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Foreign Direct Investment and Value Added in Indonesia

Fredrik Sjöholm

Research Institute of Industrial Economics
P.O. Box 55665
SE-102 15 Stockholm, Sweden
info@ifn.se
www.ifn.se

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Fredrik Sjöholm

Department of Economics, Lund University

The Research Institute of Industrial Economics

Abstract

Foreign Direct Investment (FDI) has increased in importance over the last decades, globally as well as in Indonesia. We examine how such inflows of FDI affects value added in Indonesia. The effect is positive: foreign firms generate relatively high levels of value added and they also seem to have a positive impact on value added in local firms. Moreover, FDI contribute to a structural change of the economy towards more high-value added activities. High value added could lead to increased investments and higher tax revenues for the government. High value added could also benefit labor through higher wages, an effect that is empirically confirmed in Indonesia.

JEL codes: F23; F61; F63

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I. INTRODUCTION

The Indonesian foreign direct investment (FDI) regime has typically been rather restrictive and liberalised only in times of economic difficulties (Patunru and Rahardja, 2015). It is possible, even likely, that the restrictions on FDI have been costly in terms of forgone economic growth and development. FDI can benefit the host country in different ways, all of which work through an impact on value added.

More specifically, there are three main mechanisms through which such an impact on value added may arise. The first is through the capital, technology, management and other resources the foreign firms brings with them, and which will contribute to production and value added. Moreover, foreign firms tend to contribute more than domestic firms to value added because of the special characteristics of multinational enterprises (MNEs). As an example, most new commercial technologies are developed by MNEs. Affiliates of these MNEs bring with them new technology with a positive effect on value added in the host country. Moreover, MNEs have superior international networks and dominate international trade.[2] It follows that FDI will increase the host country's exports and thereby value added and economic growth. Finally, foreign firms will have access to high-quality inputs, which again is likely to increase value added.

The second mechanism is through the types of goods and services that are being produced in the host country. FDI might contribute to a structural change by expanding high value added industries such as manufacturing and high-end service sectors. Such growth will result in use of idle resources or move capital and labour from low value-added sectors to high value-added ones.

The third and final way FDI impacts value added is through its effect on domestic firms. This effect could be either positive, for instance through support of local linkage industries, or

[2] As an illustration, MNEs account for around 10 percent of world output but 30 percent of world trade (UNCTAD, 2007).

negative, for instance because of crowding out effects that force domestic firms to operate at a lower scale.

This chapter discusses FDI in Indonesia and how it impacts value added. We will also examine how it affects other aspects that are related to value added, such as tax revenues, wages, and employment. We start by showing the development of FDI in Indonesia over time and compare it to the development in neighbouring countries. We continue with a more detailed look at the industry distribution of FDI, followed by a comparison of foreign and domestic firms in Indonesia. We then discuss how FDI contributes to a structural shift of the economy towards high value-added activities and also discuss how FDI impacts domestic firms. Our analysis shows that FDI increases value added in Indonesia and we continue by looking at which actors in the economy benefit from this higher value added. Our chapter ends with some concluding remarks and a discussion of the policy implications.

II. FDI IN INDONESIA

FDI inflows played a minor role in Indonesia until the liberalisations in the early 1990s, as seen in Figure 1. The reforms, including relaxed ownership rules and changes in the trade policy contributed to strong growth in FDI. Annual inflows grew by more than 800 percent between 1989 and 1996 when it amounted to more than US$6 billion. The 1997 Asian financial crisis, and the large political and economic turmoil that followed, resulted in the collapse of FDI inflows. In fact, FDI inflows were registered as negative every year except one between 1998 and 2003.[3] Inflows of FDI started to increase again in 2004, and the increase was dramatic. More precisely, FDI inflows in 2005 were higher than at the previous peak in 1996, and they further increased, by another 170 percent, from 2005 to 2014. Moreover, the strong growth continued in 2015, for which data from UNCTAD is not

[3] Negative FDI flows are caused by disinvestments of existing foreign firms.

available: FDI increased by almost 20 percent from 2014 to 2015, according to the Investment Coordinating Board of the Republic of Indonesia (BKPM).[4]

--Figure 1--

The growth of FDI in Indonesia coincides with global growth in FDI. Global FDI flows have for instance been growing more rapidly than international trade (Jungnickel, 2002; Antràs and Yeaple, 2014). However, growth in FDI to Indonesia seems even higher than the global trend. For instance, in 2014 FDI to Indonesia was higher than to any other Southeast Asian country, with the exception of Singapore.[5] Moreover, Indonesia has been among the top 20 receivers of FDI in recent years (UNCTAD, 2013). It seems likely that high inflows of FDI will continue, at least as judged from investors' view on Indonesia (UNTAD, 2013). More specifically, in 2012 Indonesia was ranked as the fourth most popular prospective host country for FDI.

However, the growth of FDI in Indonesia might to some extent be a catching-up effect following historically low inflows of FDI. Figure 2 tries to answer this question by relating the stock of inward FDI to national gross domestic product (GDP) in a number of Southeast Asian countries. Singapore is not included since figures on FDI to Singapore are notoriously unreliable.[6]

FDI as a share of GDP in Indonesia increased from 7 percent in 1990 to 15 percent in 2000 and almost 30 percent in 2014. Despite this growth, the relative amount of FDI in

[4] http://www.tradingeconomics.com/indonesia/foreign-direct-investment

[5] See data from UNCTAD for more information on FDI flows to Southeast Asia. http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx

[6] Singapore is a regional hub for trade and investment and a relatively large share of FDI that are recorded as going to Singapore are in reality re-invested in other countries. As a result, there is a weak link between recorded FDI flows to Singapore and actual economic activities in foreign owned firms in Singapore.

Indonesia is low compared with FDI in other countries in the region. More precisely, it is substantially lower than in Cambodia, Thailand, Viet Nam, and Malaysia; it is at about the same level as in Lao PDR; and it is only higher than in Myanmar and the Philippines.

--Figure 2--

Figures 1 and 2 are based on balance-of-payments data, which measures financial flows rather than real economic activity. Such data is problematic for various reasons (Lipsey and Sjöholm, 2011a). Most importantly, the financial flows are often not originating from the countries to which they are attributed and they often do not end up in the countries that are their supposed destinations. An alternative approach is to look at the share of actual production or employment accounted for by MNEs. Such figures are available in work by Ramstetter (2009) for the manufacturing sector in Indonesia, Malaysia, Thailand, Viet Nam, and Singapore. The foreign share of output is around 40 percent in four out of five countries, including Indonesia, and around 80 percent in Singapore. The shares have increased from previous years in Indonesia and Viet Nam, been relatively stable in Malaysia, and declined in Thailand. Moreover, the foreign share of employment is around 25 percent in Indonesia and Thailand, almost 40 percent in Malaysia and Viet Nam, and more than 50 percent in Singapore.

