Networked Structure of the Bilateral Investment Treaties:

Dynamics and Evolution

by

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STATEMENT OF AUTHORSHIP

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ABSTRACT

In this thesis, bilateral investment treaties and the dynamics and evolution of the networked structure they constitute are examined from a quantitative perspective. Since the international investment regime is not regulated by plurilateral treaties despite the rapidly increasing importance of foreign investments, the significance of bilateral investment treaties is more than preventing and resolving investment disputes.

In fact, while developing countries sign these treaties with an objective of attracting foreign direct investment developed countries are motivated by foreign policy goals or by the protection of their foreign investments. Although the contracting parties were mainly composed of a developed and a developing country in the past, emerging economies and regional powers have increased their influence in the network in the aftermath of the Uruguay Round.

Country, region and system-level measures are generated for six different time intervals corresponding to the GATT/WTO rounds. These measures are introduced in social network analyses on the country-level centrality and coreness measures, region-level intra and interregional densities, and system-level characteristics of the bilateral investment network. System-level network characteristics demonstrate the evolution of the bilateral investment network towards a more decentralized, complex and heterogeneous structure. Moreover, intraregional and interregional densities, as well as the effects of different regionalization incentives reveal a more rapid integration at the region level than system-level network characteristics. Furthermore, the relationship between contracting parties is analyzed in order to reveal changing patterns of contracting parties, as well as structural changes, between consecutive periods. Consequently, the hierarchical structure and competitive pressures of the global economy are observed to be more salient indicators than the similarities between contracting parties. I also argue that soft power in international politics arises from centrality in networks, and some countries sign these treaties in the interest of nonmaterial gains rather than solely economic concerns.

Key Words: Bilateral Investment Treaties, Foreign Direct Investment, Social Network Analysis, Centrality, Integration.

ÖZET

Bu tezde, çift taraflı yatırım anlaşmaları ve bu anlaşmaların oluşturduğu çift taraflı yatırım ağının dinamikleri ile evrimi üzerine niceliksel bir araştırma yapılmıştır. Uluslararası yatırımın giderek artan önemine rağmen bu alanın çok taraflı anlaşmalar yoluyla düzenlenmemiş olması sebebiyle, çift taraflı yatırım anlaşmalarının önemi yalnızca yatırım uyuşmazlıklarını önleme ve çözmenin ötesindedir.

Nitekim gelişmekte olan ülkeler, ülkelerine gelen doğrudan yabancı yatırımları arttırma gayesiyle bu anlaşmaları imzalarken; gelişmiş ülkelerin amaçları daha ziyade dış politika odaklı veya sınır ötesi yatırımlarını korumak yönündedir. Her ne kadar geçmiş örneklerde anlaşmaların taraflarını bir gelişmiş bir de gelişmekte olan ülke oluşturmaktaysa da, gelişmekte olan ülkeler ve bölgesel güçler Uruguay görüşmeleri sonrasında ağdaki etkilerini önemli ölçüde arttırmışlardır.

Ülke, bölge ve sistem düzeyinde GATT/DTÖ görüşmelerine karşılık gelen altı zaman dilimi için oluşturulan ölçütler; ülke düzeyinde merkezilik, bölge düzeyinde bölge içi ve bölgeler arası yoğunluk ve sistem düzeyinde ağ özellikleri üzerine yapılan farklı sosyal ağ analizlerinde kullanılmıştır. Sistem düzeyindeki ağ özellikleri, çift taraflı yatırım anlaşmaları ağının giderek daha az merkezi, ancak daha karmaşık ve heterojen bir yapıya doğru evrildiğini göstermektedir. Öte yandan, bölge içi ve bölgeler arası yoğunluk ölçütleri ile farklı bölgeselleşme hareketlerinin etkileri incelendiğinde, bölge düzeyindeki bütünleşmenin sistem düzeyinde ölçülenden daha yoğun olduğu gözlemlenmektedir.

Ayrıca, anlaşmaların tarafları arasındaki ilişki farklı dönemler arasındaki yapısal ve niteliksel değişimleri gözlemleme adına analiz edilmiştir. Sonuçta, küresel ekonominin ülkeler üzerindeki yarattığı rekabet ve anlaşma tarafları arasındaki hiyerarşik yapının çift taraflı yatırım anlaşmaları üzerindeki etkisinin anlaşma tarafları arasındaki benzerliklerden daha önemli olduğu sonucuna varılmıştır. Ayrıca uluslararası politikada yumuşak güç kavramı, ağdaki merkezi konum ile ilişkilendirilmiş ve söz konusu anlaşmaları yalnızca maddi beklentilerle imzalanmadıkları sonucuna ulaşılmıştır.

Anahtar Kelimeler: Çift taraflı yatırım anlaşması, Doğrudan Yabancı Yatırım, Sosyal Ağ Analizi, Merkezilik, Bütünleşme.

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CHAPTER 1. INTRODUCTION

International investment regime, as a crucial pillar of the international economy, has witnessed a substantial evolution since the very first bilateral investment treaty signed in 1959. The liberalization of foreign direct investment (FDI) flows in this period, especially since the 1980s paralleling with the globalization of the international economy, has made foreign direct investment an essential instrument available in the hands of economic policy makers. While inward foreign direct investment flows had constituted less than 1% of the governments' budgets in 1976, the world average in 2010 was about 5% (UNCTAD 2011b). Accordingly, international investment has become a major source of the development while it has also served to the substantial growth of multinational companies and home economies.

In fact, this substantial increase in the international investment flows is higher than the growth of the international trade in the same period. However, whereas the international trade regime has been regulated by different international and transnational institutions, several attempts towards the regulation of the international investment at the international level have failed to succeed in a multilateral treaty despite this growing importance of international investment for the developing and developed worlds.

