectoral level.[11]

Figure 2 Greenfield FDI in Africa



Source: Authors' compilation using data from the Financial Times' fDi Markets and the ILO.

As can be seen from the left panels of Figures 2 and 3, in both periods, greenfield investments created roughly thrice as many jobs in the top 10 Asian countries compared to the top 10 African countries. This is exemplified by the vast differences in job creation -over the period 2009-2018- between the African top three destinations, Egypt (167.000), Morocco (157.000), and South Africa (149.000), and the Asian top three destinations, Vietnam (909.000), Indonesia (449.000), and Thailand (371.000).[12] These overall differences were primarily driven by the higher investments in manufacturing and construction in Asian countries. Interestingly, job creation in the services sector is relatively more important in Africa. In Africa, job creation in the mining sector is minor, but still more important than in Asia in absolute terms. This is despite the fact that mining still accounts for an important share of FDI inflows In Africa: In 2018 17 billion USD compared to 33 billion USD in manufacturing for all of Africa (UNCTAD, 2019). As shown in the right panels of Figures 2 and 3, greenfield

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amount are not available, an estimate of a proprietary econometric model is reported. For more details, see the methodological note on UNCTADS WIR 2017: https://unctad.org/en/PublicationChapters/wir2017chMethodNote_en.pdf

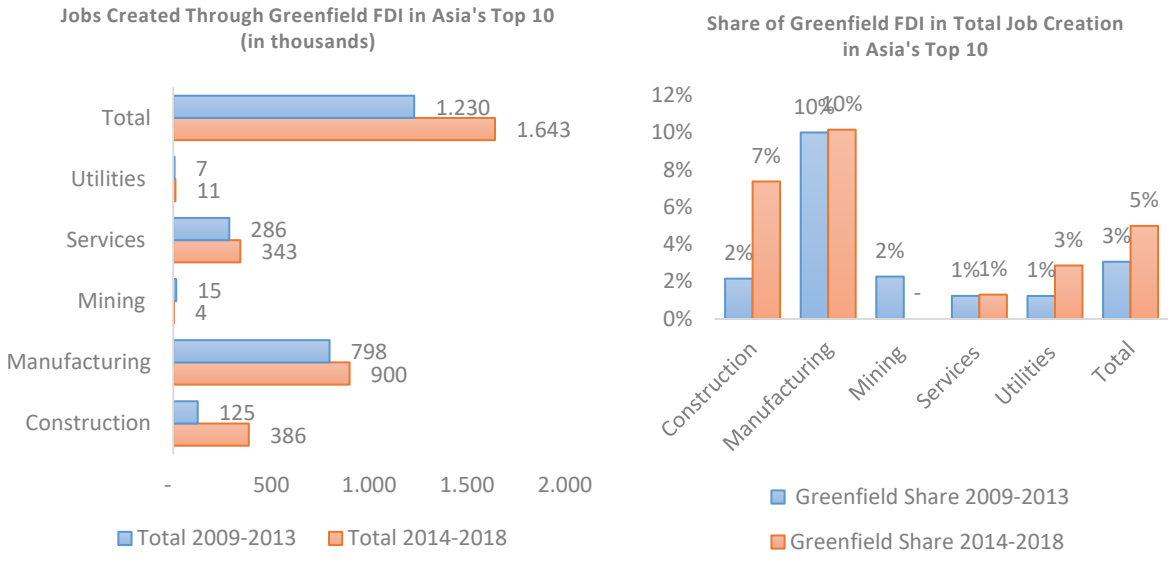
[10] Africa's top 10 destinations are Egypt, Morocco, South Africa, Ethiopia, Nigeria, Tunisia, Ghana, Mozambique, Algeria, and Kenya. Asia's top 10 destinations are Vietnam, Indonesia, Philippines, Thailand, Malaysia, Myanmar, Cambodia, Sri Lanka, Pakistan, and Bangladesh. China and India are excluded because otherwise the figure would largely represent greenfield investments in these countries due to their size.

[11] Data on total employment (by sector), comes from the ILO. Total job creation (by sector) is estimated as the change in total employment (by sector) from one year to the next and comprises both formal and informal sector jobs. As fDi markets does not adopt the ISIC, we had to match its "business activity" classification system with the ISIC that is reported in the ILO data on sectoral employment. Resulting discrepancies are presumably minor due to the high level of aggregation.

[12] Job creation in China (2.353.000) and India (2.023.000) alone was more than in our Asian top 10.

investments in manufacturing are critical to expand the manufacturing base in Africa, as they accounted for 56% and 15% of total job creation in the periods 2009-2013 and 2014-2018, respectively, compared to about 10% in both periods in the Asian countries.[13] Outside manufacturing, FDI's direct contribution to job creation seems minor, in particular in services (1% for both continents). Greenfield job creation is economically significant in mining (8%) in Africa and in the Asian construction sector (2% and 7%).[14]

Figure 3 Greenfield FDI in Asia



Source: Authors' compilation using data from the Financial Times' fDi Markets and the ILO.

The above figures suggest that greenfield investment by foreign firms can generate an economically significant number of jobs, in particular in manufacturing, with overall direct employment effects being moderate at best. Especially in developing countries there are marked differences between foreign-owned and domestic-owned firms (Blanas et al., 2017). It is well established that foreign-owned firms, on average, pay higher wages, provide more productive and stable jobs, and are more likely to provide additional benefits, such as health insurance, relative to domestic-owned firms. These differences are, however, not sufficient to conclude that foreign investors have a positive effect on the welfare of the workforce of the host economy as foreign investors may "cherry-pick" locations (for greenfield investment) or larger, more productive firms (for acquisitions) with better-educated and better-paid employees in the first place. The empirical literature on the direct effect of foreign ownership on wages and employment has therefore focused on rigorously isolating the "FDI effect", in particular on wages in acquired firms. While greenfield investment – when ignoring spillovers to domestic firms that we review in the next section – will lead to additional employment at the firm-level, this is a-priori unclear for foreign acquisitions that may be associated with job losses caused by restructuring processes (see conceptual framework). As we show now, the literature has,

[13] The high 56% can largely be explained by the decrease of about 436.000 in the total number of jobs in manufacturing from 2010 to 2011. Omitting this year from the calculations reduces the share of Greenfield FDI in total job creation to about 20%.

[14] For both Africa and Asia, the share of greenfield jobs in mining is not estimated over the period 2014-2018 because the total change in employment in mining was negative over this time period.

beyond wage and employment effects, also improved our understanding of the transmission channels that eventually explain wage and employment changes caused by foreign ownership.

Firm-level evidence on direct wage and employment effects

The key challenge in estimating the causal effect of foreign-ownership is to establish a credible counterfactual of a "world", in which the foreign-acquired firm is still domestically-owned, i.e. a counterfactual that provides an answer to the question how the employment related outcomes would have changed had the firm not been acquired by a foreign parent company. Because this counterfactual reality cannot be observed, researchers adopt different so-called "identification strategies" for the effects of FDI. A simple, but not entirely convincing strategy would compare foreign-owned and domestic firms while controlling for observable differences by using a linear regression model. A more convincing approach that requires more data would compare the performance trajectories of firms that resembled each other before one of the firms was acquired by an investor. This and more rigorous approaches have been applied in the literature based on firm- and worker-level data. As we will demonstrate a carefully chosen "identification strategy" matters for the conclusions to be drawn.

An early study on wage differentials between foreign-owned and domestic firms from a developing country context is Lipsey and Sjöholm (2004). They use data on Indonesian manufacturing firms from 1996 to compare wages in these two types of firms, without distinguishing between greenfield FDI and foreign takeovers. A simple mean comparison shows that foreign-owned firms pay 67 percent and 90 percent higher wages for blue-collar and white-collar workers, respectively, than domestically-owned firms. Once the authors control for the average education level of workers in the firm, and thereby only compare firms with workers of similar educational attainment, the wage premium decreases, but remains high at about 25% for blue-collar workers and more than 50% for white-collar workers. In repeating the analysis with panel data over the period 1975-1999, Sjöholm and Lipsey (2006) additionally control for time-invariant firm-specific effects. Although the wage premia for blue- and white-collar workers decrease, they remain high at about 17% and 28% for blue and white-collar workers, respectively.

Using data on individual wages in the manufacturing industry for five African countries in the early 1990s, Velde and Morrisey (2003) find that foreign ownership is associated with a 20-40% increase in individual wages (conditional on age, tenure and education) on average. Once the authors control for firm sizes, industry, and regions, the wage differential is roughly halved to 8-23%. Further, the study finds foreign wage differentials to be somewhat more pronounced (in selected countries) for more skilled workers. More evidence from Sub-Saharan Africa comes from the UNIDO Africa Investor Survey 2010, a survey that covers close to 6500 firms in 19 Sub-Saharan African countries. Although the cross-sectional data limit the causal content of their results, Blanas et al. (2017) report a number of interesting results on employment in foreign-owned firms in Africa. First, their estimates of foreign wage premia – controlling for a number of firm characteristics – are similar to previous estimates – about 30 percent in foreign-owned firms. The study also looks beyond wages and finds that foreign firms – again controlling for observed firm characteristics – tend to (1) invest more in employee training, in particular at the managerial level and (2) offer higher job stability and security, as they employ a higher share of full-time permanent workers than domestic firms.

In a more sophisticated study, again on Indonesian manufacturing firms but covering the period 1983-2001, Arnold and Javorcik (2005) similarly find wages to be 10 percent higher in foreign-owned firms three years after the acquisition. Further, these firms significantly expand employment by 24 percent in these three years. This study compares the performance of acquired plants with the performance of plants remaining in domestic hands and takes into account the initial difference between firms by using a difference-in-differences (DID) method in combination with a propensity

score matching technique.[15] The authors show that the change in ownership leads to a restructuring that results in considerable productivity improvements in the acquired firms. Productivity increases by 13.5% in the acquired firms after three years and investments are roughly two to three times higher in acquired firms. The disadvantage of the employed DID method is that greenfield investments are excluded from the analysis.[16] In a previous version of the study, the authors compare foreign-owned entrants – greenfield FDI – , domestic entrants and mature domestic producers, documenting higher productivity and capital- and skill-intensity, and higher employment for foreign entrants (Arnold and Javorcik, 2005).

Higher wages and the expansion of employment are likely to be driven by increased investment and productivity in acquired firms. There is, however, only little evidence on the mechanism behind these productivity increases. An exception is Stiebale and Vencappa (2018) who use data on Indian firms from a wide cross-section of industries in manufacturing, services, utilities and financial sectors, and apply the same methods as previous studies, thereby excluding greenfield FDI from the analysis. They document that acquisition targets generally sell higher quantities of output post-acquisition and achieve significant reductions in marginal costs, which are, however, fully offset by higher markups (the difference between price and marginal costs). They offer some indication that increases in markups and prices are mainly driven by improvements in product quality (as opposed to increases in market power). Finally, they find this mechanism to be stronger when the foreign investor is located in a technologically advanced country. This implies that FDI, at least in the Indian case, is associated with quality improvements.

Another mechanism behind higher investment and employment expansion may be improved financial conditions in firms acquired by foreigners. Using data on Chinese state-owned and private manufacturing firms over the period 2001-2005, Wang and Wang (2015) find that foreign ownership significantly improves target firms' leverage and liquidity ratios and thus eases credit constraints, resulting in significant and considerable output, employment and wage effects. However, they find no effect of a foreign acquisition on productivity. The latter finding, which contradicts previous findings, is likely to be related to the fact that their data allow Wang and Wang (2015) to distinguish between the effect of an acquisition and the effect of foreign ownership. In contrast to previous studies they thus compare domestically acquired firms with foreign-acquired firms. On the basis of this comparison, the authors find increases in output and employment in foreign acquisitions that are 10 percentage points higher than under domestic acquisition. For real wages they are almost 30 percentage points higher. The increases in employment after foreign acquisition in private Chinese manufacturing firms are corroborated in another study by Karlsson et al. (2009), who moreover find that foreign firms are considerably less likely to exit the market than domestic firms.

While the above firm-level studies strongly suggest that a change from domestic to foreign ownership increases wages in acquired firms, the results from firm-level studies may be somewhat misleading if higher wages are paid because acquired firms change the skill-composition of their workforce subsequent to the acquisition. If, for instance, foreign affiliates replace their unskilled workers with skilled workers after the takeover, estimated foreign wage premia would be biased upwards. By focusing on the wage effects for individual workers who stay in the same firm, it is possible to control

[15] While the propensity score matching approach assures that only pairs of acquired and domestic firms with similar observable pre-acquisition characteristics are compared with each other, the DID assures that it is the *changes* in the outcomes that are compared with each other, guaranteeing that the influence of all observable and unobservable non-random elements of the acquisition decision that are constant or strongly persistent over time are eliminated.