To sum up the discussion on FDI above, inflows to Indonesia have increased rapidly over the last decades. Part of this increase is presumably caused be a general worldwide increase in FDI and by a catching-up from previously low inflows caused by restrictive policies. Despite the increased inflows, FDI seems to be slightly less important in Indonesia than in many of its neighbouring countries.

The Distribution of FDI in Indonesian Manufacturing

--Table 1—

Table 1 shows the distribution of FDI in Indonesia by sectors. Investments target a broad range of sectors: mining, services (e.g. transport, real estate), and manufacturing (machinery). In this chapter, we focus on FDI in manufacturing, where available data allows for a more detailed analysis. Table 2 presents some descriptive statistics on the industry distribution of Indonesian manufacturing and on the share of foreign value added in different industries. The calculations are based on the Indonesian annual census of large and medium-sized plants, covering all plants with more than 20 employees. Manufacturing value added increased dramatically between 1990 and 2012: by about 5,000 percent in nominal terms. The growth varied substantially between industries, which resulted in large structural changes, as can be seen in Table 2. For instance, food products and tobacco products each accounted for around 16 percent of manufacturing value added in 1990. The relative share of food products increased to about 21 percent in 2012, whereas the share for tobacco declined to about 9 percent. Chemicals was the second largest industry in 2012 and its share has been rather stable since 1990. Basic metals and textiles were two of the largest industries in 1990, but have since declined rapidly in relative importance. The opposite development can be seen for Motor Vehicles, which in 2012 accounted for more than 9 percent of manufacturing value added. Adding the other transport equipment industry gives a combined share of almost 15 percent. This development has come about despite concerns that Indonesia is being left behind in the automotive industry because of restrictions on FDI, protectionism, and lack of skills (Soejachmoen, 2016).

The foreign share of value added has increased since the start of the liberalisations in the early 1990s, rising from around 20 percent in 1990 to slightly above one third in the first half of the 2000s and to 40 percent in 2012, the last year for which we have data.

There is a large variation between industries in the foreign share of value added, and also within industries over time. The foreign share is particularly large in the different machinery sectors and in the two transport sectors. Printing, tobacco products, and wood products are predominantly domestic industries. The foreign share of the largest industry, food products, is lower than the average.

Industries with relatively low growth rates, such as basic metals and textile, tend to have relatively low foreign shares, and industries with high growth rates, such as transport industries, tend to have high foreign shares.[7] Hence, from this simple description, there seems to be a positive correlation between FDI and growth in value added.

--Table 2—

III. VALUE ADDED IN FOREIGN AND DOMESTIC FIRMS

Figure 3 shows average value added in domestic and foreign firms in 2012. Value added is considerably higher in foreign than in domestic firms: 6.6 times as high on average. The difference is particularly high in the transport industries, which is largely explained by foreign and domestic firms being concentrated in different sub-sectors within these industries. But the difference is seen in all industries except in printing. Hence, foreign firms have higher value added than domestic firms both in typical high value-added industries, such as paper, basic

[7] High (low) growth rates can be seen from increased (decreased) industry shares of total manufacturing value added in Table 2.

metals, and electrical machinery, and in low value-added industries such as wood products and furniture.

--Figure 3—

There are several reasons for the high value added in foreign firms. Most importantly, they tend to be relatively large in size, and large firms will have higher output and higher value added than small firms. As can be seen in Table 2, the average foreign firm employs 610 employees compared to 170 employees for the average domestic firm. Hence, foreign firms are on average 3.6 times larger than domestic firms. Foreign firms are larger than domestic firms in all industries, but the difference is relatively small in chemicals and in basic metals. Foreign firms are particularly large, in absolute terms and in relation to domestic firms, in wearing apparels and in leather products.

Controlling for differences in size slightly reduces the previously shown difference in value added between foreign and domestic firms, but the difference remains large, as can be seen from the included figures on labour productivity or, in other words, on value added per employee. The average labour productivity is almost 6 times higher in foreign compared to domestic firms. This is an important difference with large welfare implications since wages and living standards are closely related to productivity. Labour productivity is higher in domestic than in foreign firms in wearing apparels, and in printing. It is higher in foreign firms in the rest of the industries, and the difference is particularly large in chemicals. Including chemicals might in some sense exaggerate the difference between domestic and foreign firms, which can be seen from the substantially lower median difference –

productivity is 2.5 times higher in foreign than in domestic firms in the median industries (textiles and rubber products).

The Indonesian market is not small, but still of modest size compared to the large economies in Asia, North America, and Europe. The limited size imposes a constraint on the scale of operation for those firms that only produce for the local market. Export enables firms to expand production and one explanation to the large foreign firms is that their networks of affiliates and their good knowledge of foreign markets make them well equipped for exporting. They also produce to a large extent for the international market and are not constrained by local demand. This can be seen clearly in Table 3. Around 35 percent of in foreign firms' output is exported, compared to around 11 percent for local firms. It is a large difference and foreign firms have relatively high export shares in all industries. Moreover, more than half of foreign firms' output is exported in wearing apparels, wood products, and furniture. The highest export share in domestic firms is also seen in wood products and furniture, with slightly more than 30 percent.

--Table 3--

The last two columns of Table 2 focus on another important difference between foreign and domestic firms: the former import a large share of the intermediate products that are used in production. One explanation is that foreign firms are typically more integrated in international production networks. Such networks are of particular importance in Southeast Asia and explain a large part of the region's increased export of manufacturing products (Athukorala and Kohpaiboon, 2015). The importance of intermediate imports is an often overlooked determinant of productivity and value added, and an aspect that is affected by

globalisation. Foreign technology might be embodied in imported inputs. Amiti and Konings (2007) examined the productivity effects of greater availability of imported intermediate goods in Indonesia between 1991 and 2001. Their results suggest that the productivity effects are large: a 10 percent lower tariff rate on intermediate goods increases productivity by around 12 percent for firms that import their intermediates.