The main reason behind the lack of cooperation at the international level to found a multilaterally recognized international institution that would be responsible for regulating the international investment regime can be explained by the clash of interests of developing and developed countries. Expropriation or in general dynamic inconstancy problem has always been one of the primary concerns of foreign investors operating in different host countries. In other words, differential treatment in host countries against foreign investors is why there is no multilaterally accorded investment regulation or equally recognized customary international law. Since this risk of differential treatment in the unregulated international investment might result in underinvestment, economic policy makers found an ad hoc solution through the bilateral investment treaties (BIT).

On one hand, bilateral investment treaties tend to bring legal guarantees to foreign investments. Developed countries sign these treaties with an objective of safeguarding their investments abroad, while developing economies usually aim attracting foreign investors by demonstrating or enhancing their credible commitment to investors' rights. Perhaps the most

noteworthy aspect of these treaties, on the other hand, is bringing in dispute resolution mechanisms for potential investment disputes.

Another reason why bilateral investment treaties have increasingly become the primary instrument in regulating the international investment regime is that they cover a more detailed list of provisions and investment related issues than both the customary international laws and the multilateral treaties. This complex and issue-specific normative nature of the BITs comes from the lower number of contracting parties, and voluntary and reciprocal declaration of intent in concluding these treaties. Consequently, the international investment regime has been regulated by more than one constitution in opposition to what had been suggested in 1948 by the Havana Charter or in several other attempts since then. In that sense, by creating a minimum treatment standard for foreign investors, BITs have become widely recognized and practiced international norms. Therefore, about three thousand treaties have been concluded since the first treaty in 1959 between West Germany and Pakistan. As of 2011, more than 90% of United Nations members were part of at least one bilateral investment treaty (UNCTAD 2011a). Indeed, the remaining countries are mostly small island and least developed countries that are not major actors within the international investment regime. Hence, these treaties have eventually become the primary instrument for the regulation of the foreign investment flows.

However, BITs have also evolved over time and witnessed remarkable changes in both the contracting parties and provisions paralleling the rapidly globalizing international investment regime. While earlier BITs were usually signed between developed and least developed countries, recent examples indicate a different pattern in which emerging economies and regional powers play more crucial roles. In addition, objectives of countries in negotiating these treaties seem to have changed to a significant extent while foreign policy objectives have started to drive the decisions of governments.

Uruguay Round in April 1994 can be considered as a milestone in the evolution of the international investment regime. Foundation of the World Trade Organization (WTO) and introduction of tighter investment related measures through the Agreement on Trade Related Investment Measures (and Trade Related Aspects of International Property Rights to some extent) have motivated developing countries to consult more frequently to bilateral measures.

Since then, the number of bilateral investment treaties more than doubled. Furthermore, the lack of cooperation between the developed and developing members of the WTO, which also failed to result in a multilateral agreement on investment (MAI) in Cancun, also boosted the interest in these treaties.

Given this substantial increase both in the numbers of bilateral investment treaties and the number of countries in the international economy, I believe that research on the international investment regime should focus on its changing dynamics and evolution. As a matter of fact, earlier studies either focused on only multilateral trade agreements or on a limited number of treaties concluded by relatively powerful countries. In such an environment where neither the quantity nor the quality of bilateral investment treaties in force have been subject to a comprehensive examination, behaving as if the BITs do not exist and speaking about an international investment network solely based on multilateral agreements including investment provisions (e.g. NAFTA) generate a quite important niche in the literature. Even though these treaties have become subject to different studies especially in the international law literature, there are only a handful of studies that concentrate on BITs from the perspective of international political economy (Aisbett 2007; Egger and Pfaffermayr 2004; Guzman 1998; Hallward-Driemeier 2003; Neumayer and Spess 2005; Peterson 2004). However, without appropriate theoretical lenses and sufficient methodological tools, most studies concentrating on the bilateral investment treaties become ineffectual in filling this gap in the literature. In fact, only two of these studies concentrate on the networked structure of bilateral investment treaties (Pinto et al. 2011; Skovgaard Poulsen and Aisbett 2011).

Actors in networks are linked to one another, and these ties define, enable and restrict their behaviors to a large extent. Accordingly, social network analysis (SNA) does not only focus on the individual attributes of actors but also aims identifying the underlying characteristics of ties among them. Furthermore, SNA enables assessing the whole networked structure of interactions. In other words, not only direct bilateral investment ties but also indirect ties can be taken into account in this framework. Through investigation of direct and indirect ties, applying the SNA framework to the networked structure of bilateral investment treaties will undoubtedly increase the understanding of the evolution and dynamics of this essential normative instrument for the international investment regime.

While direct ties had become subject to different empirical analyses in the literature in this manner, albeit limited, these indirect ties that become observable through the SNA are not yet examined in a detailed manner. However, these interactions as a whole provide researchers descriptive information on and underlying dynamics of the network. Accordingly, studying the evolution and dynamics of the networked structure of bilateral investment treaties in a detailed manner will generate a more comprehensive framework for future studies on this topic.

I believe that by a detailed analysis of system-level network characteristics, understanding of the changing dynamics and evolution of the international investment regime can be greatly extended. Furthermore, in order to be able to discuss the evolution of the international investment regime, structural changes such as the globalization or global financial crises as well as regional integration incentives should be taken into consideration. Consequently, not only a descriptive analysis of this networked structure but also detailed empirical investigations of system-, region-, dyad- and country-level dynamics of this network become essential for understanding the evolution of bilateral investment treaties over time.

The changing patterns and objectives of contracting parties while concluding these treaties might also improve the understanding of the development and catch-up strategies of emerging countries. I believe the literature still lacks solid scientific evidence for the common claims about the rise of regional powers, liberalization of the foreign investment, as well as the linkage between the foreign direct investment and bilateral investment treaties. By analyzing the changing dynamics of the contracting parties and diverse mechanisms playing crucial roles in the adoption of bilateral investment treaties, this thesis also aims contributing to the sociological institutionalism and more specifically to the policy diffusion literature.

