

# Foreign Direct Investment and Employment Outcomes in Developing Countries



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## A Literature Review of the Effects of FDI on Job Creation and Wages

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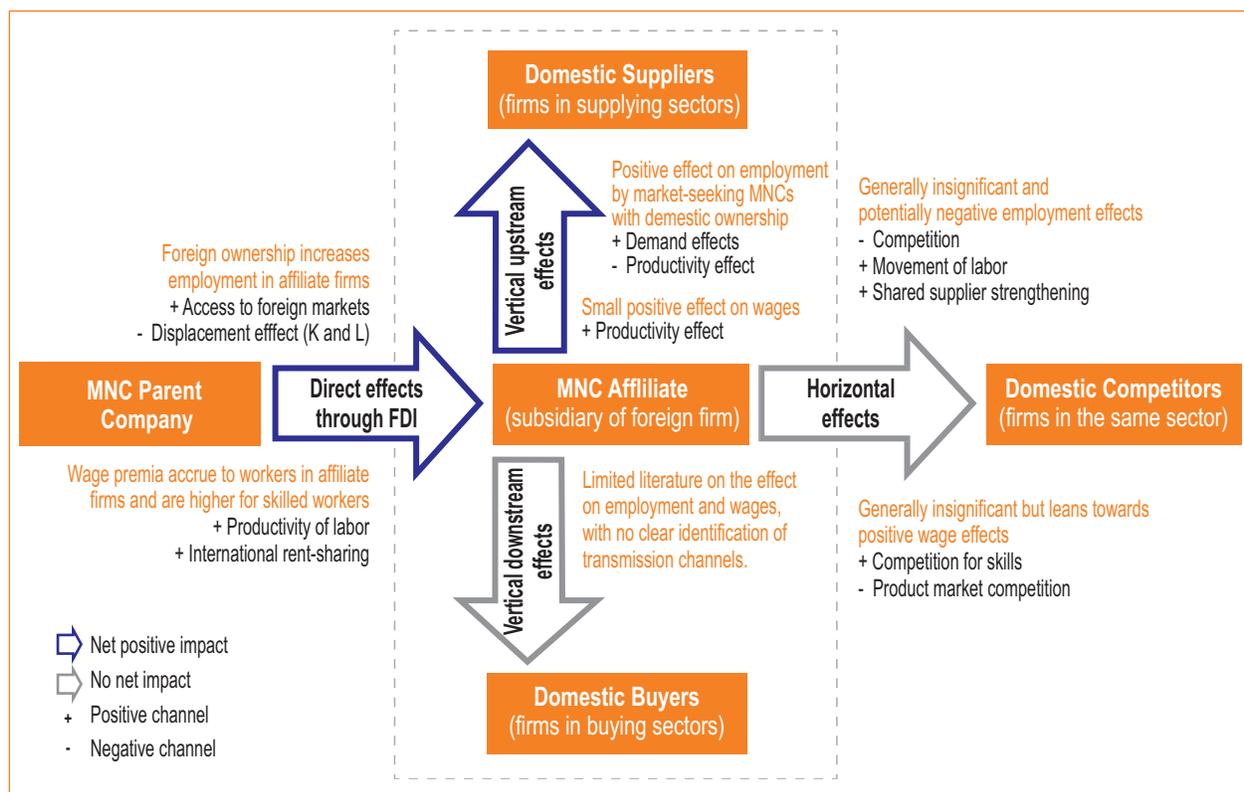
<b>INTRODUCTION</b>	<b>4</b>
<b>THE EMPLOYMENT EFFECT OF FDI</b>	<b>5</b>
<b>THE WAGE EFFECT OF FDI</b>	<b>10</b>
<b>LIMITATIONS OF EXTANT LITERATURE AND FUTURE DIRECTIONS</b>	<b>12</b>
<b>CONCLUSION</b>	<b>14</b>
<b>REFERENCES</b>	<b>15</b>
<b>ANNEX A: CHANNELS OF EMPLOYMENT AND WAGE EFFECTS AND NUMBER OF REVIEWED STUDIES</b>	<b>21</b>





This survey of literature explores the heterogeneous effect of FDI on employment outcomes in three types of domestic firms: foreign-owned local firms that are affiliates of multinational corporations (MNCs), local firms that are suppliers to or customers of MNC affiliates, and local firms that compete with MNC affiliates (figure 1). Confirming expectations from FDI to create new and better paying jobs, evidence suggests that foreign-owned firms positively affect employment generation in affiliate firms. The gap between wages in domestic firms and foreign firms is larger for high skilled workers. For firms in upstream sectors (that is, suppliers of MNCs) there is a sizeable increase in jobs but only modest wage growth. The effect on domestic competitors, both in terms of jobs and wages is muted. The type of FDI, domestic firms' size, domestic ownership share, and the sector's technological capacity, are important conditioning factors. While various transmission channels are postulated, their presence has not been adequately examined in the empirical literature. Future research should more robustly attribute impacts to specific employment channels.

**Figure 1: Key Findings Regarding the Effect of FDI on Employment Outcomes**



Source: Authors' representation based on review of literature.  
 Note: FDI = foreign direct investment.

## Introduction

**Foreign direct investment (FDI) is the largest source of external financing to developing countries**, greater than the contributions of remittances, private debt and portfolio equity, or official development assistance (UNCTAD, 2019).<sup>1</sup> Higher FDI inflows can ease capital constraints and contribute to output and employment growth. FDI is also likely to increase aggregate productivity through positive productivity spillovers and technology transfers. FDI deepens trade linkages (Freund & Pierola, 2012; Moran, 2014; Swenson, 2008): Inter- and intrafirm trade conducted by MNCs account for about three-fourths of global exports (UNCTAD 2013). Thus, it can be a significant driver of economic growth.<sup>2</sup>

**Prior research has shaped the expectation that FDI affects economic growth.** Cross-country studies covering developing economies suggest that FDI has a significant contribution to income and economic growth (Blomstrom, Lipsey, & Zejan, 1994; Borensztein, De Gregorio, & Lee, 1998; Hansen and Rand 2006). Thus, unsurprisingly, in anticipation of more formal sector jobs, policymakers in developing countries seek to attract, retain, and expand FDI stock. To facilitate inward flows of FDI, governments undertake reforms to simplify their trade and investment policy regimes, improve the business environment, and offer investment incentives. The investment climate of an economy plays a key role in determining the benefits from FDI (Farole & Winkler, 2014).

