

# The Institutional Framework and FDI

An investigation into the relationship between informal institutional uncertainty and bilateral inward foreign direct investment flows

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## Abstract

This study examines the role of formal and informal institutions in foreign direct investment (FDI) dynamics. Using the world values survey this thesis examines the role of institutions in 82 different countries. Public sentiments towards nationalism, liberalism and the attitude towards work are used as proxies for the informal institutional environment. It is important to control for formal institutions when looking at the effect of informal institutions. This study looks at the interconnection between the informal and formal institutional environment by estimating mediation and moderation models. Findings show that the attitude towards work is positively related to incoming FDI flows. Nationalism and liberalism do not seem to be directly related to incoming FDI flows. Findings suggest that the quality of formal institutions plays a significant role in attracting FDI. This thesis also concludes that the quality of formal institutions has an effect on the importance of informal institutions.

Keywords: Foreign Direct Investment, Institutional Quality, Public Opinion.

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# Introduction

In 2013 global inward foreign direct investment (FDI) amounted to \$1.45 trillion (UNCTAD, 2014). FDI and company's location decisions have attracted much attention from competitors, consumers, academics and governments. Governments are especially interested in the location decisions of multinational enterprises (MNE's). In this race for international competitiveness, governments seek to attract foreign firms to locate their operations in their country. FDI has become increasingly important as countries seek to optimize conditions to attract foreign investors in order to boost their own economy. Especially emerging economies benefit from this stable flow of capital, as it is used for technological progress through utilization and distribution of more efficient production techniques (Peng, Wang & Jiang, 2008). Over the last fifteen years trade and investment policies have been liberalized in this regard, with dramatic effects. While international trade has doubled over the last fifteen years, global FDI flows have almost grown by a factor ten during the same period (Dicken, 2007).

Since the late 1990's institutions and FDI have gained significant importance. The quality of institutions in the host country has been increasingly used for explaining discrepancies in both growth rates and income per capita among countries. Earlier research mainly focused on the formal institutional environment. In particular, efficient protection of civil and property rights, extended economic and political freedom and low levels of corruption have shown to be associated with higher FDI inflows (Kaufman, 1999; Wei, 2000). However, the study of informal institutions as a location advantage for multinational firms has not received the same recognition in the literature. Nowadays informal institutions are getting increasingly more attention in the debate about economic development and the forces that drive it.

It was the Nobel Prize winning scholar Douglas North who first underlined the importance of formal and informal institutions and their interplay in the economy through his innovative book *Institutions, institutional change and economic performance* (1990). North clearly outlined the definition of

institutions and made a clear distinction between formal and informal institutions. The research of North (1990) has served as the foundation for empirical studies on institutions ever since. There are several reasons why the quality of institutions matters for FDI. Firstly, good governance infrastructures may attract foreign investors. Secondly, inadequate institutions can bring supplementary costs to FDI. This can be the case when there are high levels of corruption in the host country. Lastly, due to high sunk costs, FDI is very vulnerable to any form of uncertainty, including uncertainties that may arise as a result of negative public opinion in the host country.

This thesis examines the relationship between informal institutions (e.g., morals, customs, traditions, norms, ideologies, opinions and sentiments), formal institutions (rules, laws, and constitutions), and FDI. The few studies that have analyzed the effect of informal institutions on FDI have done so without incorporating mediating and moderating effects of the formal institutional framework in their analysis. This research can contribute to the existing literature by describing the dynamics between public beliefs and institutional frameworks and how those two factors influence the inflow of FDI. I therefore formulate the following research question:

### **What role do public beliefs and formal institutions play on the incoming FDI flows?**

The empirical part of this thesis relates and analyses a set of countries ranging from the year 1999 until the year 2013. Using these countries this thesis examines the effects of institutional quality levels and public opinion on incoming FDI flows. Public opinion is proxied using a summary index based on attitudes toward nationalistic, liberalization and work attitude issues from the World Values Survey (WVS). I hypothesize that nationalistic public opinion in a country hinders the inflow of FDI, it is also theorized that both a favorable attitude towards liberalism and work attitude facilitates the inflow of FDI into the country. Lastly, this thesis will examine the interconnections of the informal and formal environment, I hypothesize that formal institutions both have a mediating and moderating effect on the incoming FDI flows.

Contributions to the literature are made by analyzing the informal institutional environment in conjunction with the formal institutional environment. This is done by estimating mediation and moderation results. Previous studies have examined the relationship between public opinion, formal institutions, and FDI. Jakobsen & Jakobsen (2011) have examined the effect of (economic) nationalism and FDI, but used different measurements to proxy nationalism. Kunčič & Jaklič (2014) studied the relationship between liberalism and FDI, but used different methods to aggregate the data. To my best knowledge no other study has examined the relationship between the attitude towards work and FDI. This thesis contributes to the existing literature by investigating this relationship. Moreover, there is limited understanding of the direct and indirect effects of informal institutions on inward FDI. The direction and magnitude of such effects have implications for policymakers. The wide range of countries included in the sample makes this research particularly interesting.

The remainder of this thesis is organized as follows: the second chapter of the thesis provides the literature background and the hypotheses. The used data is described in the third chapter. The methodology is elucidated in the fourth chapter, and the fifth chapter shows the results. Lastly, the conclusions and discussions are provided in the sixth chapter.

# Empirical Framework

## *Explaining Foreign Direct Investment*

FDI can best be defined as a cross-border investment by a resident entity in one economy with the objective of obtaining a lasting interest in an enterprise residing in another economy (OECD, 2015). The lasting characteristic is important in this respect as it differentiates FDI from portfolio foreign investment, which is a passive form of investment that not encompasses the control of the company in question. FDI is most often measured in stocks or flows, main difference between the two being the time of measurement. FDI stocks are measured using the value of the share of capital and reserves attributable to the parent enterprise, plus the net indebtedness of affiliates to the parent enterprise (UNCTAD, 2014). FDI flows consist of the net sales of shares and loans to the parent company plus the parent firm's share of the affiliate's reinvested earnings plus total net intra-company loans (short- and long-term) provided by the parent company (UNCTAD, 2014).

It has long been recognized that FDI can play a significant role in the process of economic development. Nations benefit from this relatively stable flow of capital as it can be a vehicle for technological progress through utilization and distribution of more efficient production techniques (Peng et al., 2008). The first scholar to examine the spillover effects resulting from FDI was MacDougall (1960). He analyzed the general welfare effects of foreign investment. Later research in this field focused on productivity and market access spillovers (Blomström & Kokko, 1998). They describe how local firms can benefit from the superior knowledge of product and process technologies or markets, without investing substantial amounts of capital. Lall (1980) further describes how the productivity and efficiency of local firms can be improved with the help of foreign companies. This is done by setting up production facilities, providing technical assistance, assisting in the purchasing of raw materials and intermediaries, and by providing training and help in management and organization. From this view it becomes clear why nations compete with one another to attract foreign firms in order to boost their own economy. Early

empirical studies concerning FDI focused on the reason why firms engaged in FDI and why they preferred one country over the other.

Dunning (1979; 1981; 1988) integrated three standing economic principles to explain the ability and willingness of MNE's to serve markets, and the reason why they choose to exploit this advantage through foreign production rather than by domestic production. Ownership, location and internalization advantages explain the reasons why MNE's engage in FDI. Ownership advantages refer to the advantage a MNE's has compared other firms in serving particular markets. The location advantage is important for MNE's because it must be profitable for the MNE's to utilize the factor inputs of the host country, such as natural resources and labor, compared to the factor inputs of the home country. Lastly, it must be beneficial to the MNE to internalize these factor inputs itself rather than externalizing them by selling or leasing to foreign firms. These three principles make up the OLI paradigm of Dunning (1979) which explain the reason why MNE's engage in FDI.