According to Zeev Maoz, only 3% of approximately 650 articles applying social network analysis framework are in the field of international relations (Maoz 2011). By incorporating this relatively new framework and traditional quantitative methodologies in the analysis of an important topic in the international political economy literature which attracted relatively less attention until today, I intend to fill this gap in the literature. On the other hand, instead of solely conducting a quantitative analysis, I prefer the tripartite methodology introduced by Laitin (Laitin 2003). Narrative in social science according to Laitin is important in three

aspects which are providing plausibility to formal models, causality to statistical outcomes and theoretical ground for future research. Therefore, I will combine quantitative methodologies and social network analysis framework with a narrative perspective in order to provide plausibility to different growth models of bilateral investment network, causality to the findings of my analyses and most importantly a theoretical ground for future research.

I believe that this descriptive framework and quantitative methods introduced in this thesis will provide me an opportunity to test diverse hypotheses. Since SNA framework and the dataset I compiled for this thesis allows assessing the historical evolution of the networked structure of bilateral investment treaties, any interruption such as diverse WTO rounds can be tested whether or not they significantly affect the dynamics and evolution of the network. Moreover, different centrality measures SNA framework provides researchers enables evaluating the differences between central and non central countries in the network that also differentiate in terms of the material and nonmaterial power they possess. In a similar fashion, these measures might also be analyzed in analyzing the FDI attractiveness of countries. Consequently, I aim testing the following hypotheses in this thesis:

The hypotheses concerning a possible interaction between the proliferation of the bilateral investment treaties and the Uruguay Round are:

Ha0. Contracting parties of bilateral investment treaties and their purposes after the Uruguay Round do not significantly differ from earlier treaties.

Ha1. Contracting parties of bilateral investment treaties and their purposes have started to differ from earlier treaties even before the termination of the Uruguay Round.

Ha2. Contracting parties of bilateral investment treaties and their purposes have started to differ from earlier treaties only after the termination of the Uruguay Round.

The hypotheses for investigating the regional and global integration in the bilateral investment network are:

Hb0. Regional and systemic level integration in the bilateral investment network does not significantly differentiate.

Hb1. In terms of intraregional and interregional densities, some regions are more densely connected to others. However, regional integration is still above the global integration level.

Hb2. In terms of intraregional and interregional densities, all regions significantly differentiate, and regional integration takes place at a more rapid pace than the global integration.

The hypotheses for the relationship between bilateral investment treaties, soft power and attractiveness for foreign direct investment are:

Hc0. Centrality in the bilateral investment network does not explain the variance in either the FDI attractiveness, or the nonmaterial and material capabilities of countries.

Hc1. Centrality in the bilateral investment network significantly increases the material capabilities, but there is no clear distinction between central and peripheral countries in terms of their nonmaterial capabilities.

Hc2. Centrality in the bilateral investment network significantly increase the material and nonmaterial capabilities of central countries.

In order to test these hypotheses, in the next part I will examine the bilateral investment treaties firstly from the perspective of the international law, secondly from a historical perspective and thirdly from the perspective of international political economy. Following this introductory chapter on the bilateral investment treaties, third section focuses on the system and region-level characteristics of the networked structure of bilateral investment treaties. Through an investigation of the bilateral investment network at the systemic level, the importance of the Uruguay Round in the evolution of the network will be empirically analyzed. In addition, diverse network characteristics that I believe have salient explanatory power for the system-level integration in the international investment will be explained in a descriptive manner in this chapter. By comparing these network characteristics with similar measures calculated for different regions, differences between diverse regionalization initiatives as well as difference between the region and system-level integration will also be assessed in this chapter.

Fourth chapter, on the other hand, concentrates on the concept of soft power and assesses the centrality and coreness scores of observed economies in diverse periods between 1959 and 2011. Since these periods correspond to the GATT/WTO rounds, these observations are crucial in understanding the country-level evolution of the bilateral investment network. In this manner, third hypothesis about the relationship between the soft power and bilateral investment treaties will be tested in this chapter. Furthermore, these observations have also a purpose of contributing to the broader literature by underlying the nonmaterial power issuing from the structural positions in normative networks. In addition, through a descriptive analysis of core and peripheral countries in diverse periods, célèbre international relations theories such as world systems and neoclassical economy theories can be analyzed whether or not they are applicable to the bilateral investment network.

In addition to these descriptive analyses benefiting from the social network analysis, three preliminary empirical investigations are conducted in the fifth chapter. Aside from testing the main hypotheses of this thesis, I believe that these investigations will also serve to understanding the importance of applying network theory in diverse topics in the international relations literature. From a quantitative perspective, similarities and dissimilarities among contracting parties at the dyad level, as well as the internationalization of production and the relationship between FDI attractiveness and BITs at the country level will be analyzed in the fifth chapter. Through dyadic-analysis, diffusion of bilateral investment treaties and diverse explanations for this phenomenon from the perspective of sociological institutionalism will be discussed. Country-level explanation, on the other hand, aims to test the third hypothesis while providing a fertile ground for further research.

In conclusion, this thesis conclude that emerging economies have significantly increased their material and nonmaterial power since the Uruguay Round, and the integration at the region level takes place at a more rapid pace than global integration in the bilateral investment network.

CHAPTER 2. BILATERAL INVESTMENT TREATIES

A bilateral investment treaty (BIT) is a legal accord through which two countries decide on rules for establishing investments in other's territory (Salacuse and Sullivan 2005). Accordingly, signatory countries aim generating "reciprocal promotion and protection of investment" through BITs (Aisbett 2007). In a non-regulated environment where no multilateral setting or customary international law was present, BITs have become the principal instrument in regulating the international investment regime (Elkins et al. 2006; Guzman 1998).

Since the signature of the first BIT between West Germany and Pakistan in 1959, international economy has witnessed a rapid expansion of this instrument for various reasons. Perhaps the most salient reason why these treaties have become the primary instrument in the regulation of international investment regime is that they bring legal guarantees to foreign investments. In addition to this legal protection from discriminatory treatment in host countries, BITs were consulted in order to raise the inward foreign direct investment (FDI) flows or as instruments for distinct foreign policy objectives. Furthermore, BITs which were born as an ad hoc response for regulating the investment regime in the absence of a customary international law are being discussed in the literature to have earned the customary international law status.