Getting back to the figures in Table 3, it can be seen that foreign firms import roughly 31 percent of their intermediate goods, a much higher figure than the 5 percent for domestic firms. The import share is substantially higher in foreign firms in each of the industries included in our study. In some industries foreign firms have very high import shares, which suggests that backward linkages with the local economy in these industries are limited. There are also industries where high import coincides with low value added (Figure 3). One prime example is the medical and optical instrument industry, where foreign firms imports two thirds of their intermediate goods, and export about half of their production, and where the resulting value added is relatively low, as can be seen in Figure 3. It is likely that the foreign operations in this, and possibly in some other industries, can be characterised by relatively simple assembling type activities, where imported inputs are put together and exported.

One of the more important reasons for high value added in foreign firms presumably is their access to relatively sophisticated technology.[8] Such access is one major reason why foreign firms can compete in foreign markets despite a disadvantage in knowledge of local preferences, institutions, and markets. The general level of technology in Indonesia is relatively low (e.g. Hill and Thee, 1998; Okamoto and Sjöholm, 2003). Very few firms are engaged in innovative activities. Public support has historically been biased in favour of unsustainable 'white elephant' type of projects, and Basri (2001) found that industries that received support have done worse than industries without support.

[8] Moreover, capital intensities will have an impact on value added. Indonesian capital stocks are measured with a lot of noise and therefore not shown.

Focusing on the role of FDI, it seems that technology capability is higher in MNEs than in local firms, but it is a firm characteristic that is quite difficult to measure. One possible approach is to construct and compare measures of total factor productivity (TFP).[9] At a general level, Aswicahyono and Hill (2002) found increased globalisation through international trade to increase TFP in Indonesian manufacturing. In a more explicit comparison between local and foreign firms, Takii (2004) found that foreign firms in 1995 had relatively high levels of TFP. Moreover, wholly foreign-owned firms had higher TFP than joint-ventures between foreign and local owners, and foreign firms that had been in Indonesia for some time had higher TFP than new foreign firms. Moreover, Okamoto and Sjöholm (2005) found in a study of TFP growth between 1990 and 1995 that the foreign firms' contribution to manufacturing TFP growth is higher than the foreign share of manufacturing. Finally, Arnold and Javorcik (2009) found in a panel of Indonesian firms between 1983 and 1996 that foreign acquisitions of local firms had a positive effect on TFP.

Hence, there is evidence that TFP and growth in TFP is higher in foreign than in local firms. To the extent that TFP captures technology capability, it suggests that one reason for high value added in foreign firms is their relatively sophisticated technology.

IV. FDI AND STRUCTURAL CHANGE

FDI will benefit Indonesia even if there were no difference in value added between foreign and domestic firms. The reason is that FDI contributes to a structural change of the economy with an expansion of relatively high value added activities. In other words, it will engage resources that had previously been poorly used, for instance the unemployed or underemployed, or used in activities with relatively low value added and productivity, such as in some parts of the agriculture and service sectors.

[9] The approach is not without limitations: TFP builds on a set of restrictive assumptions such as competitive factor markets, and they also require access to good measures on capital and output.

Indonesia is in need of job creation in the formal sector, and industrial expansion will be hugely beneficial to the country. Many Indonesians seek to make a living in low productivity agriculture or in the informal services sector. Around 60 percent of the Indonesian labour force is defined as having vulnerable employment, including self-employment, casual employment, or unpaid employment (BPS, 2014). In other words, Indonesia is still plagued by a labour surplus situation, as was described by Lewis more than 60 years ago (1954). Employment in manufacturing has increased but so has the labour force. More specifically, employment in firms with more than 20 employees increased from around 1,750,000 in 1990 to around 4,700,000 in 2012.[10] Manufacturing still only accounts for around 13 percent of total employment, because of the mentioned population growth and the resulting growth of the labour force. Manufacturing is also relatively small as a share of GDP: manufacturing peaked as a share of GDP in 2004 with around 28 percent, and has since declined to around 25.5 percent (ILO, 2015). The low share of manufacturing is unfortunate, considering that the productivity in manufacturing is twice the level in the services sector and four times the level in agriculture (ILO, 2015).

There are good reasons to believe that foreign MNEs can contribute to a structural change by expanding the Indonesian manufacturing sector as well as the higher-end services sector. As previously mentioned, the foreign share seems to be relatively high in industries with high growth rates (Table 3). Moreover, foreign firms are on average employing substantially more workers than domestic firms, as can be seen from the relative size in Table 4.

Moreover, it is not difficult to find examples in Southeast Asia and elsewhere of the entry of a few foreign firms having led to strong growth of the industry, with both new foreign and domestic firms entering the same industry or linkage industries. The textile

[10] The calculation is based on data from the census on large and medium-sized plants in Indonesian manufacturing, used in many of the tables and figures in this chapter.

industry is one example, and motor vehicles and car parts another. There is, however, to the best of our knowledge, no formal empirical study on how FDI impacts structural changes in Indonesia, or in any other country. However, Lipsey et al. (2013) examined employment growth in Indonesian manufacturing, which is related to structural change since manufacturing is one of the high-value added industries that should attract more resources and grow in importance if Indonesia is to grow and develop. If growth is relatively high in foreign firms within manufacturing, it means that they are contributing to a structural change towards a high-value-added sector.

More specifically, Lipsey et al. (2013) found employment growth to be higher in foreign than in domestic firms during 1975–2005. Employment in firms that were foreign-owned throughout the period grew on average about 5.5 percentage points faster than always domestically owned firms. Firms that were acquired by foreigners grew about 11 percentage points faster than their pre-acquisition level. Most of the employment effects of foreign takeovers occurred in the year of takeover. There was relatively little effect on growth rates in the following years, but the absolute additions to employment in the years after takeover were larger than they would have been under continued local ownership because the base was much larger.

Hence, foreign firms create a relatively large amount of employment. Moreover, there are reasons to expect that the effect can be of substantial importance. Again, and as can be seen in Table 2, foreign firms are considerably larger than domestic firms. A combination of large size and high growth means that the number of jobs created in foreign firms is large.

V. THE EFFECT OF FDI ON LOCAL FIRMS

The previous discussion shows that foreign firms have high value added. Hence, the positive effects from FDI seem obvious. However, any cost–benefit analysis of FDI needs to

consider the effect on domestic firms. For instance, a situation where FDI only results in a replacement of value added in domestic firms with value added in foreign firms will not contribute to the country's development. In other words, our conclusions and policy recommendations might be seriously biased if we only study the MNEs without taking in to account that their presence will have both positive and negative effects, sometimes referred to as externalities or spillovers, on the rest of the economy.

One difficulty in estimating externalities is that they might take very different forms. For instance, it could be through pecuniary linkages, such as the purchases of inputs from local producers, and from technology linkages, such as an increased degree of technology diffusion in the local economy. Moreover, the externalities might take place both within the same industry as the MNEs and between different industries.