Since the late 1990's the literature has tried to elaborate on the concept of location advantages by focusing on the quality of institutions as a location advantage for firms. At a macro level scholars have examined the position of institutions within the economy and have tried to explain how the behavior of national and foreign MNE's is influenced by institutions on a national level (Acemoglu & Robinson, 2008; Glaeser, La Porta, Lopez-de-Silanes, & Shleifer, 2004; Peng, 2003; Henisz, 2000). On the micro level scholars have examined the strategic decisions of MNE's in their quest to be accepted by the values and institutions of the host country in which they carry out their activities (Peng et al., 2008; Kostova, 1999). The quality of institutions has been added to the OLI paradigm as a location advantage for firms (Dunning & Lundan, 2008). In this framework institutions provide the "rules of the game" which determine the way MNE's coordinate their operations.

### *Institutions Defined*

There is still no consensus in the literature regarding the definition of institutions. Institutions have become increasingly popular in academic research over the last decades. The widespread use of the institution concept in several other disciplines, including philosophy, sociology, politics, and geography has resulted in multiple definitions of the institution concept. In the field of business economics institutions have been clearly defined by North (1990) whose new institutional perspective describes institutions on the macroeconomic level:

*“Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction” (North, 1990, p. 98).*

Institutions consist of the structure that humans impose on their dealings with each other. In this context the purpose of institutions within the economy is to reduce uncertainty by establishing a stable framework in which human interaction is structured (North, 1990). He carefully makes the distinction between institutions and organizations. Where the former can be described as “the rules of the game”, the latter can be considered as “the players of the game”. The institutional framework and the mechanisms that secure their enforcement shape the rules of the game which organizations must follow. North highlights the importance of institutions for the economy; institutions provide the incentive structure of an economy, and they shape the direction of economic change towards growth, stagnation, or decline.

Another definition is provided by Williamson (2000), who describes a more organizational view of these institutions on a microeconomic level. He describes the functioning of institutions in a country as a set of four levels of social analysis, each with its subsequent theory. Each higher level imposes constraints on the level immediately below. According to Williamson (2000) the top level is the social embeddedness level. This is where the norms, customs, mores, traditions, etc. are located. These factors influence the following levels, which include the formal rules of the game, governance and eventually the allocation of resources. A representation of the model Williamson (2000) created is provided in figure 1.





formal position, such as authority or ownership. Informal institutions and its subsequent definition have been largely overlooked in the literature. Informal institutions will be defined in this research as the practices, norms and understandings commonly accepted throughout society. Being derived from society, informal institutions are not accessible through written documents or automatically punishable through the formal institutional environment.

### *Formal Institutions and Foreign Direct Investment*

In the fields of economics, international trade and development, and public choice the analysis of institutions on a macro level has stressed the importance of good governance to enhance economic efficiency and growth. It has long been recognized that good functioning institutions are a major driver of economic development (Hall & Jones, 1999; Acemoglu, Johnson & Robinson, 2001; Rodrik, Subramanian & Trebbi, 2004; Williamson & Kerekes, 2008). Foreign investors have become increasingly aware of the importance of the institutional quality as they make their investment decisions (Bevan & Estrin, 2004). Furthermore, governments have been trying to (re)form their institutional (legal, political, economic, and cultural) structures in order to attract these foreign investors (Pedersen, 2010). Despite the common believe that institutions precede FDI, measuring the impact of institutions encounters the classical problem of reverse causality. On one hand institutions can be improved by the incoming flow of capital (Bevan, Estrin & Meyer, 2004). On the other hand it can be the quality of institutions in place that causes FDI to flow into the country in the first place. Nonetheless, institutional policy has become an instrument for increasing international competitiveness all over the world.

The impact of institutional quality is especially important for less developed nations, for a variety of reasons. First, reduced security of assets in the host country increases the chance of an investment being expropriated, making investing in such a country more expensive. Additionally, poor institutional quality affects the functioning of the market in a negative way which increases the costs of doing business in the country. Poor institutional quality causes uncertainty for the agents involved in business transactions, FDI is especially vulnerable to uncertainty resulting from poor institutional institutions. This uncertainty

makes transactions in the economy more costly (Busse & Hefeker, 2007). Lastly, poor institutions hinder the progress and development of the country. Poor institutions for instance, hinder the development of good infrastructure, the expected profitability of FDI falls, and so does the amount of FDI that comes into the market. Thus, the notion that institutional quality plays a noteworthy role in shaping the competitive environment of the country is widespread (Knack & Keefer, 1995; Busse & Hefeker, 2007; Levchenko, 2007; Pedersen, 2010).

Early research on institutional quality and FDI mainly focused on the formal institutions such as the study of Kaufman (1999). Kaufman found that five out of the six governance indicators incorporated in his research significantly influenced FDI. Political instability and violence, government effectiveness, regulatory burden, rule of law, and corruption all significantly affected the flow of incoming FDI. Only the voice and accountability indicator appeared to be a non-significant determinant of FDI. Stein & Daude (2001) conducted a similar research using comparable governance indicators, and found that regulatory burden, government effectiveness, expropriation risk, and repudiation of contracts all significantly affected the flow of inward FDI. Globerman & Shapiro (2002) build on both these empirical studies by stating that the same factors impact both the incoming and outgoing FDI flows. They argue that good institutions could have a positive impact on the inward FDI flows because of the favorable conditions for MNE's in the host country. Additionally, the authors argue that good institutions should also impact outward FDI by establishing favorable conditions in the home country that allow MNE's to emerge and invest abroad.

Other research in this field focused on similar aspects of the formal institutional framework. Wei (2000) found that corruption in the host country tends to affect the volume and composition of inward capital flows. Countries with higher corruptions scores tend to receive significantly less FDI. Méon & Sekkat (2005) describe a similar result and find that corruption in the host country hinders growth and foreign investment. The risk of expropriation was investigated by LaPorta, Lopez-de-Silanes, Shleifer, & Vishny (2000) who found that strong investor protection in terms of secure property rights positively

impacted the flow of inward FDI. Bénassy-Quéré, Coupet & Mayer (2007) also found that these property rights significantly affected the flow of inward FDI.

Empirical research on the formal institutional framework has been mainly conducted on a macroeconomic level. However, not only scholars have focused on the formal institutional framework, also business research and managers have put greater emphasis on the formal and economic institutions. Chacar, Newburry & Vissa (2010) found that formal institutions affect both the number of exchange partners in the economy and the types of exchanges allowed and tolerated. These findings have been found significant in the product, financial and the labor markets. Several other studies have been conducted on a microeconomic level to observe how managers make investments decisions under institutional uncertainty. Research on a microeconomic level was conducted by Peng et al. (2008), who described how business managers have evolved from industry and resource based views, to a wider view incorporating the institutional view.

Thus, for the most part, formal institutions have been analyzed and evaluated quite independently from informal institutions. However, according to North (1990) and Williamson (2000) informal institutions form the foundation on which the formal institutional framework is built. To fully understand the mechanisms that shape the institutional framework, one must examine both the formal and informal institutions.

#### *Informal Institutions and Foreign Direct Investment*

Helmke & Levitsky (2006) define informal institutions as socially shared rules, usually unwritten, that are created, communicated and enforced outside officially sanctioned channels. Research has yet to fully incorporate informal institutions into the existing institutional framework for FDI. However, it is clear that informal institutions play a significant role in shaping the formal institutional environment. These informal institutions can serve as a framework for market transactions when formal institutions and markets fail (Platteau, 1994; Steer & Sen, 2010). Informal institutions have been incorporated into FDI research by several scholars, including Claudia Williamson (2009) who describes how informal and

formal institutions interact and provide for economic progress. Williamson (2009) found that informal institutions strongly affect economic development. In contrast, formal institutions only seemed to be a determinant of economic development when embedded in the informal institutional framework. The study by Williamson highlights the importance of informal institutions within the institutions concept. The same results were found by Miller, Holmes, & Feulner (2013) who describe how the host country's informal institutions, in the form of the cultural dimensions of collectivism and future orientation, shape the country's formal institutions. These formal institutions in turn affect the country's level of inward FDI flows. Wang (2010) finds that networks of personal connections played a major role in facilitating FDI flows to China. Méon & Sekkat (2014) find that the impact of social trust on FDI is stronger in the absence of a formal institutional framework, stressing the importance of such an informal institutional framework. The research by Méon & Sekkat underlines the fact that informal institutions within a country can aid or impede economic activities by increasing or reducing transaction costs (Milgrom, North & Weingast, 1990; North, 1990). Transaction costs arise because information is costly and asymmetrically held by the parties in the exchange (North, 1990). This shows that MNE's should not only be concerned with the formal institutional framework, but also about their legitimacy in light of public sentiment and political context.

