
TRADE PROTECTIONISM, BUSINESS UNCERTAINTY AND
MULTINATIONAL ENTERPRISES' INVESTMENT STRATEGIES: A
QUANTITATIVE ASSESSMENT FOCUSING ON THE UNITED
STATES IN THE LAST TWO DECADES (1996-2016)

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Biographical note

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Abstract

The recent rise of anti-globalization political ideals is shifting the economic framework of international trade and investment. Going against the growing liberalization of intercountry relationships, events such as the election of President Donald Trump and *Brexit* suggest a near future of higher barriers to international movement of goods, services, people and capital.

Several researchers have deepened the impact of trade protectionism, focusing on its effect on countries and companies' trade relationships, economic gains and losses and consequences to Foreign Direct Investment (FDI) flows. Other studies have appreciatively discussed how business uncertainty derived from changes in the economic and trade framework impact on the investment decisions of multinational enterprises (MNEs). Extant literature has overlooked the combined impact of trade protectionism and business uncertainty on MNEs' investment decisions (reflected in FDI flows). Furthermore, no empirical study exists on the impact of business uncertainty on these latter variables.

The present dissertation aims at filling this gap by assessing the impact of trade protectionism and business uncertainty on the decisions of MNEs that invested in the United States of America (U.S.) in the recent past.

Such an assessment is based on fixed effects panel data estimations, which is composed of the U.S. and 19 other countries, which make up 71% of the total inward FDI flows to the U.S., over 21 years (from 1996 to 2016). We regressed the MNEs' aggregated investment decisions (measured by the outward FDI flows of each of the 19 countries to the U.S.) against the differentials of trade protection and economic policy uncertainty, controlling for a set of variables that are likely to influence those decisions (e.g., the differentials of GDP per capita, population growth, human capital, and Research & Development).

Three main conclusions can be drawn from our estimations results: 1) MNEs are likely to use FDI as a means to overcome higher barriers to trade in the U.S.; 2) higher business uncertainty differentials failed to emerge as an inhibitor for foreign investment; 3) MNEs tend to use the U.S. as an export-platform to reach other relevant trading partners, which are geographically closer but present lower institutional quality than the U.S..

JEL – Codes: D81, F23, O24.

Keywords: Foreign Direct Investment; protectionism; uncertainty; United States of America; multinational corporations.

Resumo

O recente aumento de ideias políticas anti globalísticas tem vindo a alterar o paradigma económico de trocas e investimento internacionais. Contrariando a crescente liberalização de relações entre países, eventos como a nomeação do Presidente Donald Trump e o *Brexit* apontam para um futuro de maiores entraves à mobilidade internacional de bens, serviços, pessoas e capital.

Vários investigadores aprofundaram o impacto económico do protecionismo, focando-se no efeito que este provoca sobre as relações comerciais entre países e empresas, ganhos e perdas económicas e as suas consequências no Investimento Direto Estrangeiro (IDE). Outros estudos analisam como a incerteza económica resultante de mudanças económicas e nas trocas comerciais influenciam as decisões de investimento de empresas multinacionais (MNEs). A literatura existente tem negligenciado o impacto conjunto do protecionismo comercial e incerteza empresarial nas decisões de investimento de MNEs (refletidas em fluxos de IDE). Para além disso, não existem estudos empíricos significativos sobre o impacto da incerteza empresarial nestas decisões.

O presente estudo visa colmatar esta falha através da análise do impacto que a proteção sobre trocas comerciais e a incerteza empresarial têm sobre as decisões de MNEs que investem nos Estados Unidos da América (U.S.) num passado recente.

Tal pesquisa é baseada numa estimação de painel de dados de efeitos fixos, composto pelos U.S. e mais 19 países, que constituem 71% do total de entradas de IDE nos U.S., ao longo de 21 anos (1996 a 2016). Estimámos uma regressão das decisões agregadas de investimento das MNEs (medidas pelos fluxos de saída de IDE de cada um dos 19 países para os U.S.) contra diferenciais de protecionismo e incerteza empresarial, controlando para um conjunto de variáveis que tendem a influenciar estas decisões (i.e., diferenciais de PIB per capita, crescimento demográfico, capital humano e Investigação & Desenvolvimento)

Três principais conclusões podem ser retiradas dos nossos resultados: 1) MNEs tendem a usar o FDI como forma de ultrapassar maiores barreiras alfandegárias nos U.S.; 2) maiores diferenciais de incerteza empresarial não surgem como inibidores de investimento estrangeiro; 3) MNEs tendem a usar os U.S. como plataforma de exportação para alcançar os seus parceiros comerciais relevantes, que podem estar geograficamente mais próximos mas que apresentam menor qualidade institucional que os U.S..

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1. Introduction

In a time where economic and trade freedom were at their peak and growing¹, new foreign policies were implemented in two of the world's biggest economies, the United Kingdom (U.K.) and the United States of America (U.S.).²

U.K.'s "Brexit" (March 2017) and Donald Trump's victory (November 2016) in the U.S. have come to contradict the trading trend that started after World War II and put a stop to the fall of customs barriers (Udbye, 2017). With new protectionist policies (e.g., barriers to the entry of goods and people), the U.S. and the U.K. now enter an era of bigger isolation from outside competition that can greatly impact their national-based companies.³

The U.S. are, and have been for the last century, the largest economy in the world (World Economic Outlook, 2017) and home to nine of the world's top twenty multinational enterprises (MNEs) (Fortune Global 500, 2017).⁴ The changes in U.S. foreign policy can have a tremendous impact not only internally but also in the rest of the World. If the U.S. continue to lift their trade walls and contradict the world's globalization trend, it is likely that both American and non-American MNEs will have to change their strategies in order to thrive.

One of the most notable and immediate impacts of this new wave of protectionist policies is the rise of uncertainty, most notably business and economic uncertainty, which is likely to play a critical role in the long-run decisions of consumers and companies (Bloom, 2017). Given the more forward-looking mentality of companies, the increase in such uncertainty will, mostly and primarily, affect investment, with a smaller response of consumption (Bloom, 2017). Investment is likely to be also greatly influenced by the changes in trade and migration that these policies might bring (Globerman, 2017).

Extant literature in this area has explored multinational enterprises' investment decisions (e.g., Shroff, Verdi and Yu, 2014) and uncertainty (e.g., Barrero, Bloom and Wright, 2017), but rather in isolation. There remains a clear gap in the literature, which is reflected by the absence of empirical studies that analyze MNEs investment decisions in a context of

¹ As shown by The Heritage Foundation's *Index of Economic Freedom*, in <https://www.heritage.org/index/>, accessed on 03/12/2017

² As PwC demonstrates in its report *Brexit Monitor: The impact of Brexit on (Global) trade*, in <https://www.pwc.nl/nl/brexit/documents/pwc-brexit-monitor-trade.pdf>, accessed on 03/12/2017.

³ As Morgan Stanley concludes in its assessment of the *Risks & Impact of U.S. Protectionism*, in <https://www.morganstanley.com/ideas/protectionism-risks-are-rising>, accessed on 17/10/2017.

⁴ In <http://fortune.com/global500/>, accessed on 27/10/2017.

increasing uncertainty derived from new protectionist waves. Some authors have studied the impact of trade openness and non-tariff barriers on Foreign Direct Investment (FDI) (e.g., Taylor, 2000) and how different legal and informational environments can shape these decisions (e.g., Oh and Rivera, 2013). However, such contributions do not focus on economic policy uncertainty. Studies dealing with the issues of uncertainty have mainly focused on exchange rates risks (e.g., Akiba and Deseatnicov, 2016), but have overlooked how increases in investment risk influence the decisions of MNEs. In this context, the empirical analysis of the relationship between trade protectionism, business uncertainty and MNEs' investment decisions is on demand.

The present dissertation aims at filling this literature gap by assessing the extent to which the differentials between U.S. and a group of their major trading partners at the level of trade policy and the economic/business uncertainty impact on the investment decisions of multinational enterprises (MNEs).

Complementing the extant studies in the area, which rely mainly on descriptive analysis, in methodological terms the present dissertation resorts to panel data econometric estimations, involving 20 countries (the U.S. plus other 19 countries, which represent more than 70% of the U.S. trade⁵) over a period of 21 years (1996 to 2016). The econometric specification regresses the MNEs aggregate investment decisions (that is, the outward FDI flows from these 19 countries to the U.S.) against a set of explanatory variables, including trade protection (tariffs and FDI restrictiveness differentials between the U.S. and the 19 countries), and economic/business and policy uncertainty (Economic Policy Uncertainty Index differential between the U.S. and the 19 countries).

The dissertation is organized as follows. Next section (Section 2) provides a literature review on the main issues of the paper: protectionism, uncertainty and FDI flows (that is, MNEs investment decisions). Then, Section 3 details the methodology. Section 4 presents and discusses the empirical results. Finally, Section 5 puts forward the study's main conclusion, policy implications, limitations and paths for future research.

⁵ Located in four continents: America (Brazil; Canada; Chile; Mexico); Europe (France; Germany; Ireland; Italy; Netherlands; Spain; Sweden; U.K., Russia); Asia (China; India; Japan; South Korea; Singapore); and Oceania (Australia).

2. Literature review on trade protectionism, uncertainty and Foreign Direct Investment

2.1. Trade protectionism

2.1.1. Defining protectionism and types of protectionism policies

A country's foreign policy can cover a wide range of aspects, from language and culture, on the one hand, to military and defense policy on the other; in-between, we can find aid, diplomacy and trade, the most relevant economic-related (Gordon, 1997).

In terms of trade, many theories have emerged over the years, starting with Adam Smith's Theory of Absolute Advantage (Smith, 1776), the first to argue that unrestricted trade was advantageous for countries, followed by David Ricardo's Theory of Comparative Advantage (Ricardo, 1817). These theories have been built on the notion that free trade was on a country's best interest; however, many countries have adopted restrictive measures that influence and prevent trade.

The imposition of trade barriers or restrictions is the basic concept of protectionism (Mayda and Rodrik, 2005). Contradicting Adam Smith or David Ricardo's theories, governments all over the world tend to adopt (in distinct degrees) policies to restrict spending on foreign goods and, in that way, shift demand towards domestic goods (Eichengreen and Irwin, 2010). This is one of the criteria that categorize a state policy as protectionist: it has to be adopted with the intent of improving the competitive position of domestic economic actors at the expense of foreign competitors; besides that, it has to be similar in form to the traditional instruments of protectionism (Regan, 1986). These traditional instruments, as per Regan (1986), can take three forms: tariffs, quotas or trade embargos. Tariffs are the oldest form of trade protection and consist of taxes imposed when a good or service is imported, either as a fixed charge or as a fraction of the value of the good/service, raising its cost; they have primarily been used as a source of income for countries (Krugman and Obstfeld, 2003). Quotas limit the quantities that can be imported or exported (Feenstra, 1992) and outright embargos restrict trade to specific countries or industries.