[16] The DID assures that only firms are included in the treatment group that had previously been owned domestically and then changed to foreign ownership.

for changes in the composition of the workforce. Such an analysis, however, demands linked employer-employee data, which is hard to come by, especially in developing countries. Therefore, so far, most of the studies that use matched employer-employee data focus on developed countries and find relatively low wage premia of foreign ownership – once they control for individual worker characteristics.[17]

A more recent study by Hijzen et al. (2013) includes European cases as well as two emerging economies, Brazil and Indonesia, and finds much larger foreign wage premia in these cases. Their comparative insights are worthwhile being shown in detail here since they summarize well the key insights from much of the literature on wage effects. The "raw" difference in pay between foreign-owned firms and local firms amount to 29% in Germany, 79% in Portugal, 116% in Indonesia, and a whopping 280% in Brazil. Controlling for observable firm characteristics (log employment, industry, and region – as in the above cross-sectional studies) reduces the average wage differences to 11% in Germany, 40% in Indonesia, 42% in Portugal and 150% in Brazil. When Hijzen et al. (2013) now introduce a firm-level fixed effect and consider the pure effect of a change in ownership from local to foreign, the wage premia fall to 2% in Germany, 8% in Portugal, 16% in Brazil, and 21% in Indonesia. Controlling for composition effects, however, even reduces further the foreign wage-premia to 1% in Germany and 6% in Brazil.[18] Yet another perspective includes the wage levels in greenfield investment projects that tend to be omitted in most of the above studies since they isolate the impact of a change in ownership. Using worker-level data, and after controlling for a number of observable characteristics, they find a wage gap that ranges from 4% in Germany to 29% in Brazil. These gaps can be thought of as an upper bound of the long-term wage premium effects taking into account both acquisitions and greenfield investment – due to worker and firm selection.

In addition, the availability of worker data enables Hijzen et al. (2013) to analyze employment transitions. It turns out that the changes in the composition of the workforce that tend to be associated with foreign takeovers are largely driven by new hires and separations are relatively unimportant. Examining the effect of foreign ownership for individuals who join and who leave foreign-owned firms, they moreover find significant wage gains for workers who move from domestic to foreign firms (16% in Brazil), but zero or even negative effects for workers who move from foreign to domestic firms. The wage gains are likely to reflect mostly voluntary worker movements, whereas wage losses result from workers being laid off. These findings are consistent with a view that foreign firms indeed offer better career prospects than local firms.

In sum, there is compelling evidence that foreign firms indeed pay higher wages and provide more productive jobs. Foreign acquisitions in developing economies are not associated with job losses, but instead can lead to sizeable job creation in the acquired firm driven by higher productivity and investment. There is some evidence that the jobs in foreign-owned firms are more stable and provide better career perspectives. Similar evidence on wages and job quality comes from studies on SEZs that we review in detail below. One important caveat to these general conclusions is that the rigorous evidence comes from only a few developing countries that provide the necessary data from firms and workers.

[17] See Heyman et al. (2007) and Almeida (2007) for several European economies.
[18] Unfortunately, Indonesia is excluded from this part of the analysis because of the unavailability of worker-level panel data.

The indirect effects of FDI on jobs

As outlined in our conceptual framework, there are important indirect effects of FDI. MNEs and their subsidiaries do not operate in a vacuum and interact and form linkages with non-acquired domestic firms. Especially backward linkages between a foreign MNE and its domestic suppliers are often expected to imply positive spillovers through contractual linkages, demonstration-imitation effects, or the upskilling of the labor force. Linkages between foreign and domestic firms may have important multiplier effects on employment and wages in the host economies that will depend on the linkages' extent and nature. In contrast, negative employment spillovers from foreign firms may come from increased competition and higher wage costs, which may force domestic firms to reduce employment or even to close down. As the below review of empirical findings on these opposing forces suggests, there is evidence for both positive and negative indirect effects of FDI.

Linkages between foreign and domestic firms

Two studies by Amendolagine et al. (2013; 2019), which use the same data from the above mentioned UNIDO Africa Investor Survey 2010, provide interesting evidence on both the extent to which manufacturing MNEs in Sub-Saharan Africa (SSA) establish backward linkages with domestic suppliers and the main determinants of these linkages.[19] Greenfield FDI firms, on average, source 16 percent of their inputs locally, but the data show notable heterogeneity in the shares of local sourcing across countries and industries (Amendolagine et al., 2019). In Kenya (43 percent), Zambia (25 percent), Tanzania and Ethiopia (23 percent) foreign firms seem to source a significant amount of their inputs locally, whereas in Rwanda (4 percent), Mali and Lesotho (7 percent) foreign firms establish fewer linkages with the local economy. This compares to around 35% (Jordaan, 2011) and 18% (Amendolagine et al., 2019) for foreign affiliates in Mexico and Vietnam, respectively. These estimates show that foreign affiliates establish moderate to strong vertical linkages with local firms, though there is much heterogeneity across countries. As far as industries are concerned, average local sourcing of foreign firms is larger in industries where intermediates are readily available, as in food processing and the wood and paper industry. Yet, country heterogeneity remains important within the same industry. For instance, the average foreign firm in Kenya in "Wood & Paper" buys 60 percent of its inputs in the local market, whereas the average firm of the same industry in neighboring Ethiopia only sources 12 percent of its inputs locally. In contrast, the average foreign firm in Ethiopia in "Food & Beverages" has a local content share of 62 percent compared to 15 percent for the average foreign firm in Senegal.[20]

Examining the main determinants of backward linkages between foreign and domestic firms, Amendolagine et al. (2013) find that greenfield and brownfield investments do not differ with respect to their use of local inputs.[21] Joint ventures, however, have a higher share of local inputs of about 10-15 percentage points, which is considerable considering that the sample mean is at roughly 16%.[22] Moreover, foreign investors who report that their investment is aimed at serving domestic/local markets and who have a high degree of autonomy use a higher share of local inputs. Espe-

[19] In all 19 Sub-Saharan African countries of their sample, greenfield investments constitute by far the most common mode of foreign entry in SSA, ranging from 68.4 percent of all FDI in Cape Verde to 92.5 percent in Kenya (Amendolagine et al., 2013).

[20] Unfortunately, Amendolagine et al. (2019) only report information on the local content share in foreign affiliates in manufacturing, but not in other sectors.

[21] Brownfield investment refers to the purchase of existing production facilities. Again, the findings need to be taken with a grain of salt due to the cross-sectional nature of the UNIDO Africa Investor Survey 2010.

[22] The causality may, however, also go in the other direction if local firms that rely heavily on local supplies are more likely to enter a country via a joint venture.

cially, when the investor is not part of a group of firms or a subsidiary of an MNE linkages with local firms are formed, increasing the local content share by about 13-15 percentage points. As far as investor origin is concerned, firms from China and the MENA region use much less local content – compared to European firms. On the macro-level, an efficient legal system, a good environment for private business (Amendolagine et al., 2013), and a host country's participation and positioning in the global value chains (GVCs) (Amendolagine et al., 2019) have important implications for the integration of foreign firms into the local economy.[23] It is critical to note, however, that even if linkages between foreign and domestic firms are established, spillovers do not materialize automatically. Farole and Winkler (2014) examine some of the factors that may increase the chances that linkages are translated into spillovers. Using survey data on direct supplier-multinational linkages in Chile, Ghana, Kenya, Lesotho, Mozambique, Swaziland, and Vietnam they show that supplier assistance by foreign firms increases spillovers.[24]

All these studies demonstrate the potential of important linkages between foreign and domestic firms. However, the evidence comes from manufacturing industries and also shows quite some variation between countries and even within industries. These linkages in manufacturing explain why a vast number of empirical studies clearly show that foreign firms increase the productivity of their domestic suppliers.[25] Unfortunately, however, evidence on wage and employment effects of vertical customer-supplier linkages in domestic firms is scarce. Yet, the finding on increased productivity together with the evidence on the generally positive direct effects of foreign ownership point at positive subsequent employment and wage effects in firms with linkages.

Competition effects

While there has been a consensus of positive backward spillovers to productivity in suppliers of foreign firms, the evidence has been a lot more mixed for spillovers to customers and competitors. This is not surprising because of the potential negative effect on domestic firms resulting from intensified competition on product markets and potentially higher costs when MNE presence increases wages. Here, the empirical literature has looked into both the productivity and employment spillover effects to domestic firms. Often, these studies do not distinguish between firms with or without backward (or forward) linkages.

Using a cross-section of more than 25,000 domestic manufacturing firms in 78 low and middle-income countries from the World Bank's Enterprise Surveys, Farole and Winkler (2012) indeed find evidence for negative effects of FDI on the productivity of competing domestic firms. The effects are however very heterogeneous and vary with other mediating factors that can be categorized broadly into foreign and domestic firm characteristics and host country factors. Positive intra-industry spillovers are associated with a low technology gap between domestic and foreign firms, domestic firm size, export behavior and proximity to other firms, a country's spending on education, openness to trade and in financial markets, and partial foreign ownership of FDI as well as investors' domestic

[23] More details on GVC participation and the implications for local sourcing can be found in Amendolagine et al. (2019).

[24] Forms of assistance that are found to increase the likelihood of spillovers include advance payment, provision of financing for improvements, support for sourcing raw materials, training of workers, product or process technologies, licensing of patented technology, help with the organization of production lines, help with quality assurance, help with finding export opportunities, and help with implementing health, safety, environmental, and/or social conditions.

[25] Reviewing the spillover literature would go beyond the scope of this paper. We refer to Goerg and Greenway (2004), Gorodnichenko et al. (2014), Havranek and Irsova (2011), Iršová and Havránek (2013a), Rojec and Knell (2018) for reviews and meta-analyses of this vast literature.

market orientation. The latter two findings are in line with the reported findings on linkages, stressing again that different modes of entry of FDI have different implications for spillovers. Moreover, Farole and Winkler (2012) document mediating factors to matter less for high-productivity firms as negative spillover effects tend to be smaller and insignificant for them anyway, implying that the least productive firms may be hit the hardest by foreign presence, and in the extreme case, might exit the market, probably causing negative employment effects.

Alfaro and Chen (2018) document such domestic firm exit after foreign firm entry in a cross-country dataset on manufacturing firms over the period 2002-2007. Specifically, on the basis of data on 36.000 foreign-owned subsidiaries from 32 developed and developing countries, the authors find that the presence of MNEs leads to tougher competition in host-countries' product and factor markets, resulting in a reallocation of resources from less productive to more productive firms, forcing the least efficient domestic firms to exit the market. Although the reallocation and between-firm selection cause substantial aggregate-productivity gains, the increased labor demand by foreign firms in turn causes an increase in the domestic wage rate and a decrease in employment. The decrease in employment is especially strong for the least productive firms and positive, though statistically insignificant, for the most productive firms. While, in the overall sample of domestic firms, a 100-percentage point increase in the probability of foreign firm entry is associated with 2.3 percent decrease in the domestic firms' employment share, for the least productive firms, the decrease is twice as big. As for the wage rate, across all domestic firms, a 100-percentage point increase in the probability of foreign firm entry causes a 2.9 percent increase in the average wage rate. These findings show again that FDI may affect different firms and different outcomes in different ways. While, in the above study, FDI increases aggregate productivity and average real wages in host countries, employment in domestic firms decreases. The study, however, does not say anything above the net employment effect of foreign entry.

The reallocation mechanism is also found to be relevant in Sharma (2018) who examines the effects of FDI on employment and wages in Indian manufacturing firms for the years 2000-2006. While Alfaro and Chen (2018) analyze the effects of FDI on firms with different productivities, Sharma (2018) examines whether firms of different size, and skilled and unskilled workers are affected differently.[26] Adopting a (firm) fixed effects regression, she finds a negative association between the amount of FDI an industry receives and total employment in a domestic firm of that industry. A decomposition of firms' workforce into skilled and unskilled (production) workers shows that the negative effects on employment are driven by a reduction of unskilled workers. Interacting FDI with firm size, she finds that larger firms experience an increase in employment, whereas smaller firms experience a decrease in employment, indicating a reallocation of resources to larger firms after foreign firm entry. Moreover, wages of both skilled and unskilled workers increase in larger firms with the volume of FDI, however, decrease in smaller firms. The results of this study however need to be treated with caution because they do not seem economically significant and may suffer from endogeneity problems.[27] These results are in contrast to findings by Karlsson et al. (2009) for China, which show that foreign presence must not necessarily be associated with a crowding out of domestic competitors. In the Chinese case, the absence of a crowding out could potentially be explained by positive demonstration effects or job turnover effects (Cheung and Lin, 2004) that counteracted the negative competition effects.

[26] She proxies firm size by a firm's sales.