Fortunately, there are a large number of studies on spillovers from FDI in Indonesia. More specifically, Lipsey and Sjöholm (2011b) surveyed the literature and found 10 such studies. Eight of the studies have been published in international journals, and have hence been scrutinised by referees. All of the studies relate the performance in domestic firms to the presence of FDI, typically measured as the share of FDI in the industry, the province, or the industry–province. They differ in the variable of interest: most examine productivity effects, but there are two papers that also examine wage spillovers. Moreover, the studies also differ in the econometric approaches and in the definitions of various variables. The main constraint, which they share with the whole literature on spillovers from FDI, is that they tend to show correlations rather than causal relationships.

All of the papers on spillovers from FDI in Indonesia found positive effects. Considering that they differ substantially in their methodologies and approaches, it seems to be evidence in favour of positive effects of FDI on local firms. In light of our focus on value added, it is of particular interest to note that six different papers examine the effect of FDI on

growth in value added or value added per employee in domestic firms. Again, all found positive spillovers: the presence of foreign MNEs tend to have a positive effect on value added in local firms. If we add this result to the relative high value added in foreign MNEs, as shown and discussed above, we reach the conclusion that inflows of FDI increase overall value added in Indonesia.

Whereas the statistical evidence is in favour of positive spillovers, it is less clear exactly how FDI affects value added in local firms. One can only speculate about the mechanisms but it is likely that value added could be positively affected through technology spillovers from FDI. Case studies of other countries tend to find such linkages between foreign firms and local suppliers (e.g. Moran, 2005). Technology spillovers can arise both within the same industry as the foreign firms, often through imitation effects, and in other industries, often when the foreign firms provide support to local suppliers. It is also likely that the entry of foreign firms increases competition which, in turn, forces local firms to improve to survive and keep market shares.[11]

VI. BENEFITS OF HIGH VALUE ADDED

Value added is created from inputs of labour, capital, and various inputs. It constitutes rewards for labour (wages) and for capital owners (profits). Hence, a high value added will create extra resources for the country and enable higher living standards. Value added created in foreign firms, however, might have a slightly different effect on the host country than valued added in domestic firms. The difference can be expected both when it comes to how profits are benefitting the host country (Indonesia) and in compensation to workers.

[11] See e.g. Co (2001), Chung (2001), Fu and Wu (2012), and Sjöholm and Lundin (2013) for studies on FDI and competition.

MNEs pay low corporate taxes

A relatively high efficiency in MNEs means that profits tend to be higher in MNEs than in local firms. Profits are important for the host-country as a means of generating resources to be used in various activities. For instance, it will constitute a tax base for the government and generate public revenues that can be spent on important areas such as infrastructure, education, and health. Moreover, profit is a way to generate capital for new investments within the firms. Such investments in new machinery, technology, and product development form the basis of economic growth.

The importance of the first aspect, public revenues through corporate taxes, has declined worldwide over the last decades (Gropp and Kostial, 2001). The reason is globalisation and the competition for FDI: governments are trying to attract MNEs by offering low taxes. There are good reasons for countries wanting to attract FDI to use low taxes. Many studies show that taxes are one important aspect that MNEs consider when they make their investment decisions, and increases in corporate taxes lead to less inflows of FDI (e.g. Djankov et al., 2010). More specifically, a 1 percent increase in corporate tax seems to decrease FDI inflows by between zero and 5 percent (see OECD, 2008). Moreover, it seems that FDI is becoming increasingly sensitive to taxation.

The decline in corporate taxes seen globally[12] is also taking place in Indonesia: corporate taxes have in the last two decades declined from a peak of 39 percent in 2002, to 30 percent in 2003, 28 percent in 2009, and 25 percent since 2010.[13] Moreover, there are plans to lower corporate taxes even further, to 18 percent, in 2016.[14] And there are also plans to

[12] For the global development of corporate taxes, see http://taxfoundation.org/article/corporate-income-tax-rates-around-world-2015
[13] See http://www.tradingeconomics.com/indonesia/corporate-tax-rate
[14] http://www.straitstimes.com/business/indonesia-plans-to-cut-corporate-tax-rate-next-year

introduce special taxes for new firms in 'pioneer' industries, such as energy, telecommunications, maritime transport, and agriculture processing. Firms in these industries would get tax cuts ranging between 10 and 100 percent for up to 15 years.[15]

The 'race to the bottom' in corporate taxes around the world is not without problems. An aggressive use of taxes to attract FDI might distort global trade and investment flows, which could have positive effects on the countries lowering their corporate tax rates, but negative global welfare effects. Moreover, governments will continue to need resources for public spending. If corporate taxes generate less income, taxes on other income bases will have to be increased. It is then possible that taxes will change to less mobile production factors such as labour and small local firms.

For the world as a whole, it would presumably be preferable if countries did not compete for FDI by continuously lowering corporate taxes. However, given that countries do behave this way, Indonesia has to figure out if the forgone tax revenues are lower than the extra benefits made available through more FDI.

Hence, the competition for FDI tends to drive down corporate taxes for all firms, domestic as well as foreign owned. But MNEs also seem to pay lower taxes than domestic firms for any given level of profits and any given tax rate. The reason is that MNEs are well placed to use transfer pricing to avoid taxes. Transfer pricing refers to the practice of not using market based prices on corporations' internal export and import of goods and services. By having affiliations in many different countries, MNEs can choose to show a large part of the profits in tax havens and thereby avoid or minimise taxes.

Empirical studies confirm the importance of transfer pricing as a way for MNEs to pay lower taxes. For instance, Davies et al. (2014) found that French MNEs systematically use transfer pricing to declare profits in tax havens. The total sum of forgone tax revenues for the

[15] See http://www.cnbc.com/2015/09/03/

French government amounts to around 1 percent of total corporate taxes. Accordingly, around 20 percent of all US corporate profits are declared in tax havens, a tenfold increase since the 1980s (Zucman, 2014). Moreover, Egger et al. (2010) found that subsidiaries of multinational corporations in Europe pay on average 32–57 percent less tax than similar domestically owned firms.