The position of public opinion within the institutional framework has not yet been covered extensively in prior literature. However, the role that public beliefs play in the shaping of the institutional environment has been recognized by scholars. Informal institutions such as public opinion can result in inefficient protection of property rights, corruption, additional risks and costs to FDI, and can even affect other formal institutions (Jaklič, Kunčič & Burger, 2011). Early research by Boddewyn & Cracco (1972) indicated that MNE's have to take the national identity and nationalistic sentiments of the host country into account when investing in a foreign country. Public sentiment in the form of (economic) nationalism was further investigated by Jakobsen & Jakobsen (2011), who examined the effect of economic nationalism on the flow of inward FDI in emerging countries. They found that economic nationalism acts as a deterrent for foreign investors, causing the flow of inward FDI to diminish. This effect was

particularly strong in emerging and developing economies, the same countries that stand to lose the most if FDI is absent. Golub (2003) conducted a similar research, but focused on the sentiments towards FDI in general instead of economic nationalism. Golub (2003) found that anti-FDI sentiments affect the inflow of FDI, and that these sentiments do not vanish as the country grows richer.

A recent study done by Kunčič & Jaklič (2014) covered public opinion in the form of attitude towards liberalism and FDI. They found that that both liberal and non-liberal public opinion correlate with FDI, but only non-liberal public opinion significantly reduces inward FDI directly. Gabel (1998) also examined the effect of public sentiment toward the liberalization process. He found that positive sentiments toward liberalization resulted in more economic integration in the European Union. This study is similar to an earlier study conducted by Duch (1993) who examined how public opinion on liberalization formed the transition of the Soviet-Union toward a more liberal economy. Furthermore, a general study was conducted by Kaltenthaler, Gelleny & Ceccoli (2004) who examined the reasons why citizens support liberalization in the economy. They find that public support for trade liberalization is mostly influenced by individual economic utilitarian considerations, and also partly by politically driven views. There are not many studies that examine the effect of public sentiments towards liberalization on FDI and global trade. In this respect studies have mainly focused on the liberalization policies by governments rather than the public opinion of the population.

### *Public Opinion and FDI*

The model of Williamson (2000) describes how informal institutions can work through to the institutional framework on a formal level by means of laws and regulations. MNE's have to deal with public opinion in the host country when they engage in FDI. These sentiments might be directed against MNE's due to their foreignness, and these sentiments can have unfavorable outcomes that are often underestimated (Hillman & Wan, 2005). In this case nationalism can best be defined as a belief or public sentiment that involves an individual identifying with, or becoming attached to, one's nation (Rothì, Lyons & Chrysochoou, 2006). The process involving nationalism and FDI was described in early

research by Boddewyn & Cracco (1972) and further developed by Jakobsen & Jakobsen (2011). These studies showed that national identity and nationalistic sentiments can affect the way business is conducted. If these nationalistic sentiments are widespread among the general public, it is likely to be reflected in the formal framework. Broad public support can trigger government intervention, causing the regime to react accordingly, by interfering in the activities of the multinational.

Governments have multiple instruments at their disposal such as raising corporate tax, breaking contracts, or expropriating the assets of the MNE. A public demanding nationalist policy could easily cause a government to take action against foreign practices. These nationalistic sentiments and opinions are likely to be reflected in the formal framework when citizens cast their votes in the election. Public opinion also influences the formal framework through polls and political pressure. Furthermore, citizens can organize themselves to express their views by means of organizational participation, demonstrations, unions, and lobbying. But even if formal rules do not reflect this nationalism it can still have adverse effects for MNE's by prolonging the process of getting licenses, attracting personnel, coordination with stakeholders, etc. These public sentiments may be very relevant to the behavior of the MNE, which is reflected in its investment location decision and economic performance. Thus, the first hypothesis is:

### **H<sub>1</sub>: Nationalistic public opinion hinders incoming FDI flows**

Another public sentiment that could have an effect on the behavior of the MNE is economic liberalization. Economic liberalization encompasses a spectrum of policies and beliefs, such as the freedom of movement, focus on private ownership, the support for a market economy, and the minimal involvement of the government. Liberalization of the economy increases the trade flows of goods, services and capital between countries (Markusen, 1997; Baier & Bergstrand, 2007; Mayer & Ottaviano, 2007).

Advocates of liberalizing the economy argue that the integration of the world's economic markets encourages economic growth and efficiency. They argue that opening and stimulating liberalization and thus allowing foreign MNE's to locate in the host country will result in additional jobs. Furthermore, free

movement of capital will cause the money to flow toward the most efficient investment, in doing so it creates economic efficiency and growth (Dollar & Kraay, 2002). The liberalization of the economy also enhances competitiveness. In order to maintain high income and employment levels, firms have to compete with one another. This forces the government to implement policies in favor of firms to help the competitive position, such as lower corporate taxes or efficient labor regulations. All of the above settings make for favorable conditions for foreign firms as they contrast with protectionism and closed economies.

However, there are individuals who oppose to the liberalization of the economy. They do not see the above mentioned conditions as a positive development. Instead of arguing that liberalization leads to development and growth, they argue that it leads to a “race to the bottom” regarding the domestic social policies (Epstein, Crotty & Kelly, 1996). They see liberalizing policies as only being beneficial to the capitalist elites, including foreign MNE’s and multinational investment firms. Liberalization policies are ultimately seen as policies that further widen the gap between the rich and the poor, causing inequality both between and within nations. People further find the liberalization policies harmful to the domestic welfare state and damaging to the environment (Dean, 2002).

Prior research such as Dunning (1979; 1981; 1988) suggests that managers of MNE’s seek to invest in countries with institutional environments that allow MNEs to leverage their firm-specific advantages and access local resources. Non-liberal policies implemented by the government can seriously harm these operations. Intervention by the government in the affairs of the MNE’s will directly lead to higher costs in order to comply with the government (Guthrie, 2006). Government interventions can for instance cause wage and price control limits, these interventions can seriously hinder the flexibility of MNE’s and exposes them to unfavorable market conditions. Such regulations can also be harmful for the economy of the host country, by reducing the exposure of domestic firms to foreign markets and innovations. These harmful policies can limit the number of product and service options for the population in the host country, and in turn limit economic growth. As a result, managers favor host countries with an open and liberal economy (Globerman & Shapiro, 2003).



It is clear to see why the topic of liberalization has been gaining more importance and controversy in recent decades. The issue of liberalization is of major importance to MNE's concerning their functioning and profitability. Positive attitudes towards liberalization among the population of the host country are likely to result in favorable conditions for foreign MNE's. Given the notion that these attitudes are often reflected in the policies of the government, MNE's can expect favorable conditions shaped by the government. Hence, these positive sentiments towards economic liberalization by the population decrease the risk and therefore the expected costs of investing in the host country. On the other hand negative sentiments towards liberalization can increase the risk of investing in the host country. Similar to positive sentiments, negative sentiments towards liberalization can affect government policy. Negative sentiments towards liberalization can for instance increase the risk of being expropriated by the government, making investments in the county more costly. Therefore, the second hypotheses will be:

### **H<sub>2</sub>: Liberal public opinion stimulates the flow of incoming FDI**

Favorable informal institutions (often reflected on the labor market) can stimulate the economic activity of a foreign firm and serve as a comparative advantage. The last public opinion taken into account in this research is the attitude towards work. This informal institution has its emphasis on the cultural dimension by which beliefs, values and norms are transmitted through generations and across space. An early study has examined the relation between work ethic and growth. It was Weber (1920) who examined the connection between the Protestant work ethic and the growth of capitalism. There is no extensive literature concerning the effect of work ethic on FDI, growth or trade. It is intuitive to assume that a favorable work ethic of the host country population is beneficial for foreign investors. This can be expressed in a relatively higher output per worker. These benefits should be especially prominent among developing countries, in which the ratio of labor versus capital is relatively high (labor intensive countries). Therefore the third hypotheses will be:

### **H<sub>3</sub>: A favorable attitude towards work will stimulate the inflow FDI**

### *The Interaction of Informal and Formal Institutions*

Evidence supports the view that formal rules interact with their informal environment (Platteau, 1994; Steer & Sen, 2010; Williamson, 2009; Dixit, 2009). Some scholars have found that informal and formal institutions are substitutes (Platteau, 1994; Steer & Sen, 2010; Johnson et al., 2002), while others have found that these different institutional frameworks are complementary (Lambert-Mogiliansky, Sonin & Zhuravskaya, 2007; Bjørnskov, 2011). The interaction between informal and formal institutions matters because the two are closely linked and even depend on each other. When examining informal institutions we have to control for formal institutions because of the possible indirect effect of public opinion working through government actions.