[27] Firm size, measured as sales, is likely to be correlated with some omitted third factors, such as firm productivity, which is likely to be correlated with the dependent variable, employment.

What happens to employment in domestic firms is of course related to what happens to average wages and various studies have provided evidence for important wage spillovers of FDI that affect domestic firms.[28] For the Chinese case, Hale and Long (2011) document that the presence of FDI puts an upward pressure on domestic wages, which is, however, limited to private firms and skilled workers. Specifically, an increase in FDI presence from zero to 20 percent would lead to a 60–70 percent increase in wages in private firms for skilled workers, but not in state-owned enterprises SOEs. The authors argue that wages increase for skilled workers only because these are the workers that are sought after by foreign affiliates – in line with previous evidence from Mexico (Feenstra and Hanson, 1997). It is noteworthy that, although the foreign modes of entry were different in the Chinese and Mexican experience, -cross-border M&A vs. greenfield- in both cases, foreign presence put a considerable upward pressure on wages, especially for skilled workers.

Worker mobility effects

For Brazil, Poole (2013) also finds that FDI causes an upward pressure on wages of skilled workers in domestic firms. She suggests that the wage increase comes about through another mechanism, namely the worker mobility channel. Using a linked employer-employee database from Brazil, which includes both the manufacturing and the service sector, she traces individual workers, who switch between foreign-owned and domestic-owned establishments, over time and across establishments, to examine wage spillovers of these workers to workers with no multinational experience. She finds that domestic workers in establishments with a higher proportion of workers with some experience at a multinational establishment earn higher wages than identical workers in establishments with a lower share of former multinational workers. Specifically, a 10 percentage point increase in the share of former multinational workers in the establishment increases wages by $23, implying a wage effect from enhanced foreign presence of roughly $1400 for the average domestic establishment in Brazil. Poole (2013) argues that these wage spillovers in firms with a greater share of former multinational workers result from the greater number of possible workplace interactions and the potential transfer of knowledge. Importantly, however, no multinational wage spillovers arise in heavily unionized industries, where wage and employment policies are less flexible to reward increases in productivity, and they are found only in high-skill-intensive industries. Furthermore, as for productivity spillovers, wage spillovers are more likely to occur if skill levels of former multinational workers and incumbent domestic workers are similar.

This worker mobility channel is also found to be critical in Gorg and Strobl (2005). In this study, the authors focus on the owners of domestic firms instead of the workers. They use data on whether or not the owners of domestic Ghanaian manufacturing firms have previous experience in a multinational and relate this information to firm-level productivity. They find that domestic firms that are run by entrepreneurs who had previously gained experience working in an MNE, are more productive than other firms. There are however two caveats to their findings. First, the effect diminishes for more educated entrepreneurs. Second, there is no effect if the entrepreneur gained his/her experience in multinationals in a different industry. The findings suggest that entrepreneurs accumulate valuable knowledge while working in MNEs, which can however only be applied usefully in the new domestic firm if it operates in the same industry as the MNE.

[28] An early study on the impact of FDI on wages is Feenstra and Hanson (1997) who show that the rise of maquiladoras in Mexico caused a very significant shift in employment from unskilled to skilled labor and an increase in relative wages of skilled labor.

Whether spillovers are likely to be generated through the labor turnover channel depends much on the nature of the industry and its regulations. For labor market spillovers to occur, local employees must be working in relatively skilled positions so that they obtain access to knowledge, technological know-how, and managerial competences. Three case studies by Farole and Winkler (2014) on mining, agribusinesses and apparel make evident the factors that determine whether spillovers are generated in labor markets. The case study on the mining industries in Ghana and Mozambique, for instance, indicates that there is relatively limited scope for spillovers through the labor turnover channel. Relatively few – at around 50% in Ghana and 40% in Mozambique, compared to roughly 80% in Chile – local workers are employed in higher positions.[29] Moreover, because of the mining industry's attractiveness, workers tend to stay at their companies rather than moving, and workers who want to establish their own businesses face challenges due to difficult operating environments and limited access to capital. In agribusinesses, by contrast, prospects for positive spillovers appear to be better. The localization of the work force in higher positions is much higher and ranges from around 60 percent in Mozambique, to around 70 percent in Ghana, to above 80 percent in Kenya. Moreover, a significant share of staff in foreign firms is reemployed at domestic firms, and the majority of firms report to provide training for employees. Finally, due to its supposedly large effects on employment generation, FDI in apparel has often been favored by governments.[30] Yet, Farole and Winkler (2014) argue that the potential for labor turnover spillovers may be limited in apparel because of the low-skill nature of work and few interactions between foreign and local firms, although there is significant variation across the three cases Lesotho, Swaziland and Kenya. While in Swaziland most of the higher positions are filled by expatriates, in Kenya the opposite holds true, and Lesotho is somewhere between the two. The cross-country variation may be related to industrial tradition; the apparel industry has a longer history in Kenya, which has produced workers with many years of experience.

In sum, there is evidence for both positive and negative spillovers from foreign to domestic firms. Clearly, the firms with backward linkages to foreign firms benefit from this relationship in terms of productivity albeit the employment and wage effects of linkages have not been explicitly studied. There is quite some indication that domestic firms can be hurt by foreign competition and the literature clearly suggests that low-productivity firms are hit hardest. Employment in domestic firms can thus decrease, but there is no study that reports the net employment effects of FDI, i.e. combining estimates of employment expansion in foreign firms with the employment reduction in domestic firms. Further, the exact transmission channels remain understudied, but there is compelling evidence that the wage effects of the presence of foreign firms matter.

Do „red carpet" policies work? Impacts and pitfalls of FDI promotion

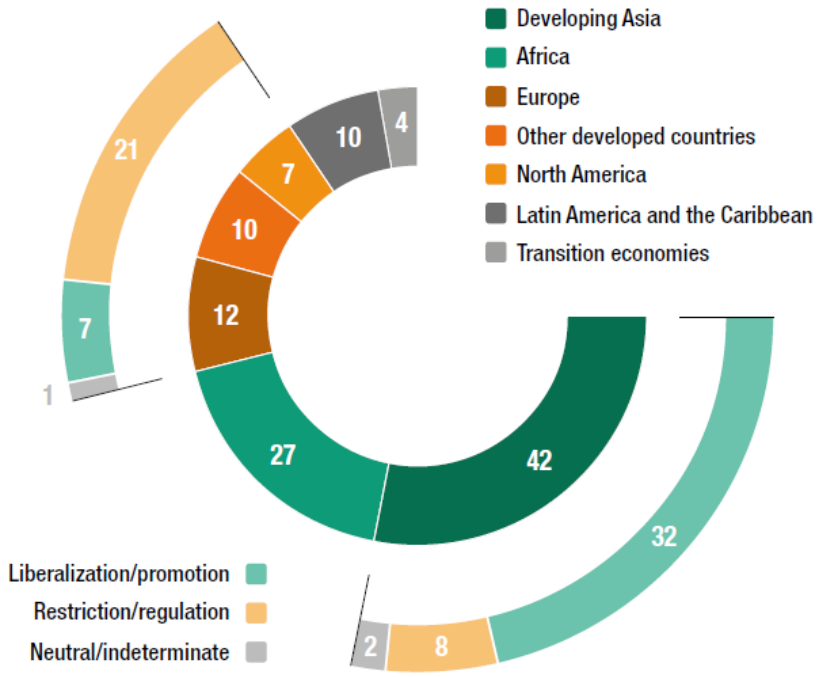
The entry of FDI is regulated by numerous policies, some of them directly aimed at promoting FDI. In this section, we examine the specific effects of some of these policies, thus providing evidence on the effectiveness of "red carpet policies" to attract FDI as well as their development outcomes, again focusing on employment and other labor market outcomes. We review the evidence on FDI-friendly national policies, in particular Special Economic Zones and corporate tax incentives, bilateral investment treaties (and trade agreements with investment provisions), investment promotion agencies, and, finally, attempts by development finance to leverage (foreign) private investment ("blended finance for investment").

[29] Higher positions are referred to as those in management, supervisors and technical positions.

[30] The apparel sector accounts for an important but limited share of the total jobs created in greenfield projects: Of the 586 000 of jobs created in manufacturing in the top 10 African countries between 2009 and 2018, 118 000 were in apparel. In the top 10 Asian countries, greenfield job creation in apparel was 348 000, out of 1.7 million manufacturing jobs.

Over the past 30 years, the world has turned into a more foreign-investor friendly place almost everywhere. UNCTAD statistics that classify FDI-relevant domestic policy measures as "liberalization/promotion" or "restriction/regulation" demonstrate this. Over the past 15 years newly taken pro-investment measures have outnumbered more restrictive ones in every single year (by around 75 to 25, by and large). In 2018, however, the number of promoting measures fell to 66, while the number of restrictions and regulations rose sharply, to 36. The recent backlash against globalization and multilateralism is thus becoming evident also in the context of cross-border investment flows. Yet, this trend – so far at least – seems to be confined to the developed world. As shown in Figure 1 below, more investment-hostile than –friendly measures have been implemented in Europe, North America, and other developed countries in 2018, while many countries in developing Asia continue to become even more open to FDI (UNCTAD, 2019). This is also the case in Africa.[31]

Figure 4: Regional distribution of national investment policy measures, 2018 (Number of measures)



Source: UNCTAD (2019), Figure III.2

Independent of the exact definition, which we will discuss in more detail below, the establishment of Special Economic Zones (SEZs) are still a key policy instrument of attracting FDI in developing economies. According to UNCTAD (2019), there are nearly 5400 zones in 147 economies today, 1400 more than five years ago. Of those 5400 more than 4700 can be found in developing economies, with China alone accounting for more than 2500. A considerable number of SEZs can be found in South-East Asia (737), South Asia (456) and Latin America (486) with only Africa lagging behind with 237 SEZs. Worldwide, more than 500 new SEZs are in the pipeline. The SEZ boom thus continues despite the uncertainties in international economic relations.[32]

Among national investment promotion measures, and often as a component of a SEZ, fiscal incentives are an important tool. Corporate tax incentives are used by both developing and developed

[31] In Africa, 14 policy measures were favorable to investment, while eight were less favourable (UNCTAD, 2019).
[32] The SEZ boom started earlier than many would assume: The beginnings of Mexico's maquiladora industry date back to the 1960s as do Export Processing Zones in Korea and Taiwan Province of China (see Farole, n.d., and, UNCTAD, 2019).

economies. Tax holidays and exemptions are common in developing regions and much less used by OECD countries. Both reduced tax rates and discretionary processes are more prevalent in – albeit not limited to – countries in East Asia and the Pacific as well as Sub-Saharan Africa (Abramovsky et al., 2018). In some countries, tax incentives tend to be extremely generous and there is evidence of a partial race to the bottom (Abbas and Klemm, 2013), albeit recent (comparative) evidence is lacking. Using data on corporate taxation in emerging and developing economies between 1996 and 2007, Abbas and Klemm (2013) report that the effective average tax rate[33] of the most generous regimes (often part of a SEZs) approached zero percent by 2007, down from about 5 percent in the late 1990s. Behind this trend, however, were two opposing developments: While European and Latin American transition and developing countries were increasing tax rates, they were falling drastically in Africa and Asia. Some more recent evidence from Sub-Saharan Africa indicates that, between 2005 and 2014, the prevalence of corporate tax incentives, including reduced corporate income tax rates, has even further increased.

There are numerous other domestic policies and regulations that affect foreign investors. Despite continued investment liberalization, many countries maintain sector-specific entry barriers, for example foreign ownership restrictions, that keep selected industries fully or partially in domestic hands. Often, foreign firms are barred from acquiring land or residential property. Then, there are various "localization measures" that include local partnership and local content requirements. In particular local content requirements seem to become more prominent since the financial crisis and in specific sectors, for example in mining and in the renewable sector (OECD, 2019; ACET, 2017). Many of these regulations have a strong sectoral component. This also holds for FDI screening policies that can be found in most developed economies and that are typically applied in sensitive sectors (UNCTAD, 2019).[34]

Domestic liberalization and investment facilitation and promotion have been accompanied by a considerable increase in bilateral investment treaties (BITs) and, since the early 2000s, investment provisions in trade agreements. BITs specify a number of guarantees for investors from the signatory countries, including the right to freely transfer funds and assets and protection against expropriation, as well as dispute settlement provisions (Berger et al., 2013). By the end of 2018 almost 2800 bilateral investment treaties were in force. Most of these treaties were signed and came into force in the late 1990s and early 2000s. Yet, also in recent years, around 30-40 BITs or Treaties with Investment Provisions (TIPs) were signed and came into force.[35] International investment agreements (IIAs) are contested, their provisions – including the dispute mechanisms – seen as outdated and as favoring foreign investors from developed economies (see, for example (GIZ, 2015), or Kollamparambil, n.d.; for recent statistics on decisions see UNCTAD, 2019). The international investment regime is likely to be re-shaped by major policy initiatives: For example, the ongoing negotiations on the Post-Cotonou agreement, and the Investment Protocol of the AfCFTA (potentially replacing over 170 intra-African BITs) will certainly reshape the international agreements that govern FDI in Africa.