New forms of protectionism have emerged throughout the years, namely antidumping regulations, duties imposed when it is determined that a foreign firm is selling their products at a 'less than fair value' (Blonigen, Flynn and Gallaway, 1998), which are currently used in the U.S. by both the government and national enterprises as a way to fight (fair) foreign competition (Kaempfer, Tower and Willet, 2002), and subsidies, used to promote exports of a certain company or industry in the international markets (Hill, 2009).

In economic terms, protectionism has arisen, throughout the years, as a response to cyclical crisis, like the outbreak of restrictive trade policies that emerged during the Great Depression of the 1930s (Eichengreen and Irwin, 2010), as a means to protect new (mainly manufacturing) industries that, as the Infant Industry Argument implies, early on cannot compete with foreign threats (Melitz, 2004), or to help domestic firms obtain first-move advantages and gain power in newly emerging industries, which is known as strategic trade policy (Brander, 1995). In political terms, governments have justified intervention in trade with the protection of jobs, consumers, national security or human rights (Hill, 2009).

Protectionism can also entail protection from foreign investment. Liberalization of the equity market would give foreign investors better opportunities to invest in domestic companies, or vice versa, increasing a country's economic growth (Bekaert, Harvey and Lundblad, 2005). However, there are barriers that can be imposed by governments or surge from a country's culture or conditions that prevent or drive away foreign investment. In this case, protectionism will not take the form of the traditional instruments described by Regan (1986), but instead present themselves as non-tariff barriers. However, it is important to note that goods and services' protectionism is also a factor that drives FDI away from a country (Garibaldi, Mora, Sahay and Zettlemeyer, 2001).

In terms of government-imposed barriers, according to Sauviant (2009), there are two situations in which regulatory measures can be considered FDI protectionism: in the case of inward FDI, if the governmental measures are used to hinder or deter foreign direct investors from investing or staying in the host country; in the case of outward flows, FDI protectionism occurs when measures which require domestic companies to repatriate assets or operations to the home country or dissuade further investments abroad are implemented.

In the United States, regarding inward FDI, protectionism has been materialized in the strengthening of the Committee on Foreign Investment in the United States (CFIUS) by the Foreign Investment and National Security Act (FINSA), which pays special attention to Mergers and Acquisitions (M&A) to "ensure national security".⁶ The committee investigates (and potentially enforces conditions on) a transaction that gives foreign control over a U.S. business if it is believed it might present any significant threat to national security; if so, CFIUS tries to mitigate that through contractual commitments by the parties involved (Sauviant, 2009).

⁶ Foreign Investment and National Security Act, 2007.

Besides FDI protectionism, there are other barriers that drive foreign investment away from a country. The investment decision of MNEs is decisively shaped by how much can the investment risk be minimized (Bitzenis, Tsiouras and Vlachos, 2009). In that sense, factors such as the legal framework, specially tax-wise, macroeconomic conditions, infrastructures and business environment are crucial (Bitzenis and Szamosi, 2009).

Indirectly, other factors might weight in companies' international investment decisions. For example, geographical location, infrastructures and culture are factors that might constitute obstacles to investment flows (Bitzenis and Szamosi, 2009). Moreover, the information environment, not only might restrict/enhance FDI flows to a country, but it can also facilitate a company's response to local growth opportunities (Shroff, Verdi and Yu, 2014). A government's protectionist policy against FDI might also include these types of barriers, besides or instead of restricting access to equity markets, as a way to protect national corporations or public interests (Sauvant, 2009).

2.1.2. The theoretical economic implications of protectionism

The economic impacts of protectionism can be studied according to different parties: countries, domestic and foreign companies, consumers, and government (Feenstra, 1992).⁷

Firstly, in a global manner, when a country imposes a restriction to imports, the effects are felt internally, as the prices of the imported goods or services rise, either due to a surcharge over the price or due to a contraction of supply (Feenstra, 1992). This effect happens with either tariffs or import quotas. The biggest benefactors from this change are domestic producers that can now sell more of their products at a higher price, whereas the biggest impaired party would be consumers, which now buy less at a higher price. Overall, the imposition of a trade barrier of this manner would be harmful for a nation, as deadweight losses would arise, surpassing the possible producer gains (Feenstra, 1992).

Other barriers can, even unintentionally, impact imports, such as regulatory frameworks (Chrystal, Coughlin and Wood, 1988). Environmental regulations, for example, have been known to restrict inwards FDI flows, especially if the country is less democratic in other issues (Oh and Rivera, 2013).

In terms of exports-related protectionism, there can be large implications arising from government intervention. For example, Boeing is, currently, a powerhouse in the commercial

⁷ In the present study, we focus on a country level.

aircraft industry not just because it was a first mover and was able to establish competitive advantages, but also due to state subsidies from the U.S. Government and NASA, which resulted in the biggest case presented for review to the World Trade Organization (WTO) at the time (Wittig, 2011). The protection of infant industries can also be very significant internationally. By making sure that an industry can start its development shielded from competition from foreign firms, governments allow companies to grow, learn-by-doing and achieve economies of scale (Bardhan, 1971).

Regarding FDI protectionism and other barriers that discourage foreign investment, the impacts can also be measured in the multinational enterprises that seek this investment and in the host companies/countries. To the former, the impacts of the existence of these barriers is going to be the increase in investment risk and, consequently, the reduction of FDI engaged by these companies. This will result in a loss of the original motives that drive MNEs to invest outside of their country of origin, which, according to Dunning (1988) and Bitzenis (2003), can be summarize as: market seeking (explore demand or growth opportunities in the host country), resource seeking (e.g. natural resources, organizational advantages, technology or human capital), efficiency seeking (i.e. economies of scale and risk diversification), ownership advantages (e.g. know-how, product innovation) and financial aspects (tax benefits or other financial incentives).

The host country and company are going to lose due to the decrease in direct investment which, subsequently, reduces or ceases altogether the advantages FDI might bring. According to Bekaert, Harvey and Lundblad (2005), equity market liberalization and more foreign investment lead to a growth in the host companies, increasing annual real per capita Gross Domestic Product (GDP) in approximately 1%. Such growth can come from two main points of change, besides the increase in capital FDI implies: firstly, FDI can greatly contribute to an increase in production efficiency and production frontier, besides having a big role in technological progress (Yao and Wei, 2007); then, foreign investment can generate productivity spillovers (Haskel, Pereira and Slaughter, 2007) since foreign firms bring technological know-how, marketing and managerial skills that are passed on to the host companies to help them raise productivity (Crespo, Fontoura and Proença, 2002).

From the above theoretical arguments, we conjecture that:

H1: Protectionism negatively impacts on MNEs' investment decisions.

2.2. Business uncertainty and multinational enterprises' investment strategies

The balance between risk and reward is the main decisive factor in companies' investment decisions. Due to their more forward-looking nature, companies tend to react to risk and uncertainty more strongly than consumers (Bloom, 2017).

Different events cause different shocks of uncertainty, which, in turn, impact companies differently. Barrero, Bloom and Wright (2017) conducted a study to understand this relationship by analyzing the effect of four factors at a company level: oil price, exchange rates, economic policy and Chief Executive Officer (CEO) turnover. They concluded that oil price volatility has a defining role in short-run uncertainty, while slow-moving drivers, such as the economic policy, are mostly connected with long-run uncertainty. CEO turnover and exchange rates affect short and long run uncertainty in a similar manner. Furthermore, the same study tried to understand how this shaped companies' investment decisions. They concluded that long-run uncertainty and, therefore, economic policy uncertainty, mostly impacts companies' Research and Development (R&D) and investment, while employment is sensitive to both horizons. Bloom (2017) also concluded that, amongst aggregated components, investment is, by far, the most sensitive to economic policy uncertainty.

The actual impact that uncertainty has on investment has been further studied through the real options theory. The basis of this theory advocates that, facing an (irreversible) investment opportunity, at the start or during a project, a company has the option to delay, expand, switch, suspend, contract or abandon the investment (Lambrecht, 2017). These options can be seen as a financial call-option, as they give the investor the right but not the obligation to invest; when the decision of investment is made, the company exercises the option, terminating that opportunity. Therefore, another cost is added to the project, an opportunity cost for the lost option (Dixit and Pindyck, 1994).

The investment rule in this theory is that a company should invest if the project's value exceeds the costs by an amount equal to the value of the waiting option (Sarkar, 2000). Under uncertainty, the difference in value of the marginal product of capital that justifies investment and the one that justifies disinvestment increases (Bloom, Bond and Reenen, 2007). The option to wait becomes more valuable under these circumstances, resulting in a discouragement of investment, as the investment rule for this theory becomes harder to achieve (Mauer and Ott, 1995). Therefore, under periods of uncertainty, the real option theory estimates a negative impact on investment by firms.

This conclusion can be very significant given the new international developments. The election of Donald Trump and of populist parties across Europe, which propose radical new policies, have massively increased policy uncertainty (Bloom, 2017). In light of these events, FDI might be of the most affected variables, as MNEs become more cautious and prefer to wait than to undertake big, costly projects with unreliable outcomes (Bloom, Bond and Reenen, 2007).

In this context, we hypothesize that:

H2: Uncertainty negatively impacts on MNEs' investment decisions.

2.3. Scientific empirical evidence on protectionism, uncertainty and multinational enterprises' investment strategies

There have been many studies that focus on investment decisions of multinational corporations and factors that condition those decisions (e.g., Guillen and Zhou, 2016), as well as studies analyzing business uncertainty (e.g., Handley and Limão, 2015). Notwithstanding, the link between business uncertainty associated to increasing trade protectionism and MNEs' investment decisions has been overlooked – see Table 1.