Williamson (1991) describes in his model how formal institutions are formed by the informal institutional environment, and how in turn formal institutions have their effect on the “play of the game” represented in this study as FDI. In this sense the formal institutional framework serves a mediator. The literature also describes how informal institutions can affect FDI directly. Business managers formulate location and investment decisions based on these informal institutions (Jakobsen & Jakobsen, 2011; Kunčič & Jaklič, 2014). Other scholars have also found that the direct effect of informal institutions on FDI is larger when the formal institutions are weaker (Steer & Sen, 2010; Johnson et al., 2002). In that case the formal institutional framework serves as a moderator to the direct effect of informal institutions on FDI.

### *The mediating effect of Formal Institutions*

The formal institutions form the legal basis which gives legitimacy to government policy. It is the formal institutional framework that shapes the environment in which foreign firms have to operate. The effect of informal institutions on FDI is likely to be mediated by formal institutions, because formal institutions dictate the way the “game” is played. Governments set the rules by determining tax levels, wage and price constraints and further overall economic policy. The economic policies set by the

government determine the way MNE's operate in a significant way. The notion that formal institutions are formed and shaped by the informal framework highlights the importance of informal institutions for managers of MNE's. Informal rules are shown to have an impact on formal institutional policies; it is because of this that informal rules should be taken seriously by business managers and decision makers. Informal institutions do shape the formal institutional environment, and do so in essential and structured ways. Although formal institutions seem relatively stable once they are instituted, they are shaped and based on the shared collective understandings, sentiments, and acceptance of individuals present in the society (Zucker, 1987). These shared collective understandings and sentiments form the informal institutional framework which is more or less constant per generation. Informal institutions can change incrementally as culture is transmitted from one generation to the next (Rohner, 1984), formal institutions are more malleable in that they are a product of human involvement (DiMaggio, 1988). In this sense formal institutions reflect the desires, motivations and opinions that are held by the public in a given country. Formal institutions provide solutions to the problems in society and therefore they must be perceived to be effective. When formal institutions no longer provide the appropriate solutions to the public, individuals will seek to change the formal institutional framework to facilitate the changing social context.

There are several ways by which individuals in a country can shape the formal institutional environment. The most familiar method is through an open election, provided that the country in question is a democracy. In democratic countries the formal institutional framework, in this case represented by the government, should reflect the desires, motivations and opinions of the majority of the individuals. But even without an election, individuals can shape and affect the functioning of the formal institutions. Sentiments in a country, for instance, can serve as political pressure on the government, especially if individuals form pressure groups. These organized groups aim to influence government policy or regulation, but they do not put up candidates for election. Pressure groups facilitate a means of participation in national politics for the general population. They are often able to amend or even scrap legislation by gathering enough public support for their cause. If certain public sentiments and opinions

are widespread among the general population, the government is eventually likely to adjust its policies to accommodate these sentiments and opinions. Politicians and other formal institutional agents win or maintain their position by satisficing the wishes and preferences of the population, even though their ultimate goal is to fulfill their own self-interest. A public demanding a certain policy is very likely to achieve it by voting for politicians who would implement it. From this view it is clear that the informal institutional environment leads to the formal institutional environment, which in turn dictates the way the game is played (mediation effect). Therefore, the fourth hypotheses will be:

**H<sub>4</sub>: Formal institutions have a mediating effect of the relationship between informal institutions and FDI**

*The moderating effect of Formal Institutions*

From the previous section it is clear that the informal institutional environment forms the basis on which the formal institutional environment is built. The informal institutional environment leads to the formal institutional environment which in turn leads to the way FDI is shaped. However, multiple empirical studies have shown that informal and formal institutions can also interact as substitutes (Platteau, 1994; Steer & Sen, 2010; Johnson et al., 2002) or complements (Lambert-Mogiliansky et al., 2007; Bjørnskov, 2011). As mentioned earlier, an important distinction between informal and formal institutions is that, while the former are shared expectations created and enforced outside officially sanctioned channels, the latter are rules and procedures, created and enforced through official channels.

Informal institutions can serve as a framework for market transactions when formal institutions and markets fail. In countries where these official channels (the government) lack sufficient power to enforce their authority, people rely more on informal institutions when engaging in market transactions. When formal institutions and markets fail, informal institutions can serve as a framework in which to conduct transactions. Informal institutions play an important role in coordinating economic activity by providing mechanisms of trust, reputation and business networks. These informal institutions can provide powerful

sanctions, especially when transactions in the economy are repeated. Businesses who conduct unethical behavior can be punished by other firms by denying them access to important information, and could be expelled from further transactions. Economies with weak formal institutions mainly rely on two types of mechanisms to minimize transaction risk: trust and reputation. Trust enhances impersonal market exchanges and decreases the need for external enforcement by the government. Reputation serves as an enforcement tool when dealing with repeated transactions in the economy.

A case study on the Vietnamese economy conducted by Steer & Sen (2010) shows how important informal institutions are when formal institutions are absent. Using data on Vietnamese private sector firms they examined how informal institutions influenced risk-minimization strategies throughout the years. Risks related to property rights and the enforcement of contracts were particularly high in the emerging economy. The authors found that firms within this economy acquire information and trust through long standing business networks and long-term relationships that are used as significant reputation mechanisms. They also observed how the role of these informal institutions changed gradually with the emergence of better formal institutions in the country. These informal institutions became less important as agents within the economy began to rely more on formal institutions such as courts. This study clearly shows how formal institutions can have a moderating effect on the relationship between informal institutions and market transactions. A similar research was conducted by Wang (2010) who examined the growth of incoming FDI in China during the mid- and late 1990's. In the absence of strong formal institutions in the country, people relied on networks of personal connections when conducting market transactions. Wang (2010) found that these networks have played a major role in facilitating the growth of incoming FDI in China.

Even though it is the case that informal institutions become less important when the formal institutional environment becomes stronger, informal institutions still play a role in countries with highly developed formal institutions. Informal institutions still play a role in these countries, but they take on a different role, again highlighting the moderating role of formal institutions. The fact that informal

institutions, including such concepts as trust and reputation, remain important even in advanced market economies has been recognized and emphasized by Alan Greenspan (2007).

From the literature it has become clear that informal institutions play a significant role in market transactions and in the way FDI is structured, especially in the absence of formal institutions. It has also become clear that the direct effect of informal institutions on FDI changes with the entrance of formal institutions in the model. It shows how formal institutions can have a moderating effect on the relationship between informal institutions and market transactions.

**H<sub>5</sub>: Formal institutions have a negative moderating effect of the relationship between informal institutions and FDI**

# Data

## *Dataset*

Data with regard to FDI is obtained from the United Nations Conference on Trade and Development (UNCTAD). This body of the United Nations is responsible for dealing with development issues, predominantly international trade. Research and gaining insights on development is at the heart of the UNCTAD's work. Data is collected on a number of subjects, including finance, technology, investment, and sustainable development.

The data on public opinion needed for this research is retrieved from the WVS. This database contains nationally representative surveys conducted in almost 100 countries which contain almost 90 percent of the world's population. The world map in figure 2 shows which countries participate in this study. The countries in blue are included in this study, while the countries colored in black are excluded from this study. A full list of all the countries present in the study can be found in the appendices.



