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The determinants of Foreign Direct Investment

DO STATUTORY RESTRICTIONS MATTER?

Fernando Mistura, Caroline Roulet

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The Determinants of Foreign Direct Investment:

Do Statutory Restrictions Matter?

by

Fernando Mistura and Caroline Roulet*

Abstract: Over the past two decades, governments worldwide have continued to liberalise restrictions on international investment with only occasional relapses. Yet, FDI liberalisation remains an unfinished agenda in various parts of the world and across sectors. This paper sheds light on their potential costs in terms of foregone investments. Applying an augmented gravity model, covering 60 advanced and emerging countries over the period 1997–2016, it estimates the elasticity of bilateral FDI positions and cross-border M&A activity to FDI restrictions as measured by the OECD FDI Regulatory Restrictiveness Index. Results suggest that reforms liberalising FDI restrictions by about 10% as measured by the Index could increase bilateral FDI in stocks by 2.1% on average. Effects are greater for FDI in the services sector, but even manufacturing sectors – which are typically open to FDI – are negatively affected by countries' overall restrictiveness. Foreign equity limitations and FDI screening policies are also scrutinised.

Authorised for release by Greg Medcraft, Director, OECD Directorate for Financial and Enterprise Affairs

Keywords: Foreign Direct Investment, Mergers and Acquisitions, Gravity Models, FDI Restrictions, Barriers to FDI, Investment Restrictions, Investment Liberalisation, Globalisation.

JEL Classification: F15, F21, K20.

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1. Introduction

Globalisation, driven partly by foreign direct investments (FDI), has come under the spotlight in recent years. Mistrust about its benefits has become widespread. To date, however, this backlash has had only a limited impact on the more traditional types of FDI restrictions.[1] Seen from a broad perspective, economies have continued to remove restrictions on international investment over time, albeit with occasional relapses. Yet, FDI liberalisation is still an unfinished agenda in various parts of the world and across sectors, in particular in large emerging economies that have not adhered or are not in the process of adherence to the OECD *Code of Liberalisation of Capital Movements* and the *National Treatment* instrument of the OECD *Declaration on International Investment and Multinational Enterprises*.

The extent of FDI restrictiveness, as measured by the OECD *FDI Regulatory Restrictiveness Index (Index),*[2] still varies greatly across jurisdictions and across sectors. Countries in the Asia-Pacific region remain relatively more restrictive to FDI, despite many being among the biggest FDI reformers in absolute terms since 1997 – the starting year of the *Index*. OECD and other emerging economies, having liberalised earlier in the 1970s-90s, are on average typically more open to FDI. Starting from relatively lower levels of restrictiveness, the pace of reform in these economies has been naturally slower since 1997, partly because there are fewer barriers to remove but also because the low-hanging fruit has already been picked and remaining areas for reforms may encounter strong stakeholder resistance. In terms of sectors, restrictions in manufacturing sectors have been largely lifted worldwide, but many primary and service sectors remain partly off limits to foreign investors, holding back potential economy-wide productivity gains. By hindering contestability and competition in services sectors, for instance, restrictions consequently contribute to raising services input costs, such as financing and logistics, for other economic sectors. Access to world class services inputs through FDI has been shown to be crucial for moving manufacturing up the value chain and boosting growth and jobs in the services sector (OECD, 2015, 2018).

A government's right to regulate in the public interest to achieve established policy objectives is paramount, but any policy that discriminates against one group of investors involves a cost. Barriers to FDI, for instance, typically involve the potential costs of forgone investment and efficiency gains. For this reason, governments are typically advised to consider whether non-discriminatory measures would be adequate to address their specific concerns. There are often sensible alternatives to discriminatory FDI policies since certain risks can be addressed through non-discriminatory regulations. When discriminatory policies are, nonetheless, deemed necessary, they should be proportional – not greater than needed to address identified risks and concerns – and set against measurable objectives and regularly assessed against those objectives. Regular assessments are rarely carried out by governments for two main reasons: firstly, some restrictions have existed for a long time and governments take them for granted without reflecting on their potential costs; and secondly, the remaining ones may be those most politically sensitive to eliminate even if they no longer can be considered to serve the public interest.

1 See for instance: Mistura and Thomsen (2017a) and the series of OECD Investment Policy Monitoring reported to the Freedom of Investment Roundtable, www.oecd.org/investment/investment-policy/g20.htm.

2 www.oecd.org/investment/fdiindex.htm

This paper sheds light on the potential costs in terms of foregone investments of maintaining statutory barriers to FDI in place. An assessment of the costs and benefits of FDI restrictions should be a country-specific exercise as various other context-specific elements need to be considered. But understanding the potential average effect of such policies across countries is important to motivate the need for constant evaluation of FDI regimes at the country level. By estimating the elasticity of FDI in relation to countries' level of FDI regulatory restrictiveness, this paper also draws attention to the potential effect that an uptake in more FDI-restrictive measures could have on countries' levels of FDI.

A negative relationship between restrictions and FDI has been observed in most of the existing literature (see Box 2). These studies, however, have been typically constrained to the experience of advanced economies and without considering potential sector-specific nuances. The few studies that extended the assessment to emerging economies have typically used fairly simplistic measures of capital controls. This paper adds to the literature by extending the assessment to a large group of advanced and emerging economies while employing a more refined measure of restrictions (the *Index*) and distinguishing the effects by economic sectors.

Drawing on the theoretical foundations in Bergstrand and Egger (2007) and Head and Ries (2008) supporting the application of the gravity equation for bilateral FDI and cross-border Mergers & Acquisitions (M&A), this paper applies an augmented gravity model to estimate the elasticity of bilateral inward FDI positions and cross-border M&A investment stocks with regards to FDI restrictions, as measured by the *Index*. It extends the earlier OECD-centered evidence (Nicoletti et al., 2003; OECD, 2011; Fournier, 2015) to a group of 60 advanced and emerging economies. The paper also performs such analysis by types of statutory barriers to FDI[3] to assess whether the various types of measures have, individually, implications for FDI attractiveness.

Lastly, as countries have historically allowed foreign participation in manufacturing industries more so than in other sectors, FDI in the manufacturing sector is expected to be less affected by overall restrictions than investments in other sectors. Unfortunately, consistent bilateral sector FDI data are not available for a large number of the countries included in this study to perform such assessment. Therefore, in order to investigate potential sector-specific nuances, data on cross-border (M&A) are used. While conceptually distinct from FDI statistics, M&A data are supposedly reflective of the international market for corporate control of overseas assets (Head and Ries, 2008) and can, to some extent, be seen as a proxy for the subset of FDI activity that opts for the M&A entry route. This relates both to the typical "buy or build" foreign market entry decision and the competition for control of existing overseas assets for strategic (e.g. to exploit synergies and complementarities) or 'opportunistic' reasons (i.e. to exploit the potential of underperforming assets for instance). In fact, much FDI currently takes the form of cross-border M&As. The point here, nonetheless, is not to compare the results for FDI and M&A, but rather to compare the sensitivity of the sector-specific M&A results with the one for the entire economy.

[3] As per the OECD *FDI Regulatory Restrictiveness Index*, these are: foreign equity limitations, discriminatory screening and approval of FDI, and other restrictions on FDI, which comprise a range of operational restrictions which are typically more burdensome to foreign investors, such as measures imposing restrictions on the employment of foreign personnel in key management positions, restrictions on branching and land-ownership by foreigners and reciprocity requirements.

The baseline results suggest that the effects of FDI reforms can be significant and sizeable. The evidence suggests that even partial restrictions can have a strong impact on investment. It is estimated that the introduction of reforms leading to a 10% reduction in level of FDI restrictiveness as measured by the *Index* could increase bilateral FDI inward stocks by around 2.1% on average. As an illustrative exercise, assuming this average effect would apply equally across countries, if more restrictive G20 economies were to reach the OECD average level of openness to FDI, for example, we could expect bilateral inward FDI stocks in these economies to increase by between 7% and 95%. The effects of such simulation depend logically on how restrictive countries are in relation to the simulated policy level. In reality, these results are not likely to apply equally across country. Among others, the efforts to implement such simulated policy would vary considerably among the countries. But this simple exercise helps to give a sense of the importance of restrictions as barriers to investment.

The effect of reducing foreign equity limitations is the strongest, denoting its relatively greater importance as a statutory barrier for investors, but foreign investment screening policies are also found to significantly curb FDI, albeit to a much lower extent. Contrary to what policymakers sometimes argue, these results confirm that discriminatory screening policies – at least in the way they have been implemented on average to date – are likely to have deterred FDI. The effect of FDI restrictions is also estimated to be greater for foreign investments in the services sector. The results obtained using cross-border M&A investment stocks suggest that the effect of a similar 10% reduction in total FDI restrictions is associated with a 3.9% increase in international acquisitions in the services sector; against 3% increase in international acquisitions economy-wide. FDI restrictions affect M&A in the manufacturing sector to a lesser extent, and restrictions are not found to be significant with respect to M&A in primary sectors. This partly reflects the fact that governments generally allow FDI in the manufacturing sector without restrictions[4]. The results for the primary sector are less evident, but may find some resonance in the location-specific characteristics of such industries.

The remainder of this paper is organised as follows: Section 2 describes trends in FDI regulatory restrictiveness by countries, types of restrictions and economic sectors. Section 3 presents the empirical methodology and the bilateral cross-border investment measures used in this paper. Section 4 describes the determinants of foreign direct investment. Results are presented in Sections 5. Section 6 concludes.

2. Trends in FDI regulatory restrictiveness

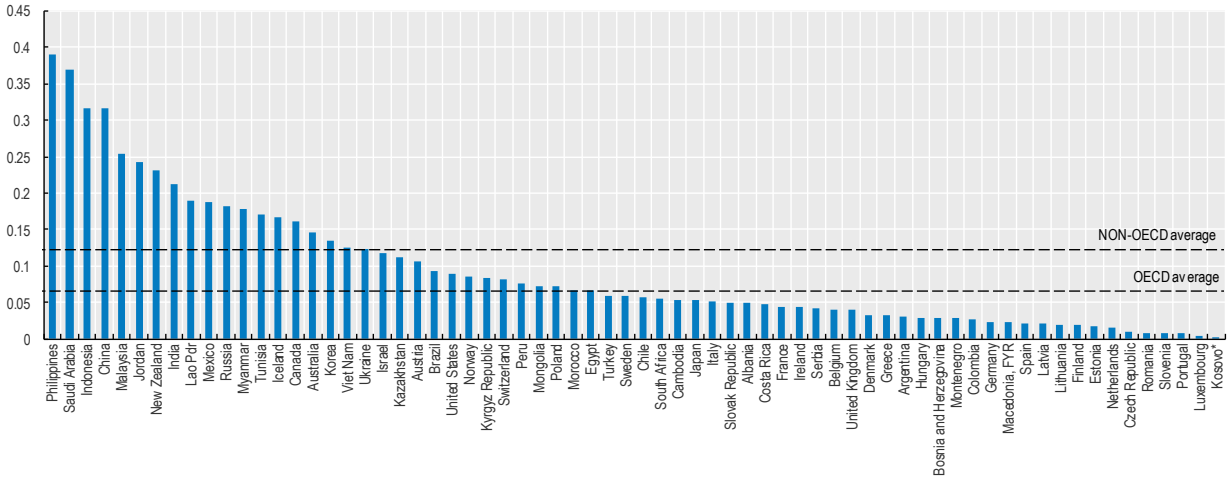
2.1. By countries

Barriers to FDI are widespread across countries. There is no country in the sample with no restriction on FDI according to the *Index* methodology (Box 1), although the extent of restrictions varies greatly across jurisdictions. OECD countries tend to have fewer restrictions on FDI than non-OECD countries covered by the *Index* (Figure 1). This difference is even greater if compared within G20 members: OECD G20 members are particularly more open than non-OECD G20 economies. Members of the European Union

[4] Except when a horizontal measure applying across the board is in place. Even when they do, this is typically restricted to narrowly defined market segments.

remain collectively largely open to FDI. Most of the Adherents[5] to the OECD *Declaration on International Investment and Multinational Enterprises*[6] and applicants to the OECD *Code of Liberalisation of Capital Movements*[7] are fairly open too. In total, about 54% of the countries in the database are more open than the OECD average, and about 72% are more open than the non-OECD average. Hence, only few countries continue to impose relatively more significant barriers to FDI.

Figure 1. OECD FDI Regulatory Restrictiveness Index by country, 2017



Note: Scores range from 0 (open) to 1 (closed).
Source: OECD FDI Regulatory Restrictiveness Index database.

5 The non-OECD countries that have adhered to the Declaration are: Argentina, Brazil, Colombia, Costa Rica, Egypt, Jordan, Kazakhstan, Morocco, Peru, Romania, Tunisia and Ukraine.

6 The Declaration consists of OECD instruments designed to promote international investment in a transparent and responsible manner. Under the Declaration, governments voluntarily commit to a balanced set of rights and obligations for foreign investors through the National Treatment instrument and the *Guidelines for Multinational Enterprises*.

7 The OECD *Code of Liberalisation of Capital Movements* is an OECD instrument designed to support the progressive freedom of capital movements, while providing flexibility for countries to lodge reservations regarding operations which the country is not yet in the position to liberalise and to reintroduce restrictions in situations of serious economic and financial disturbance. Since 2011, non-OECD economies may apply for adherence to the Code. Currently seven non-OECD countries are undergoing the process of adherence (Argentina, Brazil, Bulgaria, Croatia, Peru, Romania and South Africa).

Box 1. The OECD FDI Regulatory Restrictiveness Index ere

The *Index* focuses on four types of measures: foreign equity restrictions, discriminatory foreign investment screening and approval requirements, restrictions on the employment of foreign key personnel, and other operational restrictions (such as limits on purchase of land or on repatriation of profits and capital). The extent of discrimination between foreign and domestic private investors is the central criterion to decide whether a measure should be scored. Nevertheless, non-discriminatory measures are also covered when they are considered more burdensome for foreign investors, such as rules regarding the nationality of board of directors. The *Index* covers 30 sub-sectors, almost all sectors of the economy except health and education, which are then aggregated into 22 sectors. The economy-wide index is obtained by averaging the scores for all 22 sectors.

Scores range from 0 (open) to 1 (closed). The scoring methodology is inspired in the seminal work of Hardin and Holmes (1997) based on expert judgement. Foreign equity restrictions are given a higher score, followed by discriminatory screening measures. Restrictions on foreign key personnel and other measures receive relatively lower scores. Scores reflect the sum of scores under each policy dimension, capped at one. For further details on the scoring, please refer to Kalinova et al. (2010).

The *Index* is based on statutory measures as reflected in official OECD instruments or identified in OECD Investment Policy Reviews and yearly monitoring reports. The use of country positions under the OECD Code of Liberalisation of Capital Movements and the OECD National Treatment Instrument, as well as the comprehensive discussion of countries' discriminatory measures undertaken in the Investment Policy Reviews ensures an appropriate process for identifying relevant restrictions and allows for a great deal of consistency in their interpretation. The *Index* is updated on yearly basis, which allows it to be used to track the progress of liberalisation over time. OECD countries and non-OECD countries adhering to the Declaration are required to notify the OECD in case of changes to regulations affecting foreign investment, which facilitates keeping track of reforms for the purposes of the *Index*. Nonetheless, the OECD Secretariat monitors changes to investment-related regulations in all countries covered in the *Index*.

Actual implementation of statutory restrictions, which is difficult to assess, is not factored into the scoring. Although important, other aspects of the regulatory framework, such as the nature of corporate governance, the extent of state ownership, and institutional or informal restrictions which may also impinge on the FDI climate, are not incorporated.

Source: Kalinova, Palerm and Thomsen (2010).

Seen from a broad perspective, most economies have significantly liberalised restrictions on international investment over time. OECD economies undertook substantial reforms of their FDI regime already in the 1970s and early 1980s. For emerging economies, FDI liberalisation came later – in the late 1980s and 1990s – as the benefits of export-led development driven in part through FDI became more widely accepted (World Bank, 1991). From 1992 to 2001, about 95% of the FDI regulatory changes are estimated to have

been towards more liberalisation. Most of the attempts to attract FDI involved the introduction of promotion policies and incentives to foreign investors (Kobrin, 2005).[8]

These efforts were partly backed by the need to rely on more stable and longer term investment flows in view of various financial crises that had affected developing countries and decreasing levels of international finance available for developing countries (Kobrin, 2005). The increased competition for FDI may also have induced further policy liberalisation (Cooray and Vadlamannati, 2012). The authors' findings suggest that changes in a country's FDI regime influences changes in FDI policy elsewhere, and that competition is most fierce in countries already relatively more open to FDI.[9] Some sort of international pressure for more open and market-based economies either by international organisations or directly by partnering countries supportive of such policies may also have played a role, although evidence seems limited in this regard.[10] All reasons combined led to the impressive growth rates of annual inflows of FDI into developing countries in the late 1980s (250%) and 1990s (520%) (Kobrin, 2005).

The *Index* provides a complementary view on the trends of FDI policy liberalisation as it grasps to a certain extent the varying degrees of liberalisation or restriction embedded in countries' changes to their investment regimes since 1997. However, the short timeframe observed imposes some limitations. Since a significant number of countries included in the database liberalised strongly in previous periods (1980s and 1990s), the *Index* only captures minor policy reforms in these cases. But it captures more ambitious policy reforms in the case of laggard reformers. The pattern of reforms since 1997 as measured by the *Index* suggests that countries have generally converged towards less restrictive policy environments for FDI and sometimes significantly so. Since 2000, the pace of reform may have slowed partly because there are now fewer barriers to remove, but it may also reflect the fact that the low-hanging fruit of reform has already been picked and remaining reforms will involve more stakeholder opposition (Mistura and Thomsen, 2017a).

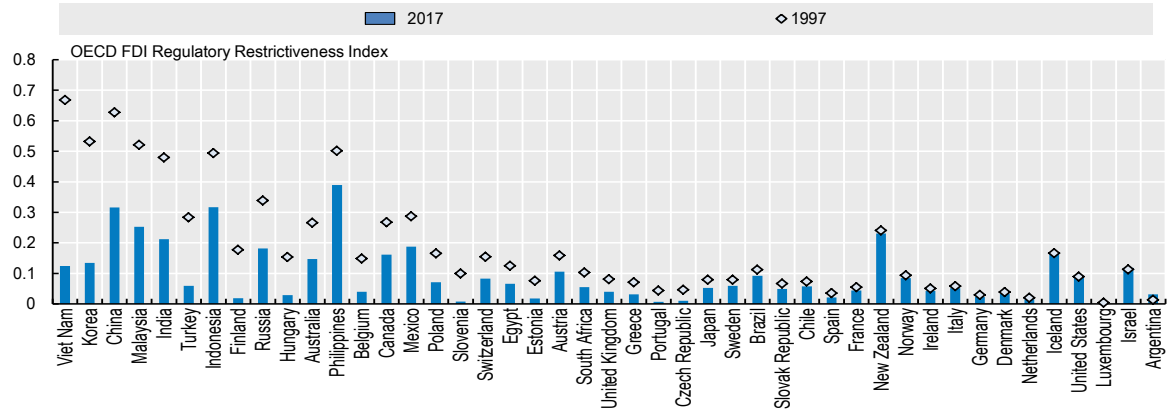
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8 Using UNCTAD's database tracking FDI regulatory changes, Kobrin (2005) analysed the determinants of liberalization of foreign direct investment policies in 116 developing countries from 1992 to 2001, covering a total of 1 086 regulatory changes. The database contains the number of annual changes regulations affecting FDI and therefore do not represent the relatively openness of a country's FDI regime. Annual changes in regulations refer to policies in eight categories: ownership restrictions, sectoral restrictions, operational restrictions, foreign exchange restrictions, promotion and incentives, guarantees and corporate regulation.