In terms of investment decisions of MNEs, several studies focused on the impact of entrance barriers and governments trade policy on FDI (Sauvant, 2009). These contributions established that an increase in FDI and trade openness lead to an increase in foreign investment in those countries (Taylor, 2000). Moreover, other factors, such as GDP, wages, inflation and foreign companies' profits impact on countries' investment attractiveness (Bitzenis, Tsitouras and Vlachos, 2009). Studies which have focused on non-tariff barriers and their impact on international investment flows showed, for instance, that MNEs are more likely to enter a country with stricter environmental laws than their home country the more democratic that host country is (Oh and Rivera, 2013). Still regarding MNEs' decision making, but focusing on the impact of the information environment, Shroff, Verdi and Yu (2014), concluded that, when the environment is adequate, subsidiary expansion investment tends to be higher; additionally, the impact of information environment on investment sensitivity is greater when there are more cross-border frictions and the parent is more involved in the investment decisions of subsidiaries.

Thus, albeit several studies have long recognized the importance of studying management under uncertainty (Akiba and Deseatnicov, 2016), most of the extant literature on MNE's

investment decisions does not specifically focus on economic or foreign/trade policy uncertainty. Regarding uncertainty, the most discussed topic relates to exchange rate uncertainty. This stream of literature has shown that changes in FDI flows can be associated with variations in exchange rate risk and that MNEs might tolerate a higher uncertainty in developed (but not in developing) countries when that is associated with higher profits (Akiba and Deseatnicov, 2016).

Applying the real option theory in international investment, Kim, Makhija and Song (2015) suggest there is still much room to be explored so that we can better understand how MNEs behave and should strategize foreign investment given uncertainty environments and situations.

Table 1: Uncovering the literature lacuna in studies dealing with MNEs investment decisions, trade protectionism and uncertainty

Broad topics	Sub-topics	MNEs' investment decisions	Trade protectionism	Uncertainty	Type of analysis	Studies
MNEs' investment decisions	Impact of entrance barriers and governments trade policy on FDI	x	x		Qualitative	Bitzenis, Tsitouras and Vlachos (2009)
	Non-tariff barriers and their impact on international investment flows	x	x		Quantitative	Oh and Rivera (2013)
	The information environment	x			Quantitative	Shroff, Verdi and Yu (2014)
Uncertainty	FDI flows and exchange rate risk	x		x	Quantitative	Akiba and Deseatnicov (2016)
	Type of uncertainty and GDP components			x	Descriptive	Bloom (2017)
MNEs' investment decisions and uncertainty	FDI dynamics and trade protectionism	x	x	x	Descriptive, appreciative	Globerman (2016)

Legend: x – the study analyses the topic.

A very recent set of papers discusses, in an appreciative manner, the issue of economic policy uncertainty and companies' investment decisions. For instance, Nicholas Bloom has published some papers that focus on the evolution of the economic policy uncertainty (EPU) index and discusses the effect of this type of uncertainty on the GDP components. He uncovered that investment is the variable that is more volatile to changes in the level of

uncertainty, with a small response from consumption and no response from government expenditure, due to the more forward-looking vision of companies when compared with the one from consumers (Bloom, 2017). Additionally, Barrero, Bloom and Wright (2017) concluded that uncertainty can have different effects depending on the type of situation that originate the reactions: cyclical, temporary drivers, such as oil price volatility, are highly connected with short-run uncertainty, while slow-moving, more radical drivers, like economic policy, are linked with long-run uncertainty. These same authors have shown that investment and R&D are more sensitive to long-run uncertainty, but their analysis does not explore MNEs' investment decisions.

Studies specifically focused on FDI dynamics and the eventual increase in trade protectionism associated with recent major international political changes, most notably, Britain's "Brexit" or Donald Trump's election, brought the issue of (trade) protectionism, uncertainty and MNEs' investment strategies to the highlights. Steve Globerman (2016) concluded that an increase in global trade protectionism and increased barriers to the movement of people are likely to further slow the growth of FDI or even result in a decline of international investment flows. However, these observations are, once again, merely descriptive and do not provide an in-depth account of the impact these changes might have on MNEs' investment decisions.

3. Methodological considerations

Our main research question is focused on the U.S. trade policy (vis-à-vis other countries) and how such trade policy and the business uncertainty impact MNEs' investment decisions, testing the following hypotheses:

H1: Protectionism negatively impacts on MNEs' investment decisions.

H2: Uncertainty negatively impacts on MNEs' investment decisions.

In order to test the study's main hypotheses, we selected a quantitative methodology. As earlier referred, the existing studies address the topics selected mainly in descriptive or qualitative manner (see Table 1). Quantitative studies in these fields are focused on a specific scope (e.g. exchange rate or information environment) or on a firm-level. Therefore, the methodology proposed here is innovative as it presents a broad, cross-country/time analysis that can serve as a basis to study the near-future changes in the American economy.

Specifically, we resort to econometric panel data models. As underlined by Hsiao (2007: 2), “[p]anel data, by blending the inter-individual differences and intra-individual dynamics have several advantages over cross-sectional or time-series data: (i) More accurate inference of model parameters; (...) (ii) Greater capacity for capturing the complexity of human behavior than a single cross-section or time series data (...) by (ii.b) Controlling the impact of omitted variables (...) [and] (ii.c) Uncovering dynamic relationships.”

The econometric specification is:

$$OFDI_{it} = \beta_1 + \beta_2 TRFREE_{it} + \beta_3 FDIPROT_{it} + \beta_4 UNC_{it} + \beta_5 X_{it} + \varepsilon_{it},$$

where

i indexes country of origin of the MNEs ($i=1, \dots, 19$)⁸ and t indexes time ($t=1, \dots, 21$)

OFDI measures the outward FDI flows from country i to the U.S.

TRFREE estimates the trade freedom of entry of goods and services of the U.S. minus the trade freedom of country i

FDIPROT represents FDI restrictions of the U.S. minus the restrictions in country i

UNC is the business uncertainty differential between the U.S. and country i .

X represents the vector of control variable, which include the Gross Domestic Product per capita (GDP pc), population growth, Human Capital, and R&D differentials between the U.S. and country i

ε is the residual error term that captures the effect of non-observed variables.

⁸ The list of the 19 countries is in Table A1 in the Appendix.

All data was collected from publicly available information from American and international databases. The FDI flows were collected from the Bureau of Economic Analysis of the U.S. Department of Commerce, trade freedom was measured through the *Trade Freedom Index* of The Heritage Foundation, FDI restrictions were collected from OECD's *International Direct Investment Statistics* and the uncertainty data was retrieved from the *Economic Policy Uncertainty*. The control variables' differentials were calculated using data from the World Bank and the *Penn World Tables*.

Nineteen countries were selected to our panel: Germany, France, Ireland, Italy, Netherlands, United Kingdom, Spain, Sweden, Russia, China, India, Japan, Singapore, South Korea, Australia, Canada, Brazil, Chile and Mexico. Data was collected from a range of twenty-one years, from 1996 to 2016.

Table 2 describes the main proxies of the relevant variables as well as their data sources.

Table 2: Proxies of the relevant variables

	Variable	Description	Data availability	Source
Dependent variables	Outward flows of country i to U.S. (OFDI)	Foreign Direct Investment in the United States by country (in Millions of dollars)	1980-2016	Bureau of Economic Analysis, U.S. Department of Commerce
Core independent variables	Trade Freedom differential (TRFREE)	Trade Freedom Index of U.S. minus the Trade Freedom Index of country i Differential between the U.S. and country i of index of restrictiveness of a country's FDI rules by looking at four main types of restrictions: foreign equity restrictions; discriminatory screening or approval mechanisms; restrictions on key foreign personnel and operational restrictions.	1996-2016	The Heritage Foundation, U.S.
	FDI restrictions differential (FDIPROT)	Differential of Economic Policy Uncertainty (EPU) Index (based on newspaper-based EPU Index) between the U.S. and country i	2003-2016	OECD International Direct Investment Statistics
	Business uncertainty differential (UNC)		1985-2017	Economic Policy Uncertainty
Control variables	GDP per capita differential (U.S. minus country i) Population growth differential (U.S. minus country i) Human Capital differential (U.S. minus country i) R&D differential (U.S. minus country i)		1960-2016	World Bank Indicators

4. Empirical results

4.1. A general overview of United States' Trade and Foreign Direct Investment

In September 2008, following the collapse of the investment bank Lehman Brothers and the public rescue of several financial institutions in the U.S. and Europe, the financial crisis that had started a year before escalated. The following year, for the first time since this indicator is measured, a negative global Gross Domestic Product growth rate was registered. The collapse of U.S. imports and exports that resulted from this were of a magnitude unique in historical terms, only comparable to the 2001 recession (Levchenko, Lewis, and Tesar, 2009). In the following year, global GDP registered a growth of -1.73%, according to the World Bank,⁹ as exports and imports decreased by 22.3% and 22.9%, respectively, according to United Nations Conference on Trade and Development (UNCTAD)¹⁰ statistics, while the United States' GDP, exports and imports grew -2.78%, -14.0% and -22.9%, respectively (Bureau of Economic Analysis¹¹). The drop in these trade variables compared with the one in the GDP was far greater than any registered during a crisis prior to this century – see Figure 1.

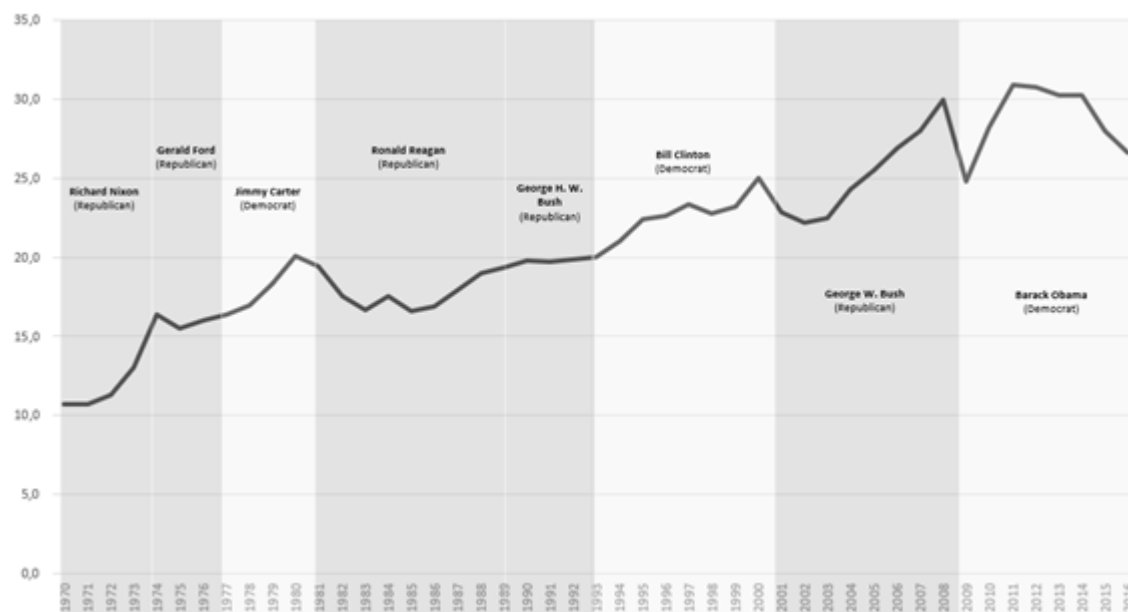


Figure 1: Trade openness index for the U.S., 1960-2016

Source: The World Bank Indicators.