**Figure 2: World map showing participating countries (blue = participating, black = excluded)**

The database consists of six waves of approximately four years ranging from 1981 to 2014. The wave ranges in the WVS database are as follows: (1981-1984), (1990-1994), (1995-1998), (1999-2004), (2005-2009) & (2010-2013). In this database all the data is available to construct the needed proxy variables for the analysis. From the six waves present in the database only the last three are used (1999 – 2013). Waves ranging from 1999 until present contain more complete and useful data than the earlier waves.

### *Dependent Variable*

The dependent variable in this research is inward FDI per capita which will be measured in flows for each country. FDI will be measured per capita in order to control for the size of the country. Data on FDI flows is available for the period 1970 until 2013, data until the late 1990's contains a lot of missing values, especially for the developing countries. In this research only data on incoming FDI flows from the years 1999 – 2013 is used. FDI flows are valued as the actual price agreed upon by the actors in the transaction on the date of the transaction and should not reflect changes induced by fluctuations in exchange rates or in the market price. FDI stocks on the other hand are the revealed accumulation of past flows, and are therefore dependent on historic events. Data on FDI flows is recorded on a net basis, meaning that net decreases in assets (outward FDI) or net increases in liabilities (inward FDI) are recorded as credits. Net increases in assets or net decreases in liabilities are recorded as debits. Thus, using flows as a measurement for FDI can result in negative values indicating that at least one of the three components of FDI (equity capital, reinvested earnings or intra-company loans) is negative and not offset by positive amounts of the remaining components. Here, the negative sign points towards reverse investment or disinvestment (UNCTAD, 2014).

### *Independent Variables*

The independent variables in this study are measures that capture the informal institutional framework. As mentioned before, North (1990) makes the distinction between formal and informal



institutions. He describes the latter as codes of behavior, conventions and customs, in contrast to the former, which are rules that are provided in written form. Measuring these codes of behavior, conventions and customs can be very challenging as they are intangible. By utilizing the WVS one can construct sound proxy variables to test for the various hypotheses in the study.

The first independent variable is *Nationalism* which measures the level of nationalism in a given country. Jakobsen & Jakobsen (2011) use “confidence in large companies” as a proxy for nationalism where they assume a proximity effect. In this study the variable *Nationalism* is created from three individual measurements, namely “proud of nationality,” “willingness to fight for country,” and “job priority to nationals”. Each of these variables was standardized to a z-score. The average value of the three variables reflects the level of nationalism for the individual in question. To measure the level of nationalism in a given country for a certain year, the average value of the individuals in the country for that year was used. An overview of the characteristics of the variable *Nationalism* can be found in table 1.

The second independent public opinion variable is *Liberalism*, which measures the level of liberalism in a given country. Following the study of Kunčič & Jaklič (2014) and Jakobsen & Jakobsen (2011) *Liberalism* is created from three individual measurements, namely “private vs state ownership of business,” “government responsibility,” and “competition good or bad.” Each of these variables was standardized to a z-score. The average value of the three variables reflects the level of liberalism for the individual in question. To measure the level of liberalism in a given country for a certain year, the average value of the individuals in the country for that year was used. An overview of the characteristics of the variable *Liberalism* can be found in table 1.

The last independent variable that is used to measure public opinion is *Attitude Towards Work*, which measures the attitude towards work in a given country. To my best knowledge no other paper has used measurements from the WVS to construct a proxy variable measuring the attitude towards work. In this study *Attitude Towards Work* is created using four individual measurements, namely “important in life: leisure time,” “important in life: work,” “work should come first even if it means less spare time,” and “hard work brings success.” Each of these variables was standardized to a z-score. The average value

of the four variables reflects how favorable the attitude towards work is for the individual in question. To measure the attitude towards work in a given country for a certain year, the average value of the individuals in the country for that year was used. An overview of the characteristics of the variable *Attitude Towards Work* can be found in table 1.

Variable	Mean	SD	Min	Max	Count
Nationalism	-.0011226	.3014584	-.583106	1.03837	1227
Liberalism	.0059494	.1833903	-.565371	.50557	1227
Attitude Towards Work	-.007624	.250282	-.613229	.556257	1227

**Table 1: Descriptive statistics independent variables**

The informal institutional independent variables were not available for every year of the sample. Data was assigned in a linear manner to the informal institutional independent variables for years with missing values. Countries with only one observation for the variable were given the same value for that variable for all the years. For example, in the dataset there was only one year of observation (2002) for Albania in the years 1999-2013. For Albania data from 2002 was assigned to all the other years in the sample. For countries with two or more observations linear values were assigned for years in between the years of observation. For example, a country with only observations for the years 2002 and 2010 was assigned a linear value for the years between 2002 and 2010. Years prior to the first observation were assigned the same value as the value of the first observation (2002). Years after the last observation were assigned the same value as the value for the last observation (2010). According to previous empirical research from Helmke & Levitsky (2006) and Williamson (1991), informal institutions remain relatively stable through the years. Informal institutions can change incrementally as culture is transmitted from one generation to the next (Rohner, 1984). Because informal institutions hardly change in such a short period, it is justifiable to assign the same data for the other years. An analysis of variance was also

conducted for the three independent variables. The analysis showed that the measured values did not change significantly across the waves.<sup>1</sup>

### *Formal Institutional Variable*

This study also examines the possible mediating and moderating effects of formal institutions on the direct effect between informal institutions and FDI. Data on the formal institutional environment was obtained from the World Bank. The data is drawn from a variety of sources such as surveys, think-tanks, international and non-governmental organizations (World Bank). These six world governance indicators were developed by Daniel Kaufman (1999) and they measure quality of governance in units ranging from about -2.5 to 2.5 with higher values corresponding to better governance outcomes. An overview of the characteristics of these variables can be found in table 2.

Variable	Mean	SD	Min	Max	Count
Government Effectiveness	0.2236593	.9740606	-1.88	2.43	1227
Voice Accountability	-.0039364	1.001203	-2.10	1.81	1227
Political Stability	-.1670579	.9572848	-3.18	1.67	1227
Regulatory Quality	.2086471	.9567248	-2.21	2.20	1227
Rule of Law	.0954605	.9953145	-1.92	1.99	1227
Control Corruption	.1329503	1.06429	-1.58	2.59	1227
Formal Institutions (average value)	.0816205	.920953	-1.928333	1.986667	1227

**Table 2: Descriptive statistics formal institutional indicators**

<sup>1</sup> Nationalism was shown to change slightly across the waves.

### *Control Variables*

In addition to the key independent variables, the regression model includes control variables reflecting the determinants of FDI (see table 3). The first control variable to be included is the measurement for inflation in the host country, which was log-transformed. High inflation rates in the host country discourage incoming market-seeking FDI by creating uncertainty and making long-term corporate planning difficult with regard to price setting and profit expectations (Buckley, Clegg, Cross, Liu, Voss, & Zheng, 2007). High values of inflation may lead to devaluation, which in turn erodes the real value of the earnings when these earnings are being transferred to the home country. I therefore expect that inflation rates are negatively related to incoming FDI flows.

The second control variable to be included in this research is the gross domestic product (GDP) level of the host country, which was log-transformed. GDP is a good measure of wealth and consumer demand. Furthermore, it may serve as a good indicator for the amount and quality of physical infrastructure. These factors have been shown to be positively related with incoming FDI (Globerman & Shapiro 2003). I therefore expect that GDP is positively related to incoming FDI flows.

The third control variable of this research measures the annual growth rate of GDP in the host country. Growing countries provide more opportunities for market-seeking FDI. In this case the growth of GDP is used as an indicator for the growth of the market. I therefore expect that GDP growth rates are positively related to incoming FDI flows.

The fourth control variable to be included in this research measures the level of trade as a percentage of GDP. This variable is used as a proxy for the openness to trade and was log-transformed to normalize the distribution. Countries that are more open to trade (fewer restrictions) are likely to attract more FDI. I therefore expect this variable to be positively related to incoming FDI flows.

The last control variable to be included in this research is the real effective exchange rate. When a currency depreciates it has a potential consequence for FDI. It reduces that country's wages and production costs relative to those of its foreign counterparts, making the host country more attractive for foreign investors. I therefore expect that this variable is negatively related to incoming FDI flows.