**Increases in FDI have been shown to directly contribute to job growth<sup>3</sup>, drawing in surplus labor from the agriculture sector.** Craigwell (2006)

finds a one-to-one Granger-causal relationship from FDI flows to employment in a sample of 20 Caribbean countries.<sup>4</sup> Fu and Balasubramanyam (2005) find empirical support for the ‘vent for surplus’ theory (Smith, 1776; Myint, 1958) of global trade using the case of China. Their results show that export growth in the labor-intensive manufacturing sector, assisted by FDI, generated the demand for excess labor and productive capacity. Targeted investment promotion in developing countries has been found to reduce information asymmetries and lower bureaucratic burden to attract FDI inflows. Thus generating about 68 percent more jobs for MNC affiliates in targeted sectors as compared to non-targeted sectors (Harding & Javorcik, 2011). A review of literature by Rahman (2014) confirms that the evidence points to a positive effect of business entry simplification, tax policy reforms, and investment promotion activities on job creation.

**FDI significantly affects wages in affiliate firms and thus welfare.** Wage premia in MNC affiliates are argued to be driven by the presence of more productive workers (Girma, Greenaway, & Wakelin, 2001; Lejarraga & Ragoussis, 2018), higher wages to prevent labor turnover (Aitken, Harrison, & Lipsey, 1996; Fosfuri, Motta, & Ronde, 2001), and rent-sharing between MNCs and their affiliates (Budd, Konings, & Slaughter, 2005; Egger & Kreickemeier, 2013). In an analysis examining the impact of MNC presence on economic activity by linking firm-level and household survey data in Vietnam, Turkey and Ethiopia, Steenbergen and Tran (2020) find that the wage benefits from FDI were positive and significant in all three countries. FDI can play an important role in supporting economic transformation in developing countries. MNCs

<sup>1</sup> Totaling US\$700 billion in 2018.

<sup>2</sup> Multinational corporations may choose to locate in developing countries out of a variety of motivations. Dunning and Lundan (2008) identify four sources of FDI motivation. MNCs that enter host economies to exploit locally available natural resources, to gain access to local markets, to enhance capabilities by acquiring strategic assets (e.g. technology, brand) of local firms, or for offshoring to save costs through efficiency in internationally distributed production.

<sup>3</sup> fDi Markets tracks cross border greenfield investment globally and estimates that in 2018 greenfield FDI projects created approximately 2.3 million new jobs.

<sup>4</sup> Results remain unaffected (that is, robust) after removing the larger economies of the Caribbean.

often possess superior management practices<sup>5</sup>, technologies, and access to export channels, which can raise domestic firm and sectoral productivity through spillovers (Das, 1987; Fosfuri, Motta, & Ronde, 2001; Wang & Blomstrom, 1992). This enables the private sector in developing countries to create more and better (higher productivity) jobs.

**Few sources provide policymakers and researchers with an integrated view of the employment effects of FDI on developing economies.** FDI affects different market players—MNC affiliates, suppliers, and competitors, through different channels. The growth in production in MNC affiliates can create extra demand for labor in host economies, but may also be accompanied simultaneously by the effects of competition, wage inequality and changes in firm productivity in domestic firms. The overall effect of FDI on employment in developing countries thus depends on the balance of such effects. This note synthesizes evidence on the effect of FDI on job creation and wages, identifying the direction and transmission channels of effects.

## The Employment Effect of FDI (see Figure 2)

### On Affiliate Firms

**Firm-level evidence from developing countries points to a positive employment effect of foreign ownership on affiliate firms.** A review of empirical literature by Javorcik (2015) suggests that FDI inflows generate good jobs through higher wages at the firm level as compared to domestic firms and enhanced firm productivity in developing

countries. In a study of Chinese manufacturing firms, Karlsson et al. (2009) find that MNC affiliates experience higher employment growth compared to domestic firms in the same sector, as a result of firm characteristics such as high capital intensity and productivity, and in particular through access to export markets. Using similar data<sup>6</sup>, Gong, Görg and Maioli (2006) find that foreign ownership of former state-owned enterprises (SOEs) results in higher employment growth in the post-acquisition period as compared with non-acquired SOEs. Such firms have average growth rate differentials of about 5.5 percent in the 75<sup>th</sup> quantile and 12.5 percent in the 90<sup>th</sup> quantile of the employment growth distribution. Lipsey, Sjöholm, and Sun (2010) find that Indonesian manufacturing plants<sup>7</sup> taken over by foreign owners experience significantly higher employment growth than their domestic counterparts.<sup>8</sup> Hijzen et al. (2013) find similar results in Indonesia, estimating that foreign takeovers raise employment by 25 percent and lean towards more skilled workers with a significant decline in low-skilled employment. New cross-country<sup>9</sup> evidence (Ragoussis 2020) suggests that brownfield investments expand employment at a rate more than double that of similar domestic firms.

**Despite substantial FDI inflows, longer-term employment creation in affiliate firms can be limited in developing countries.** Mexico attracted greenfield investments in the automobile sector, resulting in several export-oriented manufacturing units that catered to foreign markets (primarily the United States). In this offshoring model, Ramirez (2000) finds that FDI was used towards capital-intensive, computer-aided manufacturing, which had a limited labor demand effect on the domestic economy. Furthermore, Farole and Winkler (2014)

<sup>5</sup> For example, the use of wage incentives for good performance and the removal of less productive workers (Bloom & van Reenan, 2010).