9 Cooray and Vadlamannati (2012) rely on the number of annual changes in FDI laws and regulations favourable to foreign investment to analyse if countries compete for FDI by liberalising their FDI policy regimes. Their indicator is based on information reported by UNCTAD in its World Investment Report series, available for 148 countries from 1992 to 2009, and covers measures related to approval procedures, sectoral restrictions, operational conditions, incentives, investment guarantees and corporate regulations to FDI.

10 Only a handful of studies have looked into the determinants of FDI policy liberalisation. Besides the increasing need for long term finance seen in the 1980s and the rather widespread recognition of the benefits of FDI to host economies, other possible reasons for FDI policy liberalisation may have come from some sort of international pressure for such an agenda by international organisations, such as the IMF or World Bank, or directly by partnering countries compromised with such policies. Kobrin (2005), however, finds more evidence supporting a rational approach towards FDI liberalisation, with market size, trade openness and better educated workforce being the main explanations for liberalising changes in regulations affecting FDI. The author finds only limited support for an external pressure explanation of FDI liberalisation.

Figure 2. The Top FDI Reformers, 1997-2017



Note: Scores range from 0 (open) to 1 (closed).
Source: OECD FDI Regulatory Restrictiveness Index database.

Countries in the Asia and the Pacific region, nonetheless, tend to remain relatively more restrictive than those in other regions of the world, regardless of whether or not they are OECD countries. Despite being "laggards" to some extent in terms of FDI reforms, Asian emerging economies have been the most active FDI reformers in the last two decades, consistently moving towards levels of FDI restrictions observed in the more advanced economies (Figure 2). Economies such as India, Indonesia, People's Republic of China and Viet Nam have recently undertaken considerable efforts to liberalise FDI further. Yet, there is still room for further reforms as stringent foreign equity limitations still persist in most cases. These countries should further increase their efforts in achieving appropriate level of restrictions considering their political economy context. Their main concern should be the potential costs of such measures and their ability to regularly assess the associated costs and benefits to design efficient policy reforms. Having mostly undertaken greater liberalisation efforts in previous periods, evidence of reform is naturally more limited in the observed period for the European and Latin American economies (Mistura and Thomsen, 2017a).

Among non-OECD countries, many of the countries with the highest scores are also the largest economies: China, India and Indonesia. Market size is also negatively correlated with openness in terms of trade. Although there are many possible elements behind this correlation, it suggests that larger economies have less need to be open to either trade or investment because the size of the market potentially allows both for economies of scale and sufficient consumer choice. Larger developing economies may have greater means and interests to sustain the development of national players and implement a more subtle transition to FDI openness, particularly in the case of the services industry where most of the remaining restrictions reside. On the other hand, one could expect larger economies to be more open to FDI in general. These countries are more likely to attract market-seeking FDI which potentially fosters more backward and forward linkages than merely efficiency-seeking investments (Girma et al., 2008).

There is also a fair correlation between the level of restrictiveness and a country's natural resources endowment. Well-endowed countries are generally more restrictive than those which are not. Whether out of resource nationalism or simply the management of strategic assets, governments in resource rich economies feel a greater need to intervene with respect

to foreign investment. The part of this strategy which involves government control through state-owned enterprises is not captured by *Index*. Lastly, as might be expected, the most open economies to trade also tend to have the fewest restrictions on FDI.

2.2. By types of restrictions

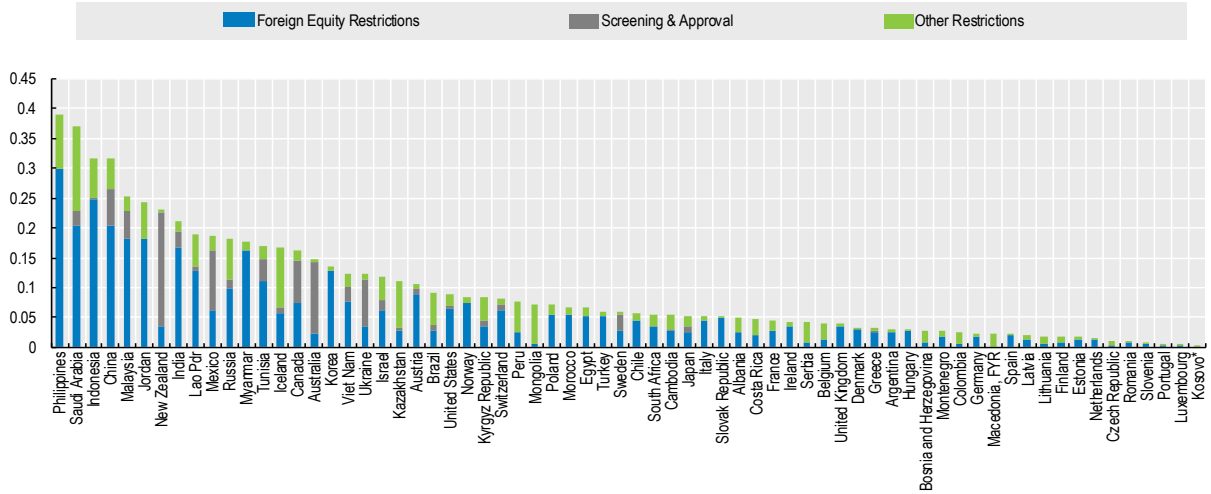
In most countries, FDI restrictions are dominated by foreign equity limits and screening measures (Figure 3). Foreign equity restrictions are usually sector-specific and limit the extent of foreign ownership permitted in companies or in the aggregate of companies in that sector. Equity restrictions are by far the most frequent type of restriction and can take different forms: they typically prevent full or foreign-majority ownership, but sometimes forbid foreign participation entirely; sometimes the scope is limited to acquisitions only instead of all foreign investments, i.e. acquisitions and greenfield projects; on rare occasions it applies only to listed companies or to investments in a specific company, typically former state monopoly holders; sometimes the cap on foreign ownership applies to the entire sector, stimulating competition only among foreign investors when the threshold is attained.

In addition to legitimate national security concerns, the rationale for imposing any sort of equity restriction or joint-venture requirement is usually to protect domestic investors from foreign competition based on the infant industry argument, to push domestic investors to upgrade by forcing linkages between foreign investors and the domestic economy or simply to ensure a domestic share in the rents of such projects. The benefits of FDI to host economies are indeed partly associated with their spillovers to domestic firms, notably in terms of knowledge transfers to local players. By strengthening the interactions between domestic and foreign firms, governments expect that foreign equity limitations or joint-venture requirements will facilitate such transfers and spillovers.

This argument finds some resonance in the empirical literature about FDI spillovers. The few existing studies that aimed to distinguish these effects by types of investors, *i.e.* fully or partially foreign-owned, do suggest that the degree of foreign ownership may matter for spillovers to occur. Foreign affiliates with shared ownership seem to engage more in local sourcing than wholly-owned foreign subsidiaries, partly because they may face lower costs of finding local suppliers for intermediates goods. And this seems to lead to higher productivity spillovers to local producers in the supplying sectors (vertical-backward spillovers) in some cases (Javorcik and Spatareanu, 2008; Javorcik, 2004). In part, this may occur because multinational enterprises may be more inclined to transfer capabilities to suppliers and customers, since they may benefit from any vertical spillover leading to superior performance of suppliers or customers.

Evidence of spillovers from FDI to firms in the same sector (horizontal spillovers) is, however, generally more difficult to observe, partly because foreign-owned firms may be *a priori* more resistant to transfer capabilities to competitors (Aitken and Harrison, 1999; Javorcik, 2004; Irsova and Havranek, 2013). Nonetheless, Javorcik and Spatareanu (2008) find evidence of horizontal spillovers arising from joint-ventures. While foreign-owned firms may be generally less willing to transfer their most advanced technology to their partially-owned affiliates than to wholly-owned subsidiaries because of the risk that it is unduly appropriated by the domestic partner or by competitors, the use of "second-class" technology, combined with the better access to knowledge through the participation of the local shareholder, may facilitate knowledge absorption by local firms in the same sector.

Figure 3. OECD FDI Regulatory Restrictiveness Index by type of restriction & country, 2017



Note: Scores range from 0 (open) to 1 (closed).
Source: OECD FDI Regulatory Restrictiveness Index database.

The evidence to date, however, makes no distinction between 'genuine' shared ownership projects and those where local participation is mandated by regulation. Besides, existing studies are heavily based on data from firms in the manufacturing sector, which is generally open to FDI. Hence, the existing evidence is most likely to be capturing the results of 'genuine' partnerships instead of imposed ones.

There are a few reasons to believe such imposed conditions may not necessarily achieve their intended purpose. The exercise of control over operations is one key underlying characteristic of foreign investment by multinational firms (Hymer, 1976; Grossman and Hart, 1986). To the extent that foreign ownership restrictions limit investors' ability to exercise this control and influence the distribution of a project's ex-post surplus, they may affect investors' investment decisions ex-ante (Karabay, 2010). By potentially diminishing a country's relative attractiveness to FDI in the first place, foreign equity restrictions may limit the potential for spillovers overall. This situation also contrasts sharply with the case where a 'genuine' joint venture is the result of foreign investors' own investment strategies, *i.e.* where from the foreign investor perspective the perceived benefits from the shared ownership are greater than any potential cost associated with the partial loss of control.

In addition, such restrictions may also decrease the potential surplus of a project by inducing the inefficient use of local resources or by simply limiting their potential spillovers vis-à-vis the case where no conditions are imposed. Foreign investors may be reluctant to enter into joint-venture with local investors, including because sometimes it is difficult to find suitable local partners with the required capacity and skills. They may also have incentives to deploy older technologies and production techniques as compared to the frontier in international industry when faced with foreign equity restrictions or joint-venture requirements (Moran, Graham and Blomström, 2005).

Another way countries sometimes regulate the entry and behaviour of foreign investors is through screening and approval mechanisms. Foreign investment screening measures encompass government approval requirements which are discriminatory to foreigners, *i.e.* that are required only from foreign-owned projects or that go beyond those licensing or

permit requirements applicable to domestic investors, explicitly containing criteria that favour domestically-owned projects. These measures may vary widely in their scope. Some countries screen FDI projects horizontally across all sectors; others only in specific strategic sectors, and others combine these approaches with monetary thresholds, screening only large projects for instance. Some screening mechanisms place the burden of proof on the investor in demonstrating a net economic benefit to the host economy; others place the burden on the host government to demonstrate that the project is not in the national interest.

Screening policies were prevalent worldwide in the early 1980s, including in OECD member countries. But most countries have eliminated them overtime as the economic and political concerns that screening had been intended to address diminished. While 30 years ago, about 70% of the OECD countries screened FDI projects, now fewer than one in six still do (Mistura and Thomsen, 2017b). Where general screening still exists, governments have done much to alleviate their burden, including by raising the threshold, narrowing the list of subjected sectors or the types of investment (e.g. only investments by state-owned enterprises/sovereign wealth funds), offering automatic approval after a period of time has elapsed and providing the right of appeal. The most frequent reforms completely replaced previous general screening systems by *ex ante* or *ex post* notification requirements, or narrowed their scope to more sensitive industries, often delimited by national security concerns. In other cases, screening of foreign investment was replaced by screening as part of the granting of incentives (Mistura and Thomsen, 2017b).

Governments that still screen FDI often argue that such policies allow them to maintain a more open regime for FDI overall by reassuring local stakeholders that their interests will be safeguarded. In addition to the argument that screening allows governments to screen out potentially harmful projects, some argue that by imposing conditions on foreign investors, the government is able to extract the maximum potential benefit for the local economy in terms of employment, management responsibilities, R&D and transfer of technology. Mistura and Thomsen (2017b) find, nonetheless, little support for such argument. Based on the OECD *FDI Regulatory Restrictiveness Index*, countries that maintain screening mechanisms tend to, on average, have more restrictions in other areas as well, with some exceptions only.

At the same time, criteria upon which decisions are rendered are often vague, as national interest is rarely defined. While not covered by the *Index*, a similar situation is observed with regards to national security screening mechanisms (Wehrlé and Pohl, 2016). Conditions imposed can also be arbitrary, inconsistent and lack in transparency, amounting to restrictions which are discretionary and *sui generis*. The existence of such review mechanisms on its own can encourage rent-seeking by local firms eager to erect barriers or even block completely potential market entrants. As such, they can have a potentially dissuasive impact on FDI through the signal it sends, the projects actually rejected or reconfigured and the administrative burden and uncertainty it imposes on potential investors. In the extreme case, screening can amount to a fairly restrictive regime where conditions imposed approach restrictiveness levels of other more straightforward restrictions, as is sometimes the case (Mistura and Thomsen, 2017b).

More than for other types of restrictions, the degree of restrictiveness of screening measures can vary greatly by the way they are designed and implemented. This makes it difficult to effectively grasp their importance in an indicator objectively. The *Index* only partially grasps their level of administrative burden and complexity by simply differentiating them according to the established investment threshold levels, without taking into account any burden on foreign investors associated with their implementation.

The various other barriers to FDI captured in the *Index* refer to restrictions on the employment of foreign key personnel[11], such as nationality requirements for members of the Board of Directors, and other measures potentially affecting the profitability or structure of the business activity, such as restrictions on land acquisition by foreigners, limits on the repatriation of profit and capital, branching restrictions and reciprocity requirements. Such measures are said to limit market reach or raise transaction costs for foreign-owned firms relative to competing locations. Some evidence exists to suggest that firms' preferences might indeed not converge with those of governments with respect to some operational barriers, such as foreign employment policies for instance, and that this may negatively influence firms' investment decisions.[12]

2.3. By economic sectors

In general, FDI in manufacturing sectors is allowed without restrictions, except when a horizontal measure applying across the board is in place, such as screening requirements or restrictions on the acquisition of land for business purposes by foreign investors. Primary and service sectors remain, however, partly off limits to foreign investors, holding back potential economy-wide productivity gains (Figure 2). Even within OECD countries, which have often undertaken greater liberalisation efforts in previous periods, restrictions on foreign investment remain in some key network sectors, such as energy and transport, and in fisheries for instance. To the extent that these sectors are often deemed strategic and/or have often been subject to state ownership, it is not unusual for foreign investors to face higher restrictions in these sectors. It is important to note, however, that the *Index* does not cover state monopolies as these restrictions apply to the entire private sector and thus do not discriminate against foreign investors. Considering all countries in the *Index*, the sectoral pattern of restrictions tends to be similar in both advanced and emerging economies, but the extent of restrictiveness is generally higher in the latter (Figure 4).

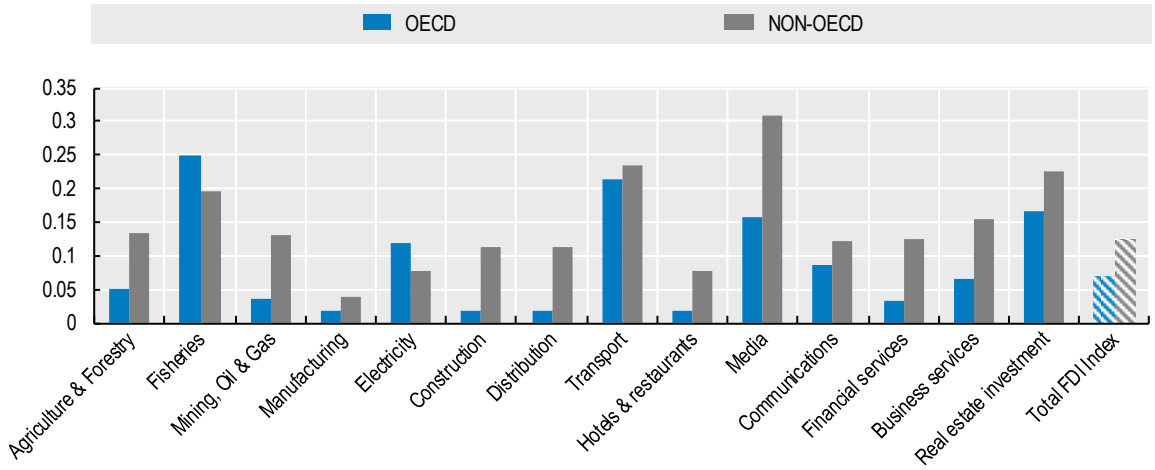
Service sectors restrictions may have important economic implications beyond their potential direct impact on the degree of competition and contestability in related sectors. A key risk is that they contribute indirectly to constrain productivity growth in downstream sectors. Evidence suggests that overall productivity of manufacturing firms and the level of product differentiation in the industry are substantially affected by restrictions and stringent product market regulations in service sectors (Nordås and Kim, 2013; Nicoletti et al., 2003; Arnold et al, 2011; Fernandes and Paunov, 2012; Duggan, Rahardja and Varela, 2013; OECD, 2018). Open and efficient markets for services are also fundamental to underpin participation in global value chains and hence to facilitate the diffusion of new technologies (OECD, 2015). In catching-up countries, lower productivity firms could achieve large productivity gains if they could benefit from the expertise of foreign owners,

[11] The Index does not capture rather horizontal foreign employment quotas affecting all levels of management position. Only restrictions on the placement of foreigners to top-level management positions are taken into account.

[12] Asiedu and Esfahani (2003), examining the determinants of FDI employment restrictions, find that the level of local employment preferred by government exceeds the level preferred by multinational companies. The authors argue that this divergence leads governments to impose restrictions on employment, which potentially affects firms' investment decisions. Their finding is based on a political economy model where the multinational company and the government have different functions: the former maximises profits and the latter cares about tax revenue and local employment. The model is tested using data on employment from the World Bank's Business Environment Survey 1999-2000, with data on 1207 foreign-owned firms operating in 52 countries.

if regulations do not impede the necessary restructuring (Kalemli-Ozcan et al., 2014). In more restrictive environments with stringent product market regulations, foreign investors perceive restructuring of weak firms as too costly, and may tend to invest into already high productivity firms by international standards. This reduces the scope for countries to upgrade the efficiency of their weakest firms.

Figure 4. OECD FDI Regulatory Restrictiveness Index by economic sector, 2017



Note: Scores range from 0 (open) to 1 (closed).
Source: OECD FDI Regulatory Restrictiveness Index database.

3. Empirical approach

The literature on the determinants of FDI is extensive. Models used to explain FDI generally take either a macro-level approach drawing on modern international trade theories to explain the location of multinational production or a firm-level approach based on microeconomic theories of the firm to explain why and which firms are more likely to become foreign investors. Together these models look into characteristics that are either endogenous to the firm, such as management expertise, technological skills, firm size etc., providing firms with ownership advantages that can be exploited abroad (Hymer, 1976; Dunning, 1973), or exogenous characteristics that affect a firm's FDI decisions, such as market size and labour costs, which imply some location advantages for establishing in a host country (Vernon, 1966; Kojima, 1973; Helpman, 1984; Markusen, 1984; Carr, Markusen, and Maskus, 2001, and Bergstrand and Egger, 2007), as well as transaction costs and market imperfections that lead companies to internalise markets for intermediate products in an international context (Buckley and Casson, 1976).