In this chapter, I will examine bilateral investment treaties firstly from the perspective of international law, secondly from a historical perspective, thirdly from the perspective of international political economy and finally in terms of their potential effects on foreign direct investment flows.

2.1. BILATERAL INVESTMENT TREATIES FROM THE PERSPECTIVE OF INTERNATIONAL LAW

In the absence of specific multilateral institutions or customary international laws having equal importance and wide acceptance compared to the bilateral investment treaties, bilateral investment treaties become the primary instruments in the regulation of the international investment regime. Hence, a brief introductory chapter on the provisions of these treaties would explain what is introduced by these treaties and how and to what extent they regulate foreign direct investments. Moreover, examining these treaties from the perspective of international law helps the understanding of why the bilateral investment network is emerged or in other words what might be the provisions that drive the decisions of contracting parties to sign these treaties.

2.1.1. Provisions of a Bilateral Investment Treaty

Most bilateral investment treaties share similar provisions (Sornarajah 2004; Tobin and Rose-Ackerman 2003). In order examine them, model treaties provide researchers a valuable opportunity since all BITs are not open to public access. Provisions in a model treaty of the United States are listed as follows: relative treatment standards, absolute treatment standards, performance requirements, entry and sojourn, employment, judicial access, publication, information exchange, taxation, expropriation, currency transfers, investor-to-state dispute resolution, state-to-state dispute resolution, non-precluded measures, preservation of rights and political subdivisions (Aisbett 2007; Dugan et al. 2008; Guzman 1998; Vandevelde 1993). Among them, some provisions such as the absolute and relative standards of treatment and dispute-settlement mechanisms are commonly included in all BITs. Moreover, some other provisions for transfer of money and people, albeit rare; as well as some performance requirements, can be present in bilateral investment treaties (Elkins et al. 2006; Hallward-Driemeier 2003; Neumayer and Spess 2005; Peterson 2004; Salacuse and Sullivan 2005).

These similar provisions, even though they may result in general recognition of BITs as customary international law, can also be argued to be an imposition of non-disputable clauses on developing countries (Elkins et al. 2006). For example, OECD draft convention on the protection of foreign property, which has tighter constraints than earlier BIT examples, has become a draft model for OECD countries to use in the negotiations (Dugan et al. 2008;

Tobin and Rose-Ackerman 2003). However, insisting on a unique legal framework, thus implementing a coercive characteristic to a BIT, can limit the number of willing countries to conclude them. For example, as a result of insistence of the US on 'prompt, adequate and effective compensation" in the first wave of its BIT program, only ten agreements could be concluded (Vandevelde 1993).

Although developing countries are somewhat dependent upon FDI, coercion is much more difficult in a bilateral setting because the conclusion of a BIT is a reciprocal declaration of intent. As a matter of fact, authors investigating the coercive mechanisms that may result in conclusion of BITs usually underline the conditionality (e.g. conditional clauses) in BITs (Sornarajah 2004). In my understanding, the necessity of attracting foreign investment for most of the developing world which might be sine qua non for the survival of a country in some cases (e.g. in the aftermath of devastating financial crises) is why conditionality in BITs has become so common. In that sense, the more FDI is needed, the more likely these countries will be willing to accept any provisions imposed by capital exporting countries. Thence, in order to understand the dynamics and evolution of these treaties, the relationship between the contracting states as well as the correlation between FDI flows and BIT proliferation should also be examined in detail.

2.1.2. Dispute-Settlement Mechanisms in Bilateral Investment Treaties

An investment dispute arises "out of or relating to an investment agreement or authorization" according to the US draft agreement of 1992 (Vandevelde 1993). In general, dispute settlement provisions in a bilateral investment treaty are covered to safeguard investors' tangible and intangible assets including the investment itself, property rights, interests in companies, performance or monetary claims and intellectual properties (Vandevelde 2000). When such disputes cannot be resolved through non-formal and formal negotiations among investors, host and home countries; contracting parties can appeal to agreed upon dispute settlement mechanisms and rules (Salacuse and Sullivan 2005; Vandevelde 1993). In fact, some authors confer them to be far more effective in preventing such disputes rather than resolving them (Vandevelde 1993).

The major commitment of host countries in a BIT is the protection of foreign investors' rights. The scope of this commitment varies depending on the text of the BIT (Hallward-

Driemeier 2003) and the contracting parties to some extent. It might also be argued as a preventive measure or an "insurance" mechanism (Egger and Pfaffermayr 2004) against dynamic inconsistency problem (Guzman 1998). Dynamic inconsistency problem is the attitude change and related discriminatory treatment in host countries once the investment is established (Neumayer and Spess 2005). The most common means of dynamic inconsistency problem is post-entry taxation (e.g. increase in the corporate tax rates). Hence, dynamic inconsistency problem is the primary cause of investment disputes, and why developed countries need dispute-settlement mechanisms included in and introduced by bilateral investment treaties.

Dispute settlement mechanisms introduced in BITs usually identify an arbitration institution and a set of rules for arbitration. The International Center for the Settlement of Investment Disputes (ICSID) under the World Bank is the most popular one among few dispute-settlement institutions commonly recognized in BITs. The International Chamber of Commerce (ICC), the Stockholm Chamber of Commerce and the United Nations Commission for International Trade Law (UNCITRAL) are other popular dispute settlement (arbitration) institutions. Since ICSID arbitration is only available to signatory countries of ICSID convention, contracting parties can agree upon other dispute settlement institutions listed above or ad hoc arbitration using ICSID, ICC or UNCITRAL rules (Vandevelde 1993). If the rules concerning the arbitration procedure are not covered in the treaty or more than one are recognized, contracting parties or investors can choose which to use (Elkins et al. 2006; Hallward-Driemeier 2003; Peterson 2004).