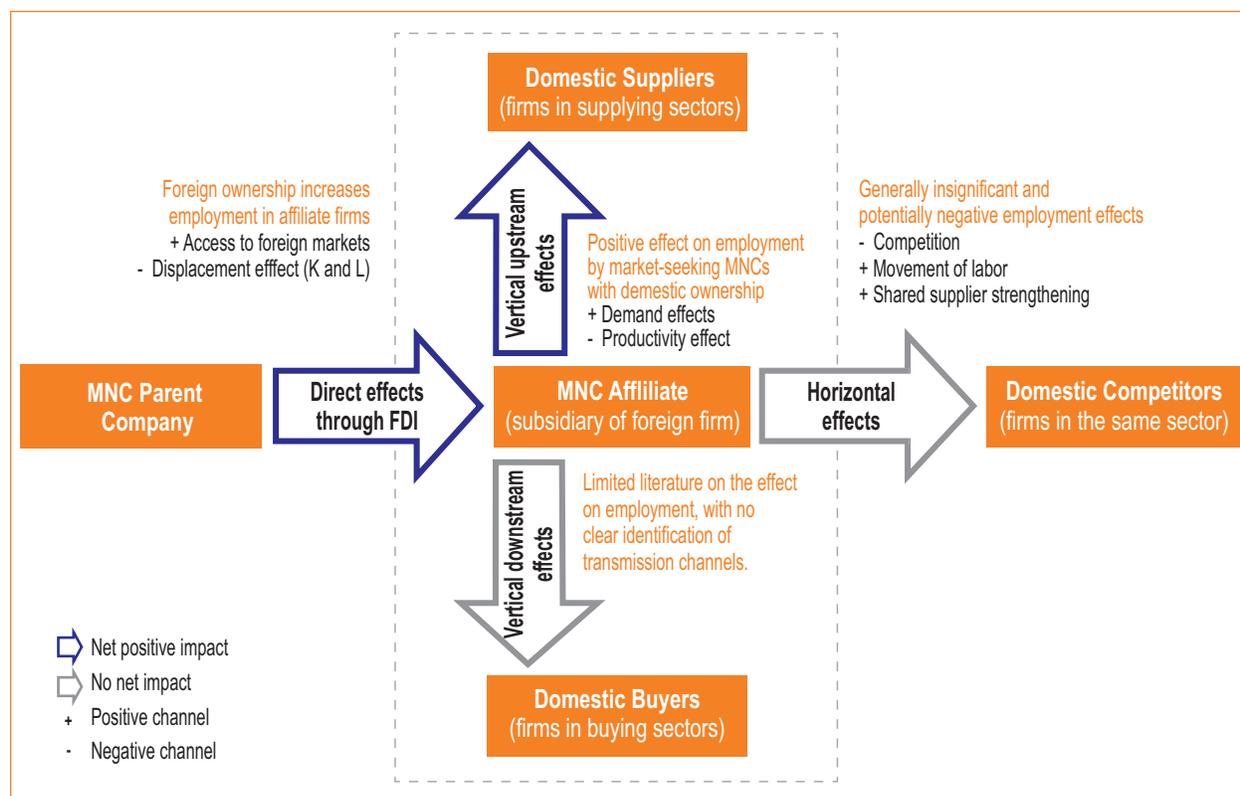
<sup>6</sup> China Industrial Enterprise Data 1998-2004 by Karlsson et al. 2009 and 1999-2003 by Gong, Görg and Maioli (2006).

<sup>7</sup> Panel data of Indonesian manufacturing plants from 1975-2005.

<sup>8</sup> No significant employment effects were observed when foreign-owned firms became domestically owned.

<sup>9</sup> China, Indonesia, Vietnam, Cote d'Ivoire, Serbia and Moldova.

**Figure 2: Effect of FDI on Employment**



Source: Authors' representation based on review of literature.  
 Note: FDI = foreign direct investment.

find survey evidence that foreign investors prefer highly skilled local staff in situations in which the linguistic distance between the FDI source and destination countries is high, but this is only to a limited degree. To preserve corporate culture and maintain effective communications with the head office, certain positions in MNC affiliates are set aside for foreign nationals and not open to local technical and managerial staff.<sup>10</sup>

### Transmission Channels

**Access to Foreign Markets:** MNCs are a central feature of GVCs, often as lead firms in international production networks (WDR, 2020). Their exposure to international markets is higher than domestic

firms (Lipsey, Sjöholm, & Sun, 2010), particularly in the case of efficiency-seeking foreign investors who organize GVCs to leverage input cost advantages. As Haddad and Harrison (1993) find, between foreign-owned and domestic firms in Morocco, foreign-firms tend to be more export oriented. By their nature MNC affiliates are adept at leveraging higher exposure to international markets (a source of competitive advantage over domestic firms), which facilitates employment generation (Karlsson et al. 2009).

**Displacement Effect:** Foreign firms tend to be more capital-intensive than domestic firms, leveraging more technological inputs and less labor

<sup>10</sup> Foreign Investor Surveys conducted by the International Trade Department of the World Bank in Chile, Ghana, Kenya, Lesotho, Mozambique, Swaziland and Vietnam. Surveyed firms' profile: agribusiness (46), apparel (13), mining (5).

for production. Assessing the employment effect of FDI in the Vietnamese manufacturing sector, Jenkins (2006) argues that foreign firms can displace local investment resulting in less labor-intensive production with lower employment. When FDI involves acquisition of local firms (brownfield), rather than greenfield investments in new plants, there is no initial increase in employment. In fact, further jobs may be lost as MNCs enhance labor productivity through rationalization or strategic reorganization. Research in Central and Eastern European countries has shown that FDI induced competitive pressures and the introduction of labor-saving technology led to job losses during 1995 and 2012 (Jude & Silaghi, 2015).