These models typically aim to explain the 'amount' of firm-level activity that would be expected in foreign markets, notably in terms of foreign affiliates sales vs. exports, rather than FDI as cross-border investment flows *per se*.[13] However, in the absence of widespread availability of foreign affiliates data, the empirical literature has mostly relied on FDI

[13] FDI flow measures are more likely to be influenced by business cycle and other short term adjustments than stocks, which is expected to better capture the 'optimal' level of capital allocation across countries.

stocks data for this purpose (Blonigen and Piger, 2011). FDI stocks are a fairly consistent proxy for the level of foreign affiliate's activity as evidenced by the strong correlation between FDI stock data and real activity data by multinational firms (Lipsey, 2007).[14]

The gravity model has been the workhorse model in the empirical literature analysing the determinants of FDI across countries. Borrowing from theoretical developments supporting the application of the gravity model to international trade, the FDI gravity equation has been extensively applied in the empirical FDI literature. Despite the lack of a clear theoretical foundation for modelling bilateral FDI in a gravity model in the early days (Blonigen, 2005), the standard gravity model could be reasonably justified to horizontal FDI (Bénassy-Quéré et al 2005). In its basic formulation, the FDI gravity model states that bilateral FDI stocks depend on the product of the GDPs of both economies, proxies for supply and demand forces, and the distance between them, which accounts (roughly) for transaction costs and other frictions in bilateral investments. Recent theoretical developments, nonetheless, have provided further foundations for applying a gravity model for other FDI models, albeit with modifications (Kleinert and Toubal, 2010; Carr, Markusen and Maskus, 2001; Bergstrand and Egger, 2007; Head and Ries, 2008).

These recent models have allowed for the combination of horizontal and vertical FDI motivations under unified and more sophisticated frameworks (Bergstrand and Egger, 2007; Carr, Markusen and Maskus, 2001) and addressed some of the FDI heterogeneity with regards to the different entry decisions. In particular, Head and Ries (2008) developed a gravity model of FDI as the outcome of the international market for corporate control of profit-generating assets, rather than development of new (Greenfield) ones which had traditionally been the focus of the literature. Essentially, the model explains the amount of corporate assets in one country that will be controlled by a management team based in another country as a result of cross-border M&A activity. At the host country level, the amount of M&A activity should therefore be reflective of the outcome of all FDI investors who anticipate the highest subsidiary valuation and compete for them against potential rivals. The authors then estimate their model using both cumulative M&A data and FDI stocks.

Based on this literature, this study applies a gravity model to estimate the effect of FDI restrictions on bilateral inward FDI stocks and cross-border M&A investment stocks. A poisson pseudo-maximum likelihood (PPML) estimator is used due to its superior performance in estimating the gravity equation in comparison to the traditional linear estimation (Santos Silva and Teneyro, 2006). The authors have shown that the linear estimation of the log-linearised gravity equation can be severely biased and inconsistent in the presence of heteroscedasticity because of the multiplicative nature of the gravity equation. The use of robust standard errors will only correct the estimated standard errors,

[14] Despite their correlation, the difference between FDI stock and the real level of activity of foreign affiliates is also worth noting. The former represents the financing from the parent foreign firm only, whereas the latter represents affiliates' activities as financed by their entire balance sheet. One may expect foreign affiliates in a country with highly developed financial markets to be less dependent on their parents' financing than affiliates in countries with less developed financial markets. If so, FDI stocks may understate the amount of foreign affiliate activity in the more financially developed markets. A robustness check was conducted by estimating the baseline model including a measure of financial markets development, notably the IMF's index of financial market depth index (Svirydzenka, 2016). Although not reported here, the results remain stable with no significant implications to the other covariates. The measure is estimated to have a positive and significant on FDI. Results can be made available upon request.

but will have no effect on the estimates of the parameters. PPML, on the other hand is consistent in the presence of heteroscedasticity and additionally provides a natural way to deal with zero values of the dependent variable. The model is consistent regardless of the distribution of the data, hence including in the presence of large number of zero observations. The only assumption needed for the PPML estimator to be consistent is the correct specification of the conditional mean of the variable of interest. Finally, another important advantage of this approach is that, although the dependent variable is entered in levels, the coefficients of independent variables entered in logs can be interpreted as simple elasticities. For these reasons, the following model is estimated in this paper using the PPML estimator:

$$X_{ij,t} = \beta_0 + \beta_1 FDI_RI_{j,t-1} + \beta_2 GDP_O_{i,t-1} + \beta_3 GDP_D_{j,t-1} + \beta_4 GDP_TR_{j,t-1} + \beta_5 SIM_{ij,t-1} + \beta_6 Distance_{ij,t-1} + \beta_7 Border_{ij,t-1} + \beta_8 Language_{ij,t-1} + \beta_9 Colony_{ij,t-1} + \beta_{10} REM_{j,t-1} + \beta_{11} REM_{i,t-1} + \beta_{12} TRADE_{j,t-1} + \beta_{13} FTA_I_{ij,t-1} + \beta_{14} FTA_O_{ij,t-1} + \beta_{15} FTA_REL_{j,t-1} + \beta_{16} FD_{ij,t-1} + \beta_{17} HCD_{ij,t-1} + \beta_{18} NR_RENT_{j,t-1} + \beta_{19} TAX_{j,t-1} + \beta_{20} RBER_{j,t-1} + \beta_{21} GOV_I_{j,t-1} + u_i + v_j + w_t + \varepsilon_{ij,t}$$

where $X_{ij,t}$ denotes the nominal inward FDI stock (FDI_INW)[15] or the nominal M&A inward investment stock (MA_INW) in millions of US dollars of country *j* from country *i* in year *t*. A description and discussion of these two dependent variables and all explanatory variables is provided in the next section.

All explanatory variables are one-year lagged vis-à-vis the dependent one to reduce possible endogeneity issues. In addition, all explanatory variables are introduced in logs, except binary variables which are taken in level. All variables are winsorized at the 1st and 99th percentile levels to reduce the effects of outliers. *ui*, vj and $w\acute{t}$ denote origin country, destination country and year fixed effects respectively. $\varepsilon_{ij,t}$ denotes a zero-mean error. Country fixed effects reduce the risk of omitted variable bias and year fixed effects capture the global macroeconomic cycle. In the presence of country and year fixed effects, it is noteworthy to observe that if a country has regulation that is persistently more restrictive than its peers, this does not drive the result. Similarly, if all countries make the same regulatory changes over time, this does not drive the result either. Only different changes across countries and time contribute to the estimation. As regards bilateral measures, results are also driven by country pairs for which this bilateral indicator differs from the average value for each of the two countries relative to all counterparts. The standard errors are clustered by country-pair to control for potential heteroscedasticity and limit the potential effect of persistency of the level of FDI and M&A stock within each country-pair over time (Fournier, 2015).

4. Data description

4.1. Dependent variables

The bilateral data on nominal inward FDI stock (FDI_INW) are from the OECD Foreign Direct Investment Statistics and UNCTAD's Bilateral FDI Statistics. The data are restrained to 60 advanced and emerging economies both in terms of origin and destination

[15] Consistent with previous literature on the determinants of foreign direct investment (Blundell-Wignall and Roulet, 2017), a robustness check is performed using a dynamic gravity model through the inclusion of a lagged dependent variable. All results are shown in Appendix 1.

countries, as covered by the OECD FDI *Regulatory Restrictiveness Index*. For OECD countries and a few others covered in the OECD database, data are available since 1997. For the rest, data are available only since 2001. The data used here are based on the 3rd Edition of OECD Benchmark Definition, which are available only up to 2012. More recent data are released under the 4th Edition Benchmark Definition, but unfortunately bilateral historical data are not available under this newest definition. Hence, for consistency reasons, only the data under the 3rd definition was used.

The bilateral M&A inward investment stock data are from Dealogic.[16] This stock measure reflects the declared amount effectively paid by the acquirer from country i for the target in country j aggregated by country pair in year t, and cumulated over the years as per Head and Ries (2008).[(17)(18)] The model is estimated for the period 2001–2016, with the initial stock in 2001 being the cumulative over the period 1997–2001. The reason for this is to account for an initial stock of bilateral cross-border investment activity. This allows for differentiating across countries in this respect, which is more likely to be the real situation. Otherwise, the model would imply that all bilateral relationships start at the initial period. Hence, while the sample time period for the regression with bilateral M&A inward investment stock is 2001–2016, the period for the regression with bilateral inward FDI stock is between 1997 or 2001 (depending if it is an OECD or a non-OECD country) to 2012.[19]

Although FDI values are conceptually distinct from M&A values[20], the latter can, to some extent, be seen as a proxy for the subset of FDI activity that opts for the M&A entry route

16 Dealogic is a commercial data provider. The used dataset provides a comprehensive coverage of global M&A deal activity. Data are sourced through direct deal submissions by banking and legal contributors involved in such transactions, and are coupled with extensive research of a broad range of sources, such as regulatory filings, corporate statements and reports, among other available sources. The dataset, however, is not subject to official vetting by authorities and the extent of coverage may be uneven across time and countries. Caution is, thus, needed when interpreting the results obtained with this data.

17 Only cross-border M&A deals (where the acquiring and the target firms are established in different countries) resulting in an equity ownership of 10% or more by the acquiring firm after transaction were taken into account here. The 10% ownership threshold was adopted as it is the standard classification of a lasting interest by direct investors in a company as per the OECD Benchmark Definition of Foreign Investment and the IMF Balance of Payments Compilation Guide. Such ownership level is assumed to give investors an effective voice in the management of the company.

18 The data has not been netted for cases where the target and acquired firm are located in the same country, but the equity seller is in a third country. As such, it differs from FDI statistics which are net of divestments. While this paper does not address any potential implications arising from this, there might be some relevant implications. For instance, in case minority investments are more likely to be divested, such netting for divestments could matter for countries with greater equity restrictions, since it could more significantly reduce the overall reported amount of bilateral M&A inward stock in the country.

19 A robustness check is performed by restricting the sample time period to 2001–2012 when using bilateral foreign direct inward capital stock or bilateral M&A inward investment stock as the dependent variable. All results are shown in Appendix 1.

20 Data on mergers and acquisitions are conceptually distinct from FDI in at least two ways. First, capital disbursed for the acquisition may not necessarily flow across the border, and thus may not partially or entirely constitute a foreign direct investment flow (e.g. the acquisition may be

as explained in the section above. In fact, much FDI currently takes the form of cross-border M&As. The point in investigating the effects of FDI restrictions using M&A data is, however, not to compare the results with those obtained using FDI data, but rather to compare the sensitivity of the sector-specific results with that obtained using bilateral M&A inward investment stock for all sectors altogether. Regressions are, therefore, run using M&A inward investment stock for all sectors and then alternately for the three sub-economic sectors (i.e., primary (MA_INW_PRIM), manufacturing (MA_INW_MANU) and services (MA_INW_SERV)).

4.2. Determinants of foreign direct investment

A large set of determinants have been used in the empirical literature to examine FDI decisions of multinational enterprises under the various models mentioned above (Blonigen, 2005). Various empirical studies have also augmented the gravity model to analyse a variety of policies that may affect firms' decision to invest in host economies. This paper focuses on the importance of statutory barriers to FDI for a country's attractiveness to FDI.[21]

4.2.1. FDI restrictions

Statutory barriers to FDI and other operational restrictions are expected to deter FDI by influencing investors' choice among different locations. Barriers may limit market reach or raise transaction costs relative to competing locations for foreign firms both in particularly restrictive sectors as well as for foreign firms operating in FDI-related supporting sectors. As discussed above, FDI restrictions are most often related to foreign equity limitations or screening measures on foreign investment projects, as well as economic needs test for employing foreign key personnel and other measures affecting the profitability or structure of the business activity, such as restriction on land acquisition by foreigners, limits on the repatriation of profit and capital, and branching restrictions (Kalinova, Palerm and Thomsen, 2010).

Most of the existing literature has focused on the implications of broader capital account restrictions for macroeconomic performance, particularly in regard to its effect on economic growth (Henry, 2007; Eichengreen, Gullapalli and Panizza, 2011; and Quinn,

entirely or partially completed with debt capital raised in the target country). Second, the reported deal amount represents the value paid for acquiring the target firm, reflecting the target firm's enterprise value rather than its equity value. The latter would more closely correspond to foreign direct investment in the case of greenfield investments for instance. Bilateral foreign direct inward capital stock and bilateral M&A inward investment stock are highly correlated at 0.77.

[21] Estimated coefficients from regressions pooling wealthy and poor economies altogether may fail to capture the true FDI-independent variable relationship for both sets of countries if the underlying relationships are indeed different for less developed countries versus developed ones (Blonigen and Wang, 2004). Therefore, a robustness check is performed by including a dummy for OECD countries in the model and by interacting it with the Index variables to investigate whether the effects of FDI restrictions can be expected to be different between developed economies and less developed ones. The control variables employed and the use of host country fixed effects are, to a great extent, already expected to control for meaningful differences between the two groups and reduce any omitted variable bias. However, some characteristics may not be fully quantifiable and adequately accounted for through the variables employed. All results are shown in Appendix 1.

Schindler and Toyoda, 2011).[22] *De jure* measures of capital account restrictions used in these studies are often based on a binary interpretation of existing regulations compiled in the IMF's AREAER publication and refer mostly to a composite index of restrictions across different asset categories of the capital account.[23] Garibaldi et al (2001) and Schindler (2009) are an exception, providing separate scores for restrictions associated with different types of assets. Nonetheless, these measures still suffer from an all-or-nothing approach arising from the binary nature of these indexes, which does not necessarily capture the degree of restrictiveness of such measures and also does not correspond to the way FDI liberalisation takes place. In many cases countries adopt a sector-based approach to FDI reforms, maintaining different level of restrictions across sectors.

The *OECD FDI Regulatory Restrictiveness Index* tries to provide a more nuanced view of statutory restrictions affecting FDI. However, grasping the different types of restrictions and quantifying them for the purposes of cross-country analyses is not easy. Countries have applied a broad range of measures, which require some sort of classification for grouping them together for any analysis. Moreover, countries report measures in different ways and therefore any quantification of such measures requires a certain degree of interpretation.

Regardless of the methodological approach to account for restrictions, the most recent empirical studies focusing particularly on FDI tend to confirm that more restrictive countries are likely to receive less foreign direct investment (Box 2). By diminishing the relative rates of return from investment, restrictions are a natural candidate for explaining the dispersion of FDI across countries (Nicoletti et al, 2003). Often foreign investors compare locational alternatives for investments abroad, although there are cases in which the decision is restricted to invest or not into one particular foreign market. This helps explain why favourable policy changes towards FDI in one country are found to be positively correlated with FDI policy changes elsewhere. The relative openness of investment regimes matters for attracting investment (Cooray and Vadlamannati, 2012), particularly for countries relatively more distant from investors. FDI restrictions amplify the disadvantage of remoteness, increasing the costs more sharply for relative more distant investors (Nordås and Kox, 2009).

Moreover, the effect of FDI restrictions is likely to extend beyond its targeted sector-scope. Remaining restrictions on FDI are essentially concentrated in service sectors, but play an important role in the competitiveness of both services and manufacturing sectors. Recent OECD work in this matter, based on the OECD-WTO TiVA-GVC database, shows that the value created by services as intermediate inputs represents over 30% of value added of manufactured goods (OECD, 2014b). Hence, improving services performance becomes ever more important for developing an internationally competitive economy. Limited competition in services sectors, including by limits on foreign participation, negatively affect the productivity of manufacturing firms (Arnold et al, 2011; Arnold et al, 2012; Fernandes and Paunov, 2012; Duggan, Rahardja and Varela, 2013; OECD, 2018), and

[22] Empirical results have been rather inconclusive despite sound theoretical foundations. According to Henry (2007), this is partially due to some studies' failure to test what the neoclassical theory actually predicts liberalization of the capital account spurs temporary GDP per capita growth in a capital-poor country, which raises the standard of living permanently. But many studies have tested whether capital account liberalisation leads to a permanent growth effect, which is not exactly what theory predicts. Capital accumulation is subject to diminishing returns and therefore could not be sustained permanently.

[23] See Quinn, Schindler and Toyoda (2011) for a review of the literature on measures of capital account restrictions.

notably the level of product differentiation in the industry (Nordås and Kim, 2013). Besides, less competitive services sectors are also likely to reduce investment opportunities by potentially increasing the costs of sourcing quality service inputs for such investments.

Restrictions on FDI constitute one of several barriers impeding the development of more efficient service sectors and globally competitive economies. The OECD *Services Trade Restrictiveness Index*, released in 2014, covers a much broader range of trade barriers affecting services sector development and a country's global competitiveness, including regulatory transparency issues, restrictions on the movement of people, barriers to competitions and other discriminatory measures besides foreign entry restrictions. Reducing overall service trade barriers is likely to increase local firms' competitiveness in international markets and overall country competitiveness. Using the STRI to estimate the effect of services policy liberalisation on trade levels, recent OECD research has found that it has greater effects on the level of exports than on the level of imports. One explanation is that services trade barriers reduce competition in local markets and thus diminish the incentives for local firms to innovate and compete internationally. But additionally, since services trade barriers occur largely behind the border, they are also likely to impose costs on local firms, resulting in less cost effective firms (OECD, 2014b).

The importance of FDI policy in determining the level of foreign direct investment in a country underscores the need for countries to benchmark themselves against their peers in this regard. While every methodology used to quantify how open an investment regime is to foreign investors has its limitations, it is nevertheless an important exercise for policy-makers to potentially identify and scrutinise statutory barriers that may be hampering investment and that may no longer be attaining policy objectives. This is particularly important as not only the overall level of openness of an investment regime matters in FDI attractiveness, but also its relative openness vis-à-vis peer economies (see Appendix 1 for evidence in this regard).

This study captures barriers to FDI as measured by the OECD *FDI Regulatory Restrictiveness Index* (*FDI_RI*). The *Index* is available for 68 countries, including OECD countries, other G20 countries and major emerging economies, and covers 22 sectors (see Box 1). However, data for 8 countries[24] are missing before 2015. Hence, this paper is based on a global sample including 60 countries[25] over the period 1997–2016, *i.e.* all countries for which bilateral cross-border investment data and the *Index* are extensively available. Regressions are run using the overall *Index* scores and then alternately by types of restrictions (i.e., equity, screening and other restrictions).[26]

[24] Albania, Cambodia, Former Yugoslav Republic of Macedonia, Kosovo, Lao People's Democratic Republic, Montenegro and Serbia.

[25] Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, Colombia, Costa Rica, Czech Republic, Denmark, Egypt, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, India, Indonesia, Ireland, Israel, Italy, Japan, Jordan, Kazakhstan, Korea, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Malaysia, Mexico, Mongolia, Morocco, Myanmar, Netherlands, New Zealand, Norway, People's Republic of China, Peru, Philippines, Poland, Portugal, Romania, Russian Federation, Saudi Arabia, Slovak Republic, Slovenia, South Africa, Spain, Sweden, Switzerland, Tunisia, Turkey, Ukraine, United Kingdom, United States and Viet Nam.

[26] A robustness check is performed by considering peer-relative index instead of the absolute value of the OECD FDI Regulatory Restrictiveness Index. This transformation introduces slightly more variation to the index measure, making it possible to better take into account those countries

Box 2. Literature survey of the effects of FDI restrictions on foreign investment

A few studies have examined the potential effect of restrictions on FDI using the *OECD FDI Regulatory Restrictiveness Index*. Nicoletti et al (2003) draw upon the original version of the index created by Golub (2003) to investigate the effects of FDI restrictions and other border and non-border policies (e.g. tariffs, infrastructure, product market regulations and labour market policies) on foreign direct investment across a panel of 28 OECD countries from 1980 to 2000. The study employs a gravity model to explain bilateral outward FDI stocks and a dynamic panel model for explaining total multilateral inward FDI stocks. Their estimate suggests that FDI restrictions could be depressing bilateral outward FDI stocks by between 10% and 80% on average across countries, depending on the type of restriction. Total inward FDI stocks were also estimated to be depressed by FDI restrictions, but results were relatively less reliable as they were sensitive to the set of countries included in the model. One reason for this may possibly be the lack of variability of restrictions across subsets of OECD countries.