Blended finance – broadly understood as combining public and private resources for development finance – has been an increasingly important instrument of private sector development policies (Pereira, 2017). For the purposes of this review we want to focus on those forms of blended finance that

[33] The effective average tax rate here refers to the ratio of the present value of taxes to the present value of profits (Abbas and Klemm, 2013).

[34] Although these national policies clearly matter for FDI and its development impacts, these policies are omitted from this review.

[35] With a few countries accounting for most cases (Argentina, Bolivia, Egypt, Mexico, India, and Ecuador are among the top 12 respondent states.

leverage FDI. Private funds can be leveraged by the provision of public funds in FDI projects through different instruments, including (1) grant elements (possibly through the provision of consulting services), (2) guarantees to protect investors against capital losses, debt that can be subordinate to senior debt (i.e. mezzanine) or with favourable terms or rates for the borrower relative to market pricing, (3) equity, i.e. ownership in a company including forms of junior equity that accepts higher risk and/or lower financial returns in exchange for social, environmental and economic impact; often in a position to take the first losses (OECD and World Economic Forum, 2015).

In the following, we first review the empirical literature on Special Economic Zones (SEZs), including Export Processing Zones. As we will show, this literature comprises a number of findings that correspond, are in line with, and complement a number of findings on the direct and indirect effects of FDI in general that we have reviewed above. While the literature on SEZs thus speaks about development and labor market impacts, the literature on tax incentives, investment promotion agencies, and international investment agreements is primarily concerned with these policies' effectiveness to attract FDI and, at times, with the effects on their sectoral composition. The latter, as we have argued above, is a key driver of the heterogeneity of both direct and indirect effects of FDI. Even less systematic evidence is available on the impacts of project-based "blended development finance". Yet, we highlight below some of its characteristics and assess some risks and potentials.

Special Economic Zones

Special Economic Zones (SEZs) come in many varieties and – depending on the definition – include Export Processing Zones (EPZs), industrial clusters and possibly many other forms (see, for example, Farole, 2011). For our purposes, a definition that emphasizes the presence of a regulatory regime distinct from the rest of the economy (typically customs or fiscal rules) is most useful. In its most recent World Investment Report that focuses on Special Economic Zones, (UNCTAD, 2019) adds a clearly demarcated geographical area and infrastructure support as key criteria for defining SEZs.

As we have shown above, SEZs have been and continue to be a prominent instrument to foster (industrial) development and attract FDI worldwide. Many of the SEZs in developing countries have some focus on exports using imports that undergo some degree of processing, which classifies them as EPZs (UNCTAD, 2019). Many firms in SEZs/EPZs[36] are of foreign origin and thus created through FDI, typically through greenfield investment. Farole (2011) compares the ownership structures of SEZs in selected Asian, Latin American and African countries and finds the share of foreign-controlled investment projects to be well above 50% in most cases (data for 2009) although there is quite some variation (e.g. Lesotho 80%, Bangladesh, the Dominican Republic, and Kenya around 70%, and Senegal 43%). He also notes that the share of local ownership tends to rise when SEZs mature, especially in Asia.

Overall, there is some but limited systematic research on SEZ's effectiveness in attracting FDI (or domestic investors) and their subsequent development, in particular employment, impacts.[37] As for the effectiveness of SEZs to attract FDI, the majority of studies suggest that they can be an important instrument to increase FDI inflows.[38] One such study , for instance, comes from the Asian Development Bank (2015). Cross-country regressions, which include developing Asia, Africa, Latina America, developing Europe, and the Middle East, show that countries with at least one SEZ receive 89 percent

[36] We use the more encompassing term SEZ from here onwards acknowledging that some of the SEZs included in the review may have a somewhat less pronounced outward-orientation (both on the import and the export side).
[37] Recent relatively comprehensive reviews can be found in Hachmeier and Mösle (2019), UNCTAD (2019) and World Bank (2017). Mösle (2019) provides a short assessment of the potential role of SEZs for growth in Africa.
[38] See Hachmeier and Mösle (2019) for a summary of key empirical and case studies on SEZ's effectiveness in attracting FDI.

more FDI.[39] However, it is not clear that the estimated effect is in fact causal as the omission of unobservable variables may explain both the presence of a SEZ and FDI inflows. Another important caveat to their findings pertains to differences in the quantity and quality of SEZs across countries which are disregarded in the analyses. Some country-level studies, predominantly focusing on China, provide more rigorous evidence as to whether SEZs boost FDI inflows. Wang (2013), for instance, exploits differences in the timing of the creation of SEZs across municipalities to assess whether they increase FDI inflows. As such, he compares changes in FDI inflows between the municipalities that created a SEZ in earlier rounds and those that created a SEZ in later rounds. His analysis reveals that SEZs have a significant effect on FDI inflows increasing the level of per capita FDI by 21.7% and the growth rate of FDI by 6.9 percentage points. What is more, there is no evidence that additional FDI inflows cause a crowding-out of domestic investments or that they are a mere result of foreign firms relocating to SEZs from other regions within China. Evidence on whether the creation of SZEs has a net positive effect on FDI inflows in countries other than China as well is scarce[40]

As for the development impacts of SEZs, UNCTAD's (2019) recent largely descriptive research provides interesting insights into the role that SEZs have or have not played in achieving deeper integration of developing countries into the world economy. The report looks, for instance, at export growth and it turns out that the top-performing economies indeed tend to have a higher number of SEZs relative to countries where exports have grown more slowly, in particularly in Asia and Latin America and the Caribbean. Yet, there are also outliers that have achieved high export growth rates without using SEZs. In Africa, there is still a relatively large number of countries without a SEZ (16 out of 54 countries in the report).[41] Yet, all top-performing countries in terms of export growth have at least one SEZ, possibly indicating that the presence of a SEZ also serves as a policy signal for foreign investors. This certainly holds for Ghana and Ethiopia, two countries that have made SEZs a pillar of their industrial and trade development strategies. Second, UNCTAD (2019) relates the presence and number of SEZs to the integration of countries into global value chains. The findings are similar to those for export performance. In particular in Asia and in Latin America and the Caribbean, the "champions of GVC integration", for example Malaysia or Mexico, have heavily relied on SEZs for global value chain integration, but some countries, for example Chile, have been successful without them.

These patterns suggest that SEZs are not a pre-condition for successful integration into the world economy. They also show that some SEZs are not successful, in particular in Sub-Saharan Africa. In his review of African SEZs, Farole (2011) concludes that African zones have generally underperformed, with the significant exception of those in Mauritius and some partial successes including Kenya, and possibly Madagascar and Lesotho. Today, Ethiopia may be added to the list of (partial) successes[42] and there is some progress in Ghanaian SEZs that today account for about 10% of Ghana's exports (UNCTAD, 2019). The more recent review by Hachmeier and Mösle (2019), additionally, identifies positive signs of development for the Kigali Special Economic Zone in Rwanda and the Nkok Special Economic Zone in Gabon. Positive developments primarily concern the zones' contributions to exports, whereas, as we will show below, contributions to employment are less pronounced.

[39] With the exception of Asian developing countries, however, these differences are not robust to the inclusion of year dummies.

[40] Exceptions are two studies on Poland (Jensen and Winiarczyk, 2014) and Costa Rica (Arce-Alpízar et al., 2005) who similarly find that SEZs increase FDI inflows.

[41] Compared to other regions, SEZs were adopted relatively late in Africa. However, in recent years they have been gaining increased traction and an increasing number of SEZs are planned to be built across the continent -often together with China's support (Hachmeier and Mösle, 2019; UNCTAD, 2019).

[42] See, for example, https://set.odi.org/sonia-hoque-odi-ethiopias-economic-transformation-job-creation-role-hawassa-industrial-park/.

When it comes to employment in SEZs, figures are (again) hard to come by. Above, we have already referred to the 90-100 million people directly employed in such zones according to UNCTAD (UNCTAD, 2019). This would correspond to an increase of about 30% percent over the last decade, as Farole (2011) reports SEZs to directly employ between 63 million and 68 million persons worldwide in the late 2000s. There is hardly a consensus on the indirect employment effects, with estimated employment multiplier effects ranging from 0.25 to 2, depending on the study and the reference country or region (Farole, 2011; UNCTAD, 2019). A multiplier of 1 would imply a doubling of the number of jobs generated, but we will come back to the evidence from single countries below. Thus, in total, SEZs may account for roughly 200 million jobs worldwide, about 1 percent of total global employment.[43]

There are huge differences across countries. Farole (2011) finds that employment generation in Latin American/Caribbean SEZs, for example in Honduras and the Dominican Republic, has been more than four times larger than in the SEZs of Ghana and Kenya. In the former two countries, employment in SEZs was about 30% of total industrial employment in 2008, comparing to 3.5% and 15% in Ghana and Kenya, respectively (figures again for 2008; note that industrial employment was less than 5% in Kenya, around 12% in Ghana, and around 15% in Honduras and the Dominican Republic).[44] China's 40 million SEZ workers by 2006 accounted for 20-25% of industrial employment in the country.

We have collected additional data from various sources, different cases and different years, and have put it in relation to employment. For the Kenyan case, UNCTAD (2019) reports 55 000 SEZ jobs (up from 30 000 in 2008), which today make up about 7% of industrial jobs. Overall, industrial employment has remained below 5% in Kenya, meaning the additional job creation in SEZs in Kenya has not or hardly been able to keep up with general workforce expansion in Kenya.[45] Some recent figures are also available for the Kigali Special Economic Zone in Rwanda. Steenbergen and Javorcik (2017) report the zone to have created 2271 permanent jobs by the end of 2016. This compares to total employment of 5.9 million, of which 4 million are in agriculture, and 206 000 in industry, so slightly above 1 percent of Rwanda's industrial employment can be found in this SEZ. This relatively modest contribution to (industrial) employment contrasts with relatively significant contributions to exports: In both countries, the SEZs account for 10% of the respective country's exports.

With a number of notable exceptions, there are moderate direct employment effects of SEZs – in line with the evidence on the direct employment impacts of FDI in general. The varying performance of SEZs will be determined by specific program features, the country and policy context, and the interaction between these two groups of factors. Much of literature on SEZs, in particular reports provided by donors and some multilateral institutions (e.g. UNCTAD or UNIDO), offers too few generalizable insights on these determinants of success. This is because they tend to focus on single cases and countries and to emphasize successes; thus ignoring the lessons to be learnt from failures. The dominance of case studies also has to do with the dearth of datasets that have information on SEZs and their characteristics, ideally paired with information on socio-economic outcomes in SEZs (and possibly their surroundings). There is a recent emerging literature that starts to address these caveats and that has already produced some interesting insights.

[43] Note that, in China alone, however, about 40 million people were directly employed in SEZs in the late 2000s (Farole, 2011). Already back then, SEZ employment was growing considerably faster outside China – from 5 million to 26 million between 1997 and 2006 – and it is likely to have done so ever since.

[44] Employment figures are from ILOSTAT. Accessed on August 28, 2019.

[45] Note that the figures on Kenya are not fully consistent. The Kenyan labor force has expanded between 2008 and 2019 from 13.2 Mio to 18.4 Mio so an almost doubling of SEZs workers should have increased the share of SEZs in industrial employment slightly. It is likely that the industrial employment figures used by Farole (2011) differed from those used here.

Frick et al. (2019) use a recently compiled dataset that includes 346 zones in 22 developing countries (and South Korea) – most of which were established in the late 1990s and early 2000s. They link the location of these zones to nightlight data to assess the impact of the presence and the characteristics of economic zones on economic activity.[46] The main results of the analysis indicate that, first, zone growth tends to slow down after an initial dynamic period. Keeping the dynamism of a zone and sustaining growth through technological upgrading appears difficult to achieve. Second, labor-intensive, low-tech manufacturing zones have been the most dynamic and outperform high-tech zones. The authors take this results as indicative of establishing technologically advanced activities in contexts that lack the prerequisites for such industries, including skilled labor, a research infrastructure, and pre-existing high-tech firms. Third, the context in which SEZs operate matters. Locational factors, such as the proximity to logistical nodes and urban agglomerations significantly determine SEZ performance, as does previous industrialization. Fourth, program characteristics, for example the choice of fiscal incentives, the presence of subsidized utilities, or zone management characteristics are not significantly correlated with SEZ success. Among the SEZ program variables, only foreign ownership requirements seem to hamper SEZ performance. These are very interesting insights on SEZ success factors. Yet, for the purposes of this review they would have been even more useful had the authors been in the position to assess performance in terms of labor market outcomes, i.e. on job creation and wages.