Variable	Mean	SD	Min	Max	Count
Inflation	1.42	1.00	3.91	5.68	1101
Nominal GDP	11.37	1.99	7.07	16.64	1223
Annual GDP Growth	4.40	5.75	-62.08	104.48	1220
Trade as % of GDP	4.25	.50	2.93	6.09	1186
Real Effective Exchange Rate	102.16	27.92	12.80	460.10	1197

**Table 3: Descriptive statistics control variables**

# Methodology

## *The Random Effects Model*

The dataset used in this study is referred to as a panel dataset. Panel data is a type of data which reflects observations of entities over time. These entities can be individuals, companies, or in this case countries. The dataset takes both informal and formal institutions into account in years ranging from 1999 until 2013. Panel data allows us to control for variables that change over time but not across entities (institutions). Panel data is useful when we suspect that the dependent variable depends on explanatory variables which are not observable but correlated with the observed explanatory variables.

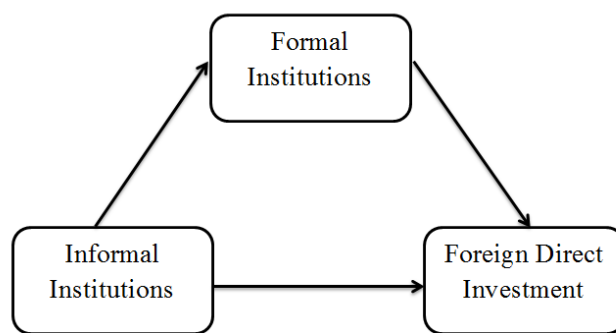
In this study we are interested in variables that hardly change and vary over time (informal institutions). In order to test the relationship between public opinion, formal institutions and incoming FDI flows, a random effects model is estimated. Unlike the fixed effects model a random effects model assumes that the variation across entities is random and not correlated with the predictor or independent variables included in the model. A random effects model assumes that the error terms from the entities are not correlated with the independent variables which allows for time-invariant variables to play a role as explanatory variables. An advantage of the random effect model is that the estimations can be generalized beyond the sample used in the model (Borenstein, Hedges, Higgins, & Rothstein, 2010).

## *The Mediation Analysis*

A mediation analysis is used to test whether the relationship between informal institutions and FDI is mediated by the formal institutional environment. The aim of this analysis is to understand if and to which extent the effect of the independent variable on the outcome variable is mediated through a mediation variable. In other words it means that variation in the independent variable causes variation in the mediator variable, which in turn causes variation in the dependent variable. In this research it means that informal institutions cause variation in the formal institutional environment, which in turns has its

effect on the variation of FDI (see figure 3). The mediation analysis was conducted with the structural equation modeling technique (SEM) in Stata. SEM is a family of statistical methods designed to test a conceptual or theoretical model. The mediation model resulting from the SEM gives the total effects, indirect effects, and direct effects of the estimation. The total effect of the model is the effect resulting from a model without the mediation variable. In this case the relationship between the independent variable and the dependent variable is tested without the mediation variable included. The indirect effects are the most important of the estimation results. These results tell us the effect of the independent variable on the dependent variable when the effect goes through the mediator. Lastly, the direct effects of the mediation analysis are provided. The direct effect is the effect of the independent variable on the dependent variable when the mediator variable is included as an independent variable (Field, 2009).

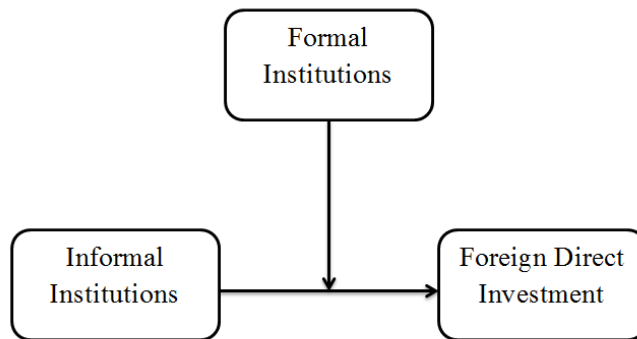
Significance of the model is tested using the Sobel test. The Sobel test is basically a t-test that determines whether the effect of the independent variable on the dependent variable is significantly reduced after the mediator is included in the model. Moreover, this model uses a 95% confidence interval; an effect of 0 would mean “no effect at all”. The fact that the confidence interval does not contain zero means that there is likely to be a genuine effect (Field, 2009).



**Figure 3: The Mediation Model**

### *The Moderation Analysis*

Moderation occurs when the relationship between the independent variable and the dependent variable is influenced by a third variable. This third variable is referred to as a moderator variable. In this research it means that the effect of informal institutions on FDI is influenced by the strength of the formal institutional environment. (see figure 4). Moderation is also known as interaction, and the analysis is typically conducted by testing for interaction between the moderator and the independent variable in a model of the dependent variable. Moderation was tested by including interaction effects into the random effects model. Marginal effects are estimated to further examine the effects of the moderation analysis. These marginal effects will tell whether informal institutions become more or less relevant when the quality of formal institutions improves relative to the mean.



**Figure 4: The Moderation Model**



# Results

## *The Random Effects Model*

In this section, I discuss the results of the empirical model created to analyze the relationship between informal institutions and FDI. A baseline model is estimated along with models for the various hypotheses. 4 presents the results for the random effects model on the dependent variable of incoming FDI flows. In this model interaction terms are included to test for the possible moderating effects that formal institutions have on the independent variables. In column one the empirical results for the baseline model are shown, where only the control variables are included. In the baseline model the nominal GDP level is shown to be significant at a 1% level. GDP is shown to be positively related to incoming FDI flows. The annual growth rate of GDP in the home country is significant at a 5% level and it is shown to be positively related to incoming FDI flows. The same counts for the openness to trade of the country; this is also significantly related at a 5% level. In the baseline model the effect of formal institutions on FDI flows is positive and highly significant ( $p\text{-value} = 0.000$ ). This outcome suggests that the quality of the formal institutional environment is strongly related to incoming FDI flows. Inflation and the real effective exchange rate are not significant in the baseline model.

In the second column the estimation results for the first hypothesis are shown. The results for the control variables remain the same with only inflation and the real effective exchange rate not being significantly related to incoming FDI flows. The level of nationalistic sentiments amongst the population of the host country does not appear to be significantly related to incoming FDI flows ( $p\text{-value} = 0.436$ ). Moreover, a negative relationship was expected to be found in the analysis. However, a positive relationship is found, even though it is not significant. The interaction term in this model is significant at a 5% level ( $p\text{-value} = 0.037$ ). This means that the strength of the relationship between nationalism and FDI depends on the formal institutional environment. From this we can conclude that there is a moderating effect of formal institutions on the relationship between nationalism and incoming FDI flows.

Altogether, it means that there is no direct effect of nationalism on the incoming FDI flows of the host country and that the first hypothesis needs to be rejected.

	(1) Baseline Model	(2) Hypothesis 1	(3) Hypothesis 2	(4) Hypothesis 3
Level of nationalism		142.93 (183.31)		
Level of Nationalism x Formal Institutions		527.68* (252.50)		
Level of liberalism			1008.39 (585.17)	
Level of liberalism x Formal Institutions			1148.51 (622.17)	
Attitude towards work				813.51* (339.34)
Attitude towards work x Formal Institutions				1635.26* (650.34)
Inflation	66.61 (45.33)	69.61 (44.49)	58.26 (40.61)	67.30 (41.97)
Nominal GDP	102.18** (33.04)	98.71** (34.19)	95.38** (30.60)	84.20** (30.59)
Annual GDP Growth	17.22* (8.17)	17.38* (8.25)	16.66* (8.04)	17.23* (8.25)
Trade as % of GDP	480.94* (205.72)	499.54* (215.76)	508.47* (208.51)	530.60* (227.84)
Real Effective Exchange Rate	2.95 (1.56)	3.01 (1.60)	2.85* (1.42)	3.06 (1.59)
Formal Institutions	448.66*** (106.11)	394.43*** (105.64)	374.35*** (86.12)	188.98* (78.05)
Constant	-3221.71* (1275.13)	-3327.40* (1319.28)	-3265.70** (1211.47)	-3447.74* (1356.23)
Observations	1067	1067	1067	1067
R <sup>2</sup>	0.3220	0.2996	0.2967	0.3301

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Table 4: The Random Effects Model**

In the third column the estimation results for the second hypothesis are presented. The attitude towards liberalism is used as the independent variable in this estimation. Liberalism does not seem to have a significant relationship with incoming FDI flows at a 5% level ( $p\text{-value} = 0.085$ ). Liberalism is positively related with incoming FDI at a 10% significance level. It means that there is a marginally statistical significant relationship between liberalism and the incoming FDI flows of the host country. The included interaction term also shows that there is a moderating effect of formal institutions on the relationship between liberalism and incoming FDI flows. The moderating effect is significant at a 10% level ( $p\text{-value} = 0.065$ ). In this model the real effective exchange rate has become significant at a 5% level, making inflation the only control variable that is not significant in the model. Formal institutions remain highly significant in the model ( $p\text{-value} = 0.000$ ). Altogether, it means that there is no effect of liberalism on the incoming FDI flows of the host country and that the second hypothesis needs to be rejected.