⁹ In <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG>, accessed 27/10/2017.

¹⁰ In <http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx>, accessed 27/10/2017.

¹¹ In <https://www.bea.gov/international/index.htm#trade>, accessed 27/10/2017.

The consequence of the crisis can also be observed in Figure 2, using data from the Organization for Economic Co-operation and Development (OECD) for the trade-to-GDP ratio¹².

In 2008, the U.S. registered a ratio of 15.4%, the lowest of the 35 OECD countries, well below the OECD average of 46.7%.

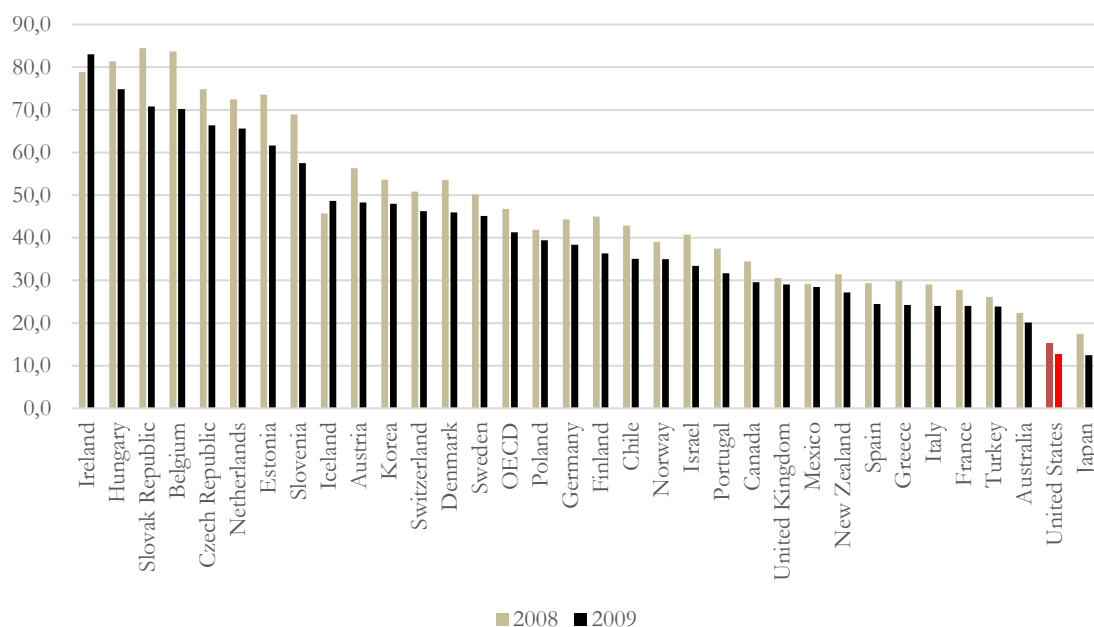


Figure 2: Trade openness index for OECD countries, 2008-2009

Source: OECD

In terms of trade of goods and services, the United States had a much lower openness ratio regarding the second type of trade, with 3.3%, compared to 12% in trade of goods. In 2009, both of these types of trade had a lower openness ratio but the trade of goods registered the biggest fall. In a broad sense, the U.S. openness ratio in 2009 decreased by 2.8 percentage points to 12.6%, the second lowest of the OECD, still much lower than the organization's average (41.3%).

It was this scenario that Barack Obama faced in his first year as President, after taking office in January 2009. In the first year of the new Administration, the United States of America registered the lowest GDP growth rate since 1946¹³ but demonstrated signs of slow recovery

¹² As stated by the OECD: "The *trade-to-GDP ratio* (...) is calculated for each country as the simple average (i.e. the mean) of total trade (i.e. the sum of exports and imports of goods and services) relative to GDP". In, accessed 04/11/2017.

¹³ In <https://www.bea.gov/national/index.htm>, accessed 27/10/2017.

by the end of the year, with quarterly GDP growth rates of 1.3% and 3.9% in the third and fourth quarters respectively.

To improve the country's recovery from the crisis, Obama approved, in March 2010, the National Export Initiative (NEI), which, as stated in its original Executive Order (Office of the Federal Register, 2010), intended to promote the participation of U.S. businesses in international markets through exports of goods and services to, in turn, boost economic growth and create high-paying jobs. It was based on five components: advocacy and trade promotion efforts on behalf of U.S. exporters, increase in export financing, removal of barriers to trade, enforcement of U.S. trade rules on their partners and promotion of a strong, sustainable and balanced growth (Export Promotion Cabinet, 2010). This initiative would, ultimately, be the major contributor factor for the achievement of the Administration's goal of doubling exports by the end of 2014.

But the NEI was only one of the first steps in a broader plan of the former presidency. Over the eight years it stood in office, the Obama Administration worked to expand agreements such as the Information Technology Agreement (ITA) of the World Trade Organization, whose main purpose is the elimination of tariffs on trade of IT products, worked closely with this organization to enforce trade rights, in order to promote and establish a fair-trading order worldwide, and established unilateral Free Trade Agreements (FTAs) with Korea (KORUS-FTA), Panama and Columbia. Furthermore, the administration negotiated the Trans-Pacific Partnership (TPP), the most significant trade initiative of the 21st century (Kotschwar, Muir, and Schott, 2013¹⁴), between 12 countries, including Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, USA and Vietnam. This FTA intended to deepen economic ties between these nations by cutting tariffs and, eventually, create a single market in the future.

The foreign trade policy adopted by Obama allowed the U.S. to recover from the financial crisis and grow in the following years, as BEA statistics show. From 2010 until the end of Obama's second term, exports and imports grew, on average, 5.13% and 4.99% per year, respectively, and GDP, on average, 2.14% and, in 2015, exports of goods and services supported an estimated 11.5 million U.S. jobs, approximately 8% of U.S. total employment (Froman, 2017).

¹⁴ <https://piie.com/bookstore/understanding-trans-pacific-partnership>, accessed 12/11/2017.

Despite the positive global frame of the behavior of exports and imports through the previous administration and a good recovery following the financial crisis, Obama's second term was less positive in terms of trade. After a good growth of the weight of exports and imports in the GDP, both variables' development slowed down starting 2012. In 2014, both variables started to register a negative growth, not just in relation to the national product but also in absolute values (Figure 3).

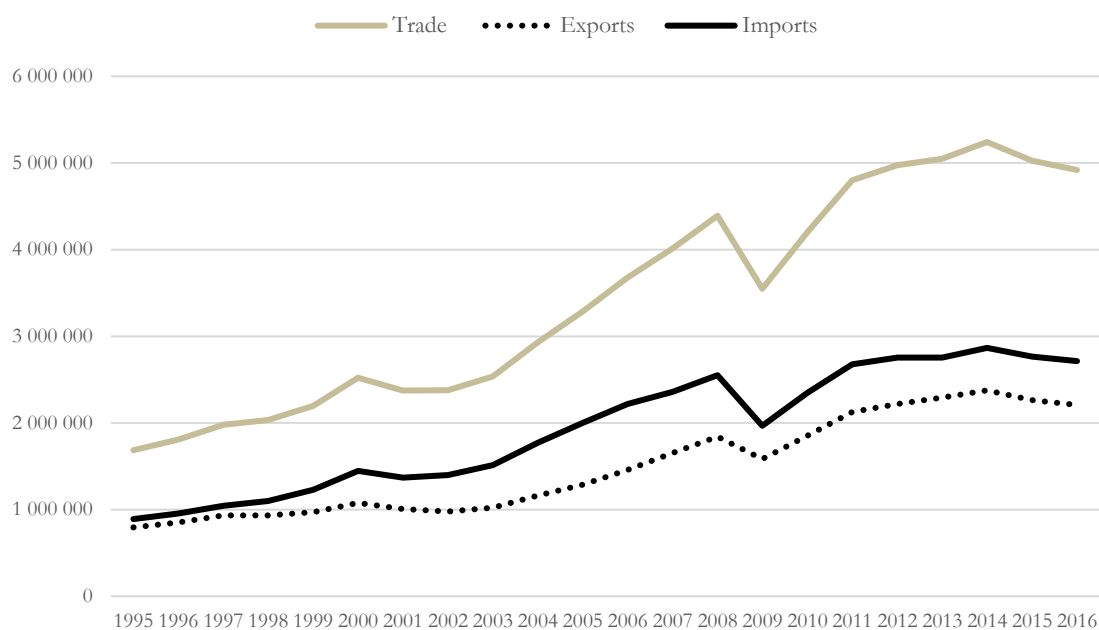


Figure 3: Trade, imports and exports of the U.S., in millions of dollars, 1995-2016

Source: OECD

The drop in this period can be associated with the strengthening of the U.S. dollar over this period. As data from the Federal Reserve¹⁵ shows, following three years (2011-2014) of a relatively low value, the price-adjusted dollar index registered a significant growth period that only seemed to stop earlier this year.

The financial crisis also affected the financial flows related to Foreign Direct Investment (FDI) in and from the U.S. (see Figure 4).

In 2007, the U.S. registered the highest level of FDI outflows in history and one of the highest levels of FDI inflows to date. The deepening of the financial crisis in 2008 resulted in a significant fall of both indicators, with U.S. firms investing 34.42% less abroad than in the previous year, which translates into a decrease of 108.31 billion dollars. The inward flows of capital only started to decrease the year after, but registered a larger relative drop, with

¹⁵ https://www.federalreserve.gov/releases/h10/Summary/indexbc_m.htm, accessed on 26/11/2017.

foreign MNEs reducing their investments in the U.S. in more than half (53.78%), resulting in a fall of 178.95 million dollars.