Ghosh et al. (2012) explore the impact of FDI restrictions on inward FDI stocks using panel time series (1981-2004) data for 23 OECD countries. Based on the 2006 methodology of the *Index* update (Koyama and Golub, 2006), their estimate confirms the significant negative effect of restrictions on inward FDI stocks. An autoregressive distributed lag model is used for estimation to separate short-term and long-term effects of variables included in the model. The short-run elasticity estimated from their model was between -0.06 and -0.14, and the long-run elasticity between -0.64 and -1.49.

As part of a comprehensive analysis of the impact of trade liberalisation on jobs and growth, the OECD (2011) has analysed the effects of restrictions as captured by the *Index* on bilateral FDI stocks in services sectors. Essentially the study evaluates the impact of FDI restrictions on the level of FDI stocks, and then feeds the results in a trade model that assess the effects of FDI stocks in services on trade levels. Described here is the result from the first-round of econometric analysis, which evaluates the impact of FDI liberalisation on FDI stocks in services. The analysis suggests that across the sample of OECD countries a policy change from full restrictiveness to full liberalisation would increase FDI stocks by about 25%. As no country in the sample is fully restricted nor it is plausible to move to full liberalisation, the authors also estimate the effects of removing half of the current restrictions. The effects of a 50% FDI liberalisation could be as large as a 12% increase in FDI stocks for certain countries.

Fournier (2015) explores with gravity models the determinants of foreign direct investment (FDI), including of FDI restrictions as measured by most recent version of the *Index*, in OECD countries. The estimates suggest a negative and significant impact of restrictions on FDI stocks after controlling for various policy and structural determinants of bilateral FDI.

Work by Ahrend and Goujard (2012) suggests that FDI restrictions may also contribute to greater financial crisis risks. More precisely, higher FDI restrictions in a number of OECD countries as measured by *Index* may have contributed to an increased bias in external liabilities towards debt, driven both by increases in external debt and decreases in equity and FDI liabilities. The authors estimate that an overall increase in the *Index* from the

with stable or fairly stable foreign direct investment regimes overtime. It also allows investigating whether a "peer-relative effect" may have implications to countries foreign direct investment attractiveness.

median to the third quartile would imply an increase in the share of debt in external liabilities by 3 percentage points, which would translate into an increase in financial crisis risk for a country by 0.3 percentage point.

Other studies, using indexes of capital account restrictions based on IMF's AREAER database, find similar results with respect to the effect of restrictions on FDI inflows. Arbatli (2011) employs a binary index of FDI restrictions to investigate policy determinants of FDI inflows into emerging economies. Based on the IMF's AREAER database, the author creates two binary indicators of FDI-related restrictions: one that assesses the existence of any restrictions on FDI inflows; and one that capture restrictions on the liquidation of direct investment. The author uses a dynamic panel model approach to model FDI inflows and data for 46 countries over 20 years. Results suggest that FDI-related capital controls have a significant negative effect on the level of FDI inflows, but no significant effect was found with respect to restrictions on the liquidation of direct investment.

Campos and Kinhosita (2003) also include a measure of FDI restrictions when examining the effects of agglomeration and institutions vis-à-vis initial conditions and factor endowments in explaining the locational choice of foreign investors. They employ an index of FDI restrictions developed by Garibaldi et al (2001) that covers approval requirements, the extent to which profits can be remitted abroad, ease in liquidating assets, and preferential treatment of direct investment. They analyse a panel of 25 transition economies from 1990 to 1998 and find that restrictions on FDI have negative and significant effects on the level of FDI, concluding that policies limiting capital inflows are effective in deterring FDI.

Binici, Hutchison and Schindler (2009) apply an index of capital restrictions based on IMF's AREAER information, disaggregated by asset class and covering 74 countries over 1995-2005, to analyse how effective capital account restrictions have been. The authors apply a combination of restrictions on FDI and portfolio equity investment to estimate their effect on overall FDI and portfolio equity investment inflows and outflows. Results suggest that capital controls are more effective in controlling equity-like capital outflows, showing only little evidence that they have an impact on inflows.

A number of other studies have used IMF's AREAER-based indexes to analyse the implication of broader capital account restrictions on overall capital inflows, but since the interest here is the potential effect of restrictions on FDI precisely, these have not been reported.

4.2.2. Market size and growth potential

Indicators of comparative advantage of host countries, such as market size and relative factor prices, are the most commonly used indicators of locational determinants of FDI. Countries with larger domestic markets tend to receive more FDI, particularly of a horizontal nature, due to higher demand potential and returns to scale. Horizontal FDI occurs when firms duplicate the same production stages in different countries due to higher returns to FDI relative to trade. Larger host country markets allow horizontal FDI to exploit firm-level economies of scale by circumventing important trade costs (tariffs and trade policies and transport costs), in industries presenting low plant-level economies of scale (Krugman, 1983). Larger markets are a natural candidate for FDI in the services sector, both for the industries that tend to accompany the development of other industries (e.g, banking) and for those industries involving large fixed costs (e.g, telecommunications).

Following the standard gravity equation model, the nominal GDP in millions of US dollars (*GDP_O* and *GDP_D*) of host and destination countries are included in the model. This should capture the productive capacity of the origin country and the purchasing power of the destination country, in addition to factors associated with the level of economic development. The coefficients of the GDP variables are expected to be positive, notably because in the case of horizontal FDI, the multinational activity is expected to be concentrated among countries that are relatively similar in both size and in relative endowments (Carr, Markusen and Maskus, 2001). The five-year average real GDP growth rate of the destination country (*GDP_TR*) is also included. It is expected to capture the dynamism intensity of host country economies and prospects of larger market sizes. Data are from the International Monetary Fund's (IMF) Economic Outlook database.

Additionally, as per previous studies, a measure of size similarity of origin and destination countries is used. This may be particularly an enabler of horizontal FDI since it should favour the exploitation of firm-level economies of scale for horizontal FDI projects (Nicoletti et al., 2003). Following Nicoletti et al. (2003), therefore a measure of size similarity (*SIM*) based on nominal GDP in millions of US dollar is included and specified as the following:

$$SIM_{ij,t-1} = ln\left[1 - \left(\frac{GDP_{i,t-1}}{GDP_{i,t-1} + GDP_{j,t-1}}\right)^2 - \left(\frac{GDP_{j,t-1}}{GDP_{i,t-1} + GDP_{j,t-1}}\right)^2\right]$$

4.2.3. Traditional gravity measures for FDI frictions

One of the most important variables in any trade or FDI gravity equation is bilateral distance, typically included as a proxy for trade or investment costs, respectively. While distance typically enters the gravity trade model as reflective of trade costs, which could generate an expectation that it be then positively correlated with horizontal FDI, most empirical studies have consistently observed a negative correlation with FDI, suggesting that it captures more than simply transport costs for instance. Besides indicating the existence of transport costs that would discourage trade and vertical FDI, distance may well capture information and organisational costs and other possibly cultural frictions that may negatively affect horizontal FDI too. In addition, as Markusen (2002) points out, FDI has only a relative advantage over trade with distant countries; thus distance and transport costs may well have an overall negative influence on FDI too, although maybe to lesser extent than on trade. Here a series of geographical measures that aims to capture various sorts of potential investment frictions are used.

As such, distance, contiguity, common language and past colonial relationship (Distance, Border, Language and Colony) variables are included in the model. Data are taken from the CEPII GeoDist database. Distance is measured as the average distance between the main cities of each country pair weighted by population. Contiguity refers to the existence of common border with the destination country. It is a binary variable which is unity if the two countries share a contiguous border and zero otherwise. Language is a binary variable which is unity if the two countries share a common language and zero otherwise, and should contribute to capture both cultural similarities and transaction costs for operating assets overseas. This facilitates the transfer of information across borders and reduces psychic distance. Finally, colony is a binary variable which is unity if the two countries share a common colonial linkage and zero otherwise. Colonial powers traditionally imposed their administrative traditions in the colonies. Similarities in administrative practices facilitate cross-border investment, as investors benefit from a reduced psychic distance between

origin and destination countries. The coefficients of these four variables are expected to be positive, reflecting the idea that proximity, common language and historical links are creating powerful networks.

4.2.4. Remoteness

A method frequently used to control for the 'multilateral resistance' terms advanced by Anderson and Van Wincoop (2003) in the structural gravity model of trade is to include a proxy for the countries' level of remoteness. The multilateral resistance term reflects countries' relative trade costs, including both physical and policy factors, for trading with the rest of the world. Remoteness from large markets is a major component of such relative costs: ceteris paribus, two countries are expected to trade more with each other, the more remote they are from the rest of the world. The same reasoning can be transposed to FDI. All else equal, FDI between two countries can be greater than FDI between any other two countries equally distant, because of their lack of alternative partners.

Therefore, a measure of remoteness (*REM*), defined as the GDP-weighted average distance between a given origin and destination country and their partners, is employed to explicitly control for this effect.[27] It is expected that remote countries will receive less FDI overall, although this may be the opposite for two remote countries close to each other. The measure is specified for the destination countries (*j*) as per the following (and similarly for origin countries (*i*)):

$$REM_{j,t-1} = \sum_{i} \frac{Distance_{ij,t-1}}{\frac{GDP_{i,t-1}}{GDP_{W,t-1}}}$$

In this formula, weights are the partner countries' shares of world GDP (denoted by GDP_W).

4.2.5. Trade openness

The degree of trade openness of a country normally reflects its trade policy environment in terms of border restrictions and multilateral agreements that facilitate the exchange of goods between signatory countries. By influencing intermediate product markets of multinational firms, trade policies are expected to affect FDI too. However, this relationship is not straightforward. Trade and FDI are likely to be complementary in the case of vertical FDI. This type of FDI occurs when firms spread different production stages of the value chain across different economies to exploit the differences in countries' relative factor proportions (Helpman, 1984). Investment of this type aims at re-exporting products to either the home market or other countries. However, exporters are often allowed to import duty-free (except for services), which may result in higher levels of trade openness due to an increase in the imports account partially resulting from higher vertical FDI stocks. Nonetheless, one would expect trade and vertical FDI to act more as complementary

[27] The literature, however, has pointed to the limitations in using such remoteness indexes as controls for multilateral resistances. The use of directional (destination and origin country) time fixed effects has been proposed as a superior and simpler manner of controlling for this with panel data (Yotov et al., 2016). The use of directional time fixed effects, however, is problematic if one is interested in estimating the effects of time-varying country-specific variables due to collinearity. As such, the remoteness measure is employed to control to some extent for multilateral resistance. In addition, country fixed effects and year fixed effects are employed, which contributes to controlling for some of such effects, in addition to controlling for other unobserved country-specific characteristics and cross-country time effects.

activities as export-oriented investors will look for both favourable export and import regimes in deciding where to locate, although the extent to which one affects the other is less clear.

In the case of horizontal FDI, however, trade and FDI may compete with each other. The objective of horizontal FDI is to access foreign markets and therefore FDI and trade can act as two substitutive modes of entry. Since trade openness is normally associated with reduced trade costs relative to the fixed costs of setting up production facilities abroad, it increases the relative returns to trade compared to FDI and thus is expected to discourage horizontal FDI (Markusen, 1984). In contrast, trade barriers (a lower ratio) create the incentive to carry out cross-border investment via joint ventures or subsidiaries, as in the tariff jumping theory of Bhagwati et.al. (1992). And if the existence or threat of trade restriction is present, and a competitor switches to cross-border affiliates, then others will be forced to follow, as in Lin and Saggi (1999). There is some empirical evidence supporting these patterns. For instance, Blonigen (2001), analysing Japanese FDI flows to the US finds that new FDI by Japanese firms decreases Japanese exports of FDI-related finished goods (trade substitution effect), but the author also finds that it increases Japanese exports of intermediate inputs associated with FDI-related products (trade complementary effect, but rather a complementary between horizontal FDI and vertical trade). With the increasing fragmentation of production networks, horizontal FDI is also likely to become relatively more intensive on world class imported intermediate inputs and, therefore, trade and FDI complementarities can be increasingly important in the aggregate.

Bergstrand and Egger's (2007) knowledge-physical capital model formalised theoretically why intra-industry trade and FDI can actually coexist. The authors showed that the expected substitution effect – fully formalised in Markusen's (2002) 2 x 2 x 2 knowledge-capital model (two countries-two goods-two factors) – lies in the assumption that only human capital is used to setup firms (headquarters) and plants (foreign affiliates), and as the world's human capital endowment is redistributed among the countries, trade and foreign affiliate sales will move in opposite directions due to the scarcity of human capital.[28] By adding a third factor (physical capital) and a third country to Markusen's (2002) model, Bergstrand and Egger's (2007) demonstrated that final goods trade, foreign affiliate sales and horizontal FDI can coexist including when the two countries' GDPs are identical. When skilled labour is not the only factor used to setup both plants and firms, it needs not to be displaced from plant to firm setups even as the two countries' GDPs converge in size. The introduction of a third factor and a third country along with capital mobility allows trade and horizontal FDI to coexist over a wide range of combinations of trade costs, investment costs, and plant-to-firm setup costs due to the endogenous adjustment of the relative price of human-to-physical capital in the three country setting.[29]

[28] Essentially, in the case where one's country GDP is really small (i.e. has virtually no human capital endowment), the country (host) is most profitably served through exports by firms from the other (home) country (human capital abundant). As host country GDP increases, *i.e.* human capital is redistributed among the two countries, there is a point where it warrants foreign affiliate production by home country firms, and home to host country exports will be partially "displaced" due to the scarcity of human capital. At equal GDPs, foreign affiliate sales would completely displace trade (Bergstrand and Egger, 2007; Markusen, 2002).

[29] The introduction of a third-country is not necessary to ensure the coexistence of trade and foreign affiliate sales (and FDI assumed as a proxy). But it allows to explain why foreign affiliate sales and trade are maximised when two countries have identical GDPs, and why bilateral FDI flows

Trade openness can also reflect preferential trade agreements that enlarge the potential market size for investments beyond domestic borders. Sometimes these even contain investment liberalising measures that themselves could incite more FDI. Regardless of the type of agreement, it generally increases the potential for exploiting firm-level economies of scale associated with horizontal FDI. Companies from outside a trade zone may benefit from engaging in the duplication of a production stage inside a trade zone, even if in a relatively small economy, to gain access to preferential trade conditions and connections to the enlarged regional market. Companies from within the zone may also engage in horizontal FDI to consolidate their market power in the region and better exploit firm-specific assets.

Therefore, while the effect of trade openness can be, to a certain extent, ambiguous in relation to horizontal FDI, it is expected to be positively associated with vertical FDI. Total trade-to-GDP ratio of the destination country is used here as an indicator of trade openness (*TRADE*). Exports and Imports data are from the OECD International Trade in Goods Database. A combination of three variables to control for the potential impact of free trade agreements on FDI is also employed. Such variables are compiled considering the list of free trade agreements in force since 1958 available in the World Trade Organisation Regional Trade Agreements Information System. *FTA_I* is a binary variable which is unity if two countries belong to the same trade agreement and zero otherwise. *FTA_O* is a binary variable which is unity if country *i* belong to a trade agreement and country *j* does not, or vice versa and zero otherwise. *FTA_REL* is the total number of partner countries that a destination country has as a consequence of the signature of free trade agreements over time. This variable accounts for the size of the network that a country can potentially reach to preferential trade agreements. Similarly to trade openness, the expected sign for the related coefficient of these three variables is ambiguous.

4.2.6. Factor endowments

Factor endowments are an important determinant of FDI (Helpman, 1984; Carr, Markusen and Maskus, 2001; Bergstand and Egger, 2007). As Fournier (2015) describes it: "the optimal factor structure depends, however, on the structure of multinational firms, especially whether they are vertically integrated and may need different production factors at different stages of production, or horizontally integrated and hence need similar factors of production. As a result, the effect of factor dissimilarity is ambiguous."

Following Nicoletti et al. (2003) and Fournier (2015), two measures are used as proxies for differences in factor endowments: factor dissimilarity (*FD*) and human capital dissimilarity (*HCD*):

$$FD_{ij,t-1} = \left| \ln\left(\frac{R_K_Stock_{i,t-1}}{n_Workers_{i,t-1}}\right) - \ln\left(\frac{R_K_Stock_{j,t-1}}{n_Workers_{j,t-1}}\right) \right|$$

$$HCD_{ij,t-1} = \left| \ln\left(n_School_Y_{i,t-1}\right) - \ln\left(n_School_Y_{j,t-1}\right) \right|$$

where FD and HCD are regarded as *a proxy* for the dissimilarity in capital stocks per worker and labour skills. R_K_Stock is real capital stock denominated in millions of 2011

are maximised when the GDP of the home country is larger than that of the host economy (Bergstrand and Egger, 2007).

US dollars. The number of workers ($n_Workers$) is defined by the number of employed persons.[30] Data are from the Penn World Table database by the University of Groningen Growth and Development Center. n_School_Y refers to the average number of years of schooling of the population. Data are from the Barro-Lee Dataset (2014; http://www.barrolee.com/).

4.2.7. Natural resource endowments

Countries with abundant natural resources are likely to attract resource-seeking FDI (Dunning, 1977). This type of investment is mostly an export-oriented investment undertaken to have access to, or secure stable supply of, particular natural resources that contribute to increase the competitiveness of the firm. While resource-rich countries will typically receive resource-seeking FDI, natural resources abundance may also crowd out resources for other sectors, diverting investments from manufacturing sectors for instance and imposing some sort of deindustrialisation or relatively lower competitiveness of such sectors. Previous studies (Asiedu, 2013; Poelhekke and Van der Ploeg, 2010) noted a negative relation between cross-border investment and natural resource, partly as a result of natural resources price fluctuations which entails greater risks for foreign investors who are not compelled by such investments.

The World Bank's indicator of rents from non-renewable natural resources in the destination country for this purpose (*NR_RENT*) is used. It is measured as the ratio of total natural resources rents[31] to GDP using estimates based on sources and methods described in "The Changing Wealth of Nations: Measuring Sustainable Development in the New Millennium" (World Bank, 2011).

4.2.8. Corporate taxation

As other investors, foreign direct investors seek to maximise the after-tax return on investment. Higher corporate taxation is, therefore, expected to discourage FDI (De Mooji and Ederveen, 2008). But the magnitude of tax effects is likely to be conditioned on a number of home and host-country policies and structural economic determinants, including agglomeration factors and the tax treatment received at the origin country (Nicoletti et al., 2006; Bénassy-Quéré et al., 2005).[32]

Host country taxation and the treatment of foreign earned income by home countries affect the difference of pre-tax and after-tax returns on FDI across comparable locations, thereby likely influencing both the locational distribution and the volume of investment, but also the way FDI is financed. The higher the tax burden on income earned in a location, the less likely an investor will transfer new capital to that location relative to other competing ones.

[30] It includes all persons aged 15 years and over, who during the reference week performed work, even just for one hour a week, or were not at work but had a job or business from which they were temporarily absent.

[31] The rent of a non-renewable natural resource is the total revenue that can be generated from the extraction of the natural resource, less the cost of extracting the resource (including a normal return on investment to the extractive enterprise). Total natural resources rents are the sum of oil rents, natural gas rents, coal rents (hard and soft), mineral rents, and forest rents.

[32] Relocation of firm-activity is costly and the instability of host country tax regimes may imply a non-linear relationship between tax and FDI depending on the tax treatment at home (Bénassy-Quéré et al., 2005).

But once established, the propensity to increase existing capital is influenced by the marginal tax burden (Devereux and Griffith, 2002). This depends, however, on the tax treatment in the home country where the parent company resides. Investors from home countries adopting a capital-import neutrality approach (tax exemption system), whereby any foreign-earned income is exempted from taxes at home (mostly applied by EU countries) and thus allowing these investors to reap the benefits from lower taxes or tax breaks of host countries, are likely to be more sensitive to host country taxation. Investors from countries adopting a capital-export neutrality approach (tax credit system), whereby domestic firms are taxed on their global operations and receive foreign tax credits for taxes paid abroad[33], are likely to be more neutral to host country taxes (Bénassy-Quéré et al., 2005; OECD, 2007).