Two other recent studies – with somewhat different foci – examine the effects of relatively recent SEZ initiatives in India and China, respectively. Hyun and Ravi (2018) investigate India's SEZ program that was initiated in 2005 and had been receiving an annual investment of about 0.5 percent of Indian GDP until 2015.[47] They use a difference-in-differences approach based on a rich set of firm and worker data and their analysis emphasizes the effects of the program on informality. Specifically, they compare investment, productivity, and employment changes between 2005 and 2010 between "treated" regions with at least one SEZ and "control" regions without an SEZ. They made sure that they compared similar regions by choosing "control" regions that were in principle eligible to operate a SEZ, but did not yet operate one. Hyun and Ravi (2018) find the average labor productivity of formal sector manufacturing firms in SEZ districts to be 24% higher after 5 years compared to control regions. Within the same industry formal production increases by 46%, employment by 18%, and investment in plant and machinery by 37% over the same time period and compared to control regions. These gains translate into wage increases in the formal sector by 14%. Finally, the results of Hyun and Ravi (2018) indicate that the presence of SEZs is associated with a structural shift towards a formalization of the economy. In informal manufacturing, the authors observe a halving of total production in SEZ districts and total informal employment losses of 24%. These losses for informal firms in SEZ districts are confined to manufacturing and cannot be observed in services.

Lu et al. (2015) investigate the impacts of the most recent wave of China's SEZs. Their analyses are based on firm census data covering a period of 4 years (between 2004 and 2008) and they compare the performance of firms (including firm entry and exit) in villages exposed to SEZs to those that are

[46] It has become common to proxy economic activity with nightlight data. However, this is not without problems that are critically discussed in Frick et al. (2019). For example, the proxy obviously favours night-light intensive activities, say open-skies transport and storage, over less light-intensive ones.

[47] The SEZ program converted India's EPZs into SEZs. Compared to other programs, it stood out for (1) having lower size thresholds (ending-up much smaller than Chinese SEZs) and (2) being open to both public and private developers (70% of the SEZs are private of public-private operations).

not exposed.[48] Despite some methodological problems that will probably be addressed when the paper undergoes peer-review, the findings are worth reporting. At the village level, the authors find economic zones to have a positive effect on employment (approx. a 30% increase), output and capital, and to increase the number of firms. They also suggest that firm entry and exit are a much more important driver of these changes than the effect on incumbents and relocations. Finally, they analyze the role of some contextual factors and program features for SEZ effectiveness. Their results indicate that capital-intensive industries exhibit larger positive effects than labor-intensive ones. In addition, in contrast to the above study by Frick et al. (2019), they find location characteristics, such as market potential and access to transport networks, not decisive for enhancing the program effects.

So far, we have focused on the quantity of employment provided in or through SEZs. Yet, concerns have often been voiced over the quality of employment, for example precarious working conditions and low wages, in SEZs or EPZs. The evidence on the wage effects of FDI that we have reviewed above is very clear: Foreign affiliates pay significantly higher wages than comparable domestic firms to comparable workers. This generalizes to SEZs where – as we have seen – many activities originate from greenfield investment. Although the above studies on India's and China's SEZs do not explicitly analyze wages, their findings on productivity and employment point to the same direction. Such an assessment is in line with Cirera and Lakshman's (2017) review on the labor market impacts of EPZs, which concludes that, in most cases, EPZs pay higher wages. One of the few more rigorous studies, which are able to control for worker characteristics, is Glick and Roubaud (2006). They show EPZ wages to be similar to non-EPZ formal sector wages for men and significantly higher for women.[49] The EPZ premium over informal work for women is more than 75%. This is probably the more relevant indicator, as most women employed in the EPZ would otherwise work in the poorly remunerated informal sector– in 2000/01 the EPZ accounted for almost 15% of female employment in Antananarivo.[50] Similar results come from Kabeer and Mahmud's (2004) study on – typically female – Bangladeshi garment workers. They also find higher EPZ wages: Mean monthly income for EZP garment workers is almost twice as much as income for non-EPZ garment workers. However, EPZ workers tend to be much more educated (and much younger), so this reported "raw" wage premium also reflects differences in worker characteristics.

Regarding labor conditions in SEZs, such as health and safety, unionization or hours worked, the evidence base is thin and the results are mixed (Cirera and Lakshman, 2017). While the results of a survey of 100 SEZs undertaken for an UNCTAD (2015) report finds that most EPZs "are not promoting environmental and social features", country-specific studies, which typically compare SEZ working conditions to local non-SEZ economic conditions, arrive at a more nuanced conclusion. The study by Glick and Roubaud (2006) on the Malagasy EPZ, also looks into non-pecuniary aspects of employment. They find EPZ jobs to be comparable or superior to formal non-EPZ jobs, also in non-wage dimensions. Noteworthy are the high prevalence of formal work contracts (80% compared to 68% in non-EPZ formal employment) in EPZ employment as well as high levels of benefits, with 79% of workers enjoying paid leave and 83% receiving health care coverage from their employers. Yet, EPZ employment is also characterized by very long working hours and high labor turnover. Further, un-

[48] They use a difference-in-difference framework and provide a placebo test to test for common trends/omitted variables. In our view, this procedure cannot rule out selection effects, but the results remain interesting. In addition, the authors compare firms just outside the SEZ with those inside the zones, a procedure that is also not without problems.

[49] According to ILO (2014), at 70, and in some cases 90 percent, the great majority of workers in EPZ are poor, young women.

[50] In 2001, EPZ employment fell drastically following a political crisis, but rebounded afterwards.

ionization levels in Madagascar are generally low (8% in non-EPZ formal employment) and somewhat higher in the EPZ (13%). These results on working conditions are remarkably similar to those found by Kabeer and Mahmud (2004) on Bangladesh. Here also working conditions approach those of formal employment (which was typically hardly attainable for female workers) and benefit levels are even higher. These findings, in particular on Bangladesh, of course seem to contradict many reports by the media, NGOs, and the ILO on precarious working conditions in EPZs. This apparent contradiction can be easily explained: Compared to prevailing working conditions in non-EPZ firms in developing countries, employment in EPZs is probably – since rigorous evidence is so scarce – better than public discussions would suggest. [51]

Cirera and Lakshman's (2017) review of EPZs' labor market impacts comes to the conclusion that there is "no robust evidence that employment created in the zones is additional".[52] Our reading of the available data and the literature, including a number of more recent contributions, is different: More jobs are created in villages or regions with SEZ presence, i.e. firms within SEZs tend to generate more jobs than those elsewhere in the same country. Therefore – although there is quite some variation between different zones and countries – SEZs can contribute moderately, sometimes considerably, to job creation, in particular in manufacturing. The positive direct employment effects are likely to be dampened by adverse effects on employment in non-SEZ firms, but evidence on these negative spillovers is scarce. In line with the general evidence on negative spillovers from increased competition low-productivity firms, many of them probably informal, are likely to be affected most. Yet, SEZs can be instrumental to indirect job creation if SEZ firms establish backward and forward linkages along the supply chain to local non-SEZ firms, thereby enabling knowledge and technological spillovers and industrial upgrading of the local economy. Rigorous empirical evidence on the indirect effects of SEZs is however limited to the general effects of FDI presented above.[53] Also in line with the above evidence on wages in foreign affiliates, the few studies that explicitly consider wages in SEZs and EPZs suggest that firms pay considerably higher wages in these zones. There is quite some evidence that working conditions in SEZs are at least comparable if not better than in the formal sector outside the zone.

In sum, there is evidence, mainly from China, that SEZs are effective in attracting additional (foreign) investments. What is more, there is compelling evidence that the jobs created in SEZs are additional as well: More jobs are created in villages or regions with SEZ presence, i.e. firms within SEZs tend to generate more jobs than those elsewhere in the same country. There is, however, quite some variation between different zones and countries, but in some contexts SEZs can contribute moderately, sometimes considerably, to job creation, in particular in manufacturing. There is some evidence on adverse effects on employment in non-SEZ firms. The few studies that explicitly study wages in SEZs and EPZs suggest that firms pay considerably higher wages in these zones. Further, there limited evidence that working conditions in SEZs are at least comparable if not better than in the formal sector outside the zone.

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[51] See Hachmeier and Mösle (2019) for a recent brief survey on working conditions in EPZs. Their reading of the literature is similar to ours albeit they suggest that there is some consensus on restricted trade union activity in EPZs, in particular in Latin America. While anecdotal evidence gives good reasons that this may be the case, we did not come across evidence based on representative data that would have supported this claim.

[52] The most recent publication in this review, however, comes from 2010 (with the exception of one report by the same authors from 2012).

[53] In line with the evidence on the general indirect effects of FDI, country case studies suggest that the effects of SEZs on non-SEZ firms are very heterogeneous across countries, depending on many of the same factors described above, especially the host country's absorptive capacity for spillovers and, more generally, the institutional framework and economic conditions in the host country (Hachmeier and Mösle, 2019).

Tax and subsidy policies

Corporate tax incentives are among the key features of SEZs and we have seen above that they can be fairly generous. Most so in Sub-Saharan Africa where domestic revenue mobilization poses an important fiscal challenge anyway. Yet, very low tax rates are not limited to Sub-Saharan Africa. India's SEZ program, the employment effects of which we have addressed above, provides a 100% tax exemption on profits for the first five years of operation, another 50% exemption in the next five years, a rate which would subsequently be applied to all profit that would be reinvested into SEZ activity (Hyun and Ravi, 2018). These very generous approaches are in contrast to China's where corporate income tax rates are between 15% and 24% for foreign, technologically advanced, and export-oriented enterprises in SEZs – compared to a common corporate tax rate of 33% (Lu et al., 2015).[54]

There is some cross-country evidence that tax incentives (in developing countries) can be effective in attracting FDI. For example Abbas and Klemm (2013) present evidence that lower corporate income tax rates and longer tax holidays are associated with higher FDI in Latin America and the Caribbean. Yet, this relationship seems absent in Africa. Further, in neither of the two regions are tax incentives significantly correlated with higher gross private fixed capital formation. Using a similar cross-country regression approach for 50 developing and emerging economies, Abbas and Klemm (2013) show that higher tax rates seem to negatively affect domestic investment and FDI, but do raise revenues in the short run.[55] This mixed cross-country evidence is in line with country case study evidence. A well-documented (early case) is Indonesia that abolished tax holidays for FDI in the early 1980s without major repercussions on FDI flows (Wells, 2001). Other country case studies, summarized in Abramovsky et al. (2018), also suggest no major role for tax incentives. However, it is well conceivable that locational competition between countries matters: Firms only care less about taxes when they have other good reasons to invest in a specific country. This may be because of a sizeable domestic market (e.g. China, India, Indonesia) or because the country has a geographical advantage or has trained staff in a specific industry. This may explain why Central American economies with similar characteristics may find themselves in a tax competition that matters to investors.

Without doubt taxes play a role in firms' investment and locational decisions. In the case of SEZs, it is difficult – if not impossible – to disentangle the effects of the reduced tax burden from other elements of SEZs, for example the provision of infrastructure and other special regulatory measures. Very few micro studies have looked specifically into effects of tax incentives alone. The two that we found do not explicitly analyze the role of or effects on foreign firms. Yet, the results are instructive.

One such study is Chaurey (2017) who examines the impact of a location-based tax incentive scheme in India using aggregated and firm-level panel data. Unfortunately, the study does not make reference to FDI, so it is probably mainly domestic firms. The introduction of tax exemptions (similar to the SEZs exemptions) and capital subsidies to foster industrialization in the states of Uttarakhand and Himachal Pradesh in 2003 provides the author with a natural experiment, as he can compare firm-level outcomes between these two states and comparator states where this policy has not been implemented. On the basis of this comparison Chaurey (2017) finds large increases in employment (43%, over 5 years), total output (56%), fixed capital (71%), and the number of firms (31%) as a result

[54] In addition, China provides customs duty exemptions for equipment and machinery employed in the production of exports.

[55] We deliberately use words like "associated" and "correlated" when we refer to these cross-country studies, as the causal meaning of these regression results is questionable. In particular, it could be difficult to observe variables like the administrative capacity of the country that determine both decisions on corporate taxes and FDI – and thus explain the observed correlation.

of the program – albeit from a low base of industrialization. He shows that these increases are due to both the growth of existing firms and the entry of new firms – with newly entering firms being larger and more productive. The study also tests for relocation effect from other states into the "treated" states, but cannot find evidence for such negative spillovers. Finally, the policy is found to be cost-effective, as gains in profits for firms and the total wage bill for workers in the treated states outweigh the costs, including subsidies and foregone tax revenue.