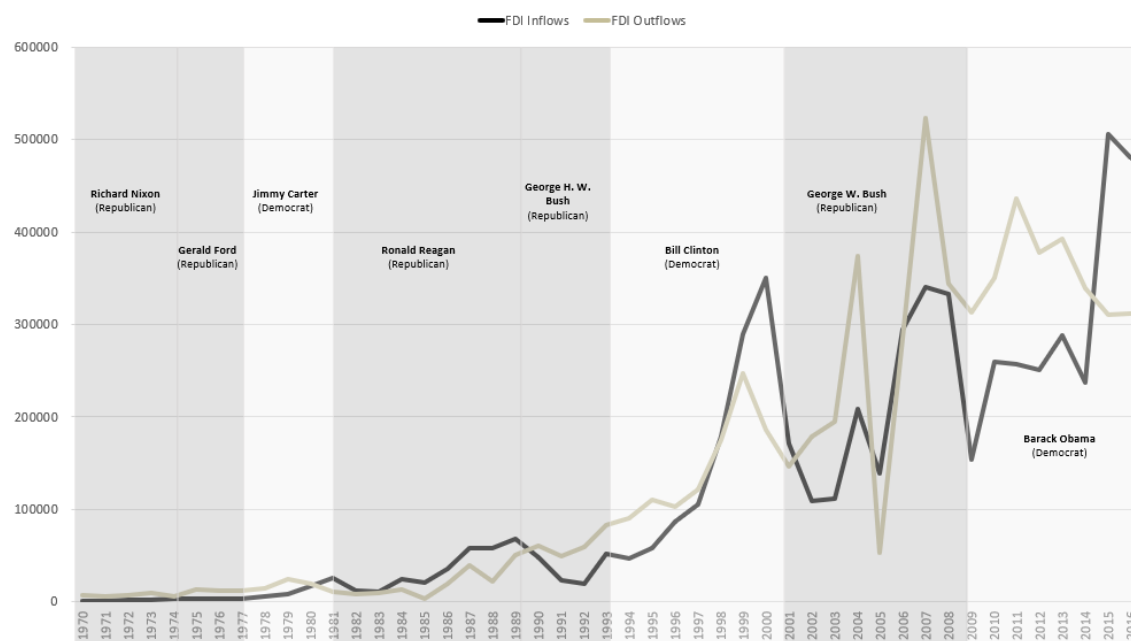


Figure 4: Foreign Direct Investment inflows and outflows in the U.S., in millions of dollars, 1960-2016

Source: Own computations based on data by the World Bank Indicators.

The changes implemented by President Obama, internally and with Trade Agreements, helped U.S. companies recover, with the outward FDI flows recording positive growth rates until 2012. After this year, domestic companies have slowed their investments abroad. In terms of inward FDI flows, the changes promoted by the new Administration had a very positive effect in attracting foreign MNEs' investment. In the 8 years it stood in office, this Government was able to increase the entry of capital from foreign MNEs in 44,08% to an historically high amount in 2015.

4.2. Descriptive and exploratory statistics of the variables included in the econometric specification: U.S. and its 19 main trade /FDI partners, 1996-2016

The panel built to estimate the model allows us to analyze key variables of the 19 countries between 1996 and 2016. To facilitate the comparison, some analyses have been performed organizing the countries into seven categories, including 4 blocks of countries - Europe (France, Germany, Ireland, Italy, Netherlands, Spain, Sweden and United Kingdom); Pacific Asia (Japan, South Korea and Singapore); and Latin America (Brazil, Chile and Mexico), China and India, and 3 isolated countries - Australia, Canada, and Russia.

4.2.1. Outward Foreign Direct Investment

The following seven graphs present a cross-time display of the evolution of 19 countries' real OFDI to the U.S., aggregated by country group.

Europe and Canada stand out as the group and country which most invest on the United States. The European average of 114 600 million dollars per year of FDI flows to the U.S. is greatly increased by the investment performed by Great Britain, which is, by a large margin, the biggest source of foreign investment into the U.S. since 2004 (see Figure 6).

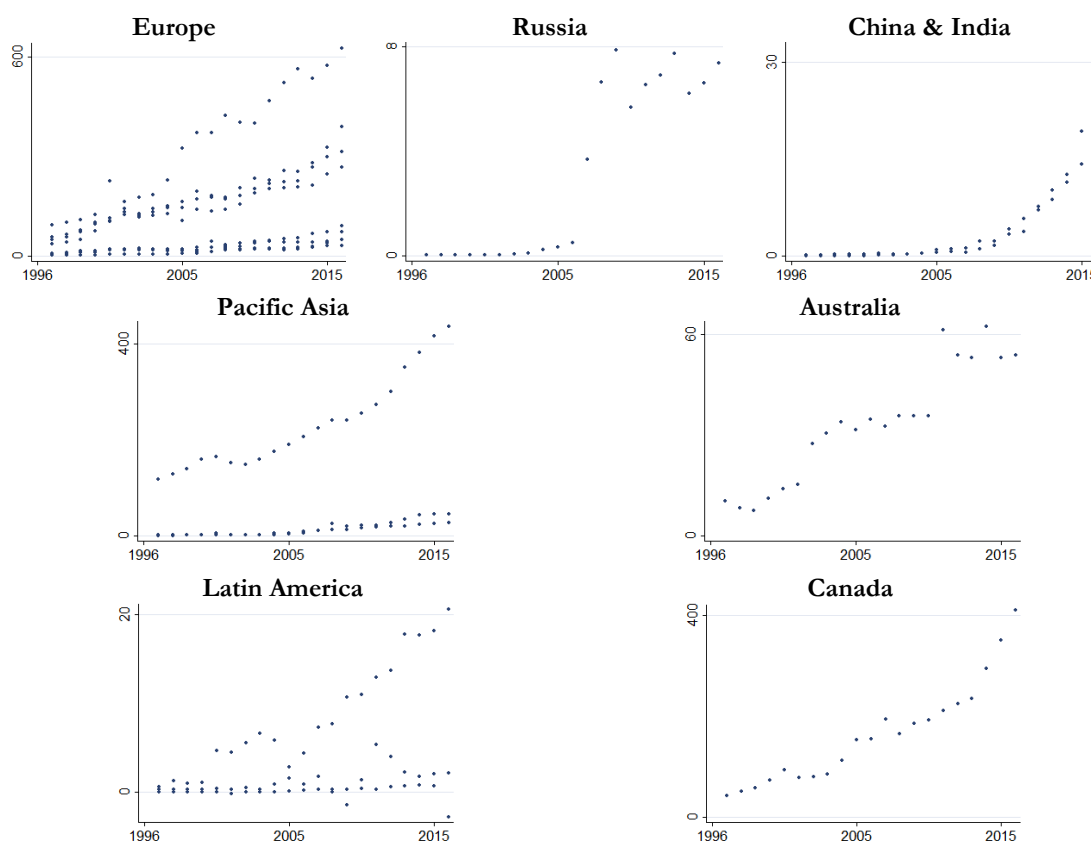


Figure 5: Foreign Direct Investment flows per country category, in billions of dollars, 1996-2016

Note: Europe includes France, Germany, Ireland, Italy, Netherlands, Spain, Sweden and United Kingdom; Pacific Asia includes Japan, South Korea and Singapore; Latin America includes Brazil, Chile and Mexico.

Source: Own computation based on data from the Bureau of Economic Analysis

Six countries demonstrate a clearly superior level of investment in the U.S.. Of these six, four are located in Europe: United Kingdom, Netherlands, Germany and France. This helps to explain why Europe is the group that invests the most on the U.S., as shown in Table 3.

Table 3: Average OFDI to U.S. by country group, in millions of dollars, 1996-2016

Country/Group	Average OFDI
Europe	114 660.10
Russia	3 171.85
China & India	4 073.03
Asia Pacific	85 530.01
Australia	33 350.37
Latin America	3 247.84
Canada	163 666.30

Canada was, until 2014, the largest single-country trading partner of the United States (according to U.S. Census data¹⁶). The two economies are, for their geographical proximity and social and economic similarities, highly integrated (Fergusson, 2011). In 1989, Canada and the U.S. established their first *Free Trade Agreement*, which later was replaced by the NAFTA. In terms of direct investment, Canada was, in 2016, the country with the third largest flow, with 163 666 million dollars.

The Asia Pacific is the group with the second highest value of investment flows to the U.S. across the 21 years. This is, in large part, due to the amount of capital flows from Japan, the country which presents the second highest FDI flow since 1999, year in which Britain became the largest investor.

China and India, despite being the first and eight largest goods trading partners of the U.S. (according to U.S. Census data¹⁷), respectively, are not in the top twelve countries with the highest investment flows to the U.S..

The two lowest averages of OFDI in our panel belong to Russia and Latin America. This group's average is lowered by Brazil, country which registered two years of divestment, 2009 and 2016. In our last year of observation, Brazil presented the lowest value of OFDI registered, -2 755 million dollars. According to UNCTAD's *World Investment Report 2017*,¹⁸ the divestment in 2016 can be justified by the recession period that Brazil faced, by debt incurred by Petrobras, and by the divestment of foreign assets from Brazilian MNEs through cross-border M&As.

4.2.2. Trade Freedom

Figure 7 represents the evolution of the differential of trade freedom between the U.S. and country i across the years.

The variable selected as a proxy of protectionism was the Trade Freedom Index of *The Heritage Foundation*, which accounts for trade tariffs and for non-tariff barriers. The index varies from 0 to 100, in which a higher score represents a higher level of freedom. Given

¹⁶ In <https://www.census.gov/foreign-trade/statistics/highlights/top/top1412yr.html>, accessed on 27/03/2018.

¹⁷ In <https://www.census.gov/foreign-trade/statistics/highlights/top/top1712yr.html>, accessed on 27/03/2018.

¹⁸ In <http://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=1782>, accessed on 13/03/2018.

this, a positive differential means that the U.S. had, in a specific year, a smaller level of trade protectionism than country i . The black line in each graph marks the null differential between countries.

All countries that are part of the Europe group were members of the European Union at the time of our study, a political and economic union. As such, its members have, internally, freedom of goods and services and a common external trade policy. Due to this fact, Europe presents many similar results between the different countries, reason why, in any given year, we can only see up to three values on its graph. In general, Europe presents a positive but almost null Trade Freedom differential with the U.S..

Russia, China and India have, across the years, a much smaller Trade Freedom index than the U.S.. With an average differential of 21 points for Russia and 34 for China and India, the three countries present themselves, across the 21 years, as significantly more closed to foreign trade than the United States. However, it is important to note that, in all three cases, the differential has presented a downwards trajectory through the years, signaling that these countries might be opening up to international markets.