Tax differentials and the treatment it receives also affect the way FDI is financed. Debt financing is to be preferred in the financing of FDI located in higher-tax jurisdictions, since interest is deductible for the foreign affiliate in the host country and would be taxed in the home country of the parent at lower rates or possibly even avoided depending on tax planning opportunities and financial instruments used. Conversely, equity capital would be preferred in the financing of foreign affiliates in low-tax jurisdictions – as dividends are taxed at the host country tax rate – notably by parent firms profiting from double-taxation rules[34] exempting tax on repatriated income (OECD, 2007).

All this depends on the various opportunities for investors to shift profits to lower-tax jurisdictions, including through transfer pricing opportunities and careful tax planning and corporate structure design, which allow investors to benefit from favourable tax treatments in different jurisdictions. These strategies affect the locational distribution of FDI and may end up dissociating the financial component of FDI from the production inputs associated with these investments (Lipsey, 2007). It is not uncommon for foreign investors to set up intermediary companies with little real activity, such as special purpose entities (SPEs), in low-tax jurisdictions or those providing favourable tax treatment to exploit tax arbitrage opportunities across jurisdictions when channelling investment to other jurisdictions where the economic activity actually takes place (Box 3).

But while taxation matters, tax differentials across competing locations may not outweigh structural economic determinants of FDI (Devereux and Griffith, 2002; Nicoletti et al., 2006). At least up to a certain extent, since taxes are partly used to finance productivity-enhancing public services, such as infrastructure, higher taxes should not necessarily

33 Often countries operating under a tax credit system allow for tax deferral, with taxes being incurred only at the moment of repatriation to the home country, and sometimes indefinitely (OECD, 2007). A few large economies, such as the United Kingdom, Japan and the United States used to operate under a tax credit system. They have all changed to an exemption system: both the United Kingdom and Japan in 2009, and the United States in 2017 (outside the period under study).

34 Double Taxation treaties are agreements between two countries for the avoidance of double taxing a taxpayer on the same taxable income or capital in both countries. While there is an expectation that they would increase investments, this may not occur exactly because they can reduce tax avoidance and other tax-savings strategies by firms (Blonigen and Davies, 2002). For instance, they may limit the opportunities for transfer pricing. Against common sense, Blonigen and Davies (2002) found evidence that recent double taxation treaties involving OECD countries have not increased FDI activity. However, when all DTTs were taken into account, they found a positive relationship. The uncertainty of effects is an important issue due to the costs of treaty formation for the countries involved.

discourage FDI (Bénassy-Quéré et al., 2005). Moreover, its effect is likely to differ according to the type of investment. Corporate taxation is likely to be more important for FDI exploiting firm-specific advantages, such as brands, patents, market power, which is relatively more mobile across countries. Conversely, FDI exploiting location-dependent profits is likely to be less influenced by host country corporate taxation. Other costs raising the tax burden, including lack of transparency and predictability of the tax regime and costly tax compliance, can also diminish the expected effect of lower taxation (OECD, 2007).

There are some considerable data shortcomings, however, for establishing an empirical link between FDI and taxation. As mentioned above, the extensive margin of FDI is theoretically affected by the forward-looking average tax rates across competing locations, and the intensive margins by the forward-looking marginal effective tax rates. Computing such forward-looking measures, however, is resource intensive (OECD, 2006). Therefore most studies rely on widely available statutory corporate tax rates or to a lesser extent on firm-level 'backward-looking' average effective tax rates.[35]

Since taxation is not a main variable of interest, the standard statutory corporate tax rate of the destination country (*TAX*) is used. Albeit being limited in their ability to reflect the whole tax landscape in the country, statutory rates carry an important signal function and are commonly used in cross-country comparisons by global investors. At first sight, the coefficient of this variable is expected to be negative, but tax planning opportunities, home country tax treatment and other economic development factors potentially associated with higher tax incomes as explained above may blur the results. Data are based on World Corporate Tax Rates database of the Tax Foundation (http://taxfoundation.org/).

Box 3. FDI statistics distortions due to corporate tax strategies

The various opportunities for companies to exploit tax arbitrage and shift-profits to low-tax jurisdictions have potentially major impact on FDI statistics, and consequently on any FDI data-based analysis. Bilateral relationships are particularly affected, as one cannot easily differentiate between the largely tax-motivated FDI ("FDI in transit") and the economically-motivated FDI, in other words between the effect of tax on FDI statistics and on "real" FDI activity associated with production and factor inputs. The issue becomes even more complicated in the case of countries that combine both particularly beneficial tax regimes and other potential economic conditions to attract capital (Lipsey, 2007). To some extent, the issue is less of a problem in the case of total inward FDI statistics, because one can exclude countries notoriously attracting only tax-motivated FDI and the geographical distribution of FDI is not of interest. But the problem remains for those countries combining both tax and economic attractiveness. Round-tripping FDI also remains an issue in some cases, as it inflates inward statistics.

In this study, by limiting the analysis to bilateral relationships between only 60 advanced and emerging economies, the problem of identifying bilateral FDI relationships that are reflective of real FDI activity and not in-transit activity is partly limited. None of the countries included in the sample can typically be considered pure tax havens, although some may have particularly business friendly tax regimes which may partly explain the

[35] See OECD (2006) for the caveats of using both statutory and backward-looking tax rates for modelling the effect of taxation on future investment decisions.

relatively significant incidence of FDI into SPEs in these countries. Most of these jurisdictions, notably those where FDI into SPEs is prominent, such as Austria, Hungary, Luxembourg and the Netherlands, already reported FDI stocks excluding such entities (OECD, 2014a). While this helps to limit the influence of potential inward FDI in-transit in the recipient country, it does not address, however, the problem of proper identification of the origin country. Investments from some origin countries may be understated if their investors are more likely to use intermediate countries not covered in this study for carrying out FDI activities, and may be misattributed in case their investments are carried by covered intermediate countries. These issues are less problematic in the case of bilateral M&A, because the data allows the identification of the ultimate investing entity, and hence allows to better capture the true origin and destination countries.

Ideally, one would like FDI data to differentiate between pure FDI in transit and real FDI. This is one of the objectives of 4th edition of the OECD Benchmark Definition of Foreign Direct Investment (OECD, 2014a). The new recommendations improve the statistics on a directional basis by recommending that the statistics be compiled excluding resident Special Purpose Entities (SPEs). While the exclusion of SPEs is likely to reduce considerably the statistical distortions brought by FDI in transit, it will not fully solve the issue, as other corporate structures may also sometimes be used for the same purpose.

In spite of this, while tax-related distortions in FDI statistics may have increased overtime, FDI stock data remains to some extent relatively correlated with real activity data by multinational firms. Lipsey (2007) report that, despite the increasing use of holding companies by United States outward investors and the diminishing relationship across time between the stock of FDI and factor inputs, notably employment and investment in property, plant and equipment (PP&E), there remains a relatively strong correlation between the locational distribution of outward stock of FDI and the inputs used in FDI (above 80% for property, plant and equipment, and 65% for employment in 1999).

The authors find similar evidence in the case of outward investors from Germany (above 77% for employment in 2004 for Germany). The authors also find a strong correlation between the country distribution of United States inward FDI stocks and the source country distribution of employment and PP&E, which shows that little FDI flowing into the United States is made through intermediate countries (roughly 95% and 91% for employment and PP&E respectively in 1997). Likewise, in the case of Germany, the country distribution of inward FDI stock is a fairly good representation of the source country distribution of employment (92% in 2004).

4.2.9. Real bilateral exchange rate

To the extent that the size of the cross-border investment stock can also be modified by valuation changes, the real bilateral exchange rate (*RBER*) is added as control variable to capture a part of these changes. This variable can also capture a part of locational competitiveness changes. The more financial perspective of FDI argues that host country real exchange rate depreciations should incite FDI because it would lower the cost of capital for the multinational enterprise, which can typically access international capital markets to obtain finance in strong-currency more easily than host country domestic firms; and because a real host country currency depreciation may increase vertical FDI rate of returns by depressing domestic prices for factors of production relatively to other competing locations (Blonigen, 1997). Conversely, a real appreciation of host country exchange rates may relatively improve the purchasing power of domestic consumers, which should

typically incite horizontal FDI. The RBER measure included in this study is expressed as home country currency per unit of the destination country currency. A rise is a depreciation of the origin country currency. The underlying data for computing such measures (real exchange rate and consumer price index) are from Datastream.

4.2.10. A synthetic governance indicator

The quality of host country institutions is also expected to affect FDI, as well as the level of institutional distance between home and host countries (Bénassy-Quéré et al., 2005). Here only the extent to which good governance in destination economies is a determinant of FDI is tested. The rationales for the positive effects of good governance on FDI are many as summarised in Bénassy-Quéré et al. (2005). First, good governance is supposedly associated with higher per capita income levels and greater productivity levels, which should support both horizontal and vertical FDI. Second, poor governance can represent costs to investors, such as in the case of corruption. And third, FDI may involve significant entry fixed and sunk costs, which renders it particularly vulnerable to uncertainty, such as arising from poor government capacity and policy implementation, policy reversals, weak enforcement of property rights etc.

A synthetic governance index (*GOV_I)* based on individual indicators developed in the World Bank by Kaufmann, Kraay and Mastruzzi (2003) is used. This measure reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, the credibility of the government's commitment to such policies and corruption levels in the destination country. *GOV_I* is the simple average of the following five indicators[36]: *VA* reflects perceptions of the extent to which a destination country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media; *PI* measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism; *REG* reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development; *RL* reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence; and *CCI* covers both private and public corruption including several indicators of the extent to which public power is exercised for private gains, including petty and grand forms of corruption, as well as "capture" of the state by private interests. A higher value of the synthetic governance index indicates better governance in the destination country which may strengthen investors' trust to engage in cross-border investment. The coefficient of this variable is expected to be positive.

Tables 1 and 2 show the descriptive statistics of the data and the correlation matrix of variables.

[36] To facilitate the interpretation of the results, all indicators are re-scaled to vary between 0 and 5, where a higher score indicate better governance.

Table 1. Summary of descriptive statistics of the sample

Mnemonic	Variable description	Number of observations	Mean	Standard deviation	Minimum	Maximum
FDI_INW	Nominal foreign direct inwards capital stock in million of US dollar	55,628	1588	6976	0.00	54781
MA_INW	M&A inwards investment stock in millions of US dollar	60,180	1478	5921	0.00	45274
MA_INW_PRIM	M&A inwards investment stock in primary sector	60,180	110	570	0.00	4630
MA_INW_MANU	M&A inwards investment stock in manufacturing sector	60,180	464	2064	0.00	16198
MA_INW_SERV	M&A inwards investment stock in services sector	60,180	787	3375	0.00	26233
FDI_RI	OECD FDI Regulatory Restrictiveness Index measuring statutory restrictions on foreign direct investment in the destination country	58,295	0.13	0.13	0.00	0.55
FDI_EQ	OECD FDI Regulatory Restrictiveness Index measuring equity restrictions on foreign direct investment in the destination country	58,295	0.08	0.08	0.00	0.35
FDI_SCREEN	OECD FDI Regulatory Restrictiveness Index measuring screening and approval requirements on foreign direct investment in the destination country	58,295	0.03	0.05	0.00	0.20
FDI_OTH	OECD FDI Regulatory Restrictiveness Index measuring other operational restrictions on foreign direct investment in the destination country	58,295	0.03	0.03	0.00	0.15
GDP_O	Nominal GDP in millions of US dollars of the origin country	74,222	849176	2093683	1236	19400000
GDP_D	Nominal GDP in millions of US dollars of the destination country	74,222	849176	2093683	1236	19400000
GDP_TR	Five-year average real GDP growth rate of the destination country	73,573	3.47	2.50	-3.19	10.77
SIM	Size similarity based on nominal GDP	74,104	-1.71	1.11	-5.53	-0.69
Distance	Natural logarithm of average distance between the main cities of each country pair weighted by population	74,340	8.45	0.99	4.66	9.88
Border	Binary variable which is unity if the two countries share a contiguous border and zero otherwise	74,340	0.04	0.20	0.00	1.00
Language	Binary variable which is unity if the two countries share a common language and zero otherwise	74,340	0.06	0.24	0.00	1.00
Colony	Dummy variable that equals 1 if the two countries share a common colonial linkage and zero otherwise	74,340	0.03	0.16	0.00	1.00
REMj	Natural logarithm of GDP-weighted average distance between a given destination country and its partners	74,340	19.62	0.50	18.79	21.07
REMi	Natural logarithm of GDP-weighted average distance between a given origin country and its partners	74,340	19.62	0.50	18.79	21.07
TRADE	Ratio fo the sum of imports and exports to GDP of the destination country	69,040	83.75	47.36	1.17	295.97
FTA_I	Binary variable which is unity if two countries belong to the same trade agreement and zero otherwise	74,340	0.43	0.49	0.00	1.00
FTA_O	Binary variable which is unity if the origin country belong to a trade agreement and the destination country does not, or vice versa and zero otherwise	74,340	0.08	0.27	0.00	1.00
FTA_REL	Number of countries a destination country is connected to following the signature of free trade agreements over the period 1997-2016	74,340	63	50	0.00	222
FD	Absolute value of the log-difference of real capital stock per worker between origin and destination countries	60,552	1.03	0.91	0.01	4.60
HCD	Absolute value of the log-difference of average number of years of schooling between origin and destination countries	73,101	0.26	0.23	0.00	1.00
NR_RENT	Ratio of total natural resources rents to GDP in the destination country	68,263	3.99	6.64	0.00	38.66
TAX	Statutory tax rate of the destination country	64,546	27.78	7.17	12.50	44.60
RBER	Natural logarithm of real bilateral exchange rate expressed as domestic currency per unit of the destination country currency	74,106	0.00	4.28	-11.47	11.47
GOV_I	Synthetic governance index of the destination country	70,800	3.08	0.88	0.91	4.37

Note: Further information relating to this summary table and variables description is provided in section 3. The bilateral foreign direct inward capital stock, bilateral M&A inward investment stock and GDP data are reported in millions of US dollars.

Table 2. Correlations amongst the main explanatory variables

	FDI_RI	FDI_EQ	FDI_ SCREEN	FDI_OTH	GDP_O	GDP_D	GDP_TR	SIM	Distance	Border	Language	Colony	REMj	REMi	TRADE	FTA_I	FTA_O	FTA_ REL	FD	HCD	NR_ RENT	TAX	RBER	GOV_I
FDI_RI	1																							
FDI_EQ	0.90	1																						
FDI_SCREEN	0.68	0.49	1																					
FDI_OTH	0.71	0.54	0.32	1																				
GDP_O	-0.05	-0.06	-0.03	-0.04	1																			
GDP_D	0.12	0.17	0.12	0.03	0.05	1																		
GDP_TR	0.36	0.34	0.20	0.26	-0.03	-0.28	1																	
SIM	0.00	0.02	-0.04	-0.06	0.05	0.05	-0.01	1																
Distance	0.27	0.19	0.24	0.17	0.06	0.06	0.13	-0.05	1															
Border	-0.02	-0.01	-0.02	-0.01	0.04	0.04	-0.02	0.00	-0.40	1														
Language	0.03	0.02	0.03	0.01	0.06	0.06	-0.01	0.03	-0.08	0.18	1													
Colony	-0.01	0.00	-0.02	-0.01	0.06	0.06	-0.02	-0.05	-0.09	0.21	0.27	1												
REMj	0.11	0.12	0.06	0.08	-0.02	-0.15	0.09	0.04	0.37	-0.06	0.09	-0.02	1											
REMi	0.32	0.22	0.25	0.18	-0.15	-0.02	0.18	0.04	0.37	-0.06	0.09	-0.02	0.32	1										
TRADE	-0.30	-0.22	-0.21	-0.26	0.03	-0.31	-0.07	0.06	-0.23	0.02	-0.01	-0.03	-0.05	-0.34	1									
FTA_I	-0.22	-0.15	-0.22	-0.16	0.00	0.00	-0.10	0.17	-0.56	0.14	0.05	0.00	-0.18	-0.18	0.13	1								
FTA_O	0.07	0.01	0.03	0.13	-0.13	-0.13	0.05	-0.21	0.13	-0.02	-0.02	-0.02	0.14	0.14	-0.04	-0.25	1							
FTA_REL	-0.30	-0.24	-0.29	-0.24	0.08	0.06	-0.18	0.17	-0.18	0.00	0.01	0.00	-0.17	-0.26	0.20	0.37	-0.39	1						
FD	0.14	0.16	0.10	0.11	-0.07	-0.14	0.17	-0.10	0.24	-0.11	-0.06	-0.01	0.04	0.02	-0.23	-0.29	0.00	-0.13	1					
HCD	0.15	0.17	0.11	0.08	-0.06	-0.05	0.14	0.00	0.18	-0.10	-0.01	-0.04	0.09	0.10	-0.24	-0.12	-0.01	-0.08	0.48	1				
NR_RENT	0.32	0.25	0.24	0.21	0.03	-0.23	0.32	0.02	0.22	-0.02	-0.01	-0.01	-0.06	0.16	-0.13	-0.18	0.05	-0.24	0.15	0.09	1			
TAX	0.16	0.12	0.20	0.09	-0.11	0.40	-0.07	-0.07	0.16	-0.01	0.08	0.02	0.23	0.47	-0.46	-0.15	0.15	-0.27	0.04	0.10	-0.14	1		
RBER	-0.19	-0.20	-0.03	-0.19	-0.14	0.13	-0.17	0.00	0.00	0.00	0.00	0.00	0.16	-0.16	0.04	0.00	0.00	0.15	-0.02	0.01	-0.15	0.01	1	
GOV_I	-0.43	-0.44	-0.26	-0.37	-0.01	0.24	-0.39	0.03	-0.17	0.00	0.05	0.02	0.01	-0.04	0.38	0.15	-0.04	0.24	-0.36	-0.27	-0.54	0.05	0.18	1

Note: Figures in italics indicate values of the T-statistics that test for null hypothesis of Pearson's coefficients of correlation equal to 0.

5. Empirical results

The baseline results are discussed below. Overall they show that the relationship between bilateral cross-border investment and FDI restrictions, as measured by the OECD *FDI Regulatory Restrictiveness Index*, may differ according to the types of regulatory restrictions and the bilateral cross-border investment measure considered. Further analysis is performed to investigate whether the results may differ by sub-economic sectors – primary, manufacturing or services sector – using bilateral M&A inward investment stocks.[37] In all cases, it is examined whether the findings are consistent with the economic intuition discussed in Section 4. In Appendix 1, a number of robustness checks are performed.

Table 3 summarises all the results obtained by including alternately the OECD *FDI Regulatory Restrictiveness Index* components (regressions 1, 2, 3 and 4) and the two bilateral cross-border investment stock measures (Panels A and B). Table 4 summarises all the results obtained by considering the breakdown of bilateral M&A inward investment stock by sub-economic sectors (i.e., primary, manufacturing and services; Panel B1, B2 and B3)[38].

5.1. Baseline results

The baseline results suggest that the effects of FDI reforms can be significant and sizeable. To some extent, it is tautological to say that when foreign investment is prohibited, an economy will receive no investment, but the evidence suggests that even partial restrictions can have a significant impact on investment. From an investment policy perspective, this means that such measures are generally effective in deterring the entry of foreign investors. Hence, it points out the importance of regularly assessing their remaining pertinence for the economy. These policies carry an opportunity cost associated with forgone investments, which increases as peer economies advance with reforms (see Appendix 1). These results also provide support to the OECD *FDI Regulatory Restrictiveness Index* methodology by establishing empirical evidence of its ability to consistently explain the dispersion of FDI or M&A activity across countries.