## On Suppliers

**In addition to jobs created directly in MNC affiliates, additional jobs may be created through upstream inter-industry linkages.** The employment generated through MNC-supplier relationships depends on the extent of upstream linkages. For example, Jenkins (2006) analyze the employment effect of FDI in the Vietnamese manufacturing sector and find that the employment effect on upstream sectors was limited due to weak local linkages. Foreign firms in the study primarily relied on imports, as evidenced by substantially higher import shares compared to domestic counterparts.

**The exclusivity of sourcing relationships, value chain configurations, and domestic ownership are important factors conditioning employment effects in upstream sectors.** Exclusive supply relationships imply that new procurement linkages are formed at the expense of relationships between domestic firms and their former suppliers, limiting employment creation (Rodriguez-Clare, 1996; Lin & Saggi, 2005). Hansen, Pederson, and Peterson (2009), using data from Danish MNCs located in developing countries, find that MNCs with more dispersed value chains create more jobs through

supplier linkages in comparison to MNCs with globally integrated value chains. Farole and Winkler (2014) use survey data<sup>11</sup> on direct MNC-supplier linkages from seven countries and find that they develop fewer linkages with the local economy in terms of inputs and workers (technical services, transport, cleaning, catering and other services had a higher potential for linkages). Furthermore, MNC affiliates with higher share of domestic ownership are more likely to create linkages with the local economy (Toth & Semjem, 1999) as compared to wholly-owned subsidiaries and firms relying exclusively on foreign technologies (Sanchez-Martin, de Pinies, & Antoine, 2015).

**Some evidence suggests that certain modes of entry (joint ventures and acquisitions) and market-seeking FDI are better positioned to establish supplier linkages.** Using the case of Japanese electronics manufacturing MNCs with affiliates in 24 countries, Belderbos, Capannelli and Fukao (2001) show that MNC affiliates instituted through joint ventures and acquisitions utilize more local content in their production than those established via greenfield investment, due to the former's higher embeddedness in the local economy. Similarly, MNC affiliates selling more of their output in domestic markets utilized more local content, suggesting that domestic market-seeking investments better leverage local suppliers. Using the World Bank Enterprise Survey data for the Caribbean, Sanchez-Martin, de Pinies and Antoine (2015) find that market-seeking investors are more inclined to establish backward linkages than export-seeking investors, and a significant negative relationship exists between the share of domestic inputs and the share of exports. Based on investor survey data, Farole and Winkler (2014) also find a positive relationship between market-seeking FDI, share of sales in the host country, and the probability of supplier assistance. A higher degree of domestic ownership was associated with higher local sales and supplier assistance.

<sup>11</sup> Foreign Investor Surveys conducted by the International Trade Department, World Bank in Chile, Ghana, Kenya, Lesotho, Mozambique, Swaziland and Vietnam. Surveyed firms' profile: agribusiness (46), apparel (13), mining (5).

**While more empirical attention is needed, theoretical work sheds light on the factors that may condition employment effects in upstream sectors.** The distance (that is, cost of communication) between the MNC parent and affiliate, the complexity of the production process, the sectors receiving FDI inflows, the size of the host economy, and the level of development of the source and host countries, can be important factors conditioning employment effects on suppliers. Alfaro (2016) demonstrates that FDI's positive impacts are not exogenous but contingent on complementarities such as a competitive business environment or well-developed financial markets that ensure the conversion of vertical upstream relationships into robust linkages. Rodriguez-Clare (1996) argues that greater physical, cultural and legal distance from parent MNCs creates stronger incentives for affiliates to create domestic supplier linkages to source specialized intermediate goods. Similarly, linkages are likely to be stronger if MNC affiliates intensively use intermediate inputs. Sanchez-Martin, de Pinies and Antoine (2015) find that in the Caribbean, food, wood and furniture, and automobile and auto parts sectors tended to develop more backward linkages as compared to garments, electronics, and some service sectors, where there was a low level of dependence on local suppliers. Additionally, smaller economies (such as those in the Caribbean) usually have a limited number of firms with the capabilities required to supply to MNCs affiliates, thereby resulting in fewer linkages with local firms. A smaller destination market also implies that the FDI is essentially efficiency-seeking and export oriented. Finally, more developed host countries with firms capable of supplying MNC affiliates, offer better conditions for MNC affiliates to establish linkages with upstream sectors. Lin and Saggi (2005) show that the degree of MNC linkages with upstream sectors depends on the technological gap between MNC affiliates and their competitors. They argue that additional demand from MNCs only outweighs decreased demand from affiliates' local competitors (who lose market share) when technology gaps are sizeable.

## **Transmission Channels**

**Demand Effects:** FDI often increases demand for locally-produced intermediate goods (Javorcik, 2004). Local suppliers may increase employment to raise output in order to meet this increased demand. Lin and Saggi (2005) develop a theoretical model in which the effect can run in both directions. That is, the net effect of FDI on supplier output depends on whether the increased demand from MNCs outweighs decreased demand from domestic competitors due to exclusivity restrictions in MNC sourcing or the decline in demand from domestic firms that have lost market share to MNC affiliates. However, most literature on the topic tends to find positive effects of FDI on the output of supplying firms in upstream sectors (for example: Blalock and Gertler, 2008).

**Productivity Effect:** MNC affiliates are often 'pickier' in their choice of suppliers, demanding tighter timelines, higher quality, and lower costs. This may induce productivity improvements both at the individual firm level and via compositional effects at the sector level pushing less productive suppliers out of the market (Crespo & Fontoura, 2007; Javorcik, Keller, & Tybout, 2006). While such productivity improvements may be good for firm competitiveness and profitability, they may actually lead to employment declines as less labor is needed per unit of output (Javorcik, Keller, & Tybout, 2006).