Hence, the Indonesian government's tax revenues from foreign MNEs can be expected to be lower than tax revenues from indigenous firms with more limited abilities to move profits to foreign tax havens. It would, however, be premature to take this as an indication that a country would be better off without the foreign MNEs. Firstly, foreign and domestic firms are not perfect substitutes: a foreign MNE that withdraws from Indonesia will not be automatically replaced by an indigenous firm. Secondly, foreign firms are larger and more efficient with higher profits. Hence, it is possible that the actual amount of absolute taxes paid by foreign firms can be substantial even if the share of profits paid in corporate taxes is lower than in domestic firms. Finally, MNEs as well as domestic firms will contribute to tax revenues not only through corporate taxes but also through taxes on for instance wages and property.

Investments in foreign and domestic firms

The second positive effect of profits, mentioned above, is that they can be reinvested in Indonesia. Also this aspect might differ between domestic and foreign firms and the contribution of the latter group might be comparably smaller for a given amount of profits. More specifically, profits in foreign firms might leave the country and not be re-invested to the same extent as profits in domestic firms. In other words, owners of a firm with all of its activities in Indonesia will tend to invest a relatively large part of the profits within Indonesia. Foreign owners of a MNE located in Indonesia will chose to invest where the return for the

corporation as a whole is the largest. This could be in Indonesia but also in the home country of the MNE or in any other country where it has, or plans to have, affiliates. The amount invested in Indonesia and the amount invested in other countries will ultimately be decided by the relative business climate. International surveys suggest that around one third of profits in MNEs are re-invested in the host economy and about two thirds are repatriated (UNCTAD, 2013).

Investments as a share of value added can be seen as a rough proxy-variable for the share of profits being invested in Indonesia. Such figures are available for domestic and foreign firms in the year 2000 and are shown in Table 4. The figures confirm the previous hypothesis: investment ratios tend to be lower in foreign than in domestic firms. More specifically, investments amount to around 26 percent of value added in domestic firms compared to less than 11 percent in foreign firms. Hence, the investment ratio is about 2.5 times higher in domestic than in foreign firms. It is a robust relationship judging from the industry figures: domestic firms have a higher investment ratio than foreign firms in every included industry. Again and as previously discussed, the figures show that domestic firms invest more for a given level of profits, measured as value added. We cannot conclude that investment would increase if foreign firms were replaced by domestic ones, since the former firms tend to be larger and have higher value added.

--Table 4--

Workers gain from FDI

MNEs are sometimes accused of using their strong bargaining power, achieved by the threat of moving to cheaper production sites, to put pressure on wages and working conditions

(UNCTAD, 2013). However, there is not much empirical evidence that show MNEs to be more footloose than local firms. For instance, Bernard and Sjöholm (2003) found that foreign plants in Indonesia are less likely to close down than domestically owned plants.

Moreover, there are several reasons why foreign-owned firms might chose to pay higher wages than domestically owned firms. For instance, lack of knowledge of the local labour market might force foreign firms to pay a wage premium to attract good workers; it might be a way to restrict labour turnover and thereby leakage of knowledge and technologies (Fosfuri et al., 2001); it could be because of rent-sharing arrangements between foreign firms and their employees (Budd et al., 2005); or a result of higher labour demand volatility in foreign-owned firms (Fabri et al., 2003). Other studies show that globalisation, which FDI is part of, can lead to different wages for identical workers in the presence of: efficiency wages (e.g. Davis and Harrigan, 2011); fair wages (e.g. Egger and Kreickemeier, 2009); and hiring and firing rigidities (e.g. Helpman et al., 2010).

A number of empirical studies in different countries show that workers employed in MNEs have higher wages than employees in local firms, which is also the case in Indonesia, as shown in Table 5. The figures show the difference in wages, as a ratio between wages in foreign and domestic firms, without taking in to account differences in worker or firm characteristics. Wages in foreign firms were about 50 percent higher for blue-collar workers and 60 percent higher for white-collar workers in 2012. Domestic firms pay higher wages than foreign firms for blue-collar workers in textiles and wearing apparels. Foreign firms pay higher wages in all other industries and for both categories of workers.

--Table 5--

Lipsey and Sjöholm (2004) carried out a more rigorous analysis of wages in Indonesian manufacturing in 1996. They found that the average wage in foreign firms was about 50 percent higher than in private domestic firms. Hence, the difference is similar to the one in 2012 shown in Table 5. Lipsey and Sjöholm also found that foreign firms provide more of other types of labour compensation. Wage bonuses, gifts, social security, insurances, and pensions are typically higher in foreign firms, and if all such forms of labour compensation are accounted for compensation for employees is about 60 percent higher in foreign than in domestically owned firms.

The Indonesian firm data in 1996 includes information on the level of education of employees. This information can be used to see how much of the above wage difference is caused by differences in worker characteristics (education) and how much is caused by ownership. Lipsey and Sjöholm (2004) found that among blue-collar employees, more than 6 percent of those in private domestic firms had less than a primary education and around 30 percent had only primary education, while in foreign-owned firms, only 2 percent had less than a primary education and 17 percent only primary schooling. At the other end of the distribution, about a third of the employees in domestic firms had stopped after completion of high school and only a little over 1 percent had a tertiary education, while more than half the employees of foreign-owned firms had completed high school and 3 percent had a completed tertiary education.

When wages are examined econometrically and when controlling for the above mentioned differences in education, the wage premium in foreign firms declines to a little over one quarter for blue-collar and half for white-collar employees. Hence, the result suggests that foreign MNEs pay substantially higher wages for identical workers, or at least for workers with identical levels of education.

One potential problem is that foreign firms might acquire high-wage domestic firms. In other words, the correlation between foreign ownership and high wages might not necessarily be a causal relationship. Lipsey and Sjöholm (2006) addressed this concern in a study that continues to examine wages in foreign and domestically owned Indonesian establishment but using a panel between 1975 and 1999. Their study separated firms into those taken over by foreigners from domestic owners, those taken over by domestic owners from foreigners, and those that did not change ownership. They examined wage levels in establishments before they are taken over to learn whether foreign firms select high-wage firms to acquire, and they examine wage changes after takeover.

While establishments acquired by foreigners had previously paid somewhat above-average blue-collar, but not white-collar, wages, the differences were far too small to account for the wage differences between foreign-owned and domestically owned firms in general. Moreover, after foreign takeovers, both white-collar and blue-collar wages in these firms rose strongly, especially the white-collar wages. Parts of the increase in wages were due to changes in firm characteristics, such as size and input use, but even after controlling for these, the foreign firm margins were in the range of about 30 to 40 percent.

To sum up, it seems well established that workers in foreign MNEs benefits from a wage premium. The exact magnitude of this premium is more uncertain but results from previous studies suggest that it is of not only statistical but also economic significance.