ICSID has been founded in 1965 but did not receive a case until 1972 (Salacuse and Sullivan 2005). Whereas only 369 cases have been carried to ICSID arbitration since 1972, 258 (69.9%) of them have been dated since 2003 and 2011 was the busiest year of the ICSID with 38 new cases (ICSID 2012). Arbitration institutions, including the ICSID, are also legal authorities in the state to state investment or trade disputes issuing from other investment agreements than BITs. For example, ICSID's caseload includes some cases related to certain free trade agreements or multilateral investment agreements such as the ASEAN, NAFTA, or

Energy Charter as well as investment contracts between foreign investors and host states[1]. Consequently, 63% of the cases brought to the ICSID are due to violations of BIT provisions[2].

Contractual clauses enabling the application to international arbitration gives the claimant party an option to bypass domestic legal systems of host countries (Peterson 2004), because arbitrations are exempt from the supervision of any judicial office or system at the international or domestic level (Peterson 2004). Once a dispute is carried to an arbitration institution, although the case can be confidential and it usually is, the dispute gets beyond the domestic legal system. Differently than the disputes between domestic investors and home states, these disputes usually cannot be resolved by domestic power relations.

In other words, neither the governments nor the legal system at the domestic level can intervene to a case that has been taken to the international level through arbitration process. Even though there are significant power asymmetries between contracting parties, and sometimes between MNCs and host states; arbitration mechanism is chosen over domestic legal system due to its more neutral character (Guzman 1998).

However, taking the case to an international arbitration body may internationalize the dispute (Peterson 2004). Another important aspect of such disputes can be related to its politicized characteristic (Hallward-Driemeier 2003). Since two contracting parties are not generally equal in terms of their political capacity, home states tend to use their bargaining and diplomatic power in order to resolve the issues before the arbitration process (Tobin and Rose-Ackerman 2003). Such negotiations have a politicizing effect on solely economic matters usually arising from violations of contractual clauses. Indeed, disputes can arise due to financial crises (Peterson 2004) or coup d'états that result in unintended violations of provisions of the BIT.

Salient asymmetries between contracting parties can also be present in the arbitration phase. Asymmetry of resources, including information (Peterson 2004), and financial capacity and

[1] To open a parenthesis for such contracts; whilst foreign investors can sign relatively smaller scale contracts with host countries, they usually do not include investor-friendly provisions due to lack of negotiating power of foreign investors compared to developed countries as home countries.

[2] For more information and statistics about the caseload in ICSID, see: http://icsid.worldbank.org/ICSID/FrontServlet?requestType=ICSIDDocRH&actionVal=ShowDocument&CaseLoadStatistics=True&language=English31 , consulted on 12.03.2012.

legal expertise (Peterson 2004) can sometimes cause unexpected consequences for the weaker part. Therefore, arbitration process, which ought to resolve disputes arising from power asymmetries, can become a means to serve to power asymmetries itself.

2.1.3. Non-discriminatory Treatment

Host states in a BIT cannot implement protective measures and economies policies unless otherwise accorded. They should provide equal treatment to foreigners in even infant industries (Vandevelde 2000). However, BITs are not entirely liberal in nature since contracting countries have a right, albeit limited, to allow or restrict international investments to a certain degree (Salacuse and Sullivan 2005). Though, it does not mean that such a protectionist approach is fully unfavorable of the international investment regime under the WTO. Indeed, weaker countries in considerable need of foreign investment commonly adopt liberal economic policies or at least seem to commit to liberal investment protection measures to some extent. Hence, investment liberalization, differently than investment promotion, is somewhat succeeded by not only the developing countries but also by the developed countries having different policy objectives. Though, the main objective of most developing countries, while resisting to absolute investment liberalization, is rather investment promotion by adopting a relative liberalization while preserving certain protectionist measures (Salacuse and Sullivan 2005).

Although power asymmetries might be present between contracting parties, performance requirements can sometimes be imposed on foreign investors by host countries. Moreover, protectionist measures including control over foreign investments might be applied, especially by countries in their catch-up phases (e.g. Asian Tigers). Strategic planning and protection for infant industries is among the issues highly debated within the international financial institutions as well as in the literature. However, most BITs include national treatment or most-favored nation treatment clauses that restrict the options available in the hands of developing countries in favor of protectionist measures (Elkins et al. 2006; Neumayer and Spess 2005; Peterson 2004; Salacuse and Sullivan 2005).

National treatment necessitates that foreign investors shall not be treated less favorably than domestic investors whereas the most-favored nation treatment recognize the same privileges (given to a particular investor or home country) to all foreign investors (Neumayer and Spess

2005; Salacuse and Sullivan 2005). Moreover, these clauses provide contracting and third parties rights to establish new investments or make acquisitions in addition to the sectors covered in a BIT. Consequently, these clauses usually provide more advantageous rights and treatment to foreign investors than domestic investors (Neumayer and Spess 2005; Salacuse and Sullivan 2005) who had been until neoliberal economic policies have started to replace protectionism. Besides, BITs signed with developed OECD countries, especially Canada, US and Japan, have even tighter conditions than WTO agreements on investment measures (TRIMS) and intellectual property rights (TRIPS) for developing nations that might prevent them from implying protectionist measures (Peterson 2004; Rodrik 2007; Salacuse and Sullivan 2005).

Hence, contrary to the claims and desires brought to the international level by developing countries to build a New International Economic Order, developed countries have gained the rights they insisted for to invest securely in strategic sectors by benefiting from these treaties and the clauses argued above. Such a radical change in attitude of developing countries need a detailed investigation and can be explained by the historical evolution of bilateral investment treaties to some extent.