The countries from Pacific Asia present, in this variable, slightly different results amongst them. Singapore has, across the 21 years, a slightly higher Trade Freedom index than the U.S., as South Korea, on the other hand, has a much lower average level of Freedom. Japan's index registered almost no growth along the years; as the U.S. Trade Freedom increased, the differential between the two countries grew in favor of the United States but its average is only of 2 points.

Although Australia's graphic shows scattered results, the Trade Freedom Indexes of this country and the U.S. are very similar, with the differential averaging 1.57 points across the years, with a standard deviation of 1.60. This is similar to what happens between the U.S. and Canada, whose differential averages -0.40 per year and the standard deviation is 1.80.

Regarding Latin America, the differential is almost always positive across the 21 years, with only five negative results (from Mexico and Chile). The group presents the third highest average differential, which demonstrates the significantly lower openness to foreign trade of this countries when compared with the United States.

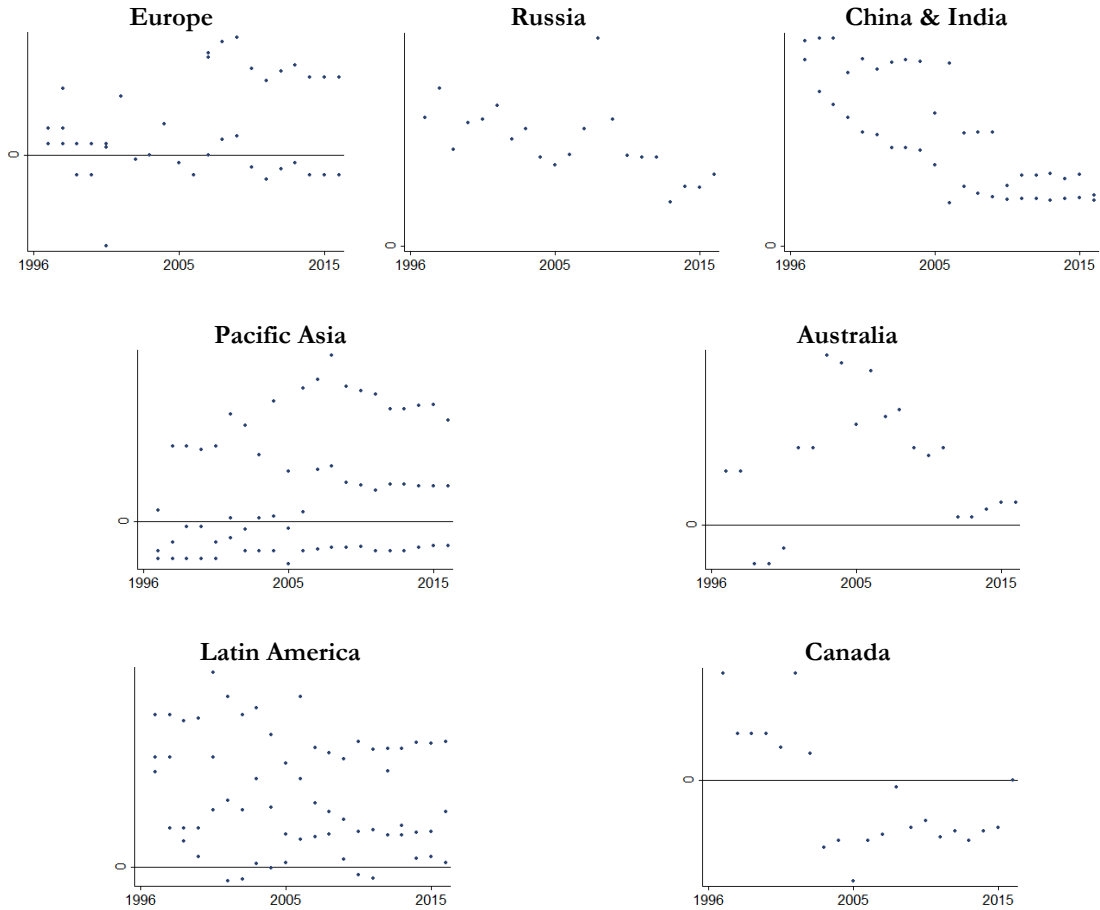


Figure 6: Trade Freedom Index Differential (U.S. minus country i) per country category, 1996-2016

Note: Europe includes France, Germany, Ireland, Italy, Netherlands, Spain, Sweden and United Kingdom; Pacific Asia includes Japan, South Korea and Singapore; Latin America includes Brazil, Chile and Mexico.

Source: Own computation based on data from The Heritage Foundation

4.2.3. Business uncertainty

Figure 8 depicts the Economic Policy Uncertainty Index for the panel across the 21 years of observation. Similar to the previous case, this variable is presented as a differential between the U.S.'s level in a given year and the uncertainty of country i during that same timeframe. The black line on the graphs depicts a null differential, meaning that, with a value below the line, the level of uncertainty of the U.S. in a given year was smaller than that of country i .

Up until the financial crisis of 2008, Europe maintained a cyclical differential with the U.S., with the first presenting, in general, a smaller level of uncertainty. After 2008, Europe went through a period of higher uncertainty and of much scattered indexes within the group, resulting in the U.S. having a smaller mean level of Economic Policy Uncertainty across the 21 years of observation. Europe also presents the most negative value of differential, which

corresponds to the level felt in the United Kingdom in 2016, in big part due to the *Brexit* voting results (Bloom, 2017).

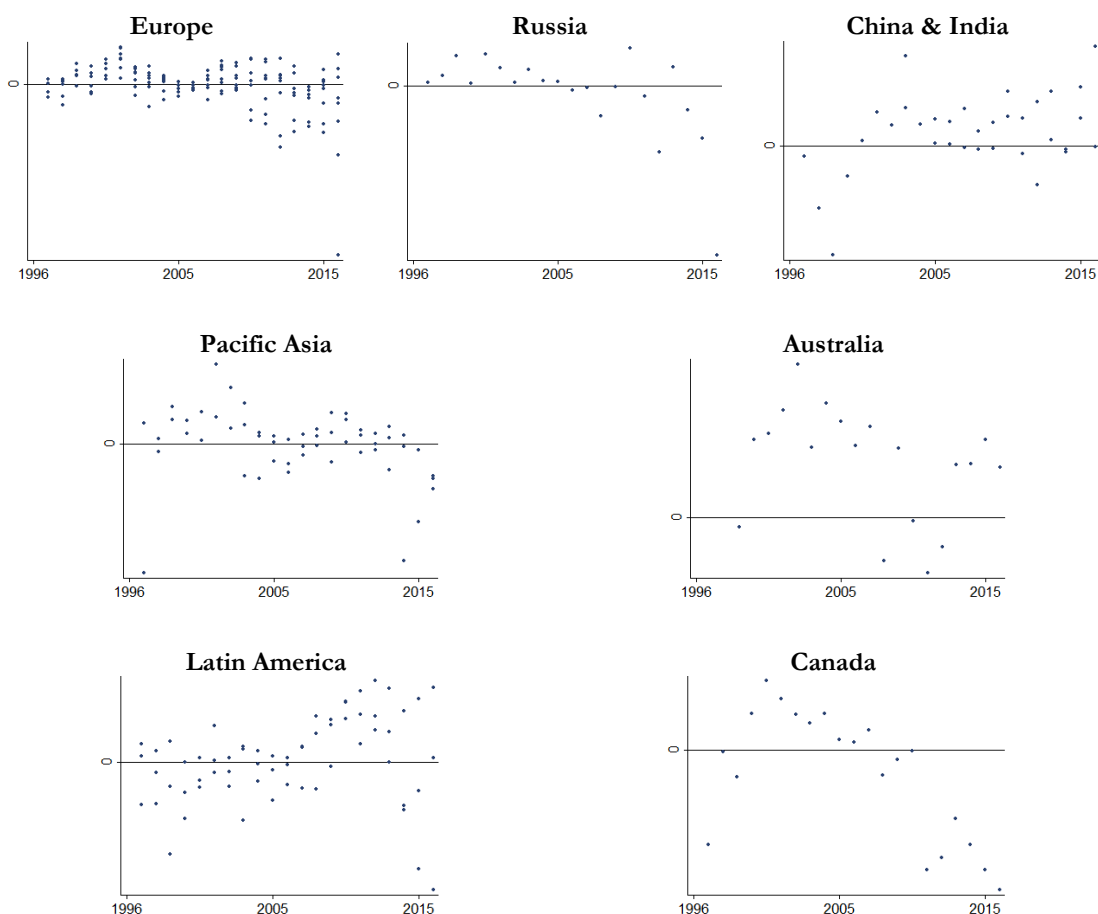


Figure 7: EPU Index Differential (U.S. minus county i) per country category, 1996-2016

Note: Europe includes France, Germany, Ireland, Italy, Netherlands, Spain, Sweden and United Kingdom; Pacific Asia includes Japan, South Korea and Singapore; Latin America includes Brazil, Chile and Mexico.

Source: Own computation based on data from Economic Policy Uncertainty

Russia and Canada present similar results and a similar pattern of differential across the years. The countries average differential is, respectively, -11.17 and -15.49, the two lowest means of the panel, and they both present a high standard deviation of results. The negative average witnessed across the 21 years is explained by the increase in uncertainty in the last 5 years. Although the United States presented high levels of uncertainty at the end of the period of observation, both Russia and Canada registered much higher economic uncertainty.

On the other hand, China and India and Australia presented a mean level of uncertainty between 1996 and 2016 smaller than that of the U.S., with a low variance of results. The three countries had the highest minimum values of differentials and some of the smallest

maximum values, which resulted in uncertainty mean indexes of, respectively, 10.16 and 15.66.

Pacific Asia and Latin America had the smallest differential averages of the panel, demonstrating that their EPU was, in general, very similar to that of the United States. However, both groups present high levels of variance of results. In the case of the Pacific Asia countries, their levels of uncertainty started smaller than those of the U.S. but, over the years, the two started to converge and the Asian countries ended with slightly higher levels of uncertainty. The Latin American countries registered negative values of uncertainty at first but, as the uncertainty in the United States grew, the EPU index in the Latin countries started to decrease, resulting in the highest levels of uncertainty differential of the panel over the 21 years.