The last column of the random effects model shows the estimation results of the third hypothesis. Here the attitude towards work is used as an independent variable. The attitude towards work is positively related to incoming FDI flows, this effect is significant at a 5% level ( $p\text{-value} = 0.017$ ). It means that there is a relationship between the attitude towards work and the incoming FDI flows, and that the third hypothesis is supported. Countries in which the population has a favorable attitude towards work attract more FDI flows. The relationship between the attitude towards work and incoming FDI flows is significantly moderated by formal institutions ( $p\text{-value} = 0.012$ ). This means that the strength of the relationship between the attitude towards work and FDI depends of the quality of the formal institutional environment. The control variables in the model show that only inflation and the real effective exchange rate are not significantly related to incoming FDI flows. The quality of formal institutions remains significantly related to incoming FDI flows, but now only at a 5% level ( $p\text{-value} = 0.015$ ).

### *Marginal Effects*

Next the marginal effects of the model are obtained, the estimation outputs can be found in table 5. Using the delta method estimates of the marginal effects concerning the various independent variables and their interaction effect with the formal institutional environment are presented. The Stata command *nlcom* computes point estimates, standard errors, test statistics, significance levels, and confidence intervals for nonlinear combinations of parameter estimates. Marginal effects are estimated to test whether the effect of informal institutions is significant when formal institutions take on a different value than zero. By doing this it can be examined whether the effect of informal institutions on FDI changes when formal institutions improve or worsen. In this case the marginal effects show what happens to the informal institutions when formal institutions improve with three and standard errors relative to the mean.

<b>Marginal Effects</b>	<b>Effect</b>	<b>SE</b>	<b>Z</b>	<b>P</b>	<b>LLCI</b>	<b>ULCI</b>
Nationalism	1725.96*	859.61	2.01	0.045	41.16	3410.76
Liberalism	4453.93	2405.68	1.85	0.064	-261.11	9168.98
Attitude Towards Work	5719.28**	2223.70	2.57	0.009	1360.91	10077.64

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Table 5: Marginal Effects**

The estimation results in table 5 show what happens when the formal institutions increase with three standard errors relative to the mean, *ceteris paribus*. As can be seen in table 5 the marginal effect of the attitude towards nationalism is significant at a 5% level ( $p\text{-value} = 0.045$ ). The attitude towards work is significant at a 1% level ( $p\text{-value} = 0.009$ ). From these results it becomes clear that informal institutions become more significant when the formal institutional environment improves<sup>2</sup>. Thus, informal institutions are more important for attracting FDI in countries with formal institutions of better quality. This is a surprising result, it was expected that countries with weaker formal institutions relied more on the

<sup>2</sup> Liberalism is not yet significant but became less in-significant in this model.

informal institutional environment. But it seems that formal and informal institutions are complementary, confirming earlier research by Lambert-Mogiliansky et al. (2007) and Bjørnskov (2011). These findings mean that hypothesis 5 should not be confirmed. Formal institutions seem to moderate the relationship between informal institutions, but seem to do so in a complementary way. A robustness check was performed showing the estimation results when the formal institutions decrease with three standard errors relative to the mean, *ceteris paribus*. The robustness check confirmed the main result and shows that informal institutions and formal institutions are indeed complementary. The robustness check is presented in the appendices.

### *Mediation Analysis*

Table 6 presents the output from the conducted SEM model. This part of the output is the most important part of the model. It displays the total, direct, and most important the indirect effect of the independent variables on the dependent variable of incoming FDI flows. First, the effect on the independent variables on incoming FDI flows in isolation (the total effect) are presented. Next, the results of the independent variables on incoming FDI flows are presented when formal institutions are included in the model as a predictor variable as well (the direct effect). Lastly, the indirect effects of the model are presented in which the relationship between the independent variables and the dependent variable is shown when formal institutions serve as the mediator. Indirect effects were tested using the Sobel test; we're given the estimated size, the robust standard errors, the associated z-score, the p-value, and the confidence interval of the estimation.

Formal institutions seem to have a mediating effect on the relationship between nationalism and incoming FDI flows (*p-value* = 0.002). Meaning that public opinion towards nationalistic issues is reflected in the formal institutional framework, which in turn has its effect on FDI. Formal institutions do not mediate the relationship between the attitude towards liberalism and the incoming FDI flows (*p-value* = 0.057). The indirect effect of liberalism is significant at a 10% level and thus only marginally statistically significant, therefore the hypothesis is not confirmed. Lastly, formal institutions mediate the

relationship between the attitude towards work and incoming FDI flows. Overall, it seems that formal institutions indeed serve as a mediator when it comes to some informal institutions and their relationship with FDI and that the fourth hypothesis needs to be confirmed.

<b>Total Effects</b>	<b>Effect</b>	<b>SE</b>	<b>Z</b>	<b>P</b>	<b>LLCI</b>	<b>ULCI</b>
Nationalism	375.6356	332.7503	1.13	.259	-276.543	1027.814
Liberalism	910.8526	573.5925	1.59	.112	-213.3681	2035.073
Attitude towards work	1123.7***	269.3969	4.17	.000	595.6921	1651.709
<b>Direct Effects</b>	<b>Effect</b>	<b>SE</b>	<b>Z</b>	<b>P</b>	<b>LLCI</b>	<b>ULCI</b>
Nationalism	-38.59094	342.7145	-.11	.910	-710.299	633.1171
Liberalism	569.5833	536.8503	1.06	.289	-482.6239	1621.791
Attitude towards work	215.8555	298.2194	0.72	.469	-368.6438	800.3548
<b>Indirect Effects</b>	<b>Effect</b>	<b>SE</b>	<b>Z</b>	<b>P</b>	<b>LLCI</b>	<b>ULCI</b>
Nationalism	414.2265**	136.0428	3.04	.002	147.5875	680.8655
Liberalism	341.2693	179.3511	1.90	.057	-10.25249	692.7911
Attitude towards work	907.8449***	245.0909	3.70	.000	427.4755	1388.214

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Table 6: Mediation Analysis**

### *Robustness Checks*

A robustness check was conducted using only observations from wave 4 (years 1999 – 2004). This robustness check is listed in the appendices (table 8). The robustness check on the public opinion measures shows the results of a random effects model. The robustness check shows that formal institutions remain highly significant in the models<sup>3</sup>. Attitude towards work has become insignificant in the robustness check ( $p$ -value = 0.137). Other variables show similar results as the random effects model presented earlier in the thesis. From this robustness test we found that using a different wave (wave 4)

<sup>3</sup> Formal Institutions have become insignificant in model 4.

only resulted in slight changes in the outcomes, leading to the conclusion that the results are indeed robust.

As mentioned earlier, a robustness check of the marginal effects was estimated to examine what happens when formal institutions decrease with 3 standard errors relative to the mean, *ceteris paribus* (table 9). The results show that the formal and informal institutions have a complementary relationship. This is similar to the results that were found in the previous marginal effects model. From this it can be concluded that the results that were found are robust.