2.2. BILATERAL INVESTMENT TREATIES FROM THE HISTORICAL PERSPECTIVE

2.2.1. The Hull Rule and the Calvo Doctrine

Historically, bilateral investment treaties can be claimed to be successors of the Friendship, Commerce and Navigation (FCN) treaties (Bishop et al. 2005; Salacuse and Sullivan 2005; Sornarajah 2004; Tobin and Rose-Ackerman 2003; Vandevelde 1993). Even though the FCN program of the United States had resulted in a number of successful treaties since the end of 1790s; certain provisions, especially the 'prompt, adequate, and effective compensation', have eventually resulted in a loss of willingness among developing countries for further FCNs since the late 1960s. Moreover, these FCNs were not solely concentrated on investment measures, at least until the Second World War. Rather, they were intended to promote trade and trustworthy foreign relations between contracting parties (Bishop et al. 2005; Salacuse and Sullivan 2005; Sornarajah 2004; Vandevelde 1993). On the other hand, national treatment and most-favored nation clauses introduced by FCNs, in addition to dispute resolution mechanisms, constitute the historical grounds of modern bilateral investment treaties (Sornarajah 2004).

The most salient international norm regulating the international investment regime until the expansion of BITs was the Hull Rule. The Hull Rule can be considered to be another predecessor of the bilateral investment treaties in terms of creating a customary international law for a minimum standard of treatment against expropriation (Guzman 1998; Neumayer and Spess 2005). According to the Hull Rule, "no government was entitled to expropriate private property, …, without provision for prompt, adequate, and effective payment…" (Elkins et al. 2006). However, the process of decolonization, then the nationalization wave followed by the so called "New International Economic Order"[3] (Dugan et al. 2008; Guzman 1998) had contested this rule and weakened its customary status (Elkins et al. 2006; Guzman 1998; Salacuse and Sullivan 2005). Some authors point out 1970s as the period when the Hull Rule

[3] New International Economic Order is declared by the Resolution 3201 of United Nations General Assembly in May 1974. According to the resolution, every state has full permanent sovereignty on its natural resources and economic activities. Moreover, they are entitled to exercise the right to nationalization (i.e. expropriation). For such exercise, no country can be subjected to economic, political or other type of coercion (Guzman 1998)

had eventually lost its status as a customary international law (Guzman 1998; Neumayer and Spess 2005).

The same period also corresponds to a substantial increase in the proliferation of BITs. As stated in the previous section, protection of foreign investments against expropriation is perhaps the most prominent reason for the expansion of the number of BITs developed countries conclude. Albeit very rare in practice, expropriation can be legally justified if only it is for a public cause. However, even if the cause is licit, compensation should be paid, and it should be prompt, adequate and effective (Hallward-Driemeier 2003); thus even the contemporary international investment regime that is composed of bilateral investment treaties adopts the principles introduced by the Hull Rule (Guzman 1998; Salacuse and Sullivan 2005).

On the other hand, the UN General Assembly's recognition of the Charter of Economic Rights and Duties of States in 1974 had given the right to assess the compensation for expropriation to host states (Vandevelde 1993). Such a right recognized by the UN General Assembly is, indeed, parallel to the historical objections of developing countries against a customary international law as well as plurilateral treaties regulating international investment. Developing countries historically object to the provision of prompt, adequate, and effective compensation brought by the Hull Rule (Guzman 1998). In that sense, the Calvo Doctrine[4] unites the developing world, especially Latin American countries, while resisting against the developed world supporting the Hull Rule and its provisions related to the expropriation. The Calvo doctrine insistently rejects the right of foreign investors to appeal to dispute settlement mechanisms to compensate their losses due to expropriation. In fact, some authors highlight the fact that most countries in Latin America, in "the region that gave birth to the Calvo doctrine" (Vandevelde 2000), have already signed some BITs as of today. Therefore, as stated in the previous section; it may be argued that BITs, not necessarily but practically, have become a widely recognized international legal norm, or a customary international norm which brings us to the question: to what extent bilateral investment treaties, as customary international norms are supported?

[4] For more information on the Calvo Doctrine, see (Vandevelde 2000).

2.2.2. Bilateral Investment Treaties as Customary International Law

Article 38(1) of the statute of the International Court of Justice recognizes customary international laws as one of the primary sources of international law, in addition to international treaties and general principles of law (Salacuse and Sullivan 2005). In an environment where no legal arrangements binding all countries, or in other words no multilaterally accorded international norm under the form of a treaty is present, customary international laws become sole instruments for governing the international investment regime. However, these customary international laws include the main and vague principles and do not necessarily stress the technical issues unless a multilateral agreement is put into force (Salacuse and Sullivan 2005). At least, that was the situation until the expansion of bilateral investment treaties which became the fundamental source of international law in regulating foreign investments (Salacuse and Sullivan 2005).

BITs address more numerous and specific issues than ordinary customary international laws. In comparison with the Hull Rule, which is discussed to be a customary law in previous subchapter and which had solely concentrated on expropriation, BITs include other and specific provisions about non-discriminatory treatment against foreign investors (Neumayer and Spess 2005). That is, contrary to the early periods in the proliferation of international investment, because expropriation has become a less common practice in terms of differential treatment as a result of globalization of production phenomenon and vertical investments (Büthe and Milner 2008). More subtle government interventions[5] such as discriminatory taxation, tariffs, fees or legal treatment have become the primary concern of foreign investors, thus subject to legally binding guarantees introduced by bilateral investment treaties (Büthe and Milner 2008). In that sense, BITs might be defined as an "ad hoc" response to the non or quasi-regulated investment regime where the customary international laws have not sufficiently addressed the changing nature of the international economy (Sornarajah 2004).