4.2.4. Other variables

The average across the 21 years of the differentials of Gross Domestic Product per capita, Population Growth and Human Capital index and R&D expenditure are positive, meaning the United States present, on average, a better level in all of the control variables than the other 19 countries.

In terms of GDP per capita, only one group has a higher average between 1996 and 2016, Australia. On the other hand, China and India are the group with the highest differential and also the one with the highest minimum and maximum value.

Although the global average for population growth differential is positive, this only happens with Europe and Russia, the last one particularly high. With all other groups and countries, the differential is negative but close to null.

The United States have, in general, a clearly higher Human Capital (HC) Index than the rest of the panel. All average differentials for the countries/groups are positive and there are only two countries with a higher level of HC index than the U.S. across the 21 years: Singapore in 2016 and the United Kingdom in the last seven years.

Finally, in terms of R&D expenditure, all average differentials are positive, specially between the U.S. and China and India and Latin America, except for Pacific Asia, which has the closest differential to null. This is due to the higher R&D expenditure (in percentage of the GDP) of Japan than the U.S., which is one of the three countries with the negative differential through the 21 years, together with Sweden and South Korea.

4.2.5. Bi-variate relations among the relevant variables

Table 4 evidences that FDI outflows (OFDI) targeting the USA are negatively related to ‘Trade Freedom differential’ (TRFREE) and ‘Business uncertainty differential’ (UNC). This means that when these differentials between the U.S. and the remaining countries of the panel increase, the values for OFDI tend to decrease. In turn, this indicates that when there is a higher level of trade freedom and of uncertainty in the United States compared to the level of country i , the flow of direct investment from this country to the U.S. tends to be smaller.

The positive correlation between OFDI and trade freedom seems to contradict the literature reviewed, reflecting a positive relationship between FDI in the U.S. and trade protection.

In contrast, the negative correlation between uncertainty and FDI evidences that an increase in uncertainty in the investment recipient country is associated with a decrease in the amount invested in that given country.

Regarding FDI protection (FDIPROT), the correlation between the differential (between the U.S. and each of the 19 countries considered) of FDI protection and OFDI is positive, which suggests that when there is a higher level of FDI protection in the United States compared to that of country i , the direct investment from this country to the U.S. increases. Such bi-variate association seems to contradict the theoretical expectations.

In what concerns the control variables, the GDP per capita (GDP pc), Human Capital and R&D expenditures differentials present a negative relationship with OFDI, meaning that the larger the difference between the United States and the remaining countries in regards to these variables, the lower the flow of FDI from these countries to the U.S.. In contrast, the population growth differential is positively correlated with the OFDI.

Table 4: Descriptive statistics and correlation matrix

	Variable	Description	Mean	Min	Max	Standard Deviation	1	2	3	4	5	6	7	VIF
Dependent variable	1. Outward flows of country i to U.S. (OFDI)	Foreign Direct Investment in the United States by country	73 260.48	-2 755.26	62 476.8	112 710	1							
Core independent variables	2. Trade Freedom differential (TRFREE)	Trade Freedom Index of U.S. minus the Trade Freedom Index of country i	7.1573	-5.20	65.20	13.0505	-0.4939	1						1.94
	3. FDI restrictions differential (FDIPROT)	Differential between the U.S. and country i of index of restrictiveness of a country's FDI rules	-0.03371	-0.5694	0.074	0.1144	0.3457	-0.3881	1					1.23
	4. Business uncertainty differential (UNC)	Differential of Economic Policy Uncertainty (EPU) Index (based on newspaper-based EPU Index) between the U.S. and country i	-0.5994	-397.64	104.00	48.44	-0.1307	0.0269	-0.0308	1				1.03
	5. GDP per capita differential	U.S. minus country i	17 198.83	-17 369.48	50 401.29	17 264.21	-0.5613	0.5986	-0.323	0.0012	1			1.88
Control variables	6. Population growth differential	U.S. minus country i	0.1011	-4.3756	2.5993	0.7518	0.1700	0.1365	0.0143	-0.0020	0.0512	1		1.24
	7. Human capital differential	U.S. minus country i	0.6285	-0.0385	1.8929	0.4880	-0.6908	0.4814	-0.1444	0.1205	0.5113	-0.2735	1	2.21
	8. R&D differential	U.S. minus country i	0.0094	-0.0155	0.0247	0.0088	-0.5164	0.3146	-0.1408	0.0056	0.4429	-0.1837	0.5945	1.63

4.3. Estimation results

To estimate the proposed specification, we used a fixed-effects panel model which takes into account both time and cross-country variability in FDI outflows targeting the U.S. economy (see Table 5).

The model's fit is reasonable with an overall R^2 of 0.5343 and a F-test statistically significant - the p-value is 0.0000 – meaning that the model is globally significant.

The diagnosis tests performed support the content that there are no problems of multicollinearity in the estimated model as the Variance Inflation Factors (VIF) (see Table 4) are all close to 1 (O'Brien, 2007).¹⁹ Moreover, the Breusch-Pagan test allows us to conclude that the error variances are constant, that is, estimated errors are homoscedastic.

In terms of results (see Table 5), our first hypothesis – H1: *Protectionism negatively impacts on MNEs investment decisions.* – in terms of trade of goods and services, is not validated. Indeed, the Trade Freedom estimate is statistically significant and negative (-0.2944, with a p-value < 0.01), which means that, on average, all the remaining factors being held constant, a larger differential of Trade Freedom between U.S. and a given country is associated to a lower level of investment of MNEs of that country in the United States (that is, lower Outward Foreign Direct Investment (OFDI) flows from a given country to the U.S.).

In short, despite the extant theory assert that an increase in the level of protection in terms of goods and services trade (lower level of freedom) is harmful for global production networks (Görg and Labonte, 2012; Taylor, 2000), our results fail to support this content.

These results, although contrary to the majority of the literature of FDI, find support in Markusen's theory of "horizontal multinationals" (Markusen, 1984) and knowledge-capital model (Carr, Markusen and Maskus, 1998). The argumentation departs from the concept of 'horizontal firms' which invest in plants or subsidiaries in other countries to produce/provide their product/service as they do in their home country. This type of investment is most used when trade costs are high (and the countries are more developed) as a way to surpass these costs. MNEs invest in the country where they want to sell their products/services to produce locally and, therefore, avoid the costs of entry of exports.

Thus, our results seem to suggest that OFDI reflects the strategic decisions of MNEs which use direct investment as a way of being present in the U.S. market avoiding the increased

¹⁹ See also <https://statisticalhorizons.com/multicollinearity>, accessed on May 2018.

costs that U.S. trade protectionist measures induce. Such strategic decisions lead to an increase in the OFDI to the U.S. when the level of trade freedom in U.S. decreases (protectionism increases) in comparison to the level of trade freedom in their country of origin.

Table 5: Fixed effect panel data estimation (dependent variable: Outward FDI to the U.S.)

Independent Variable	Variable description	Estimated coefficient
Trade Freedom	U.S. Trade Freedom Index minus country <i>i</i> Trade Freedom Index	-0.2944*** (0.0927)
FDI protectionism	U.S. index of restrictiveness regarding FDI rules minus country <i>i</i> index of restrictiveness regarding FDI rules	0.9989*** (0.3410)
Uncertainty	U.S. Economic Policy Uncertainty Index minus country <i>i</i> Economic Policy Uncertainty Index	-0.0114 (0.1063)
GDP pc	U.S. GDP pc minus country <i>i</i> 's GDP pc	-0.1545* (0.0856)
Population growth	U.S. Population growth minus country <i>i</i> 's Population growth	-1.1897*** (0.2185)
Human Capital	U.S. Human Capital minus country <i>i</i> 's Human Capital pc	-3.7809*** (0.4576)
R&D expenditure	U.S. R&D expenditure minus country <i>i</i> 's R&D expenditure	-54.0480*** (12.50613)
Diagnosis tests	Variance Inflation Factors (VIFs)	All below 3
	Breusch-Pagan / Cook-Weisberg test for heteroscedasticity - chi2(1) (p-value)	0.63 (0.4291)
	Hausman test - chi2(1) (p-value)	16.67 (0.0196)
Goodness of fit	F-Statistic	22.75 (0.000)
	R ²	0.5343
Number of observations		399

Note: ***(**)[*] statistically significant 1% (5%) [10%]. All variables are in logarithms. Grey cells identify statistically significant estimates.

In terms of FDI protection, the estimate is significant and positive (0.9989, with a p-value<0.01). The positive relationship between FDI protection and OFDI indicates that, *ceteris paribus*, a higher protection differential over foreign investment in the U.S. in relation to that of a given country leads to MNEs from this country to invest more in the United States.

This appears to be a contradictory relationship, as the imposition of governmental barriers to foreign investment would serve as a hindrance to investment (Bitzenis and Szamosi, 2009). However, the result obtained can be explained by a closer observation of the available and relevant data. Table 6 presents the evolution of the values of FDI Restrictiveness Index for our seven groups and the United States, over five selected years.

We can observe that the level of FDI Restrictiveness of the United States across the 21 years of observation (1996-2016) does not change, being equal to 0.089 in all years. As a result, the variance of the differential of FDI protection between the U.S. and the other countries comes exclusively from the latter.

A smaller differential of FDI Restrictiveness Index between the U.S. and a country i suggests that a MNE from this country faces less restrictions when investing in the United States. As the index measures barriers over both the inflows and outflows of FDI, the MNE faces less restrictions to the outflow in its country of origin but the same level of restrictions in the U.S.. In this way, we can conclude that the model estimates that when an MNE faces less restrictions to the outflow of FDI in its country of origin (and so, the differential between the U.S. and this country increases), it will increase its investment in the United States, and vice-versa.

Therefore, our first hypothesis, which stated that protectionist measures have a negative impact on MNEs' investment decisions, is, in fact, confirmed for FDI protection.

Table 6: FDI Restrictiveness Index per country group

Country/Group	FDI Restrictiveness Index				
	1996	2000	2005	2010	2016
Europe	0.037	0.039	0.042	0.052	0.052
Russia	0.338	0.338	0.308	0.180	0.187
China & India*	0.554	0.490	0.366	0.353	0.270
Asia Pacific	0.370	0.176	0.102	0.098	0.094
Australia	0.269	0.256	0.240	0.128	0.146
Latin America	0.165	0.147	0.127	0.125	0.117
Canada	0.268	0.265	0.263	0.175	0.166
United States	0.089	0.089	0.089	0.089	0.089

Note: *values for 1997, 2003, 2006, 2010 and 2016 because of data availability.