Contrasting findings come from a similar study on Ethiopia. Here, Gebrewolde and Rockey (2019) examine the effects of differences in tax incentives for firms located in and close to Addis Ababa and those in the rest of the country (>100km away from the capital). While all exporting firms in Ethiopia are exempted from corporate income tax (4 years if a firm exports more than 50 % or supplies more than 75% to an exporter; 2 years if a firm exports less than 50%) firms located outside Addis Ababa receive one additional year of tax exemption. The study of Gebrewolde and Rockey (2019) exploits this variation and compares firms inside a 100km radius around Addis Ababa with those outside. It finds no significant positive effect of the additional tax incentive on firm performance in terms of productivity, productive assets, or employment. Given the minimal gains, a cost-benefit analysis of the policy suggests that the policy has been very costly. These findings should, in our view, be treated with caution. It seems to us that (a) the results may be threatened by a violation of the parallel trends assumption (i.e. firms in Addis would have performed differently even without the differential policy), and (b) the additional tax incentive was probably not large enough to affect investment decisions.

Despite its limitations, the Ethiopian study may be indicative of the potential problems of tax incentives. A number of descriptive cost-benefit studies of incentives have suggested that the costs are very likely to exceed the benefits (Abramovsky et al., 2018). A key parameter in such cost-benefit analyses is the redundancy rate, the percentage of investors who would have invested even without the tax incentive. If only investors are attracted by the incentive that would otherwise not have come, redundancy is zero and there is no revenue loss. An upper bound to actual revenue loss that assumes full redundancy is the tax intake that would accrue to the government if all investing firms were not granted tax holidays and/or reduced rates.[56] This upper bound, here termed "foregone revenue", can be very high. Tuomi (2012) provides some examples from Africa. In Rwanda, the revenue authority estimates foregone revenue due to tax incentives to amount to about 35% of total tax revenue, 15% of government-budget, and 3.5-5% of GDP in 2008 and 2009. In Tanzania, tax-incentives during a 10-month period between 2008 and 2009 resulted in foregone revenue equivalent to 6.4 percent of the total 2009/10 national budget.

These exemplary figures and generous tax incentives granted by many countries (see above) suggest that the costs of tax incentive schemes can be very substantial. Eventually, these potentially huge costs have to be compensated by the economic (including fiscal) benefits of attracting additional long-term investment. Redundancy will imply short-term revenue losses and there is some indication that redundancy may not be zero. A study by James (2009) with some case study evidence from Mozambique, Jordan, Nicaragua and Serbia sheds some light on redundancy. In fact, the share of investors who state in surveys that tax incentives are among the top 5 reasons to invest can be surprisingly low (17% in Mozambique), but also very high, in particular among investors who invest in SEZs (76% in Nicaragua) – probably they expect such incentives to be in place. Further, it is evident from the considerable differences in experiences with FDI as a driver of economic development and

[56] There are numerous reports and studies that discuss methodological issues regarding cost-benefit estimations of tax incentives. See Wells (2001) as well as Abramovsky et al. (2018) and the studies cited therein.

job creation that the success of an FDI-focused strategy cannot be taken for granted. In light of potentially huge costs with uncertain gains governments should therefore carefully monitor the costs and the necessity of tax incentives. These costs are likely to be exacerbated because FDI-related tax incentives may make the tax system too complex and therefore difficult to understand and to administer – more so if incentives have specific sectoral provisions and can be granted in a discretionary manner (Abramovsky et al., 2018).[57]

International Investment Agreements

International Investment Agreements can be thought of as a tool to reduce the political risk encountered by foreign investors. By providing a legal commitment to the fair and equitable treatment of foreign investors, they seek to attract additional investments. Considering the popularity of IIAs as a tool for investment promotion, the empirical evidence on their effectiveness has long been conspicuously inconclusive.[58] Recent studies that use more sophisticated methods however indicate that IIAs do stimulate FDI (Berger et al., 2013; Busse et al., 2010; Egger and Merlo, 2007). A limitation of most of these studies is, however, that they ignore the actual content of IIAs, even though their substance has evolved considerably since the first IIAs were signed in the late 1950s (GIZ, 2015). Hence, in recent years, studies increasingly start to distinguish between IIAs with distinct institutional features, especially investor-state dispute settlements and market access clauses. While evidence on the effectiveness of the former to attract FDI is rather mixed,[59] the latter are mostly found to affect FDI flows positively, at least when included in investment clauses within preferential trade and investment agreements (Berger et al., 2013; Lesher and Miroudot, 2006).

Besides understanding whether IIAs are effective in attracting foreign investments, it is critical to discern what type of FDI is attracted by IIAs. As argued in the first part of this study, different types of FDI have distinct development effects, and we have, for example, demonstrated that some are more likely than others to generate employment and to establish linkages with local firms. Despite the fact that certain investments, such as those that are associated with larger sunk costs or that are politically sensitive, are likely to react very differently to an increased investor protection than more flexible investments with a higher degree of reversibility, we are aware of only one study that distinguishes between these different types of FDI that are attracted by IIAs.

Using data for seven different sectors in 13 countries in Central and Eastern Europe and the Former Soviet Union over the period 1994–2009, Colen et al. (2016) find that BITs are most effective in attracting FDI in those sectors of the economy that are characterized by large sunk costs, relatively low levels of firm-specific know-how and in sectors that are politically sensitive to foreign ownership. In their sample countries, the utilities and real estate sectors exhibit these features, and therefore experience an increase in FDI inflow after the signing of BITs. The manufacturing and service sectors, in contrast, remain largely unaffected by the singing of BITs. Hence, in this study, BITs are more likely to increase the flow of FDI into sectors that typically do not generate much employment, and in which few linkages are established with local firms. Although the sample of countries used in the study is rather small and developing countries' economies, especially in Africa, have distinct features, the findings cast doubt on whether IIAs are an appropriate tool to attract investments with important development impacts.

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[57] Abramovsky et al. (2018) highlight this by providing evidence from the Ghanaian and Ethiopian FDI-related tax regimes.
[58] See, for instance, GIZ (2015) and Michael Jacobs (2017) for an overview of the empirical literature, with a focus on developing countries.
[59] Colen et al. (2016) and Frenkel and Walter (2019) document positive effects, whereas (Berger et al., 2013, 2011) find that largely ineffectual

Investment Promotion Agencies

Economists think of investment promotion agencies as a means to reduce information barriers faced by foreign investors. There is some, but limited evidence on the effectiveness of investment promotion agencies to actually achieve their aim. Harding and Javorcik (2011) examine the effects of investment promotion on inflows of US foreign direct investment (FDI) using data on 124 countries. They test whether sectors explicitly targeted by investment promotion agencies receive more investment relative to the pre-targeting period and non-targeted sectors. Their results suggest that investment promotion lead to higher FDI flows from the US only to developing countries where red tape and information asymmetries are likely to be more severe than in developed economies. In a follow-up paper, Harding and Javorcik (2013) investigate whether higher quality of investment promotion services translates into higher FDI inflows. Their cross-country analysis, based on information on 156 countries, suggests that countries with higher quality investment promotion services indeed attract higher levels of FDI. Higher quality is proxied by a more professional response to investor inquiries in a more professional manner as well as higher quality web sites.

Another interesting insight on IPA comes from the study on linkages by Amendolagine et al. (2013). They find that foreign firms that made use of IPA support in the process of entering the domestic market demand fewer local inputs. The authors suggest that this could be driven by a selection effect, as foreign firms who have limited information on the host-economy are more likely to demand IPA assistance and to generate limited linkages. Nonetheless, this finding has important implications for the work of IPAs as it suggests that they should perhaps focus more on establishing linkages with the domestic economy instead of focusing on maximizing the mere volume of FDI.

FDI-supporting blended finance

The idea of leveraging (foreign) private investment through instruments of development finance has clearly become an important element in donor strategies to help developing countries attract more investment, foster economic growth, and create jobs. This is evident in the recent G20 Compact with Africa (African Development Bank et al., 2017), and the EU's (Bilal and Krätke, 2013) and Germany's (Lakemann and Lay, 2018) international development cooperation. While the persistent lack of productive employment, in particular in Sub-Saharan Africa, is behind this new focus on direct support to private firms, geo-strategic considerations of the EU are likely to play a role as well, as argued by Mah (2018). This political dimension cannot be ignored when assessing the (potential) effectiveness of such policies. We come back to this later.

Since 2017, the OECD-DAC has been reporting on the mobilisation of private sector funds by official development finance differentiating between five instruments: guarantees, syndicated loans, shares in collective investment vehicles (CIVs), direct investment in companies, and credit lines (data have been collected retrospectively since 2012). In 2018, the OECD-DAC added (a) project finance, including special purpose vehicles (SPVs) as part of a new category "direct investment in companies and SPVs", and (b) simple co-financing, such as public-private partnerships (PPPs). According to OECD-DAC figures, investment guarantees are the most important among these instruments, followed by syndicated loans and credit lines. Direct investments and SPVs also play a role, but are clearly less important (Stacey, 2019). Between 2012 and 2015, a total of about 80 billion USD of private funds were mobilized (OECD-DAC, 2017), with about 30% of this amount going to Africa (Nigeria being the second most important of all beneficiary countries, after Turkey).

The OECD-DAC (2017) report provides a number of project examples that illustrate how (and to what extent) private funds are leveraged through the different blending instruments and how they are related to (foreign) investment.[60] For example, a political risk insurance, i.e. a guarantee, was provided by the Overseas Private Investment Corporation (USA) to the Rwanda Trading Company, a subsidiary of an American holding, with the aim to support an investment of 5 million USD in modernizing a coffee milling and processing plant in Kigali. An example of a supported direct investment is the partnership of Falck Danmark A/S with the International Finance Corporation (IFC) and the Danish development cooperation. These partners provided the equity capital (Falck Danmark USD 60 million, IFC and Danish development cooperation USD 20 million each) for Falck Medical Services Africa A/S, a new company that plans to invest in health clinics and expand access to high-quality basic health services across sub-Saharan Africa. A very typical mode[61] of "blended" support are credit lines and or syndicated loans to intermediaries – either banks or investment funds based either in the recipient countries or financial hubs in the South to support local corporations and Small and Medium enterprises.

While the many accounts of successfully arranged blended finance projects are suggestive that these types of instruments work, we did not come across any systematic or even rigorous evidence on their effectiveness. There are numerous reasons to be sceptical. One general reason is that there is already "too much money chasing too few projects" (African Development Bank et al., 2017), in particular in Sub-Saharan Africa. Banks and investors are awash with liquidity because of expansionary monetary policy and low interest rates in the OECD. At least in Africa, this excess liquidity meets what is perceived and described by potential investors as a lack of bankable projects (Lay, 2017). In this context, investment subsidies obviously risk redundancy, i.e. they may support investments that would have been undertaken even without the subsidy. Further, moral hazard may come into play: Subsidies possibly lead investors to take excessive risks.

In our view and in light of the increasing importance of "blended finance", there is a very urgent need to assess the development impact of these instruments. However, we acknowledge that this is not a trivial task since there are several reasons for this lack of evidence, only some of which can be tackled easily. One area where progress is needed is data and transparency at the project-level. Typically, the relevant organizations, e.g. IFC or the German DEG, do not provide such data publicly.[62] Such project data (ideally including projects that were rejected and/or that never came to fruition) are a pre-condition to examine questions of redundancy, for example. Even with more data, rigorous impact evaluations will be difficult. One reason is that projects and hence the "intervention" tend to be very heterogeneous. Another important complication arises from the fact that leverage instruments are typically an early element of a long impact chain (see the above examples, from a credit line to a Bank in Dubai to a small loan to an entrepreneur in Kampala, Uganda). Yet, important intermediate outcomes along this chain can be evaluated.

While (most) of the above policies to attract FDI fall clearly into the responsibility of the host country – although these policies can receive donor support – this is less the case for "blended finance", which is clearly an aid instrument. This means that further aspects need consideration. In light of the development challenges in so many other sectors, including in health and education, there has to be

[60] Surprisingly, the report has no information on the (aid) funds used to mobilize this amount. We understand, of course, the difficulties of doing this.

[61] This is our admittedly parsimonious reading of various reports of International Finance Institutions and the relevant subsidiaries (IFC, DEG).

[62] We understand that there are limits to transparency when it comes to business operations. Yet, one could think of providing anonymized data and/or that data may be used by externals who keep the micro data confidential.

a clear case for aid-financed subsidies to private enterprises. This type of support is clearly biased against Least Developed Countries who receive only a tiny fraction of "blended development finance" (Stacey, 2019). Supporting investment by companies based in donor countries increases the risk of tied aid (Mah, 2018), which is very likely to lead to inefficiencies. Finally, the project-based approach may imply that the "donor-selected" projects may not align with country strategies (Pereira, 2017).