From Table 3 (Panel A.1), it is estimated that the introduction of reforms leading to a 10% reduction in level of FDI restrictiveness as measured by the *Index* could increase bilateral FDI inward stocks by around 2.1% on average. Assuming this average effect would apply equally across countries, if more restrictive G20 economies were to reach the OECD average level of openness to FDI, we could expect bilateral inward FDI stocks in these economies to increase by between 7% and 95%. The effects of such simulation depend logically on how restrictive countries are in relation to the simulated policy level. In reality, these results are not likely to apply equally across country. Among others, the efforts to implement such simulated policy would vary considerably among the countries. Nonetheless, this simple exercise helps to give a sense of the importance of restrictions as barriers to investment.

[37] On average for the 60 countries included in the sample over the period 2001–2016, M&A inward investment stock in primary sector accounts for 14.3% (with median at 7.8%) of total M&A inward investment stock. This average share is 35.3% (with median at 34.9%) in the manufacturing sector and 49.7% (with median at 48.4%) in services sector.

[38] Only the results obtained for the variables of interest are reported. Detailed results are available upon request.

The effect of reducing foreign equity limitations is the strongest, denoting its relatively greater importance as a statutory barrier to FDI, but foreign investment screening policies – excluding pure national security approvals which are not covered in the *Index*– are also found to significantly curb FDI, albeit to a much lower extent. This is somewhat expected as screening policies are supposedly less stringent and may differ fairly widely in the way they are implemented across countries, notably in dimensions which are not captured by the *Index*. But the results are telling because, against what policymakers sometimes argue, they confirm that discriminatory screening policies – at least in the way their characteristics are captured by the *Index* – are likely to have a deterring effect on FDI. As such, this study finds no evidence supporting their neutrality or that they allow governments to maintain relatively more open regimes by securing their constituents that allowed investments are in the national interest.

The result from Panel B.1 using bilateral M&A inward investment stock show consistent findings with the model obtained using FDI stocks. By types of restrictions, however, only foreign investment screening and other operational restrictions seems to significantly affect bilateral M&A activity, despite the expected negative sign being observed across all types of measures. Foreign investment screening and other restrictions may be capturing the complexity and administrative burdens to complete M&A deals in time and the potential importance given by acquirers to nominating foreigners to key management positions. Besides, the significant result for screening restrictions may partially reflect the scope of such measures, *i.e.* their incidence is often limited to foreign acquisitions and not to Greenfield investments.

The absence of significance for foreign equity restrictions despite the expected sign, however, merits further research. It may likely be that the nature and limitations of the M&A data generation process are partly to blame. Aside any potential caveats regarding the quality of the M&A data, the result may reflect some more genuine differences between greenfield and M&A investments. It may be that foreign investors behind greenfield investments are typically less willing to share the rents with local equity partners. It may also be that foreign ownership restrictions affect the incentives for foreign investors to reinvest or expand investments in the host economy. This is reflected in the FDI data (retained earnings is included), but not in the M&A data which reflect only the amount paid for the acquisition at entry.

The result may also underscore a potential signalling effect of restrictions about the difficulties in doing business as a foreign investor including outside of the restricted sectors, in addition to acting as a direct barrier to entry. This may be more relevant for overall FDI than for M&A because of some unique characteristics of M&A investments. These are potentially more asset-specific and, in this respect, possibly less sensitive to competing locations than Greenfield investments. Investors opting for the M&A route may be more responsive to the windows of opportunities for acquiring suitable targets in their markets of interest, and be less concerned by the overall investment climate in the host country as signalled by restrictions. They may perceive a strategic value in the acquisition of target firms and their assets (established distribution channels, market presence, local market knowledge, brands etc). Nocke and Yeaple (2007) argue that a key motivation for firms to engage in FDI is to obtain non-mobile capabilities abroad, which could justify the incidence of cross-border M&A even in more restrictive environments or in the presence of partial equity restrictions. Acquirers also have access to targets' performance records, which may

render M&A investments relatively less risky and allow foreign investors to feel more comfortable in partnering with local equity holders when necessary.[39]

The result may also reflect a prevalence of market-oriented investments occurring through M&A. About 50% of the cross-border M&A activity in destination countries reflects deals in the services sectors, which can be expected to be relatively more market-oriented. Although the service sector is quite heterogeneous, it may be that on average the local knowledge and assets brought by domestic partners is non negligible to the foreign investment decision. In some services and manufacturing sectors, there might also be cases where the target firm-specific assets are particularly valuable (e.g. as possibly in the case of privatisations).[40] Altogether, these characteristics may depress the importance of foreign equity limitations for M&A investments.

Regarding the other determinants of FDI and bilateral M&A investments, most of the findings are consistent with the expectations. The coefficient for the GDP of both origin and destination countries is positive and significant. The measures capturing distance and cultural similarities (i.e. common language and colonial relationships) are highly significant with a positive impact. The difference in relative human capital endowment is significant with a negative impact, suggesting possibly the predominance of horizontal FDI and M&A investments. The binary variable which is unity if country *i* belong to a trade agreement and country *j* does not (or vice versa and zero otherwise) is also significant with a negative impact. This suggests that the investors from countries participating in a trade agreement tend to divert from opportunities in countries that are not parties to any trade agreement. The trade openness indicator is positive and significant in the FDI estimations suggesting a possible complementarity between trade and FDI. For bilateral M&A investments, these results are not so clear-cut although the positive expected sign is observed. Again, as mentioned above, these results may reflect the rather different nature of M&A investments.

The indicators of economic size similarity and the dynamism of the destination economy have significant and positive impacts on FDI as expected. These results seem to corroborate the predominance of horizontal FDI in the global spectrum of FDI. Nevertheless, the indicator of dynamism of the destination economy has a significant and negative impact on bilateral M&A investments. This potentially reflects the increasing role played by emerging markets multinational enterprises in the international acquisitions market, notably their increased appetite for 'asset-seeking' acquisitions including in less dynamic advanced developed

39 In some instances, foreign equity restrictions can also be legally circumvented by the use of more complex shareholding structures. While this is not expected to be a widespread practice across counties, one could imagine that it could have less of a deterrent effect for M&A investments than for Greenfield ones because of the potential strategic value attached to assets acquired.

40 The fact that the OECD FDI Regulatory Restrictiveness Index does not capture public monopolies – since, in principle, there is no discrimination in such policy between foreign and domestic private investors – can add to the difficulty in establishing a significant relationship between equity restrictions and M&A investments. The fully opening up of a sector to private investment is not captured. The Index only captures the case where a sector moves from being entirely closed to private investment to being closed or partially closed to foreign investors only. In this case, there would be an uptake in the level of restrictiveness as measured by the *Index*, while an increase in foreign investments is nevertheless possible. This may be relevant for this study, because M&A investments are mostly concentrated in the services sectors, which are more likely to be subject to public monopolies and privatisations. Privatisation-related deals can also be expected to be relatively larger in value terms, which may give them a more significant weight in the dataset.

economies (OECD, 2017; Mckinsey, 2015). In addition, while on the one hand, one could rather expect growth cycles to attract foreign investment; it may be that growth cycles contributes to higher enterprise values, making targets relatively more costly for foreign acquirers. In addition, targets may be in better financial conditions to prevent more easily foreign acquisitions and domestic acquirers may also be better position to compete with foreign investors. Results obtained for remoteness indicators are mixed. The indicator for the destination country has a significant and negative impact on FDI as expected. However, the estimation is positive and significant for the remoteness of the origin country with regard to bilateral M&A stocks. Although it is not clear cut what may be driving these results, they were kept in the model because they contribute to control for multilateral resistance.

The binary variable for origin and destination countries participation into a same trade agreement is significant with a negative impact on bilateral M&A investment. This result suggests that being partners in a trade agreement tends to discourage M&A activities between origin and destination countries, possibly because a trade agreement facilitates access to the destination country market through other channels, such as exports or greenfield investments.

Finally, the results for the real exchange rate are not in line with theoretical expectations in the determination of bilateral M&A investments. This goes against theoretical expectations (Froot and Stein, 1991) and plausible explanations are difficult to provide. This may partially reflect measurement gaps and other possible limitations in M&A data computation, but may point as well as to investors' potential risk diversification strategy behind M&A transactions, where firms in relatively weaker currency environments may seek to secure access to strong-currency cash-flow generating assets. This may also partly reflect the increasing volume of emerging market firms venturing abroad into advanced markets as mentioned above, particularly when these investments may allow them to reutilise the acquired assets more globally. In this case, the returns from such investments may still be less impacted or sensitive to a relatively depreciated currency.

5.2. Results by economic sectors

Considering the breakdown of M&A by economic sector, the effect of the *Index* is estimated to be greater for foreign investments in the services sector (Table 4, Panel B.3) compared to the overall economy (Table 3, Panel B.1). The effect of a 10% reduction in total FDI restrictions is associated with a 3.9% increase in international acquisitions in the services sector; against 3% increase in international acquisitions economy-wide. This is expected as restrictions tend to be concentrated in services sectors.

FDI restrictions seem to affect M&A in the manufacturing sector to a lesser extent. The coefficient associated to the *Index* is relatively higher and only significant at the 10% level (Panel B2.1). This partly reflects the fact that countries generally allow foreign investment in the manufacturing sector (excluding defence and military goods) without restrictions, except when a horizontal measure applying across the board is in place, such as foreign investment screening for business purposes by foreign investors. On the other hand, the significance of the result suggests that, despite the concentration of restrictions in services sectors, manufacturing investments seem also to be affected. This echoes the existing literature on the effects of restriction in services on the productivity of manufacturing firms. To the extent that FDI restrictions affect the competitiveness of services sectors, and that services are increasingly an important input to manufacturing value added, they may also partly discourage manufacturing investments by potentially increasing the costs of sourcing quality service inputs for such investments.

Table 3. Baseline Poisson Pseudo-Maximum Likelihood model on the determinants of bilateral cross-border investment stock

	Panel A: FDI inwards (USD million)				Panel B: M&A inwards (USD million)			
	[1]	[2]	[3]	[4]	[1]	[2]	[3]	[4]
$FDI_RI_{j,t-1}$	-0.208***	-	-	-	-0.305**	-	-	-
	(-2.82)				(-2.48)			
$FDI_RI_EQ_{j,t-1}$	-	-0.287***	-	-	-	-0.04	-	-
		(-3.84)				(-0.39)		
$FDI_RI_SC_{j,t-1}$	-	-	-0.107***	-	-	-	-0.179***	-
			(-3.43)				(-4.74)	
$FDI_RI_OTH_{j,t-1}$	-	-	-	-0.008	-	-	-	-0.108**
				(-0.18)				(-2.50)
$GDP_O_{i,t-1}$	1.226***	1.222***	1.239***	1.225***	1.050***	1.059***	1.075***	1.043***
	(8.47)	(8.52)	(8.48)	(8.37)	(8.09)	(8.08)	(8.21)	(8.00)
$GDP_D_{j,t-1}$	1.188***	1.209***	1.198***	1.239***	0.861***	0.928***	0.833***	0.925***
	(6.32)	(6.47)	(6.41)	(6.46)	(6.68)	(7.02)	(6.44)	(7.03)
$GDP_TR_{j,t-1}$	0.065**	0.062**	0.057**	0.056**	-0.068***	-0.084***	-0.080***	-0.067***
	(2.40)	(2.32)	(2.16)	(2.01)	(-3.99)	(-4.43)	(-4.46)	(-3.98)
$SIM_{ij,t-1}$	0.105*	0.105*	0.105*	0.106*	-0.089	-0.089	-0.09	-0.089
	(1.85)	(1.85)	(1.86)	(1.88)	(-1.11)	(-1.10)	(-1.11)	(-1.11)
$Distance_{ij,t-1}$	-0.610***	-0.610***	-0.610***	-0.609***	-0.580***	-0.580***	-0.581***	-0.581***
	(-8.01)	(-8.01)	(-8.04)	(-7.99)	(-7.75)	(-7.74)	(-7.77)	(-7.77)
$Border_{ij,t-1}$	-0.098	-0.098	-0.097	-0.097	0.02	0.021	0.02	0.019
	(-0.77)	(-0.77)	(-0.76)	(-0.75)	(0.13)	(0.14)	(0.13)	(0.13)
$Language_{ij,t-1}$	0.340***	0.339***	0.340***	0.340***	0.416***	0.416***	0.415***	0.416***
	(2.68)	(2.68)	(2.68)	(2.69)	(2.67)	(2.67)	(2.66)	(2.67)
$Colony_{ij,t-1}$	0.321***	0.321***	0.322***	0.320***	0.271*	0.271*	0.271*	0.269*
	(2.76)	(2.75)	(2.75)	(2.74)	(1.90)	(1.90)	(1.91)	(1.89)
$REM_{i,t-1}$	-0.655	-0.688	-0.671	-0.664	0.938**	0.932**	0.914**	0.925**
	(-1.51)	(-1.59)	(-1.55)	(-1.52)	(2.10)	(2.07)	(2.05)	(2.05)
$REM_{j,t-1}$	-1.175**	-1.149**	-1.526***	-1.313***	-0.048	-0.173	-0.389	-0.014
	(-2.46)	(-2.40)	(-3.14)	(-2.71)	(-0.12)	(-0.43)	(-0.99)	(-0.03)
$TRADE_{j,t-1}$	0.653**	0.742***	0.635**	0.694**	0.375	0.466**	0.333	0.371*
	(2.42)	(2.77)	(2.35)	(2.53)	(1.63)	(2.08)	(1.47)	(1.64)
$FTA_I_{ij,t-1}$	-0.061	-0.06	-0.061	-0.061	-0.385**	-0.387**	-0.386**	-0.389**
	(-0.38)	(-0.37)	(-0.38)	(-0.38)	(-2.42)	(-2.42)	(-2.43)	(-2.44)
$FTA_O_{ij,t-1}$	-0.338***	-0.335***	-0.347***	-0.346***	-0.260**	-0.290**	-0.304***	-0.266**
	(-2.76)	(-2.75)	(-2.79)	(-2.78)	(-2.17)	(-2.45)	(-2.59)	(-2.22)
$FTA_REL_{j,t-1}$	-0.005	-0.002	-0.002	-0.001	0.009	0.01	0.008	0.011
	(-0.04)	(-0.17)	(-0.02)	(-0.04)	(0.86)	(0.97)	(0.79)	(1.13)
$FD_{ij,t-1}$	-0.084	-0.087	-0.085	-0.089	0.004	0.003	0.007	0.001
	(-0.72)	(-0.75)	(-0.73)	(-0.77)	(0.04)	(0.03)	(0.08)	(0.01)
$HCD_{ij,t-1}$	-0.870**	-0.859**	-0.850**	-0.853**	-0.613*	-0.604*	-0.614*	-0.617*
	(-2.48)	(-2.44)	(-2.42)	(-2.44)	(-1.75)	(-1.73)	(-1.76)	(-1.77)
$NR_RENT_{j,t-1}$	-0.047	-0.057	-0.052	-0.046	0.018	0.02	0.011	0.019
	(-0.91)	(-1.09)	(-1.00)	(-0.91)	(0.43)	(0.51)	(0.27)	(0.49)
$TAX_{j,t-1}$	0.295	0.278	0.324*	0.246	-0.014	-0.167	-0.052	-0.129
	(1.54)	(1.48)	(1.65)	(1.30)	(-0.08)	(-0.94)	(-0.31)	(-0.76)
$RBER_{j,t-1}$	-0.02	-0.026	-0.017	-0.018	0.099*	0.118**	0.135**	0.09
	(-1.15)	(-1.44)	(-0.93)	(-1.01)	(1.70)	(1.97)	(2.29)	(1.50)
$GOV_I_{j,t-1}$	-0.475	-0.644	-0.689	-0.443	-0.295	-0.346	-0.299	-0.371
	(-0.69)	(-0.93)	(-0.99)	(-0.62)	(-0.77)	(-0.89)	(-0.75)	(-0.99)
C	17.19	17	24.51*	20.21	-32.52***	-29.97**	-25.41**	-33.30***
	(1.27)	(1.25)	(1.81)	(1.47)	(-2.63)	(-2.42)	(-2.08)	(-2.64)
R-square	0.711	0.712	0.711	0.710	0.635	0.635	0.636	0.634
Obs.	33239	33239	33239	33239	34948	34948	34948	34948

Note: This table shows the results of estimating Poisson Pseudo-Maximum Likelihood (PPML) models for a cross sectional unbalanced panel data on bilateral foreign direct inward capital stock or bilateral M&A inward investment stock from 60 countries over the period 1997–2016. The sample time period for the regression is 2001–2016 when bilateral M&A inward investment stock is used as the dependent variable and 1997 or 2001 (depending if it is an OECD or a non-OECD country) –2012 when bilateral foreign direct inward capital stock is used as the dependent variable. Origin country, destination country and year fixed effects are included, but coefficients are not reported. *i* denotes the origin country, *j* the destination country and *t* a given year. All explanatory variables are one year lagged. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively. Z-scores are in parentheses.

FDI restrictions were not found to be significant with respect to M&A in primary sectors. The results for the primary sector are less evident, but may find some resonance on the characteristics of some of such industries. The location-specific and licensing-heavy nature of some of such investments (e.g. extractives industries) may offer relatively few alternatives to foreign investors. Securing access to these location-and-project-delimited assets may trump any constraint imposed by FDI restrictions. Where economic rents are potentially high, as in extractives industries, governments worldwide have typically adopted measures, such as taxes and royalties, to capture part of such rents for their nationals. Foreign investors in these industries may be well used to them and see foreign ownership limitations as an equivalent measure.

Table 4. Poisson Pseudo-Maximum Likelihood model on the determinants of bilateral M&A inward investment stock by sub-economic sectors

	Panel B1: Primary sector				Panel B2: Manufacturing				Panel B3: Services			
	[1]	[2]	[3]	[4]	[1]	[2]	[3]	[4]	[1]	[2]	[3]	[4]
$FDI_RI_{j,t-1}$	0.216	-	-	-	-0.163*	-	-	-	-0.387**	-	-	-
	(0.99)				(-1.64)				(-2.35)			
$FDI_RI_EQ_{j,t-1}$	-	0.176	-	-	-	-0.081	-	-	-	-0.019	-	-
		(0.86)				(-0.77)				(-0.20)		
$FDI_RI_SC_{j,t-1}$	-	-	0.056	-	-	-	-0.089*	-	-	-	-0.254***	-
			(0.67)				(-1.90)				(-4.93)	
$FDI_RI_OTH_{j,t-1}$	-	-	-	-0.011	-	-	-	-0.011	-	-	-	-0.139***
				(-0.16)				(-0.22)				(-2.87)
R-square	0.515	0.515	0.515	0.514	0.631	0.631	0.631	0.631	0.633	0.632	0.634	0.630
Obs.	31749	31749	31749	31749	34325	34325	34325	34325	34948	34948	34948	34948

Note: This table shows the results of estimating Poisson Pseudo-Maximum Likelihood (PPML) models for a cross sectional unbalanced panel data on bilateral M&A inward investment stock by sub-economic sectors (i.e., primary, manufacturing and services) from 60 countries over 2001–2016. Origin country, destination country and year fixed effects are included, but coefficients are not reported. *i* denotes the origin country, *j* the destination country and *t* a given year. All explanatory variables are one year lagged. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively. Z-scores are reported in parentheses.