## **On Competitors**

**FDI's effect on employment in domestic competitor firms is estimated to be null to moderately negative.** Reyes (2017), using World Bank Enterprise Survey data from 121 economies, finds that the presence of foreign firms in the sector does not have a significant effect on employment growth for the average firm. However, a small section of same sector, high-growth firms experience gains from the presence of MNCs. High-growth firms are enterprises located in the top fifth percentile of the distribution of employment growth in a country.

The author posits that such firms are better able to internalize productivity-enhancing technologies and counterbalance additional competition from MNCs.

**Some studies analyze FDI's effect on competitors' output and productivity and find insignificant or negative effects driven by loss of market share to MNC affiliates** (Irsova & Havranek, 2013; Javorcik, Keller, & Tybout, 2006). If the demand for labor moves with production, then null or negative effects on output would translate into similar effects on jobs. The net effect on jobs would depend on firm productivity, whereby if domestic firms are able to produce more efficiently, additional labor may not be needed. However, if the loss of market share drives productivity downwards, more labor would be required.

**FDI may induce increases in employment among competitor firms under special circumstances.** Looking at Indonesian manufacturing firms, Blalock and Gertler (2008) find that Indonesian firms which share suppliers with MNC affiliates experience an increase in production. Similarly, analyzing data from Ghanaian manufacturers, Görg and Strobl (2005) observe increases in output among firms founded by entrepreneurs who had previously worked at MNC affiliates in the same industry.

### **Transmission Channels**

**Competition:** The presence of MNC affiliates increases competitive pressures on domestic firms in the same sector. Competition can affect domestic firms both positively and negatively. On the one hand, domestic firms are likely to invest in improved production techniques to compete and maintain market share (Blyde, Kugler, and Stein 2005; Glass and Saggi 2002; Görg and Greenaway 2004;

Wang and Blomstrom 1992). On the other hand, with higher capital stocks and more sophisticated technologies, MNC affiliates can gain market share at the expense of domestic competitors (Aitken & Harrison, 1999). If the latter effect dominates, employment levels in domestic competitors are likely to decrease as they lose market share and reduce production scale.

**Shared Supplier Strengthening:** MNC affiliates and their competitors in the same sector may rely on a shared set of suppliers for inputs. FDI often leads to positive productivity effects on upstream sectors as MNC affiliates invest in local suppliers or induce the entry of new suppliers (Havranek & Irsova, 2011). Consequently, suppliers enhance the quality of products and services, and the entry of new suppliers lowers prices for all buyers, including domestic competitors (Gorodnichenko, Svejnar, & Terrell, 2007; Kee, 2014). As Blalock and Gertler (2008) suggest, for competitors that share suppliers with MNCs, the availability of higher-quality and/or cheaper inputs may in turn increase output and therefore jobs.

**Movement of Labor:** New technologies and management practices can diffuse to domestic firms when employees of MNC affiliates leave to join competitors. Such knowledge spillovers may occur from the migration of both managers and high-skilled employees with knowledge of best practices (Görg and Strobl, 2005; Glass and Saggi, 2002; Poole 2013) and workers, who have undergone productivity enhancing training (Fosfuri, Motta, & Ronde, 2001; Glass & Saggi, 2002). Benefitting from specialized knowledge, local competitors are likely to gain domestic market share as well as in export markets, in turn increasing production and employment.