VII. CONCLUDING REMARKS AND POLICY RECOMMENDATIONS

This chapter shows that FDI is important for Indonesia. Foreign MNEs contribute to industrial expansion and thereby to economic growth and increased living standards. Or in other words, FDI has contributed to Indonesian value added. One core channel for the positive effect is that foreign firms generate higher value added than domestic firms. We have also

shown that FDI seems to increase value added in domestic firms located in the same industry or province. High value added in foreign firms together with positive externalities on domestic firms add up to a positive overall effect on the Indonesian economy.

FDI will also contribute to a structural change in the economy, which improves value added and living standards by moving resources from sectors with low value added to sectors with high value added. There are indications of such effect in Indonesia: employment growth is comparably high in foreign-owned firms in the Indonesian manufacturing sector. High employment growth in combination with the relatively large size of foreign firms means that they contribute with large employment in a high value-added sector.

Increased value added will benefit the whole country through different channels. More specifically, value added will contribute to profits and to higher wages. Profits, in turn, are important to finance further investments and also constitute a tax base for the government.

The policy conclusion from our analysis is straightforward: Indonesia will benefit from increased inflows of FDI and should therefore implement policies that encourage such inflows. It is more difficult to identify the exact policies that encourage FDI. A good starting point is to ensure a level playing field for foreign and domestic firms. Economic nationalism has strong roots in Indonesia, which has frequently resulted in policies favouring domestic firms. There is a tendency to raise hurdles for foreign firms when the indigenous know-how and capital is available. Such restrictive policies are regularly launched, also by recent governments (Pantunru and Rahardja, 2015).

For instance, one recent complaint has been the frequent changes of the negative list: a list of the sectors where foreign firms are not allowed, or where they need to form partnerships with Indonesian co-owners. Some of the other hurdles for foreign firms in Indonesia refer to the overly long processes to get permits and the difficulties of using foreign personnel in Indonesian affiliates.

Once the playing field has been levelled, focus can be put on improving the overall business climate as a way to encourage foreign firms to locate in Indonesia rather than elsewhere. One positive aspect of such efforts is that it will also benefit domestic firms. There is certainly room for improvements in the business climate, as indicated by the yearly rankings by the World Bank.[16]

A promising approach is to start by thinking on what typically are considered the basics for attracting FDI: economic and political stability, labour force skills, and infrastructure. Indonesia is doing relatively well when it comes to stability but substantially worse when it comes to labour force and infrastructure. Note that labour force development is not only about improving education but does also include policies to supply skills that are demanded by foreign MNEs. One suggestion would be to invite foreign MNEs to discuss how to collaborate to secure the necessary skills through, for instance, vocational training and internships. Good education brings the additional advantage of improving the absorptive capacity in the economy and thereby the technology diffusion from MNEs to the local firms. It is, finally, also an important determinant when MNEs decides on upgrading of the production lines and production processes.

The government should presumably avoid selective policies aiming at targeting what is sometimes describes as 'high-quality' FDI. Such policies put large requirements on the administrative capacity and on the integrity of the bureaucracy. Moreover, targeting is in many countries combined with various subsidies, tax incentives, and protection from outside competition. There is a tendency that such support gets permanent and leads to inefficiencies.

It is therefore to be preferred if government policies instead focus on creating a competitive environment with low trade barriers and strong domestic competition. The reason being that the institutional setting affect the type and behaviour of FDI and thereby its

[16] See http://www.doingbusiness.org/rankings

contribution to growth and development. For instance, we have previously discussed that foreign firms are large partly as a result of their high degree of international integration. Hence, a more outward trade regime might spur employment growth in foreign firms, a result that got support in Lipsey et al. (2013). Accordingly, high competition will force foreign firms to bring up-to-date technologies to Indonesia and thereby foster high growth (Sjöholm, 1999).

To sum up, Indonesia is fortunate in having a relatively large domestic market, to be located in a dynamic region, and to have rich endowments of natural resources. The potential for large inflows of FDI is good. Relatively modest changes of economic policies have therefore the potential to generate substantial improvements in incomes and living standards.

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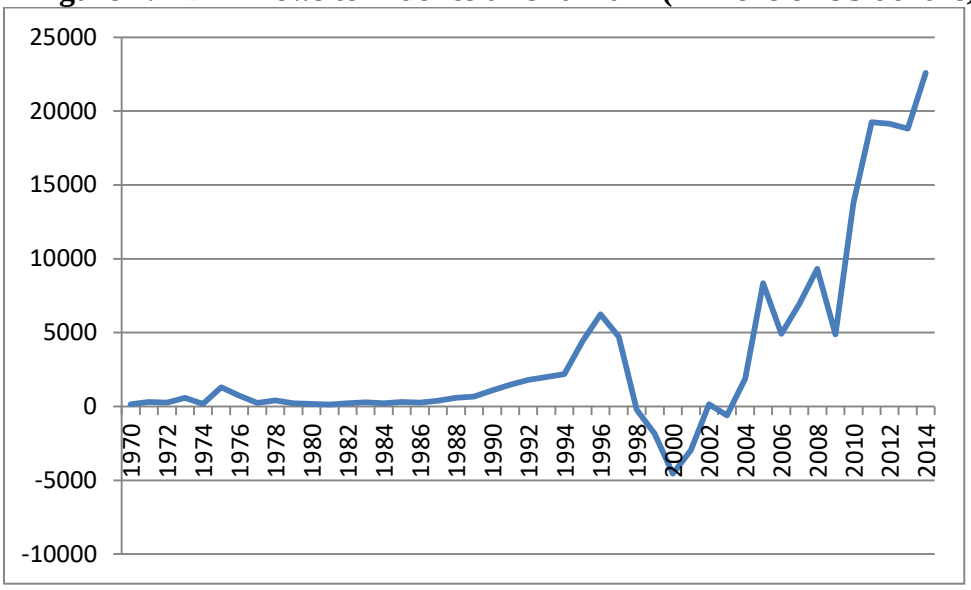
Table 1: FDI in Indonesia by Sectors in 2015

Sector	Share of total FDI (%)
Mining	13.7
Transportation, Warehouse, and Telecommunication	11.2
Metal, Machinery, and Electronic	10.6
Electricity, Gas, and Water Supply	10.4
Real Estates	8.3
Others	45.8