6. Main takeaways

The results from the econometric tests suggest that the effects of FDI reforms can be significant and sizeable, and that even partial restrictions can have a strong impact on investment. As such, they provide a sense of what could be the potential impact to FDI of further liberalising reforms, and vice-versa, of an uptake in investment restriction policies. It is estimated that the introduction of reforms liberalising FDI restrictions by about 10% as measured by the *Index* could increase bilateral FDI inward stocks by around 2.1% on average. Assuming this average effect would apply equally across countries, if more restrictive G20 economies were to reach the OECD average level of openness to FDI, we could expect bilateral inward FDI stocks in these economies to increase by between 7% and 95%.

The paper also shows that barriers to FDI have had larger deterring effects on foreign investments in the services sectors than elsewhere in the economy, partly reflecting their higher incidence in these sectors. But countries overall level of FDI regulatory restrictiveness was also found to negatively affect FDI into manufacturing – which is open to FDI in most of the countries covered in the study. This points out to possible negative spillovers from such policies beyond their initially targeted sectors. Together, these results call attention to the potentially important implications of FDI restrictions to overall economy-wide productivity as discussed in the literature.

Furthermore, while foreign equity limitations are found to affect FDI more prominently, foreign investment screening policies, excluding those based solely on national security reviews which are not measured by the OECD *FDI Regulatory Restrictiveness Index* and are carved out under OECD and other international legal instruments, are also found to significantly curb FDI – at least in the way they have been implemented on average to date. This somewhat runs against the argument that such policies would rather encourage FDI by allowing governments to maintain more open FDI regimes overall. Liberalisation reforms in peer economies are also found to have sizeable negative consequences to a country's capacity to continue attracting FDI. In general, the results highlight the importance for governments to continuously benchmark their investment regime against peers and assess if remaining restrictions continue to meet their objectives on a net benefit basis.

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Appendix 1. Robustness checks

A1.1. Robustness check 1: Dynamic gravity model on the determinants of bilateral foreign direct inward capital stock

Egger and Merlo (2007) argue that ignoring the dynamic nature of foreign direct investment could lead to an overestimation of the effect of bilateral factors[41]. Therefore a dyadic dynamic model is used, including the one-year lagged dependent amongst the set of explanatory variables. This model is estimated using the Arellano and Bover (1995), Blundell and Bond (1998) system generalised method of moments (GMM) estimator to avoid some Nickell (1981) bias, which only vanishes as T, the number of time periods of the panel, becomes large. This estimator augments the Arellano and Bond (1991) estimator by making an additional assumption that first differences of instrument variables are uncorrelated with the fixed effects[42]. This allows the introduction of more instruments and can dramatically improve efficiency. It has the advantage that the endogeneity of variables can be explicitly taken into account. It builds a system of two equations: the original equation and the transformed one, and is known as system-GMM. A second-order serial correlation test is performed. It is expected to find no serial correlation in the second differenced residuals. The presence of such autocorrelation in the system-GMM approach can be treated in principle by adding two lags of the dependent variable as instruments. Year fixed effects are introduced in the regressions. Standard errors are clustered on dyads in order to be fully robust toward arbitrary autocorrelation and heteroscedasticity. Regressions results are shown in Table A1.1. Most of the results are consistent with those obtained using Poisson Pseudo-Maximum Likelihood estimator. In particular, the OECD *FDI Regulatory Restrictiveness Index* on "other types of restrictions" is becoming significant at the 10% level with the expected negative impact on bilateral foreign direct inward capital stock.

A1.2. Robustness check 2: Poisson Pseudo-Maximum Likelihood model on the determinants of bilateral cross-border investment stock, over the period 2001–2012

In the main regression framework, sample time periods differ when using bilateral M&A inward investment stock or bilateral foreign direct inward capital stock as the dependent variable. To check the stability of the results, the sample time period is restricted to 2001–2012 whatever the definition of the bilateral cross-border investment measure used as the dependent variable. Regressions results are shown in Tables A1.2 and A1.3. Most of the results are consistent with those obtained using Poisson Pseudo-Maximum Likelihood

41 The general problem is as follows: Consider the model : $y_{ij,t} = Ø_{ij}y_{ij,t-1} + \beta'_{ij}x_{ij,t} + u_{ij,t}$,

where x is a vector of regressors, $uij,t = cij,t(y) + \lambda ijfij,t + \varepsilon ij,t$, c is a vector of specific fixed effects, f is a vector of unobserved common factors, and $xij,t = cij,t(x) + \eta ijfij,t + vij,t$, where η is a matrix of factor loadings for the regressors. If the Øij are zero, this reduces to the static model, but if not they must be treated as a dynamic model. Since the uij,t is correlated with xij,t and yij,t-1 rendering pooled estimation inconsistent, this must be treated with a GMM estimator.

42 Arellano and Bover (1995), Blundell and Bond (1998) proposed a system estimator that uses moment conditions in which lagged differences are used as instruments for the level equation in addition to the moment conditions of lagged levels as instruments for the differenced equation.

estimator. However, overall OECD *FDI Regulatory Restrictiveness Index* becomes insignificant when considering bilateral M&A inward investment stock in manufacturing sector as the dependent variable.

A1.3. Robustness check 3: Poisson Pseudo-Maximum Likelihood model on the determinants of bilateral cross-border investment stock, using peer-relative OECD FDI Regulatory Restrictiveness Index

A robustness check is performed by considering peer-relative index instead of the actual value of the OECD *FDI Regulatory Restrictiveness Index*. This transformation introduces slightly more variation to the index measure, making it possible to better take into account those countries with stable or fairly stable foreign direct investment regimes overtime. It also allows investigating whether a "peer-relative effect" may have implications to countries foreign direct investment attractiveness. Peer-relative OECD *FDI Regulatory Restrictiveness Index* is calculated as the difference between OECD *FDI Regulatory Restrictiveness Index* of a destination country and the average OECD *FDI Regulatory Restrictiveness Index* of the 59 remaining destination countries at year *t*. Regressions results are shown in Tables A1.4 and A1.5. Most of the results are consistent with those obtained using the actual value of the OECD *FDI Regulatory Restrictiveness Index*. However, the value of the estimated coefficients related to OECD *FDI Regulatory Restrictiveness Indices* has increased. Hence, the impact of peer-related index on cross-border investment activities is even bigger than when using the actual index. These results suggest that not only actual but also peer-level of regulatory restrictions on foreign direct investment are important to consider when studying the determinants of cross-border investment. In other words, when taking the decision to invest abroad, investors consider the actual but also give a particular attention to the peer-relative level of restrictions on foreign direct investment prevailing in a given destination country.

A1.4. Robustness check 4: Poisson Pseudo-Maximum Likelihood model on the determinants of bilateral cross-border investment stock, OECD vs. non-OECD effects of FDI restrictions

Blonigen and Wang's (2004) findings suggest the possibility of MNE activity in developing economies being governed by a very distinctive process than MNE activity in a developed economy. If the case, estimated coefficients from regressions pooling wealthy and poor economies altogether may fail to capture the true relationship between FDI and the explanatory variable of interest for both sets of countries because the underlying relationships are systematically different (Blonigen and Wang, 2004). In order to investigate whether the effects of FDI restrictions can be expected to differ for developed and developing economies, a robustness check is performed by including in the baseline FDI model a dummy variable that takes the value of one for host OECD member countries as per their year of accession to the organisation and an interaction term with the variable of interest capturing their level of FDI restrictiveness. Results are mostly consistent with baseline results and confirm the overall negative influence of statutory barriers on FDI for both groups of countries (OECD and non-OECD). They suggest, however, that such negative effects tend to be more accentuated for developing economies.

Table A1.1. Dynamic system-GMM gravity model on the determinants of bilateral foreign direct inward capital stock

	FDI inwards (USD million)			
	[1]	[2]	[3]	[4]
FDI_INWij,t-1	0.948***	0.934***	0.933***	0.931***
	(180.39)	(161.60)	(159.31)	(153.44)
$FDI_RI_{j,t-1}$	-0.013*	-	-	-
	(-1.64)			
$FDI_RI_EQ_{j,t-1}$	-	-0.017*	-	-
		(-1.73)		
$FDI_RI_SC_{j,t-1}$	-	-	-0.014***	-
			(-2.79)	
$FDI_RI_OTH_{j,t-1}$	-	-	-	-0.018**
				(-2.09)
$GDP_O_{i,t-1}$	0.108***	0.166***	0.166***	0.163***
	(7.51)	(10.37)	(10.18)	(9.78)
$GDP_D_{j,t-1}$	0.093***	0.108***	0.104***	0.108***
	(8.89)	(9.33)	(9.80)	(9.46)
$GDP_TR_{j,t-1}$	0.076***	0.070***	0.070***	0.064***
	(8.22)	(7.56)	(7.74)	(7.13)
$SIM_{ij,t-1}$	-0.030*	-0.024	-0.023	-0.032*
	(-1.71)	(-1.28)	(-1.23)	(-1.72)
$REM_{i,t-1}$	-0.184***	-0.241***	-0.224***	-0.216***
	(-4.72)	(-5.56)	(-5.40)	(-5.10)
$REM_{j,t-1}$	-0.068***	-0.085***	-0.106***	-0.088***
	(-2.68)	(-3.22)	(-3.79)	(-3.37)
$TRADE_{j,t-1}$	0.098***	0.066**	0.068**	0.094***
	(3.65)	(2.32)	(2.53)	(3.34)
$FTA_I_{ij,t-1}$	0.002	-0.009***	-0.008***	-0.007**
	(1.29)	(-3.54)	(-3.06)	(-2.43)
$FTA_O_{ij,t-1}$	-0.003	-0.033***	-0.032***	-0.032***
	(-1.02)	(-6.69)	(-6.56)	(-6.33)
$FTA_REL_{j,t-1}$	0.047***	0.046***	0.041***	0.045***
	(5.31)	(5.14)	(4.51)	(4.76)
$FD_{ij,t-1}$	-0.083***	-0.069***	-0.046***	-0.045**
	(-5.22)	(-3.80)	(-2.59)	(-2.51)
$HCD_{ij,t-1}$	-0.066	-0.109	-0.178**	-0.227***
	(-0.99)	(-1.51)	(-2.42)	(-3.06)
$NR_RENT_{j,t-1}$	0.021***	0.013**	0.016***	0.014**
	(3.87)	(2.14)	(2.73)	(2.39)
$TAX_{j,t-1}$	-0.085*	-0.189***	-0.128***	-0.141***
	(-1.81)	(-4.08)	(-2.73)	(-3.21)
$RBER_{j,t-1}$	-0.003	-0.003	-0.008***	-0.007**
	(-0.92)	(-0.92)	(-2.58)	(-2.01)
$GOV_I_{j,t-1}$	0.153***	0.156***	0.184***	0.143***
	(3.41)	(3.07)	(3.98)	(2.85)
Arellano-Bond test for AR(2)	-0.14	-0.21	-0.2	-0.19
in first differences	(0.885)	(0.837)	(0.841)	(0.847)
Obs.	33177	33177	33177	33177

Note: This table shows the results of estimating dyadic system-GMM dynamic fixed effects models for a cross sectional unbalanced panel data on bilateral foreign direct inward capital stock from 60 countries over the period 1997 or 2001 (depending if it is an OECD or a non-OECD country) –2012. Constant and year-specific time dummies are included, but coefficients are not reported. *i* denotes the origin country, *j* the destination country and *t* a given year. The results for the Arellano-Bover (1995) / Blundell-Bond (1998) GMM estimation refer to robust two-step estimates; t- and z-values reported in parentheses. Standard errors are fully robust toward arbitrary autocorrelation and heteroscedasticity (i.e., standard errors are clustered by home-host dyad with White-Huber corrections). All explanatory variables are one year lagged. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.

Table A1.2. Poisson Pseudo-Maximum Likelihood model on the determinants of bilateral cross-border investment stock, over the period 2001–2012

	Panel A: FDI inwards (USD million)				Panel B: M&A inwards (USD million)			
	[1]	[2]	[3]	[4]	[1]	[2]	[3]	[4]
$FDI_RI_{j,t-1}$	-0.147**	-	-	-	-0.267**	-	-	-
	(-2.09)				(-2.02)			
$FDI_RI_EQ_{j,t-1}$	-	-0.179***	-	-	-	-0.012	-	-
		(-2.74)				(-0.12)		
$FDI_RI_SC_{j,t-1}$	-	-	-0.125***	-	-	-	-0.194***	-
			(-3.86)				(-4.90)	
$FDI_RI_OTH_{j,t-1}$	-	-	-	-0.011	-	-	-	-0.126**
				(-0.26)				(-2.39)
$GDP_O_{i,t-1}$	1.060***	1.059***	1.083***	1.060***	1.022***	1.025***	1.051***	1.023***
	(6.93)	(6.95)	(7.04)	(6.86)	(7.50)	(7.49)	(7.72)	(7.43)
$GDP_D_{j,t-1}$	0.948***	0.966***	0.935***	0.978***	0.905***	0.969***	0.878***	0.909***
	(4.80)	(4.90)	(4.80)	(4.86)	(6.32)	(6.65)	(6.13)	(6.34)
$GDP_TR_{j,t-1}$	0.081***	0.078***	0.075***	0.076***	-0.074***	-0.090***	-0.086***	-0.059***
	(3.04)	(2.99)	(2.91)	(2.77)	(-3.57)	(-4.11)	(-4.02)	(-2.88)
$SIM_{ij,t-1}$	0.085	0.085	0.084	0.085	-0.051	-0.05	-0.051	-0.051
	(1.44)	(1.45)	(1.44)	(1.45)	(-0.59)	(-0.58)	(-0.59)	(-0.60)
$Distance_{ij,t-1}$	-0.619***	-0.619***	-0.619***	-0.619***	-0.627***	-0.628***	-0.628***	-0.629***
	(-8.12)	(-8.12)	(-8.16)	(-8.11)	(-7.57)	(-7.57)	(-7.59)	(-7.60)
$Border_{ij,t-1}$	-0.115	-0.115	-0.115	-0.115	0.052	0.053	0.053	0.052
	(-0.88)	(-0.87)	(-0.88)	(-0.87)	(0.34)	(0.35)	(0.34)	(0.34)
$Language_{ij,t-1}$	0.335***	0.335***	0.335***	0.335***	0.390**	0.390**	0.390**	0.390**
	(2.61)	(2.61)	(2.61)	(2.61)	(2.31)	(2.31)	(2.31)	(2.31)
$Colony_{ij,t-1}$	0.334***	0.333***	0.335***	0.333***	0.247*	0.246*	0.248*	0.246
	(2.85)	(2.84)	(2.85)	(2.84)	(1.65)	(1.65)	(1.66)	(1.64)
$REM_{i,t-1}$	-0.621	-0.643	-0.63	-0.627	0.998*	0.993*	0.948*	0.976*
	(-1.45)	(-1.50)	(-1.48)	(-1.46)	(1.90)	(1.87)	(1.82)	(1.85)
$REM_{j,t-1}$	-0.833*	-0.837*	-1.182**	-0.922*	0.16	-0.023	-0.392	0.241
	(-1.70)	(-1.71)	(-2.39)	(-1.86)	(0.33)	(-0.05)	(-0.81)	(0.50)
$TRADE_{j,t-1}$	0.296	0.364	0.251	0.32	0.378	0.432*	0.302	0.336
	(1.16)	(1.43)	(0.99)	(1.24)	(1.52)	(1.75)	(1.21)	(1.35)
$FTA_I_{ij,t-1}$	-0.058	-0.057	-0.058	-0.059	-0.492***	-0.495***	-0.493***	-0.496***
	(-0.35)	(-0.35)	(-0.35)	(-0.36)	(-2.76)	(-2.77)	(-2.77)	(-2.79)
$FTA_O_{ij,t-1}$	-0.257**	-0.257**	-0.266**	-0.262**	-0.225**	-0.255**	-0.273**	-0.224**
	(-2.31)	(-2.30)	(-2.40)	(-2.34)	(-2.02)	(-2.30)	(-2.48)	(-2.02)
$FTA_REL_{j,t-1}$	0.005	0.005	0.007	0.006	0.005	0.006	0.006	0.008
	(0.56)	(0.50)	(0.73)	(0.60)	(0.56)	(0.62)	(0.68)	(0.83)
$FD_{ij,t-1}$	-0.089	-0.09	-0.089	-0.091	-0.008	-0.01	-0.004	-0.011
	(-0.78)	(-0.79)	(-0.77)	(-0.80)	(-0.08)	(-0.09)	(-0.04)	(-0.10)
$HCD_{ij,t-1}$	-0.821**	-0.813**	-0.812**	-0.815**	-0.936**	-0.931**	-0.934**	-0.941**
	(-2.30)	(-2.27)	(-2.27)	(-2.29)	(-2.48)	(-2.48)	(-2.48)	(-2.50)
$NR_RENT_{j,t-1}$	-0.001	-0.009	-0.004	0.004	0.008	0.012	0.006	0.004
	(-0.02)	(-0.19)	(-0.08)	(0.08)	(0.20)	(0.30)	(0.16)	(0.10)
$TAX_{j,t-1}$	0.567***	0.552***	0.630***	0.511***	-0.189	-0.305	-0.124	-0.325
	(2.95)	(2.91)	(3.28)	(2.75)	(-0.93)	(-1.45)	(-0.64)	(-1.62)
$RBER_{j,t-1}$	-0.006	-0.009	0.011	-0.005	0.038	0.044	0.07	0.045
	(-0.06)	(-0.09)	(0.11)	(-0.05)	(0.58)	(0.67)	(1.09)	(0.66)
$GOV_I_{j,t-1}$	-0.832	-0.907	-1.06	-0.874	-0.635	-0.687	-0.883*	-0.487
	(-1.24)	(-1.35)	(-1.60)	(-1.28)	(-1.28)	(-1.39)	(-1.75)	(-1.00)
C	15.73	15.99	22.69*	17.74	-37.45**	-33.59**	-25.46*	-38.84***
	(1.17)	(1.19)	(1.69)	(1.29)	(-2.52)	(-2.25)	(-1.72)	(-2.60)
R-square	0.721	0.721	0.722	0.721	0.645	0.645	0.646	0.645
Obs.	27531	27531	27531	27531	27664	27664	27664	27664

Note: This table shows the results of estimating Poisson Pseudo-Maximum Likelihood (PPML) models for a cross sectional unbalanced panel data on bilateral foreign direct inward capital stock or bilateral M&A inward investment stock from 60 countries over the period 2001–2012. Origin country, destination country and year fixed effects are included, but coefficients are not reported. *i* denotes the origin country, *j* the destination country and *t* a given year. All explanatory variables are one year lagged. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively. Z-scores are reported in parentheses.

Table A1.3. Poisson Pseudo-Maximum Likelihood model on the determinants of bilateral M&A inward investment stock by sub-economic sectors, over the period 2001–2012

	Panel B1: Primary sector				Panel B2: Manufacturing				Panel B3: Services			
	[1]	[2]	[3]	[4]	[1]	[2]	[3]	[4]	[1]	[2]	[3]	[4]
$FDI_RI_{j,t-1}$	0.526	-	-	-	-0.125	-	-	-	-0.367*	-	-	-
	(1.37)				(-1.26)				(-1.95)			
$FDI_RI_EQ_{j,t-1}$	-	0.342	-	-	-	-0.065	-	-	-	-0.012	-	-
		(1.54)				(-0.63)				(-0.12)		
$FDI_RI_SC_{j,t-1}$	-	-	0.077	-	-	-	-0.076	-	-	-	-0.269***	-
			(0.67)				(-1.48)				(-5.66)	
$FDI_RI_OTH_{j,t-1}$	-	-	-	0.066	-	-	-	-0.018	-	-	-	-0.161***
				(0.58)				(-0.31)				(-2.63)
R-square	0.503	0.503	0.501	0.501	0.638	0.637	0.638	0.638	0.648	0.647	0.649	0.646
Obs.	25157	25157	25157	25157	26678	26678	26678	26678	27182	27182	27182	27182

Note: This table shows the results of estimating Poisson Pseudo-Maximum Likelihood (PPML) models for a cross sectional unbalanced panel data on bilateral M&A inward investment stock by sub-economic sectors (i.e., primary, manufacturing and services) from 60 countries over 2001–2012. Origin country, destination country and year fixed effects are included, but coefficients are not reported. *i* denotes the origin country, *j* the destination country and *t* a given year. All explanatory variables are one year lagged. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively. Z-scores are reported in parentheses.