## The Wage Effect of FDI (see Figure 3)

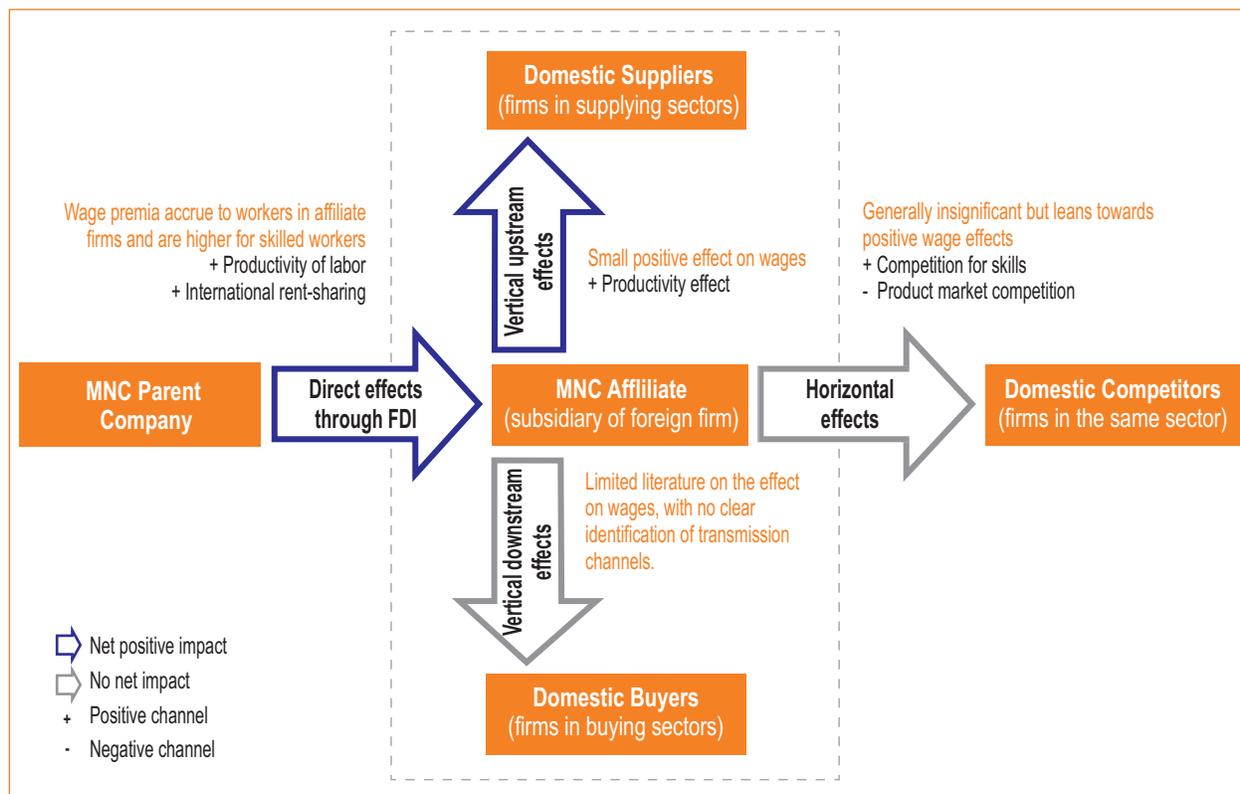
### On Affiliate Firms

Consistent evidence suggests that the effect of foreign ownership on workers' wages in MNC affiliates is positive in developing countries. This is a well-studied relationship with empirical literature offering broad coverage of developing regions, including East Asia and the Pacific, Latin America and the Caribbean, and Sub-Saharan Africa. The research primarily leverages manufacturing sector census and sample survey data, by national statistical agencies and multilateral organizations.

In East Asia, wage premia accrue to all manufacturing workers in foreign-owned firms

but are significantly higher for workers with advanced skills. Using cross-sectional data from Indonesia's manufacturing sector, Lipsey and Sjöholm (2004) find that foreign-owned firms paid higher wages for workers at a given education level as compared to domestic firms. The wage premium reveals that foreign firms may be biased in favor of more educated workers and offer higher wages. Lending further support to the skill-biased wage premium argument, Harrison and Scorse (2009), Lee and Wie (2015) and Hale and Long (2011) find that in Indonesia and China respectively, skilled workers command sizeable wage premia.<sup>12</sup> Hijzen et al. (2013) find that firms taken over by MNCs pay on average about 21 percent more than their domestic counterparts and the difference grows over time. These findings are broadly replicated in other regions: In Latin America (Aitken, Harrison, & Lipsey, 1996)

Figure 3: Effect of FDI on Wages



Source: Authors' representation based on review of literature.  
 Note: FDI = foreign direct investment.

<sup>12</sup> Indonesia: 20-30 percent; China: 51 percent for managers, 30 percent for engineers.

and in Africa (Velde & Morrissey, 2003) higher FDI is associated with 16 to 40 percent increases in wage premia compared to domestic ownership.

**Evidence suggests that FDI increases wage inequality.** The capital-intensive production in foreign-owned firms generates greater demand for skills, pushing relative wages up for higher skilled workers (World Bank, 2020). Examining the effect of service sector liberalization in the Philippines, Amoranto, Brooks and Chun (2010) find that the reforms may have potentially been harmful for less skilled individuals, while creating more employment opportunities for men with higher skills. In Vietnam, McLaren and Yoo (2016) investigated the effects of FDI inflows on income distribution and absolute living standards from 1989—2000. Their findings suggest that an increase in FDI in a province was associated with a slight decline in living standards for households that did not have a member employed by the foreign-owned enterprise, while indicating modest gains for households whose member(s) were employed by the affiliate. On the contrary, Cornia (2016) find that in Ethiopia, Ghana and Mozambique, FDI in labor-intensive manufacturing and infrastructure sectors increased the integration of domestic and international markets and reduced inequality through employment growth in labor-intensive sectors.

### Transmission Channels

**Productivity of Labor:** The main argument for higher wages paid to workers in foreign-owned firms is one of higher marginal productivity. Various authors postulate that MNC affiliates affect wages through the productivity channel (Aitken, Harrison, & Lipsey, 1996; Girma, Gong, Gorg, & Lancheros, 2015; Earle, Telegdy, & Antal, 2018; Peluffo, 2014; Javorcik B. S., 2015). MNC affiliates hire more productive workers and thus must remunerate at rates higher than their domestic counterparts. Higher initial wage offers may persist over time to retain more productive workers and to prevent labor turnover (Fosfuri, Motta, & Ronde, 2001; Glass & Saggi, 2002).

**International Rent-Sharing Mechanisms:** Higher wages paid by foreign affiliate firms can also be attributed to profit-sharing across borders within multinational firms. Cross-border flows of capital, labor, goods and information may exert strong influences on the nature of profit-sharing between firms and workers. Budd and Slaughter (2004), Budd, Konings and Slaughter (2005) and Hildreth and Oswald (1997), using data on European and British firms, find that parent firms share profits with their foreign affiliates and the degree of rent-sharing through wages is stronger in the case of majority-owned MNC affiliates. Using a two-country model, an analytically tractable general equilibrium model with MNCs, Egger and Kreickemeier (2013) demonstrate that MNCs pay higher wages in their affiliate firms, when compared to domestic players, due to higher global profits.

### On Suppliers

**The few studies that have investigated the role of FDI presence on wages in upstream sectors find a small positive effect.** Using firm-level manufacturing data from Turkey, Fatima and Khan (2018) find that higher foreign presence is associated with a positive effect on the wage bill in domestic firms that supply inputs to MNC affiliates—an indication of increasing labor welfare from MNC linkages. Their estimates suggest that a one percentage point increase in backward linkages (inter-sectoral linkages between MNC affiliates and domestic suppliers) results in a 0.7 percent increase in the total firm wage bill.

**The size of the firm and technological level of the sector are important factors conditioning wage effects from FDI presence in upstream sectors.** Hoi and Pomfret (2010) shed light on the role of firm heterogeneity on vertical wage effects using firm-level data from the mining, manufacturing, and utilities sectors in Vietnam. Their estimates show that a greater presence of foreign firms is positively related to higher wages in domestic private firms in upstream sectors. They explain their results in light of possible productivity and technological spillovers from foreign firms accruing to domestic private

firms that push wages upwards. Firms experiencing greater wage effects are smaller (fewer than 100 employees) and in lower technology sectors (such as textiles, food and beverage).