Summary, discussion and policy recommendations

This study has reviewed the literature on foreign investment and its promotion with a focus on the effects on labor markets. We have thus put to test the assumption whether FDI brings employment and better jobs. We have also examined whether the many policy instruments to promote FDI are effective in attracting foreign firms and achieve the supposed benefits.

In our conceptual framework we have illustrated the multiple channels through which FDI affects the host economy: Direct effects originate from greenfield investment or can be found in firms acquired by foreign investors. While the direct employment effects from greenfield investment are positive, this is not clear for firm acquisitions, as foreign investors may restructure firms and release workers. Through various spillovers the presence of foreign firms influences the performance of and thus employment and wages in domestic firms. Positive indirect effects are likely to arise from direct backward linkages in customer-supplier relationships, but domestic firms may be negatively affected through increased competition in both product and factor markets. The importance of the different transmission channels and the final impact of FDI will not only depend on the magnitude of FDI inflows, but also on the type of FDI. The conceptual framework highlights that both magnitude and FDI composition are a function not only of country characteristics (endowments, geography, general investment climate), but of numerous policies that may be specifically designed to attract, to restrict or to regulate FDI flows.

Our review clearly shows that the effects of foreign ownership on firm performance are relatively well studied and we provide a summary of the key findings of this literature below. However, with the important exception of Special Economic Zones, the various policy instruments to attract FDI have mainly been studied with regard to their general impact on FDI flows, while the potential subsequent development and labor market impacts have hardly been examined. The empirical evidence demonstrates that the impacts of FDI, be it on employment, wages, or productivity, and the extent of spillovers tend to vary very significantly across industries and country contexts. It is hence very reasonable to assume that it is not so much the volume, but more the industry composition in interaction with country characteristics that eventually determine development and labor market outcomes of the attracted FDI inflows.

Designing investment promotion policies to maximize the beneficial labor market impacts requires understanding and anticipating the complex causal chain from an investment promotion policy (package) to development and labor market outcomes. This is not a trivial task but this review has provided numerous insights that can inform such understanding and anticipation:

1. The direct employment effects of FDI can be substantial in selected countries, in particular in the manufacturing sector and in Special Economic Zones. In some countries, foreign firms employ 20-30% of the workforce in this sector. In the past 20 years, FDI has played an important role for job creation in manufacturing in both Africa and Asia. Yet, the overall employment impacts of FDI should not be overestimated – also because manufacturing employment often accounts for a minor share of total employment, in particular in Africa.
2. Foreign firms pay higher wages. Yet, great care has to be taken before basing conclusions on the direct effects of FDI on employment and wages on too simple statistics and comparisons.

For example, the reduction of the raw foreign wage premium in Brazil from 280% to about 6% when considering the impact estimate of a foreign acquisition on the same individual worker is telling. However, even controlling for firm and worker differences, the positive "takeover effect" of foreign ownership on wages remains significant and economically important. Wage premia are higher in less developed countries, and for more skilled workers. In line with this, there is clear evidence that foreign ownership shifts the composition of a firms' workforce towards higher-skilled workers. Thus, foreign firms' labor demand tend to be skill-biased, by the standards of the host country.

3. There is no evidence that foreign takeovers would reduce employment. In contrast, foreign investors expand employment in acquired firms. There are therefore direct positive employment effects of both greenfield investment and acquisitions. There is some evidence that the jobs in foreign-owned firms are more stable and provide better career perspectives.
4. Job creation and higher wages in acquired firms are driven by higher productivity and investment. The exact mechanisms behind this are unclear. Some evidence hints at the importance of technology transfer and higher product quality while a study from China suggests that FDI may relieve credit constraints at the firm level.
5. There are both positive and negative spillovers from foreign to domestic firms. Firms with backward linkages to foreign firms benefit from this relationship in terms of productivity, but the employment and wage effects of linkages have not been investigated. Domestic firms can be hurt by foreign competition and low-productivity firms may suffer most. Competitive pressure through product and factor markets (through increased wages, labor costs) can lead domestic firms to release workers, but the effects tend to be moderate – with the exception of the study on the effects of Special Economic Zones in India. There is no study that would have tried to assess the net employment effects of FDI taking into account employment expansion in foreign-owned firms as well as the contraction in domestic firms.
6. The evidence on SEZs is very much in line with the previous key findings. There is evidence that SEZ jobs are additional: More jobs are created in villages or regions with SEZ presence, i.e. firms within SEZs tend to generate more jobs than those elsewhere in the same country. There is, however, quite some variation between different zones and countries, but in some contexts SEZs can contribute moderately, sometimes considerably, to job creation, in particular in manufacturing. There is some evidence on adverse effects on employment in non-SEZ firms. The few studies that explicitly study wages in SEZs and EPZs suggest that firms pay considerably higher wages in these zones. There is also quite some evidence that working conditions in SEZs are at least comparable if not better than in the formal sector outside the zone – possibly with the exception of unionization of workers.
7. The generous tax incentives granted by many countries, often as an element of SEZ schemes, are associated with potentially huge costs that have to be compensated by the economic (including fiscal) benefits of attracting additional long-term investment. Redundancy causes short-term revenue losses and there is some indication that redundancy may not be zero. There may thus be detrimental fiscal effects of corporate tax incentives implying trade-offs between domestic resource mobilization and investment promotion.
8. The evidence on the effectiveness of IIAs to attract FDI is mixed. There is some recent evidence that these agreements influence the composition of FDI flows favoring those that benefit most from investor protection. Such investments, for example in mining, may not necessarily be in industries that are preferable in terms of their employment effects.

9. Investment promotion agencies – at least when offering high-quality advisory services – are found to have a positive impact on FDI inflows. However, there may be room for IPAs to induce foreign investors to source a higher share of local content.
10. There is no systematic or even rigorous evidence on the impacts of "blended finance" for leveraging FDI, which is clearly gaining importance as an instrument of development finance. The case study evidence of successfully arranged blended finance projects may be suggestive that these types of instruments work, but there are also reasons to be sceptical, including redundancy or even "moral hazard" problems.

In almost all of the above aspects, we have noted important knowledge gaps in the literature. (1) There is a surprising dearth of aggregate and comparable data on employment in foreign-owned firms and thus on employment creation through FDI. Similarly, data on employment in SEZs or EPZs are very difficult to find. (2) An important caveat to the general conclusions on the direct wage and employment effects of FDI is that the rigorous evidence comes from only a few developing countries that provide the necessary data on firms (and workers). (3) The same holds true for the evidence on indirect effects. Here, another omission becomes salient: Studies – be it on linkages or on various spillover effects – tend to focus on the manufacturing sectors. This is despite the fact that linkages to domestic service industries may also be important. Further, there is only one study that studies spillovers to the informal sector that account for a large share of employment in many developing economies (including manufacturing employment). The evidence that low-productivity firms are hit hardest by the presence of foreign firms reinforces the argument to examine more closely the effects on informal firms.

With regard to investment promotion instruments, an important gap in the empirical assessments is that the different types of FDI promotion and facilitation policies are typically analyzed in isolation. This is despite the very likely importance of interactions between the different types of policy tools. The success of a Special Economic Zone is likely to depend on the presence of international investment agreements and on the quality and reliability of the information provided by an Investment Promotion Agency. This leads us to our final general policy conclusions: Obviously, a well-coordinated investment promotion and facilitation scheme – including a package of policies and instruments – is likely to be superior to efforts that lack such coordination. Yet, coordination will need to have an eye on complexity. Even a well-coordinated and coherent investment promotion strategy with too many policies and instruments may become too complex to provide clear guidance for investors.

References

Abbas, S.M.A., Klemm, A., 2013. A partial race to the bottom: corporate tax developments in emerging and developing economies. Int. Tax Public Finance 20, 596–617. https://doi.org/10.1007/s10797-013-9286-8

Abramovsky, L., Tyskerud, Y., Bird, N., 2018. Review of corporate tax incentives for investment in low- and middle-income countries. https://doi.org/10.1920/BN.IFS.2018.BN0229

ACET, 2017. Comparative Study on Local Content in Mineral, Oil and Gas Sectors: Policies, Legal and Institutional Frameworks-Trends and Responses in Selected African Countries.

African Development Bank, International Monetary Fund, Word Bank, 2017. The G-20 Compact with Africa A Joint AfDB, IMF and WBG Report.

Alfaro, L., Chen, M.X., 2018. Selection and Market Reallocation: Productivity Gains from Multinational Production. Am. Econ. J. Econ. Policy 10, 1–38. https://doi.org/10.1257/pol.20150437

Almeida, R., 2007. The labor market effects of foreign owned firms. J. Int. Econ. 72, 75–96. https://doi.org/10.1016/j.jinteco.2006.10.001

Amendolagine, V., Boly, A., Coniglio, N.D., Prota, F., Seric, A., 2013. FDI and Local Linkages in Developing Countries: Evidence from Sub-Saharan Africa. World Dev. 50, 41–56. https://doi.org/10.1016/j.worlddev.2013.05.001

Amendolagine, V., Presbitero, A.F., Rabellotti, R., Sanfilippo, M., 2019. Local sourcing in developing countries: The role of foreign direct investments and global value chains. World Dev. 113, 73–88. https://doi.org/10.1016/j.worlddev.2018.08.010

Arce-Alpízar, G., Monge-Gonza, R., Rosales-Tijerino, J., 2005. Cost-Benefit Analysis of the Free Trade Zone System. Organization of the American States, Office for Trade, Growth and Competitiveness., Washington, D.C.

Arnold, J.M., Javorcik, B.S., 2005. Gifted Kids Or Pushy Parents? Foreign Acquisitions And Plant Performance In Indonesia, Policy Research Working Papers. The World Bank. https://doi.org/10.1596/1813-9450-3597

Asian Development Bank (Ed.), 2015. Asian economic integration report 2015: how can special economic zones catalyze economic development? Asian Development Bank, Mandaluyong City, Metro Manila, Philippines.

Berger, A., Busse, M., Nunnenkamp, P., Roy, M., 2013. Do trade and investment agreements lead to more FDI? Accounting for key provisions inside the black box. Int. Econ. Econ. Policy 10, 247–275. https://doi.org/10.1007/s10368-012-0207-6

Berger, A., Busse, M., Nunnenkamp, P., Roy, M., 2011. More stringent BITs, less ambiguous effects on FDI? Not a bit! Econ. Lett. 112, 270–272. https://doi.org/10.1016/j.econlet.2011.05.026

Bilal, S., Krätke, F., 2013. Blending loans and grants for development 10.

Blanas, S., Seric, A., Viegelahn, C., 2017. Jobs, FDI and Institutions in Sub-Saharan Africa: Evidence from Firm-Level Data. Lancest Univ. Econ. Work. Pap. Ser. 55.

Blonigen, B.A., 2005. A Review of the Empirical Literature on FDI Determinants. Atl. Econ. J. 33, 383–403. https://doi.org/10.1007/s11293-005-2868-9

Busse, M., Königer, J., Nunnenkamp, P., 2010. FDI promotion through bilateral investment treaties: more than a bit? Rev. World Econ. Weltwirtschaftliches Arch. 146, 147–177.

Chaurey, R., 2017. Location-based tax incentives: Evidence from India. J. Public Econ. 156, 101–120. https://doi.org/10.1016/j.jpubeco.2016.08.013

Cheung, K., Lin, P., 2004. Spillover effects of FDI on innovation in China: Evidence from the provincial data. China Econ. Rev. 15, 25–44. https://doi.org/10.1016/S1043-951X(03)00027-0

Cirera, X., Lakshman, R.W.D., 2017. The impact of export processing zones on employment, wages and labour conditions in developing countries: systematic review. J. Dev. Eff. 9, 344–360. https://doi.org/10.1080/19439342.2017.1309448

Colen, L., Persyn, D., Guariso, A., 2016. Bilateral Investment Treaties and FDI: Does the Sector Matter? World Dev. 83, 193–206. https://doi.org/10.1016/j.worlddev.2016.01.020

Egger, P., Merlo, V., 2007. The Impact of Bilateral Investment Treaties on FDI Dynamics. World Econ. 30, 1536–1549. https://doi.org/10.1111/j.1467-9701.2007.01063.x

Farole, T., 2011. Special Economic Zones in Africa - Comparing Performance and Learning from Global Experience. World Bank. Directions in Development. 328.

Farole, T., Winkler, D. (Eds.), 2014. Making Foreign Direct Investment Work for Sub-Saharan Africa:Local Spillovers and Competitiveness in Global Value Chains. The World Bank. https://doi.org/10.1596/978-1-4648-0126-6

Farole, T., Winkler, D., 2012. Foreign Firm Characteristics, Absorptive Capacity and the Institutional Framework: The Role of Mediating Factors for FDI Spillovers in Low- and Middle-Income Countries, Policy Research Working Papers. The World Bank. https://doi.org/10.1596/1813-9450-6265

Feenstra, R.C., Hanson, G.H., 1997. Foreign direct investment and relative wages: Evidence from Mexico's maquiladoras. J. Int. Econ. 42, 371–393.