This ad hoc characteristic of BITs might result in an inadequate understanding of these treaties as specific laws that are not often consulted in the international system. Even if BITs

[5] This new type of government intervention on foreign investments is also defined as "creeping expropriation" in the literature (Guzman 1998).

are not seen as part of the customary law due to their characteristic as "lex specialis"[6] (Sornarajah 2004), their expansion corresponds to their acceptance as a general principle of common law (Salacuse and Sullivan 2005). As a matter of fact, 2940 BITs and 177 contracting states as of today validate state practice and general recognition to a large extent. Hence, it can undoubtedly be claimed that in the absence of a satisfactory customary law; the expansion of BITs has resulted in a creation of a custom (Salacuse and Sullivan 2005). Moreover, these treaties have consistently been applied by the majority of the states in the international system contrary to any attempt to establish a multilaterally accepted investment system. However, some authors are still uncertain whether diverse practices and provisions in bilateral investment treaties can result in the creation of a customary principle of international law. For example, Guzman argues that economic interests rather than a understanding of legal obligation as the main motivation behind BITs do not provide such treaties the status of customary international law (Guzman 1998).

2.2.3. Attempts for a Multilateral Agreement on Investment and the Proliferation of Bilateral Investment Treaties

Following the emergence of multinational corporations (MNCs); investment and sovereignty issues, such as exploitation of natural resources; and accordingly less space for domestic economic policies have necessitated national control over foreign investment in the eyes of the developing world in search for a New International Economic Order. Conversely, home states of these MNCs have started to look for limiting the national control over their investments abroad (Sornarajah 2004). However, several initiatives of these developed countries before 1970s had failed to succeed in concluding a multilateral treaty to regulate the international investment regime and somewhat forced them to define the norms for foreign investment through bilateral investment treaties (Dugan et al. 2008; Sornarajah 2004). Among these unsuccessful attempts, the Havana Charter in 1948, International Code of Fair Treatment of Foreign Investment in 1949, the International Convention for the Mutual Protection of Private Property Rights in 1957, Abs-Shawcross Convention and OECD Draft Convention on the Protection of Foreign Property in 1967 can be cited (Salacuse and Sullivan

[6] Sornarajah underlines that BIT provisions are not enough to form a customary international norm due to the fact that they are 'lex specialis' or in other words they only have an effect in specific issues and between the contracting parties (Sornarajah 2004).

2005; Tobin and Rose-Ackerman 2003). In the following years, other efforts to negotiate a Multilateral Agreement on Investment (MAI) either under the umbrella of the Organization for Economic Co-operation and Development (OECD) (Peterson 2004; Salacuse and Sullivan 2005) or under the World Trade Organization in the Cancun Ministerial Conference in 2003 (Peterson 2004) have also failed and eventually resulted in broader application of bilateral measures on investment protection.

This movement towards BITs can also be interpreted as a response of developing countries to ready-made, complex and usually imposed rules of investment in a multilateral setting. For example, US' persistent support for the Hull Rule was due to its desire to establish a multilateral setting for regulation of international investments that would also facilitate investment liberalization. Given the fact that investment liberalization is different from investment promotion aimed with bilateral investment treaties by developing countries (Salacuse and Sullivan 2005), this insistence is one of the reasons why US had become a laggard in the BIT race until it started its bilateral investment treaty program in 1977 (Vandevelde 1993). In 1977, when the leaders of the BIT race in Europe had already started to enjoy several BITs, United States was unable to protect its investments abroad through the FCNs. For example, whereas West Germany had 26 BITs concluded with African countries in 1977, there were only two FCNs concluded by the US in spite of its larger stocks of foreign investment (Bishop et al. 2005). The first wave of the BIT negotiations of the US was carried under the Reagan administration between 1982 and 1986 (Elkins et al. 2006; Vandevelde 1993), when not only the West Germany but other European states have already started enjoying the fruits of their BIT programs.

Germany who had lost all its foreign investments after the Second World War signed the first BIT and started the BIT proliferation race. Other European countries, which are still amongst the most central nodes in bilateral investment network, such as Switzerland, France, United Kingdom and Netherlands followed Germany by increasing their ties (Salacuse and Sullivan 2005). These European countries remained as the leaders of the BIT race until 1990s.

Though, international investment regime had witnessed a boom in the number of BITs in 1990s (Elkins et al. 2006). This rapid increase in the number of concluded BITs is in line with not only the so called Multilateral Agreement of Investment initiative, but also with the

globally increasing FDI flows and the increasing number of countries integrated into the international economy. Globalization has also played a crucial role in this sudden expansion by rapidly diffusing neoliberal ideas throughout the world. Bilateral investment treaties have been seen as an instrument in this manner to promote the economic liberalism in the developing world. Not only some developed countries have tried to diffuse neoliberal economic ideas through these treaties, but also several developing countries trying to attract more FDI have chosen investment liberalization over investment promotion (Sornarajah 2004).

Another reason why 1990s witnessed this significant increase in the number of BITs can be investigated through conferences organized by central countries (e.g. Germany, France and Switzerland) and others such as Bolivia, India, Croatia and Thailand in search for augmenting their importance in the network. These conferences were organized with the purpose of concluding a series of BITs among participant countries. For example, authors highlight forty-two BITs that were concluded among francophone countries in a conference organized by France (Elkins et al. 2006).

More important than previous causes, the last reason is related to post-soviet states' need for foreign capital for restructuring their economies following the collapse of the USSR. These countries have rapidly started concluding BITs with developed economies in early 1990s (Hallward-Driemeier 2003; Sornarajah 2004; Vandevelde 1993). In this sense, not only the expansion of bilateral investment network in 1990s but also the increasing protection of property rights at intergovernmental level (e.g. TRIPS agreement) (contrary to the objection of their predecessor to international protection for property rights (Vandevelde 1993)) is due to the need for capital of these young states to a large extent. Besides, BITs are sometimes used as a foreign policy instrument by these countries to demonstrate their commitment to neoliberalism. In this manner, Eastern European countries including the Czech Republic, Hungary, Poland and the Slovak Republic had become central nodes through the number of BITs they concluded even before they joined the OECD (Egger and Pfaffermayr 2004). Moreover, the signaling effect of signing several BITs with the developed world has resulted in an understanding in foreign investors and developed home countries of the structural changes having been undertaken in these countries (Sornarajah 2004)

As a matter of fact, some authors highlight the fact that what we witness since the beginning of the 2000s is kind of saturation in the bilateral investment network (Pinto et al. 2011). Despite the rapidly increasing density of the network in 1990s, due to various reasons argued above in the last years we witness smaller number of BITs being concluded (Dugan et al. 2008).