The technological gap<sup>13</sup> between foreign and domestic firms is likely an important determinant of the extent of upstream wage effects. Beginning with Hoi and Pomfret (2010), smaller wage effects are observed from wide technological gaps between foreign and domestic upstream firms. While no studies leveraging data from developing countries were found to explore this factor, Pittiglio, Reganati, and Sica (2015) investigate this question using Italian manufacturing sector data. The authors show that when the technological gap between MNC affiliates and suppliers is large, wages are negatively affected in upstream sectors. Conversely, positive wage effects materialize when the technological gaps are smaller.

### Transmission Channels

**Productivity Effect:** The inter-sectoral linkages between MNC affiliates and domestic suppliers can be a conduit for productivity enhancement (Fatima & Khan, 2018). Time, quality, and cost requirements imposed by MNCs on local suppliers are argued to induce productivity improvements both at the individual firm level and via compositional effects at the industry level pushing less productive suppliers out of the market (Crespo & Fontoura, 2007; Javorcik, Keller, & Tybout, 2006).<sup>14</sup> The productivity increase among suppliers thus exerts an upwards pressure on real wages.

### On Competitors

**The literature on horizontal (intra-industry) wage effects resulting from the presence of foreign firms is limited and points towards a positive effect in developing countries.** MNC affiliates typically deploy more technologically

advanced production processes, increasing demand for skilled workers. In developing countries, the supply of required skills can be limited. In the short to medium run, this supply is inelastic and can drive wages for skilled workers upwards in the sector (Hale & Xu, 2016). Some empirical work confirms that the competition for skills leads to higher wages for skilled workers in the sector (Hale & Long, 2011; Lipsey & Sjöholm, 2001; Feliciano & Lipsey, 1999). Hale and Long (2011), using Enterprise Survey data in China, find that the presence of FDI in the same sector and region affects wages of skilled workers in private firms but does not affect those of unskilled workers or workers in SOEs. Using manufacturing data from Indonesia, Tomohara and Takii (2011) show that foreign-owned firms increase local employee wages by elevating reference wages. Employees in local establishment realize that they are underpaid compared to the reference wage and negotiate for higher wages. In manufacturing firms in Turkey, Fatima and Khan (2018) find that higher foreign presence is associated with a small positive increase in the wage bill (includes wages, salaries, allowances, overtime payments, social contributions, etc.) in firms in the same sector—confirming horizontal wage effects. Estimates suggest that a one percentage point increase in foreign presence in a sector results in a 0.15 percent increase in the total real wage bill in that sector.

**Evidence from Latin America on wage effects resulting from the presence of foreign firms on same sector domestic firms is mixed.** Using a matched establishment-worker database from Brazil covering manufacturing, services and utilities sectors, Poole (2013) presents evidence on positive wage effects due to labor turnover from MNCs to domestic firms. In contrast, in a comparative study including Mexico, Venezuela, and the United States, Aitken, Harrison, and Lipsey (1996) find that in the manufacturing sector, while there is no evidence of higher FDI presence (employment in the sector) resulting in wage effects for same sector firms in

<sup>13</sup> Defined as the difference in labor productivity between firms in a certain industry during a certain time.

<sup>14</sup> Recall from the discussion of productivity spillovers affecting employment outcomes in upstream sectors that MNC affiliates are often 'pickier' in their choice of suppliers.

Mexico and Venezuela, such effects are significant only in the case of the United States.

**The effect of FDI on wages in same sector domestic firms may occur within a geographically limited area.** Using data from a manufacturing census in Indonesia, Lipsey and Sjöholm (2001) find suggestive evidence of regional segmentation in the wage effect of FDI in a sector. Since labor mobility is more prevalent among firms within a province than across provinces, the authors argue that any wage effect should be localized. Their empirical results confirm this argument and show that FDI presence affects wages within the same two-digit industry sector in the same province but not across provinces. Hoi and Pomfret (2010) lend further support to the localized nature of wage effects from FDI in Vietnam.

### Transmission Channels

**Competition for Skills:** If FDI increases demand for skilled labor in a sector then, in labor markets with inelastic labor supply, wages for skilled workers are likely to increase (Hale & Xu, 2016). This upward pressure on wages is likely a short- to medium-term effect, as domestic competitors adjust to increased wages. Skilled workers may gravitate towards foreign firms in response to higher wage offers. To cope with increased wage competition for skilled workers, domestic firms are likely to substitute skilled with lower skilled workers to preserve the average costs of production (Barry, Görg, & Strobl, 2005). Such a change in the skill-mix would have a downward effect on average wages in domestic firms. The net effect depends on the degree of competition for skills and the ability of competitors to substitute away skilled workers.

**Competition:** The competition between foreign and domestic firms in product markets (Barry, Görg, & Strobl, 2005) can affect wages. Being

more technologically advanced, market-seeking foreign investors gradually gain market share at the expense of domestic producers, such that over time the output produced by incumbent domestic firms decreases. Such a change pushes firms up the average cost curve and reduces labor productivity, resulting in a reduction in wages.