Frenkel, M., Walter, B., 2019. Do bilateral investment treaties attract foreign direct investment? The role of international dispute settlement provisions. World Econ. 42, 1316–1342. https://doi.org/10.1111/twec.12743

Frick, S.A., Rodríguez-Pose, A., Wong, M.D., 2019. Toward Economically Dynamic Special Economic Zones in Emerging Countries. Econ. Geogr. 95, 30–64. https://doi.org/10.1080/00130095.2018.1467732

Gebrewolde, T., Rockey, J.C., 2019. The Effectiveness of Industrial Policy in Developing Countries: Causal Evidence From Ethiopian Manufacturing Firms. SSRN Electron. J. https://doi.org/10.2139/ssrn.3329883

GIZ, 2015. Developing countries and the future of the international investment regime.

Glick, P., Roubaud, F., 2006. Export Processing Zone Expansion in Madagascar: What are the Labour Market and Gender Impacts? J. Afr. Econ. 15, 722–756. https://doi.org/10.1093/jae/ejk016

Goerg, H., Greenway, D., 2004. Much Ado about Nothing? Do Domestic Firms Really Benefit from Foreign Direct Investment? World Bank Res. Obs. 19, 171–197. https://doi.org/10.1093/wbro/lkh019

Gorg, H., Strobl, E., 2005. Spillovers from Foreign Firms through Worker Mobility: An Empirical Investigation*. Scand. J. Econ. 107, 693–709. https://doi.org/10.1111/j.1467-9442.2005.00427.x

Gorodnichenko, Y., Svejnar, J., Terrell, K., 2014. When does FDI have positive spillovers? Evidence from 17 transition market economies. J. Comp. Econ. 42, 954–969. https://doi.org/10.1016/j.jce.2014.08.003

Hachmeier, K.U., Mösle, S., 2019. Sonderwirtschaftszonen und Industrieparks in Theorie und Praxis – unter besonderer Berücksichtigung Afrikas. Kiel. Beitr. Zur Wirtsch. 23, 146.

Harding, T., Javorcik, B.S., 2013. Investment Promotion and FDI Inflows: Quality Matters. CESifo Econ. Stud. 59, 337–359. https://doi.org/10.1093/cesifo/ifs029

Harding, T., Javorcik, B.S., 2011. Roll Out the Red Carpet and They Will Come: Investment Promotion and FDI Inflows. Econ. J. 121, 1445–1476. https://doi.org/10.1111/j.1468-0297.2011.02454.x

Havranek, T., Irsova, Z., 2011. Estimating vertical spillovers from FDI: Why results vary and what the true effect is. J. Int. Econ. 85, 234–244. https://doi.org/10.1016/j.jinteco.2011.07.004

Heyman, F., Sjöholm, F., Tingvall, P.G., 2007. Is there really a foreign ownership wage premium? Evidence from matched employer–employee data. J. Int. Econ. 73, 355–376. https://doi.org/10.1016/j.jinteco.2007.04.003

Hijzen, A., Martins, P.S., Schank, T., Upward, R., 2013. Foreign-owned firms around the world: A comparative analysis of wages and employment at the micro-level. Eur. Econ. Rev. 60, 170–188. https://doi.org/10.1016/j.euroecorev.2013.02.001

Hisarciklilar, M., Gultekin-Karakas, D., Asici, A.A., 2014. Can FDI Be a Panacea for Unemployment?: The Turkish Case, in: Dereli, T., Soykut-Sarica, Y.P., Şen-Taşbaşi, A. (Eds.), Labor and Employment Relations in a Globalized World. Springer International Publishing, Cham, pp. 43–70. https://doi.org/10.1007/978-3-319-04349-4_3

Hyun, Y., Ravi, S., 2018. Place-based Development: Evidence from Special Economic Zones in India 55.

ILO, 2014. Trade union manual on export processing zones. Geneva.
Inekwe, J.N., 2013. FDI, Employment and Economic Growth in Nigeria: FDI, Employment and Economic Growth in Nigeria. Afr. Dev. Rev. 25, 421–433. https://doi.org/10.1111/1467-8268.12039
Iršová, Z., Havránek, T., 2013. Determinants of Horizontal Spillovers from FDI: Evidence from a Large Meta-Analysis. World Dev. 42, 1–15. https://doi.org/10.1016/j.worlddev.2012.07.001
Japan International Cooperation Agency, 2019. Business Environment Reform and Investment Promotion, Study Report. Donor Committee for Enterprise Development.
Jenkins, R., 2006. Globalization, FDI and employment in Viet Nam. Transnatl. Corp. 15, 28.
Jensen, C., Winiarczyk, M., 2014. Special Economic Zones 20 Years Later. SSRN Electron. J. https://doi.org/10.2139/ssrn.2394547
Jordaan, J.A., 2011. FDI, Local Sourcing, and Supportive Linkages with Domestic Suppliers: The Case of Monterrey, Mexico. World Dev. 39, 620–632. https://doi.org/10.1016/j.worlddev.2010.08.012
Jude, C., Silaghi, M.I.P., 2016. Employment effects of foreign direct investment: New evidence from Central and Eastern European countries. Int. Econ. 145, 32–49. https://doi.org/10.1016/j.inteco.2015.02.003
Kabeer, N., Mahmud, S., 2004. Globalization, gender and poverty: Bangladeshi women workers in export and local markets. J. Int. Dev. 16, 93–109. https://doi.org/10.1002/jid.1065
Karlsson, S., Lundin, N., Sjöholm, F., He, P., 2009. Foreign Firms and Chinese Employment. World Econ. 32, 178–201. https://doi.org/10.1111/j.1467-9701.2009.01162.x
Kollamparambil, U., n.d. Why developing countries are dumping investment treaties [WWW Document]. The Conversation. URL http://theconversation.com/why-developing-countries-are-dumping-investment-treaties-56448 (accessed 8.26.19).
Lakemann, T., Lay, J., 2018. Wirtschaftsfokus der deutschen Afrikapolitik: Richtiger Weg, überhöhter Anspruch. GIGA Focus Afr.
Lay, J., 2017. The G20 Compact with Africa: An Incomplete Initiative. GIGA Focus Afr.
Lesher, M., Miroudot, S., 2006. Analysis of the Economic Impact of Investment Provisions in Regional Trade Agreements (OECD Trade Policy Papers No. 36). https://doi.org/10.1787/322248021805
Lipsey, R.E., Sjöholm, F., 2004. Foreign direct investment, education and wages in Indonesian manufacturing. J. Dev. Econ. 73, 415–422. https://doi.org/10.1016/j.jdeveco.2002.12.004
Lu, Y., Wang, J., Zhu, L., 2015. Do Place-Based Policies Work? Micro-Level Evidence from China's Economic Zone Program. SSRN Electron. J. https://doi.org/10.2139/ssrn.2635851
Mah, L., 2018. PROMOTING PRIVATE SECTOR FOR DEVELOPMENT: THE RISE OF BLENDED FINANCE IN EU AID ARCHITECTURE 28.
Michael Jacobs, 2017. Do Bilateral Investment Treaties Attract Foreign Direct Investment to Developing Countries? A Review of the Empirical Literature. Int. Relat. Dipl. 5. https://doi.org/10.17265/2328-2134/2017.10.001
Mösle, S., 2019. Special Economic Zones – An ef- fective instrument for growth in Africa? 4.
Nocke, V., Yeaple, S., 2007. Cross-border mergers and acquisitions vs. greenfield foreign direct investment: The role of firm heterogeneity. J. Int. Econ. 72, 336–365. https://doi.org/10.1016/j.jinteco.2006.09.003
Nunnenkamp, P., Bremont, J.E.A., 2007. FDI in Mexico: An empirical assessment of employment effects [WWW Document]. Kiel Work. Pap. No 1328. URL https://www.econstor.eu/bitstream/10419/4019/1/kap1328.pdf (accessed 7.31.19).
OECD, 2019. Local content requirements.pdf.
OECD, World Economic Forum, 2015. Blended finance Vol. 1: A primer for development finance and philanthropic funders [WWW Document]. URL https://static1.squarespace.com/static/549ae273e4b0d1a214a4482b/t/5b1e64f5575d1f68caec5367/1528718587784/WEF_Blended_Finance_A_Primer_Development_Finance_Philanthropic_Funders_report_2015.pdf (accessed 7.31.19).

OECD-DAC, 2017. Amounts Mobilised from the Private Sector by Official Development Finance Interventions Guarantees, syndicated loans, shares in collective investment vehicles, direct investment in companies and credit lines.

Onaran, O., 2008. Jobless Growth in the Central and East European Countries: A Country-Specific Panel Data Analysis of the Manufacturing Industry. East. Eur. Econ. 46, 90–115. https://doi.org/10.2753/EEE0012-8775460405

Pereira, J., 2017. Blended Finance: What it is, how it works and how it is used 52.

Pinn, S.L.S., Ching, K.S., Kogid, M., Mulok, D., Mansur, K., Loganathan, N., 2011. Empirical Analysis of Employment and Foreign Direct Investment in Malaysia: An ARDL Bounds Testing Approach to Cointegration. Adv. Manag. Appl. Econ. 1, 77–91.

Poole, J.P., 2013. Knowledge Transfers from Multinational to Domestic Firms: Evidence from Worker Mobility. Rev. Econ. Stat. 95, 393–406. https://doi.org/10.1162/REST_a_00258

Rizvi, S.Z.A., Nishat, M., 2009. The Impact of Foreign Direct Investment on Employment Opportunities: Panel Data Analysis (Empirical Evidence from Pakistan, India and China). Pak. Dev. Rev. 48, 841–851. https://doi.org/10.30541/v48i4IIpp.841-851

Rojec, M., Knell, M., 2018. Why is there a lack of evidence on knowledge spillovers from foreign direct investment?: Lack of evidence on knowledge spillovers. J. Econ. Surv. 32, 579–612. https://doi.org/10.1111/joes.12207

Sharma, A., Cardenas, O., 2018. The Labor Market Effects of FDI: A Panel Data Evidence from Mexico. Int. Econ. J. 32, 572–588. https://doi.org/10.1080/10168737.2018.1547322

Sharma, S., 2018. Does Plant Size Matter? Differential Effects of Foreign Direct Investment on Wages and Employment in Indian Manufacturing. Asian Dev. Rev. 35, 52–80. https://doi.org/10.1162/adev_a_00105

Sjöholm, F., Lipsey, R.E., 2006. Foreign Firms and Indonesian Manufacturing Wages: An Analysis with Panel Data. Econ. Dev. Cult. Change 55, 201–221. https://doi.org/10.1086/505723

Stacey, B., 2019. Blended Finance in the Least Developed Countries 2019 72. https://doi.org/10.1787/1c142aae-en.

Steenbergen, V., Javorcik, B.S., 2017. Analysing the impact of the Kigali Special Economic Zone on firm behaviour [WWW Document]. URL https://www.theigc.org/wp-content/uploads/2017/10/Steenbergen-and-Javorcik-working-paper-2017_1.pdf (accessed 8.12.19).

Stiebale, J., Vencappa, D., 2018. Acquisitions, markups, efficiency, and product quality: Evidence from India. J. Int. Econ. 112, 70–87. https://doi.org/10.1016/j.jinteco.2018.02.005

Taglioni, D., Winkler, D., 2016. Making Global Value Chains Work for Development 289.

Tuomi, K., 2012. Review of Investment Incentives: Best Practice in Attracting Investment.

UNCTAD, 2019. World Investment Report 2019: Special Economic Zones. World Invest. Rep. 237.

UNCTAD, 2015. Enhancing the Contribution of Export Processing Zones to the Sustainable Development Goals - An analysis of 100 EPZs and a Framework for Sustainable Economic Zones.

Wang, J., 2013. The economic impact of Special Economic Zones: Evidence from Chinese municipalities. J. Dev. Econ. 101, 133–147. https://doi.org/10.1016/j.jdeveco.2012.10.009

Wang, J., Wang, X., 2015. Benefits of foreign ownership: Evidence from foreign direct investment in China. J. Int. Econ. 97, 325–338. https://doi.org/10.1016/j.jinteco.2015.07.006

Wells, L.T. (Ed.), 2001. Using tax incentives to compete for foreign investment: are they worth the costs?, Occasional paper / Foreign Investment Advisory Service. World Bank, Washington, DC.

World Bank, 2017. Special Economic Zones An Operational Review of Their Impacts.