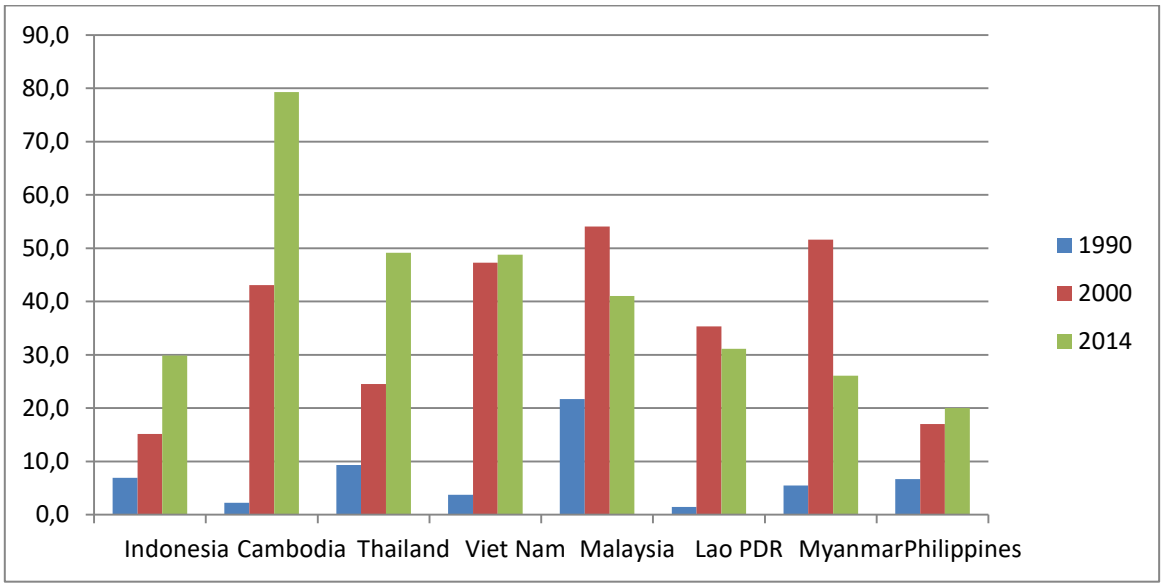
Source: The Investment Coordinating Board of the Republic of Indonesia.
http://www.indonesia-ottawa.org/wp-content/uploads/2010/12/FDI-TW_IV_2015_Final.pdf

Figure 1: FDI inflows to Indonesia 1970–2014 (millions of US dollars, current prices)



Source: Data from UNCTAD.
http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx

Figure 2: The Stock of FDI as a Share of GDP in Selected Southeast Asian Countries 1990–2014 (%)



Source: Data from UNCTAD.
http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx

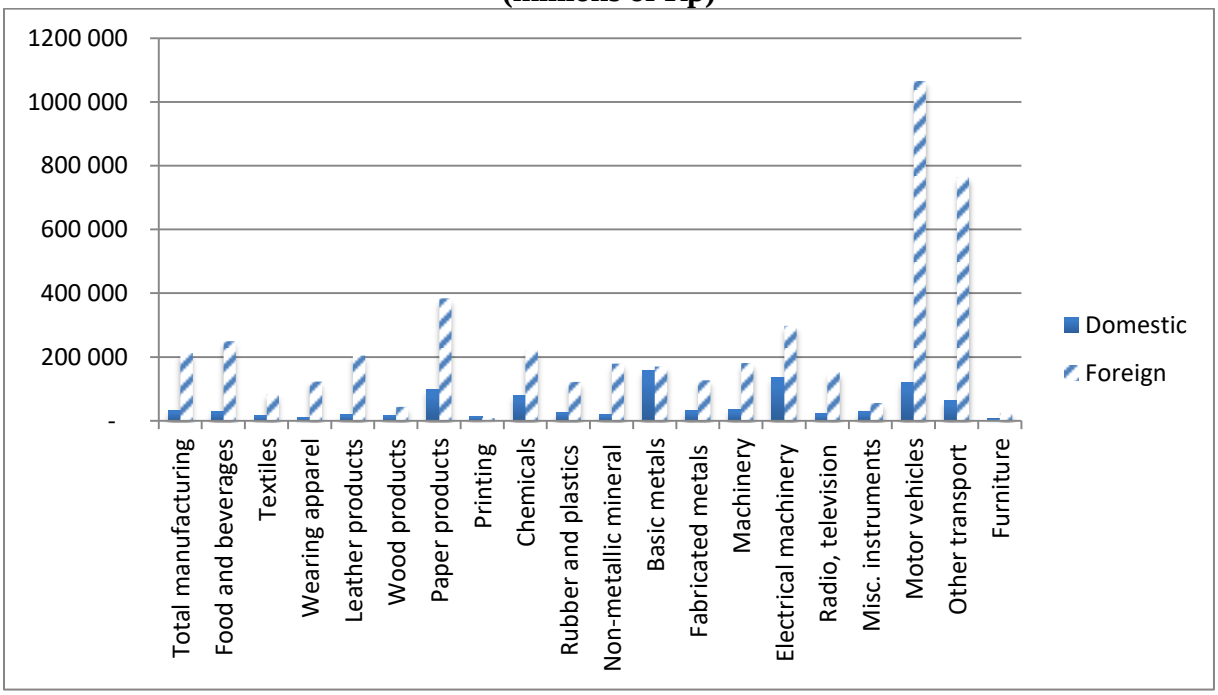
Table 2: Industry Distribution of Indonesian Manufacturing and the Foreign Share of Manufacturing Value added 1990–2012 (%).