### Limitations of Extant Literature and Future Directions

**To estimate the causal effects of FDI on employment outcomes (that is, employment and wages) in MNC affiliates, time series firm-level data with employer-employee matches are a requirement.** Lack of such data in developing economies has been a key limitation. Investigating the relationship between FDI and its employment outcomes is complicated by selection bias, induced by the non-random foreign ownership of firms in host economies.<sup>15</sup> This issue has been characterized as the “cherry-picking” phenomenon, in which MNCs select firms that are more productive and plausibly have higher growth prospects. Such firms may experience faster employment and wage growth, with or without MNC affiliation and hence it is empirically challenging to identify the causal effects of foreign ownership. Researchers have attempted to overcome this selection issue by using instrumental variables and matching techniques for identification.<sup>16</sup> Few studies have used firm-level panel data, controlling selection by netting out time-invariable unobservable characteristics of firms, to assess the effect of foreign takeover on employment. A few studies have also used employer-employee matched data, where available, to assess the effect of foreign ownership on individual wages. However, the lack of information on worker characteristics (skill level, education, age and so on), constrain the estimation of FDI

<sup>15</sup> The selection issue (Barnow, Cain, & Goldberger, 1980) in foreign ownership: Firms that are identified by MNCs may differ from firms that are not acquired by MNCs on a variety of characteristics, some observable and some unobservable. These characteristics may influence foreign ownership decisions and employment outcomes of the affiliate firm simultaneously. Consequently, an estimate of the impact of foreign ownership on the affiliates' employment outcomes, not controlling for these confounders is likely to be biased.

<sup>16</sup> See Hale and Xu (2016) for an overview of instruments used.

wage premia to only two skill groups, omitting other dimensions of worker heterogeneity.

**Key aspects of the employment effect in the relationship between MNC affiliates and local suppliers are also under-studied.** While research has shed some light on the positive job creation effect of FDI on domestic firms in upstream sectors, literature is relatively silent on the wage effects in such firms. As Lin and Saggi (2005) suggest, a lack of theoretical models that provide empirical predictions is a plausible first step in future research. This is likely driven by the nascent understanding of vertical relationships between MNC affiliates and their domestic suppliers. The search for and identification of potential suppliers, the type of foreign firms seeking domestic suppliers, and the nature of contractual relationships (e.g. the role and consequence of exclusivity), remain policy-relevant areas for future research attention.

**Another limitation of the literature is the relatively light coverage of heterogeneities and change mechanisms in FDI's effect on job creation and wage effects.** Few studies estimating FDI's employment effects account for heterogeneity across types of FDI (greenfield vs. brownfield), FDI motivation<sup>17</sup>, ownership modalities (joint ventures vs. foreign control), source country/region, industry, and characteristics of domestic firms. Conditions under which FDI leads to positive employment outcomes remain a key area for policy research. Relatedly, few investigations attempt to disentangle the channels through which FDI affects jobs and wages in host economies, seldom exploring the mechanism of change. Part of the issue relates to the lack of detailed microdata that limits policy insights. Furthermore, existing studies largely examine effects in manufacturing in middle-income countries. Services in low-income countries, particularly in Africa, are thus key areas for closer future research. A new and emerging area of research examines the complementary role that service liberalization may play in the improved performance and

increased total factor productivity of downstream manufacturing sectors (Arnold, Javorcik, & Mattoo, 2011; Arnold J. M., Javorcik, Lipscomb, & Mattoo, 2014; Duggan, Rahardja, & Varela, 2013). Finally, the effects in downstream sectors, on buyers and distributors have received relatively little attention.

## Conclusion

**This note synthesizes evidence on the effect of FDI on job creation and wages in domestic firms in developing countries.** MNC affiliates in developing economies experience a significant increase in both jobs and wages from foreign ownership. The wage effect is larger for high skilled workers. In upstream sectors, the increase in jobs is sizeable but the wage growth is modest. The effect on domestic competitors, both in terms of jobs and wages is muted. The type of FDI, domestic firms' size, domestic ownership share, and the sector's technological level, are important conditioning factors. While various transmission channels are postulated to be at work, it remains to examine their presence empirically. Based on this review of literature, postulated channels of effect on job creation and wages are presented in Annex A Table 1 along with the number of studies that were reviewed for this note in Table 2.

**Future research should address gaps in existing literature.** The literature's coverage of the channels through which FDI shapes job creation and wage outcomes and the mediating factors that influence such effects is modest. Additionally, there is limited information on the conditions in host countries and in domestic firms that can lead to greater positive effects in upstream sectors through MNC-supplier linkages. A responsive research agenda could thus focus on illustrative case studies to assess the presence and relative significance of channels through which MNC affiliates affect domestic firms' employment outcomes. These insights could then be leveraged to guide the generation of microdata to support empirical estimation.

<sup>17</sup> Dunning and Lundan (2008) identify four sources of FDI motivation: natural resources in the host country, access to the host country market, strategic assets of firms in the host market, or cost savings through higher production efficiency.



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# Annex A: Channels of Employment and Wage Effects and Number of Reviewed Studies



**Table 1: Employment and Wage Effects by Transmission Channels**

Stakeholder → Transmission Channel ↓	MNC Affiliates	Domestic Competitors	Domestic Suppliers
Access to Foreign Markets	Positive (job creation effect)	-	-
Displacement Effect	Negative (job creation effect)	-	-
Competition Effect	-	Negative (job creation effect) Negative (wage effect)	-
Shared Supplier Strengthening	-	Positive (job creation effect)	-
Movement of Labor	-	Positive (Job creation effect)	-
Demand Effect	-	-	Positive (Job creation effect)
Productivity (of Suppliers) Effect	-	-	Negative (job creation effect)
Productivity of Labor	Positive (wage effect)	-	Positive (wage effect)
International Rent Sharing Mechanism	Positive (wage effect)	-	-
Competition for Skills	-	Positive (wage effect)	-

**Table 2: Reviewed Studies on FDI's Effect on Employment and Wages in Local Firms**

Evidence <sup>18</sup> by Region	Number of Studies	Study Characteristics	Number of Studies
Global	15	Theoretical	11
East Asia and Pacific	18		
Europe and Central Asia	11		
Latin America and Caribbean	7	Empirical	54
Middle East and North Africa	1		
South Asia	2	Literature Reviews	8
Sub-Saharan Africa	4		

<sup>18</sup> Counted studies have strong claims to internal and external validity, which covers characteristics such as country coverage, data reliability, and empirical strategy.