In what respects the second hypothesis - *H2: Uncertainty negatively impacts on MNEs investment decisions* – the result fails to validate it.

Although the signal of the estimate is negative indicating that a higher uncertainty (differential between the U.S. and the country of origin of the FDI) is associated with an

increased risk of an investment and thus a decrease in outward FDI flows, the coefficient is not statistically significant. In short, while uncertainty might, through the increase of investment risk, discourage FDI at times, we cannot conclude that it is a decisive factor for MNEs' decision regarding the investment in the U.S..

Concerning the control variables, all present statistically significant and negative coefficients. This means that when the differential between the U.S. and a given country increases, the level of FDI from this country to the U.S. decreases, that is when the U.S. observe an increase in its GDP pc, population, Human Capital level and R&D expenditure in relation to a given country i , the MNEs based in this country (proxied by the outward FDI flows) tend to invest less in the U.S..

These latter results seem to indicate that MNEs do not explore investment opportunities in the U.S. for market-seeking or resource-seeking reasons. In other words, MNEs are not likely to pursue investments in the U.S. to take advantage of higher economic growth or market size, nor to exploit the stronger competencies of the U.S. in term of human, technological resources or innovation.

Other reasons might nevertheless underlie OFDI to the U.S., such as efficiency, location, strategic or political reasons (Bitzenis Szamosi, 2009; Taylor, 2000). In particular, MNEs might target the U.S. using a strategy of 'export-platform FDI', this is, as a path to overcome trade barriers and/or to exploit Free Trade Agreements (Fugazza and Trentini, 2014) that the United States established with other countries (e.g., Trans-Pacific Partnership Agreement or North American Free Trade Agreement (NAFTA)), serving not only the local American market but also surrounding markets through production facility in the U.S.. If a company is looking to explore, for example, growth opportunities in Brazil or Chile, it might resort to export-platform FDI in the U.S. as a way to produce in this country, which possess higher quality institutions and lower institutional uncertainty (as shown above in our exploratory results), and then export to Latin America. Companies would avoid protectionist barriers to trade while investing in a country with better investment/business conditions, smaller risk or a better trade-off between risk and return (Fugazza and Trentini, 2014).

5. Conclusion

The main goal of the present dissertation was to assess the impact of the trade policy and economic uncertainty on the investment decisions of foreign MNEs. Using the U.S. as the reference country, we investigated whether the outward foreign direct investment flows from 19 countries to the U.S. (proxy for MNEs strategic investment decisions) were determined by the differentials (between the U.S. and those 19 countries) in the levels of trade and investment protection and uncertainty.

Although voluminous, extant literature on trade barriers and FDI (Sauvant, 2009; Globerman, 2016) have not yet account for the economic/business uncertainty that is likely to influence FDI. Additionally, FDI studies that addressed the issue of economic uncertainty (Akiba and Desatnicov, 2016; Bloom, 2017)) overlooked the empirical analysis of the impact of protectionist measures on FDI.

In order to respond to the dissertation's research question – Do protectionism and business uncertainty impact on MNEs' strategic investment decisions? – we built a panel which includes the U.S. plus 19 countries from North, Central and South America, Europe, Asia and Oceania, which represent 71% of the U.S. total inward FDI²⁰, over the last two decades (1996 to 2016). Methodologically, we resort to fixed-effect panel data techniques, and uncover several main results.

First, MNEs tend to invest more in the U.S. (i.e., the OFDI to the U.S. is higher) when, in comparison to the home country, the level of trade protection in the U.S. increases. Such strategic decision suggests that FDI is a substitute for trade, that is, FDI is used to overcome the higher trading costs.

Second, home country's higher level of FDI protection discourages investment in the U.S..

Third, the differentials in terms of economic uncertainty failed to explain OFDI/MNEs strategic investment decisions in the U.S..

Fourth, market size and/or high level factor resources (Human Capital, technology) are not the primary reason for the 19 countries' MNEs to invest in the U.S.. Instead, results seem to suggest that export platform and complex-vertical investment strategies have been driving FDI decisions, in the line of what has been found in Fugazza and Trentini (2014). Such strategic investments enable MNEs to exploit highly dynamic emerging, but institutionally

²⁰ According to data from the Bureau of Economic Analysis

feeble, markets while taking advantage of the business and technological advantages the United States have to offer. By horizontally investing in the United States and, from this country, export to other regions, MNEs can reduce their investment risk and trade costs while establishing themselves in a country where they believe that, even if there is an increase in business uncertainty, the higher returns will compensate for the higher risk.

The present study provides two main scientific contributions.

First, it develops an integrated and quantitative analysis of the impact of protectionism and business uncertainty on MNEs strategic investment decisions. Up to the present date extant literature did not focus, simultaneously, on trade protection, uncertainty and the impact these variables might have on FDI flows. We found, controlling for a wide set of factors which are likely to influence OFDI, that protectionism, but not uncertainty, significantly impacts on MNEs strategic investment decisions in the U.S..

Regarding the impact of trade openness in FDI flows, existing studies, which focus on the straight relationship between FDI and protectionism (e.g., Taylor, 2000; Görg and Labonte, 2012), mostly conclude that increased protectionist measures towards goods and services reduce a country's investment attractiveness. By disrupting global production networks, protection over international commerce hinders the connection and trade between headquarters and foreign subsidiaries. Our study, however, shows that, in the case of the U.S., a different explanation prevails, by demonstrating that MNEs are likely to use FDI as a mean to overcome a greater trade protection faced in the U.S..

In terms of uncertainty, most studies (e.g., Bloom, 2017; Shroff, Verdi and Yu, 2014), mainly of theoretical stance and with a generalist nature, focus on exchange rate and environment-driven uncertainty to argue that FDI flows to a given country diminish when a country faces a higher investment risk. Our empirical study shows that, when controlling for protectionism, although there is a negative relationship between uncertainty and international investment flows, uncertainty fails to emerge as a critical factor for MNEs' investment decisions.

The second scientific contribution lies in the fact that our study considers bilateral flows and country differentials in the protectionism and uncertainty measures, instead of global averages, allowing for a better understanding of the MNEs strategic investment decisions. We perform a macroeconomic analysis to analyze the decision making of MNEs in terms of international investment, differentiating ourselves from most studies regarding multinational enterprises' investment decisions, which are performed in a micro perspective (Shroff, Verdi

and Yu, 2014; Lee and Song, 2012), and from most studies of FDI, which consider this variable in a global manner (e.g., Sauvart, 2009; Yao and Wei, 2007).

The present study has important policy implications.

First, results imply that an increased liberalization of FDI restrictions by a given home country fosters the foreign expansion of those countries' MNEs. Our study also points to the conclusion that, if the U.S. decrease the investment barriers foreign companies face when investing in the country, they can increase their inward flows of FDI. Furthermore, the results obtained showcase that an increase in trade protection in a given country might have the collateral effect of increasing the investment of MNEs to that country as a way to overcome the higher trade costs. This conclusion can be very important when a country assesses, for example, the costs and benefits of tariff increases.

A second policy implication lies in the strategy MNEs use when investing in the U.S.. Our study suggests that companies look for investment opportunities in the U.S. on an export-platform FDI basis, as they might seek to use this country not just to serve its internal market but also to take advantage of its trade agreements with regions which present themselves as a less viable investment choice. As such, the U.S. can foster inward FDI flows by promoting conditions that facilitate and encourage this practice, not just in regards to the country of origin of the FDI flows, but also in terms of third party-countries (good potential exports' destiny), by, for example, establishing or broadening trade agreements.

Despite the novelty and scientific contributions of the present study, there are some limitations that need to be highlighted.

Firstly, the indicators chosen as proxies for our core variables – FDI protectionism and uncertainty - do not cover some important aspects. In terms of FDI protectionism, the proxy selected, OECD's FDI Restrictiveness Index, measures the barriers imposed on FDI by focusing on four points: equity restrictions, discriminatory screening or approval mechanisms, restrictions on key foreign personnel and operational restrictions. This excludes some barriers, namely legal framework, infrastructure and other macroeconomic conditions; these include measures not directly taken to deter foreign investment. Another important aspect is that this index fits simultaneously barriers to both inward and outward FDI flows, thus not allowing for a better measurement of each individually. In what concerns the proxy chosen for uncertainty, Economic Policy Uncertainty Index, it also presents some flaws. This measure is constructed based on the monthly number of own-country newspaper articles that debate economic policy uncertainty, tax code changes and disagreements over economic

forecasts. Although this is one of the best current measures of uncertainty, it still presents itself as a flawed indicator: the number of uncertainty related articles do not reflect their severity and a general agreement of a negative economic forecast might also affect uncertainty and not be reflected by this index. Furthermore, for some countries (e.g. Netherlands, Sweden) the index is not built by the same authors that initially created the EPU Index and who implemented it for most countries.

Secondly, we have assumed that the U.S.'s inward FDI flows represent a good proxy for foreign MNEs investment decisions. However, this does not take into account the individual decisions of multinational corporations inside each country and the differences between the characteristics of these companies. Such endeavor would require to depart from a microeconomic analysis and then to proceed to an aggregation to reach the macroeconomic level and answer the questions we put forward in the present dissertation.

Finally, we based our study and constructed our panel on bilateral relationships between the U.S. and its main trade partners. However, when deciding where to invest, MNEs might not focus exclusively on the relationship between their country of origin and the U.S.. Instead, they might analyze different opportunities in other countries to estimate the potential opportunity costs of investing in the U.S. or any of those countries. Therefore, to fully understand the impact of protectionism and uncertainty on MNE global strategic investment decisions in the U.S., it would be important to consider the differential between the U.S. and a weighted average of that indicator for a set of countries and not only the MNEs' home country.

Given the above mentioned limitations, further challenging and interesting avenues for future research emerge: 1) devising new indicators to measure FDI protection (which covers a wider range of investment barriers) and uncertainty (which would be constructed from a different basis and with a more homogeneous implementation over all countries); 2) consider MNEs investment decisions resorting to multilateral relationships among countries; 3) consider, instead of bilateral differentials (of protectionism and uncertainty) between the U.S. and a given home country, the differential between the U.S. and a weighted average of a larger set of alternative countries that MNEs could consider as investment targets.

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Appendix

Table A 1: List of the 19 U.S. main trading partners

Australia
Brazil
Canada
Chile
China
France
Germany
India
Ireland
Italy
Japan
Mexico
Netherlands
Russia
Singapore
South Korea
Spain
Sweden
United Kingdom