Table A1.4. Baseline Poisson Pseudo-Maximum Likelihood model on the determinants of bilateral cross-border investment stock, using peer-relative OECD FDI Regulatory Restrictiveness Index

	Panel A: FDI inwards (USD million)				Panel B: M&A inwards (USD million)			
	[1]	[2]	[3]	[4]	[1]	[2]	[3]	[4]
$FDI_RI_R_{j,t-1}$	-0.269***	-	-	-	-0.362**	-	-	-
	(-2.94)				(-2.56)			
$FDI_RI_EQ_R_{j,t-1}$	-	-0.423***	-	-	-	-0.077	-	-
		(-4.23)				(-0.56)		
$FDI_RI_SC_R_{j,t-1}$	-	-	-0.182***	-	-	-	-0.401***	-
			(-3.46)				(-5.36)	
$FDI_RI_OTH_R_{j,t-1}$	-	-	-	0.035	-	-	-	-0.169**
				(0.44)				(-2.02)
$GDP_O_{i,t-1}$	1.229***	1.225***	1.239***	1.223***	1.051***	1.060***	1.080***	1.048***
	(8.50)	(8.59)	(8.48)	(8.32)	(8.11)	(8.10)	(8.27)	(8.02)
$GDP_D_{j,t-1}$	1.178***	1.207***	1.192***	1.259***	0.855***	0.926***	0.776***	0.913***
	(6.27)	(6.41)	(6.37)	(6.49)	(6.64)	(6.99)	(6.13)	(6.93)
$GDP_TR_{j,t-1}$	0.065**	0.061**	0.057**	0.053**	-0.069***	-0.084***	-0.072***	-0.076***
	(2.40)	(2.31)	(2.16)	(1.96)	(-4.01)	(-4.44)	(-4.06)	(-4.42)
$SIM_{ij,t-1}$	0.105*	0.105*	0.105*	0.106*	-0.09	-0.089	-0.09	-0.09
	(1.85)	(1.85)	(1.86)	(1.88)	(-1.11)	(-1.10)	(-1.12)	(-1.11)
$Distance_{ij,t-1}$	-0.610***	-0.610***	-0.610***	-0.609***	-0.580***	-0.580***	-0.580***	-0.581***
	(-8.02)	(-8.02)	(-8.02)	(-7.98)	(-7.76)	(-7.74)	(-7.76)	(-7.77)
$Border_{ij,t-1}$	-0.098	-0.098	-0.097	-0.096	0.02	0.021	0.019	0.019
	(-0.77)	(-0.77)	(-0.76)	(-0.75)	(0.13)	(0.14)	(0.13)	(0.13)
$Language_{ij,t-1}$	0.340***	0.339***	0.340***	0.340***	0.416***	0.416***	0.415***	0.416***
	(2.68)	(2.68)	(2.69)	(2.69)	(2.67)	(2.67)	(2.66)	(2.67)
$Colony_{ij,t-1}$	0.322***	0.321***	0.322***	0.320***	0.271*	0.271*	0.273*	0.270*
	(2.76)	(2.75)	(2.75)	(2.74)	(1.90)	(1.90)	(1.91)	(1.89)
$REM_{i,t-1}$	-0.66	-0.711	-0.663	-0.664	0.933**	0.926**	0.917**	0.938**
	(-1.53)	(-1.64)	(-1.53)	(-1.52)	(2.09)	(2.05)	(2.06)	(2.08)
$REM_{j,t-1}$	-1.184**	-1.166**	-1.550***	-1.351***	-0.067	-0.175	-0.533	-0.019
	(-2.47)	(-2.43)	(-3.20)	(-2.79)	(-0.17)	(-0.44)	(-1.38)	(-0.05)
$TRADE_{j,t-1}$	0.647**	0.772***	0.656**	0.728***	0.379*	0.478**	0.306	0.375
	(2.40)	(2.88)	(2.46)	(2.60)	(1.65)	(2.15)	(1.37)	(1.64)
$FTA_I_{ij,t-1}$	-0.06	-0.059	-0.06	-0.061	-0.385**	-0.386**	-0.383**	-0.389**
	(-0.38)	(-0.37)	(-0.38)	(-0.38)	(-2.42)	(-2.42)	(-2.41)	(-2.44)
$FTA_O_{ij,t-1}$	-0.339***	-0.336***	-0.346***	-0.348***	-0.259**	-0.291**	-0.312***	-0.257**
	(-2.79)	(-2.75)	(-2.78)	(-2.77)	(-2.16)	(-2.46)	(-2.67)	(-2.14)
$FTA_REL_{j,t-1}$	-0.005	-0.003	-0.001	-0.001	0.008	0.009	0.007	0.011
	(-0.04)	(-0.25)	(-0.07)	(-0.07)	(0.81)	(0.91)	(0.70)	(1.13)
$FD_{ij,t-1}$	-0.084	-0.086	-0.084	-0.09	0.004	0.003	0.01	0.002
	(-0.72)	(-0.74)	(-0.72)	(-0.77)	(0.04)	(0.03)	(0.11)	(0.02)
$HCD_{ij,t-1}$	-0.873**	-0.863**	-0.853**	-0.845**	-0.616*	-0.604*	-0.624*	-0.622*
	(-2.48)	(-2.45)	(-2.43)	(-2.42)	(-1.76)	(-1.73)	(-1.79)	(-1.78)
$NR_RENT_{j,t-1}$	-0.046	-0.057	-0.051	-0.047	0.018	0.02	0.01	0.024
	(-0.89)	(-1.09)	(-1.00)	(-0.92)	(0.43)	(0.49)	(0.24)	(0.62)
$TAX_{j,t-1}$	0.297	0.277	0.32	0.255	-0.007	-0.156	-0.005	-0.158
	(1.55)	(1.47)	(1.64)	(1.34)	(-0.04)	(-0.88)	(-0.03)	(-0.93)
$RBER_{j,t-1}$	-0.005	-0.003	-0.001	-0.001	0.008	0.009	0.007	0.011
	(-0.04)	(-0.25)	(-0.07)	(-0.07)	(0.81)	(0.91)	(0.70)	(1.13)
$GOV_I_{j,t-1}$	-0.505	-0.71	-0.66	-0.483	-0.291	-0.346	-0.292	-0.355
	(-0.73)	(-1.03)	(-0.94)	(-0.68)	(-0.75)	(-0.89)	(-0.73)	(-0.93)
C	17.44	17.46	24.82*	21.03	-32.10***	-29.91**	-22.42*	-33.49***
	(1.29)	(1.28)	(1.83)	(1.53)	(-2.60)	(-2.42)	(-1.85)	(-2.64)
R-square	0.711	0.712	0.711	0.710	0.635	0.635	0.636	0.634
Obs.	33239	33239	33239	33239	34948	34948	34948	34948

Note: This table shows the results of estimating Poisson Pseudo-Maximum Likelihood (PPML) models for a cross sectional unbalanced panel data on bilateral foreign direct inward capital stock or bilateral M&A inward investment stock from 60 countries over the period 1997–2016. The sample time period for the regression is 2001–2016 when bilateral M&A inward investment stock is used as the dependent variable and 1997 or 2001 (depending if it is an OECD or a non-OECD country) –2012 when bilateral foreign direct inward capital stock is used as the dependent variable. Origin country, destination country and year fixed effects are included, but coefficients are not reported. *i* denotes the origin country, *j* the destination country and *t* a given year. All explanatory variables are one year lagged. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively. Z-scores are reported in parentheses.

Table A1.5. Poisson Pseudo-Maximum Likelihood model on the determinants of bilateral M&A inward investment stock by sub-economic sectors, using peer-relative OECD FDI Regulatory Restrictiveness Index

	Panel B1: Primary sector				Panel B2: Manufacturing				Panel B3: Services			
	[1]	[2]	[3]	[4]	[1]	[2]	[3]	[4]	[1]	[2]	[3]	[4]
FDI_RI_R$_{j,t-1}$	0.225	-	-	-	-0.176*	-	-	-	-0.472**	-	-	-
	(0.91)				(-1.65)				(-2.44)			
FDI_RI_EQ_R$_{j,t-1}$	-	0.154	-	-	-	-0.089	-	-	-	-0.063	-	-
		(0.63)				(-0.66)				(-0.46)		
FDI_RI_SC_R$_{j,t-1}$	-	-	0.149	-	-	-	-0.245***	-	-	-	-0.582***	-
			(0.99)				(-2.99)				(-5.69)	
FDI_RI_OTH_R$_{j,t-1}$	-	-	-	-0.002	-	-	-	0.003	-	-	-	-0.231**
				(-0.01)				(0.03)				(-2.33)
R-square	0.515	0.515	0.515	0.514	0.631	0.631	0.631	0.631	0.633	0.632	0.634	0.631
Obs.	31749	31749	31749	31749	34325	34325	34325	34325	34948	34948	34948	34948

Note: This table shows the results of estimating Poisson Pseudo-Maximum Likelihood (PPML) models for a cross sectional unbalanced panel data on bilateral M&A inward investment stock by sub-economic sectors (i.e., primary, manufacturing and services) from 60 countries over 2001–2016. Origin country, destination country and year fixed effects are included, but coefficients are not reported. *i* denotes the origin country, *j* the destination country and *t* a given year. All explanatory variables are one year lagged. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively. Z-scores are reported in parentheses.

Table A1.6. Poisson Pseudo-Maximum Likelihood model on the determinants of bilateral cross-border investment stock, OECD vs. non-OECD effects

	Panel A: FDI inwards (USD million)			
	[1]	[2]	[3]	[4]
FDI_RI$_{j,t-1}$	-0.784***	-	-	-
	(-2.83)			
FDI_RI_EQ$_{j,t-1}$	-	-1.255***	-	-
		(-3.71)		
FDI_RI_SC$_{j,t-1}$	-	-	-0.288***	-
			(-3.75)	
FDI_RI_OTH$_{j,t-1}$	-	-	-	-0.288
				(-0.88)
OECDdum_D*FDI_RI	0.586**	-	-	-
	(2.06)			
OECDdum_D*FDI_RI_EQ	-	0.975***	-	-
		(2.79)		
OECDdum_D*FDI_RI_SC	-	-	0.204**	-
			(2.49)	
OECDdum_D*FDI_RI_OTH	-	-	-	0.28
				(0.86)
OECDdummy_Dj,t	2.165***	3.649***	1.825***	1.624
	(2.86)	(3.40)	(3.65)	(1.28)
GDP_O$_{i,t-1}$	1.228***	1.221***	1.239***	1.223***
	(8.46)	(8.51)	(8.46)	(8.35)
GDP_D$_{j,t-1}$	1.117***	1.042***	1.201***	1.233***
	(6.05)	(5.87)	(6.26)	(6.41)
GDP_TR$_{j,t-1}$	0.0665**	0.0593**	0.0550**	0.0546**
	(2.48)	(2.30)	(2.12)	(1.98)
SIM$_{ij,t-1}$	0.105*	0.105*	0.105*	0.105*
	(1.85)	(1.87)	(1.85)	(1.87)
Distance$_{ij,t-1}$	-0.612***	-0.612***	-0.612***	-0.611***
	(-8.03)	(-8.01)	(-8.05)	(-8.02)
Border$_{ij,t-1}$	-0.099	-0.099	-0.098	-0.097
	(-0.77)	(-0.77)	(-0.77)	(-0.76)
Language$_{ij,t-1}$	0.340***	0.340***	0.340***	0.340***
	(2.68)	(2.68)	(2.68)	(2.69)
Colony$_{ij,t-1}$	0.321***	0.319***	0.321***	0.319***
	(2.75)	(2.74)	(2.75)	(2.74)
REM$_{i,t-1}$	-0.624	-0.672	-0.642	-0.654
	(-1.44)	(-1.56)	(-1.48)	(-1.50)
REM$_{j,t-1}$	-1.340***	-1.255***	-1.659***	-1.333***
	(-2.84)	(-2.68)	(-3.50)	(-2.74)
TRADE$_{j,t-1}$	0.658**	0.698***	0.686**	0.730***
	(2.46)	(2.65)	(2.54)	(2.72)
FTA_I$_{ij,t-1}$	-0.065	-0.065	-0.065	-0.067
	(-0.41)	(-0.40)	(-0.40)	(-0.42)
FTA_O$_{ij,t-1}$	-0.329***	-0.322***	-0.343***	-0.342***
	(-2.69)	(-2.66)	(-2.75)	(-2.75)
FTA_REL$_{j,t-1}$	-0.001	-0.004	0.001	-0.001
	(-0.12)	(-0.33)	(0.06)	(-0.08)
FD$_{ij,t-1}$	-0.076	-0.081	-0.079	-0.09
	(-0.65)	(-0.70)	(-0.68)	(-0.77)
HCD$_{ij,t-1}$	-0.877**	-0.843**	-0.861**	-0.861**
	(-2.50)	(-2.41)	(-2.44)	(-2.46)
NR_RENT$_{j,t-1}$	-0.061	-0.0781*	-0.065	-0.059
	(-1.28)	(-1.67)	(-1.37)	(-1.24)
TAX$_{j,t-1}$	0.288	0.196	0.337*	0.234
	(1.50)	(1.04)	(1.71)	(1.24)
RBER$_{j,t-1}$	-0.001	-0.004	0.001	-0.001
	(-0.12)	(-0.33)	(0.06)	(-0.08)
GOV_I$_{j,t-1}$	-0.428	-0.661	-0.582	-0.439
	(-0.64)	(-0.97)	(-0.85)	(-0.61)
C	18.58	17.21	25.25*	18.56
	(1.39)	(1.27)	(1.89)	(1.34)
R-square	0.711	0.712	0.711	0.711
Obs.	33239	33239	33239	33239

Note: This table shows the results of estimating Poisson Pseudo-Maximum Likelihood (PPML) models for a cross sectional unbalanced panel data on bilateral foreign direct inward capital stock from 60 countries over the period 2001–2012. Origin country, destination country and year fixed effects are included, but coefficients are not reported. *i* denotes the origin country, *j* the destination country and *t* a given year. All explanatory variables are one year lagged, except for the dummy for OECD member countries. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively. Z-scores are reported in parentheses. The Wald test of joint significance for the restriction measure and the interaction term (not reported) is significant at 1% in all estimations, except under estimation [4].

Appendix 2. OECD Working Papers on International Investment

www.oecd.org/investment/working-papers.htm

2018

2018/1 Societal benefits and costs of International Investment Agreements: A critical review of aspects and available empirical evidence

2017

2017/5 Adjudicator Compensation Systems and Investor-State Dispute Settlement

2017/4 Have currency-based capital flow management measures curbed international banking flows?

2017/3 Addressing the balance of interests in investment treaties: The limitation of fair and equitable treatment provisions to the minimum standard of treatment under customary international law

2017/2 The balance between investor protection and the right to regulate in investment treaties: A scoping paper

2017/1 Foreign direct investment, corruption and the OECD Anti-Bribery Convention

2016

2016/3 State-to-State dispute settlement and the interpretation of investment treaties

2016/2 Investment policies related to national security

2016/1 The legal framework applicable to joint interpretive agreements of investment treaties

2015

2015/3 Currency-based measures targeting banks - Balancing national regulation of risk and financial openness

2015/2 Investment Treaties over Time - Treaty Practice and Interpretation in a Changing World

2015/1 The Policy Landscape for International Investment by Government-controlled Investors: A Fact Finding Survey

2014

2014/3 Investment Treaties and Shareholder Claims: Analysis of Treaty Practice

2014/2 Investment Treaties and Shareholder Claims for Reflective Loss: Insights from Advanced Systems of Corporate Law

2014/1 Investment Treaty Law, Sustainable Development and Responsible Business Conduct: A Fact Finding Survey

2013

2013/4 Temporal validity of international investment agreements: a large sample survey of treaty provisions

2013/3 Investment treaties as corporate law: Shareholder claims and issues of consistency

2013/2 Lessons from Investment Policy Reform in Korea

2013/1 China Investment Policy: an Update

2012

2012/3 Investor-state dispute settlement: A scoping paper for the investment policy community

2012/2 Dispute settlement provisions in international investment agreements: A large sample survey

2012/1 Corporate greenhouse gas emission reporting: A stocktaking of government schemes

2011

2011/2 Defining and measuring green FDI: An exploratory review of existing work and evidence

2011/1 Environmental concerns in international investment agreements: a survey

2010

2010/3 OECD's FDI Restrictiveness Index: 2010 Update

2010/2 Foreign state immunity and foreign government controlled investors
2010/1 Intellectual property rights in international investment agreements

2006

2006/4 OECD's FDI regulatory restrictiveness index: Revision and extension to more economies
2006/3 Interpretation of the Umbrella Clause in Investment Agreements
2006/2 Investor-State Dispute Settlement in Infrastructure Projects
2006/1 Improving the System of Investor-State Dispute Settlement: An Overview

2005

2005/3 Corporate Responsibility Practices of Emerging Market Companies - A Fact-Finding Study
2005/2 Multilateral Influences on the OECD Guidelines for Multinational Enterprises
2005/1 Transparency and Third Party Participation in Investor-State Dispute Settlement Procedures

2004

2004/6 Mobilising Investment for Development: Role of ODA - The 1993-2003 Experience in Vietnam
2004/5 ODA and Investment for Development: What Guidance can be drawn from Investment Climate Scoreboards?
2004/4 Indirect Expropriation and the Right to Regulate in International Investment Law
2004/3 Fair and Equitable Treatment Standard in International Investment Law
2004/2 Most-Favoured-Nation Treatment in International Investment Law
2004/1 Relationships between International Investment Agreements

2003

2003/2 Business Approaches to Combating Corrupt Practices
2003/1 Incentives-based Competition for Foreign Direct Investment: The Case of Brazil

2002

2002/2 Managing Working Conditions in the Supply Chain: A Fact-Finding Study of Corporate Practices
2002/1 Multinational Enterprises in Situations of Violent Conflict and Widespread Human Rights Abuses

2001

2001/6 Codes of Corporate Conduct: Expanded review of their contents
2001/5 The OECD Guidelines for Multinational Enterprises and other corporate responsibility instruments
2001/4 Public policy and voluntary initiatives: What roles have governments played?
2001/3 Making codes of corporate conduct work: Management control systems and corporate responsibility
2001/2 Corporate Responsibility: Results of a fact-finding mission on private initiatives
2001/1 Private Initiatives for Corporate Responsibility: An Analysis

2000

2000/5 Recent trends, policies and challenges in South East European countries
2000/4 Main determinants and impacts of FDI on China's economy
2000/3 Lithuania: Foreign Direct Investment Impact and Policy Analysis
2000/2 Investment Patterns in a Longer-Term Perspective
2000/1 Bribery and the business sector: Managing the relationship

1999

1999/3 Rules for the Global Economy: Synergies between Voluntary and Binding Approaches
1999/2 Deciphering Codes of Corporate Conduct: A Review of their Contents
1999/1 Southeast Asia: the Role of FDI Policies in Development

1998

1998/1 Survey of OECD work on international investment