## Conclusion and Discussion

Institutions may be formal (rules, laws, and constitutions) or they may be informal (morals, customs, traditions, norms, ideologies, opinions and sentiments), and their quality affects FDI and poses significant challenges for MNE's. Public sentiments such as the attitudes towards nationalism, liberalism and work could affect MNE's in terms of investment location decisions, and performance. Informal institutions may cause change in and work through formal institutions (and potentially affect political risks or wider country risk). The main goal of this study was to gain insights into the relationship between informal institutions and FDI, and what for role the formal institutions play in this regard. Three hypotheses were formulated in this regard, each reflecting a different aspect of the informal institutional environment. I examined the relationship between informal institutions, in the form of nationalism, liberalism, and the attitude towards work, and FDI.

The results of the study indicate that only public opinion towards work has a significant relationship with the level of incoming FDI flows. Countries in which the population has a favorable attitude towards work are likely to attract more incoming FDI. In this regard it can be concluded that hypothesis three can be confirmed. A favorable attitude towards work attracts FDI but its effect on FDI depends on the formal institutional environment, as can be concluded from the conducted moderation analysis. Moreover, there is an indication that the effect of the attitude towards work on FDI works through the formal institutional environment in a mediating way.

The study shows significant results regarding the relationship between nationalism and FDI. Confirming earlier research by Jakobsen & Jakobsen (2011) nationalism does affect the level of incoming FDI flows. However, this result is only significant when the formal institutions are of good quality. There is no direct relationship between nationalistic sentiments and FDI. Possible explanation for this result may be that the used questions drawn from the survey reflected the attitude towards nationalism and not economic nationalism in particular. It is possible that managers and decision makers looking for favorable



investment locations care more about economic nationalism than they do about nationalism in general. However, the conducted mediation analysis does show a significant mediating effect of formal institutions on the relationship between nationalism and incoming FDI flows. Further research is needed to elucidate the true nature of the relationship between economic nationalism and FDI.

No relationship was found between the attitude towards liberalism in a particular country and the incoming FDI flows. MNE's looking for favorable investment locations do not take the attitude towards liberalization of the population into account. Moreover, the results from the conducted moderation and mediation analysis show that formal institutions both do not have a moderating and mediating effect on the relationship between the attitude towards liberalism and incoming FDI flows.

Overall these results do not imply that a broad range of informal institutions and their actors should be considered in the FDI decision making process. Out of the three formulated hypotheses regarding informal institutions, only one has shown to be significantly related to FDI. We can however conclude that formal institutions are extremely important in the process of attracting FDI. The interplay between the formal and informal institutional environment is of major importance in the process of attracting FDI. Informal institutions have a bigger impact on the location decision of MNE's if the country in question has a strong formal institutional framework in place. Countries with good formal institutional frameworks should take this fact into consideration.

From the conducted analyses it has become clear that the quality of the formal institutional environment is significantly related to incoming FDI flows. Governments and their policy makers can capitalize on this information as they try to seek new ways of attracting foreign businesses in order to boost their economy.

### *Limitations and Further Research*

A limitation in this study is that there is no data available for every year of the sample. It was necessary to assign data to years with no observations. Using prior literature it can be assumed that informal institutions hardly change over time. However, it would have been better for the validity of the

research if data was available for each year of the sample. This research does not differentiate between the various types of FDI (horizontal and vertical). It is possible that certain types of informal institutions have different effects on certain types of FDI. Future research could look into this topic by making a distinction between horizontal and vertical FDI or between market seeking FDI, efficiency seeking FDI, and Resource seeking FDI. As mentioned before, there is little known about the relationship between attitude towards work and FDI. This study established the relationship, now other studies should delve deeper into this relationship by uncovering the nature of this relationship and the characteristics that cause of the attitude towards work to be related to incoming FDI flows. No previous literature regarding work attitude and FDI exists, the only one who examined the attitude towards work and growth being the German scholar Weber (1920). Further research could examine which types of FDI (horizontal or vertical) are more likely to be affected by the attitude towards work.

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# Appendices

## *Countries included in the sample*

Albania	Finland	Mexico	Thailand
Algeria	France	Moldova	Trinidad
Andorra	Georgia	Morocco	Tunisia
Argentina	Germany	Netherlands	Turkey
Armenia	Ghana	New Zealand	Uganda
Australia	Great Britain	Nigeria	Ukraine
Azerbaijan	Guatemala	Norway	United States
Bahrain	Hungary	Pakistan	Uruguay
Bangladesh	India	Peru	Uzbekistan
Belarus	Indonesia	Philippines	Vietnam
Bosnia	Iran	Poland	Yemen
Brazil	Iraq	Qatar	Zambia
Bulgaria	Israel	Romania	Zimbabwe
Burkina Faso	Italy	Rwanda	
Canada	Japan	Saudi Arabia	
Chile	Jordan	Singapore	
China	Kazakhstan	Slovenia	
Colombia	Kuwait	South Africa	
Cyprus	Kyrgyzstan	South Korea	
Ecuador	Lebanon	Spain	
Egypt	Libya	Sweden	
Estonia	Malaysia	Switzerland	
Ethiopia	Mali	Tanzania	



*Correlation Matrix*

	FDI Inflow	Nationalism	Liberalism	Attitude towards work	Price Index	Nominal GDP	Annual GDP Growth	Trade as % of GDP	Real Effective Exchange Rate	Formal Institutions
FDI Inflow	1.000									
Nationalism	0.2111	1.000								
Liberalism	0.1110	-0.1112	1.000							
Attitude towards work	0.3704	0.6181	-0.0627	1.000						
Price Index	-0.2525	-0.1947	-0.1187	-0.2502	1.000					
Nominal GDP	0.1938	0.3633	0.1130	0.4020	-0.3049	1.000				
Annual GDP Growth	-0.0266	-0.2492	-0.0323	-0.2162	0.1685	-0.2474	1.000			
Trade as % of GDP	0.3689	0.0757	-0.1892	0.1615	-0.0760	-0.2376	0.0651	1.000		
Real Effective Exchange Rate	0.0243	-0.1470	0.0561	-0.1400	0.0206	-0.0039	-0.0217	-0.1085	1.000	
Formal Institutions	0.4872	0.4722	0.1633	0.6793	-0.5068	0.4810	-0.3292	0.1703	-0.1275	1.000

**Table 7: Correlation Matrix**

*Robustness Checks*

	(1) Baseline Model	(2) Hypothesis 1	(3) Hypothesis 2	(4) Hypothesis 3
Level of nationalism		50.37 (271.46)		
Level of nationalism x Formal Institutions		503.72* (246.59)		
Level of liberalism			538.09 (299.27)	
Level of liberalism x Formal Institutions			503.58 (416.97)	
Attitude towards work				538.09 (362.27)
Attitude towards work x Formal Institutions				1308.88*** (353.12)
Inflation	-35.66 (39.75)	-34.46 (40.16)	-34.41 (40.70)	-31.86 (39.95)
Nominal GDP	-1.61 (25.56)	-11.03 (31.46)	-11.92 (28.77)	-17.90 (29.62)
Annual GDP Growth	12.62** (4.89)	12.87* (5.07)	12.22* (4.75)	12.80** (4.86)
Trade as % of GDP	403.26 (253.27)	440.41 (260.51)	438.59 (254.63)	471.43 (267.54)
Real Effective Exchange Rate	1.07 (0.59)	1.05 (0.62)	1.06 (0.56)	1.05 (0.62)
Formal Institutions	437.18*** (72.18)	393.49*** (85.51)	398.36*** (78.71)	196.2856 (114.92)
Constant	-1476.83 (1221.02)	-1591.32 (1305.66)	-1522.55 (1218.88)	-1748.23 (1298.38)
Observations	406	406	406	406
$R^2$				
Adjusted $R^2$				

Standard errors in parentheses  
 \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Table 8: Random Effects Model (1999-2004)**

<b>Marginal Effects</b>	<b>Effect</b>	<b>SE</b>	<b>Z</b>	<b>P</b>	<b>LLCI</b>	<b>ULCI</b>
Nationalism	-1440.09*	689.85	-2.09	0.037	-2792.17	-88.02
Liberalism	-2437.15	1365.74	-1.78	0.074	-5113.95	239.65
Attitude Towards Work	-4092.26*	1702.45	-2.40	0.016	-7429.01	-755.51

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Table 9: Marginal Effects**