Industry	Share	Foreign	Share	Foreign	Share	Foreign	Share	Foreign	Share	Foreign
	1990		1995		2000		2005		2012	
Total	**100**	**20.1**	**100**	**26.5**	**100**	**36.3**	**100**	**33.5**	**100**	**39.9**
Food products and beverages	16.2	12.5	10.6	20.4	12.1	25.2	15.6	27.7	21.4	30.4
Tobacco products	16.3	3.2	14.9	4.2	10.8	6.4	12.3	22.6	8.7	8.6
Textiles	9.8	22.6	11.0	17.0	10.2	27.7	7.9	22.4	4.7	22.9
Wearing apparel	2.5	12.2	3.9	35.8	4.2	38.6	3.2	37.5	3.8	49.9
Leather products	1.8	38.7	2.6	46.1	2.8	51.6	2.2	57.8	2.4	56.7
Wood products	9.8	10.3	7.6	13.3	5.6	6.8	4.1	9.6	1.8	15.4
Paper products	3.4	45.4	3.2	40.9	3.9	20.1	6.9	19.5	5.2	28.7
Printing	1.5	0.4	1.7	1.7	2.8	0.6	1.3	12.2	0.6	1.5
Oil proudcts	0.1	55.1	0.1	37.7	0.2	74.7	0.2	68.8	0.2	23.2
Chemicals	8.2	50.6	7.3	48.0	9.1	57.7	9.8	25.5	10.5	41.0
Rubber and plastics products	4.4	16.3	3.9	22.9	4.3	31.7	6.3	30.7	5.5	33.9
Non-metallic mineral products	4.3	21.0	3.9	26.8	3.7	39.3	5.6	37.4	3.9	28.1
Basic metals	10.1	18.2	9.0	43.2	3.7	37.0	3.2	26.6	3.5	28.0
Fabricated metal products	1.9	22.0	2.6	53.7	3.2	66.5	2.3	35.6	3.7	43.7
Machinery and equipment	0.5	24.3	0.9	57.1	0.6	48.1	1.4	59.3	2.2	63.4
Office. accounting and computing machinery	0.0	0.0	0.0	0.0	0.0	48.5	0.2	98.6	0.0	90.4
Electrical machinery	1.3	24.4	3.1	22.9	3.4	72.7	2.2	58.1	3.5	54.6
Radio. television and communication	1.2	42.9	2.2	72.7	6.8	87.9	2.8	71.6	2.3	89.6
Medical. precision and optical instruments	0.1	16.7	0.3	54.2	0.5	44.8	0.1	41.3	0.2	56.6
Motor vehicles	2.7	37.8	2.0	54.8	3.1	86.3	6.8	60.7	9.3	75.1
Other transport equipment	2.8	60.9	7.4	13.6	6.8	23.0	3.6	79.4	5.1	71.8
Furniture	1.0	13.6	1.7	33.6	2.2	27.8	2.0	32.8	1.4	27.8

Note: Share is the industry's share of total manufacturing. Foreign is the foreign share of value added in the industry. Firms are defined as foreign if they have at least ten percent foreign ownership.

Source: Data is from the BPS annual census on large and medium sized enterprises in the manufacturing sector.

Figure 3: Average Value Added in Domestic and Foreign Firms in Indonesia in 2012 (millions of Rp)



Note: Industries with less than 10 foreign firms have been excluded.
Source: Data is from the BPS annual census on large and medium-sized enterprises in the manufacturing sector.

Table 3. Characteristics of Domestic and Foreign-owned Firms in Indonesia in 2012

	Size dom.	Size for.	VA per empl. (ratio)	Export domestic (%)	Export foreign (%)	Import domestic (%)	Import Foreign (%)
Total	**170**	**610**	**5.9**	**10.6**	**35.1**	**5.2**	**30.9**
Food products and beverages	143	480	5.5	8.8	36.1	2.3	9.5
Textiles	185	696	2.5	6.8	35.7	5.6	28.6
Wearing apparel	181	1394	0.9	9.5	53.5	4.8	32.6
Leather products	184	2060	1.2	8.5	38.6	5.9	33.0
Wood products	181	575	1.7	31.8	56.3	1.5	14.9
Paper products	262	519	3.6	5.0	27.6	6.1	32.8
Printing	102	210	0.7	1.1	8.2	1.8	27.7
Chemicals	211	214	10.1	7.9	20.4	20.4	45.0
Rubber and plastics products	193	432	2.5	9.8	34.9	7.5	28.5
Non-metallic mineral products	106	432	4.3	3.8	15.1	2.9	23.4
Basic metals	235	237	1.6	15.4	21.0	12.0	51.2
Fabricated metal products	159	278	4.2	3.5	20.7	10.4	35.2
Machinery and equipment	142	343	1.8	5.5	18.4	13.3	39.2
Electrical machinery	264	612	1.5	7.8	29.1	17.4	42.8
Radio, television and communication equipment	186	647	3.7	9.7	32.6	23.4	42.1
Medical, precision and optical instruments	223	406	1.5	10.3	49.7	14.8	69.5
Motor vehicles	222	728	2.5	2.5	24.2	12.6	43.1
Other transport equipment	212	617	2.6	5.5	19.9	12.0	47.5
Furniture	120	452	1.4	32.1	68.5	3.9	19.7

VA = value added.

Note: Industries with less than 10 foreign firms have been excluded. Size is measured as the number of employees; Value added per employee is measured as the ratio between foreign and domestic firms. Export is the share of output being exports; Import is the share of intermediate goods being imported.

Source: Data is from the BPS annual census on large and medium-sized enterprises in the manufacturing sector.

Table 4: Investment as a Share of Value Added in Domestic and Foreign Firms (2000, %)

	Domestic	Foreign
Total	**25.9**	**10.6**
Food products and beverages	20.5	12.5
Textiles	58.0	8.4
Wearing apparel	13.9	2.4
Leather products	24.6	6.8
Wood products	29.5	22.5
Paper products	15.3	12.3
Printing	26.7	2.3
Chemicals	38.2	23.3
Rubber and plastics products	20.1	16.6
Non-metallic mineral products	25.0	13.3
Basic metals	27.7	7.3
Fabricated metal products	17.0	4.7
Machinery and equipment	14.5	6.0
Electrical machinery	23.2	2.3
Radio. television and communication equipment	17.4	1.8
Medical. precision and optical instruments	18.6	6.7
Motor vehicles	73.5	5.3
Other transport equipment	16.8	20.8
Furniture	8.9	1.8

Note: Industries with less than 10 foreign firms have been excluded.
Source: Data is from the BPS annual census on large and medium-sized enterprises in the manufacturing sector.

Table 5: Wages for Blue- and White-Collar Workers in Foreign and Domestic Firms in 2012 (Ratio Foreign/Domestic)

	Blue-Collar Workers	White-Collar Workers
Total	**1.5**	**1.6**
Food products and beverages	1.4	1.3
Textiles	0.8	1.4
Wearing apparel	0.9	2.0
Leather products	1.0	1.3
Wood products	1.3	1.1
Paper products	1.4	1.4
Printing	1.1	4.1
Chemicals	1.5	2.2
Rubber and plastics products	1.7	2.1
Non-metallic mineral products	1.8	1.4
Basic metals	1.3	1.3
Fabricated metal products	1.2	1.3
Machinery and equipment	1.3	1.4
Electrical machinery	1.2	1.1
Radio, television and communication equipment	1.1	1.3
Medical, precision and optical instruments	1.9	1.8
Motor vehicles	1.8	1.6
Other transport equipment	1.1	1.3
Furniture	1.2	1.4

Note: Industries with less than 10 foreign firms have been excluded.
Source: Data is from the BPS annual census on large and medium-sized enterprises in the manufacturing sector.