2.3. BILATERAL INVESTMENT TREATIES IN THE EYES OF CONTRACTING PARTIES

2.3.1. Who are the Contracting Parties?

Literature suggests that most of the BITs were signed between a developed and a developing country (Egger and Pfaffermayr 2004; Peterson 2004; Tobin and Rose-Ackerman 2003). Even though this was the case especially for the earlier periods, in the last years we witness in increasing numbers of BITs signed between two developing countries (Dugan et al. 2008; Peterson 2004; Tobin and Rose-Ackerman 2003). Since it is hypothesized and analyzed in this thesis that emerging countries, contrary to the least developed countries (LDCs), can invest relatively larger resources abroad and might have a desire to augment their soft power, this sudden increase necessitates a detailed empirical investigation.

Some researchers point out and depict the BITs between least developed countries as "strange BITs" (Elkins et al. 2006). However, the number of these strange BITs is much lower than anticipated. Only 89 of total 2940 BITs demonstrate such characteristic. In my opinion, this 3% is not about protecting or promoting potential investments. In fact, it is related to two hypothesis examined in this thesis: first, the effect of the recent phenomena that we have started to observe with the globalized economy, the so called internationalization of the production on FDI incentives; second, the positive effect of the degree centrality in the international investment network that would augment the FDI attractiveness of a country in the eyes of potential investors. Neumayer and Spess explain this fact with an argument similar to my second hypothesis and discuss that these agreements are a way of remaining competitive among developing countries most of which have already concluded a number of BITs with the developed world (Elkins et al. 2006; Neumayer and Spess 2005). Hence the authors underline a positive spill-over or in other words signaling effect of signing several BITs (Neumayer and Spess 2005).

Early research investigating the BITs underlines that no treaties were signed between two developed countries (Guzman 1998). Conversely, some authors point out the BIT-like Chapter XI of the North American Free Trade Agreement between Canada and the US as an example to this kind of BITs (Salacuse and Sullivan 2005). In addition, it was argued in previous subchapters that some BITs might have been signed with foreign policy objectives

rather than only economic concerns. When left undecided between the political opportunities of a BIT and the protectionist economic policies; governments usually choose BITs and having strong political relations with strategically important countries at the expense of their economic sovereignty. One example of such kind of a BIT is between two G8 countries, the US and Russian Federation (Vandevelde 1993). Indeed, Russian Federation has also bilateral investment ties with all other G8 countries. Hence, albeit rare, what we witness between developed countries in the last years is that they have also begun signing BITs with other major economies but usually with political rather than economic purposes.

In parallel with the rapid catch-up process of some developing, so called emerging countries, BITs among them have also become popular. My dataset covers 148 BITs of this characteristic, mostly concluded in the last few years. Such BITs would protect the rights of investors from both contracting parties; therefore would be based on reciprocity and mutual protection like odd BITs argued above, that were signed between two developed countries (Salacuse and Sullivan 2005).

2.3.2. Potential Costs and Benefits of Bilateral Investment Treaties

Developing countries are obliged to attract foreign capital to a certain extent. The reasons for this obligation are threefold: Firstly, foreign capital under the form of green field investment increases foreign exchange reserves and creates employment opportunities that developing countries hardly produce themselves (Tobin and Rose-Ackerman 2003). Secondly, some sectors or services, such as infrastructure investments or high-tech industries that necessitate high production costs are unachievable for indebted developing countries or domestic investors. Third, most developing countries have chosen to privatize state controlled enterprises since 1980s; and through mergers and acquisitions[7] these privatizations address foreign exchange as well as budget deficits. Consequently, developing countries need to compete for foreign investment; and this competition has a somewhat coercive character that puts developing countries in a "prisoner's dilemma" (Neumayer and Spess 2005) to choose between more economic sovereignty or more credibility in the eyes of foreign investors (Elkins et al. 2006).

[7] Mergers and acquisition deals have usually been higher when compared to green field investments according to the UNCTAD (UNCTAD 2011c) .

BITs usually do not address developmental concerns or trade related promises. Whilst some authors argue that, in exceptional cases, some BITs might have a goal of economic development; it is not the main concern of developed countries (Peterson 2004). BITs do not address market failures, either (Vandevelde 2000). In fact, what is desired by a developed party in a BIT is oftentimes protecting its investors from expatriation, nationalization or any other discriminatory treatment in a host country which may result in unexpected loss of profit. By introducing dispute settlement mechanisms for investor-host state and home state-host state disputes (Salacuse and Sullivan 2005), BITs create an investor-friendly environment in particular host countries, and in the international investment regime in general. The dispute settlement provisions as well as potential costs of violating contractual clauses often protect the existing investments (Peterson 2004; Salacuse and Sullivan 2005). On the other hand, the purpose of developing countries is to compete against one another by creating a more credible, thus investor-friendly environment to attract more FDI, technology and skilled labor from the developed world (Egger and Pfaffermayr 2004; Elkins et al. 2006; Guzman 1998; Hallward-Driemeier 2003; Neumayer and Spess 2005; Salacuse and Sullivan 2005; Stein and Daude 2002; Tobin and Rose-Ackerman 2003; Vandevelde 1993). Hence, what we witness might be explained as a win-win bargain between the developed and developing world. However, there are also certain disadvantages and costs associated with a BIT especially for the weaker party of the bargain.

Violating a BIT is much more difficult, thus costly than violating an investment contract between a host country and a MNC because of potential political, economic and legal burdens. These burdens can be cited as sovereignty costs due to the legal outcomes of dispute-settlement mechanisms (Sornarajah 2004); economic and reputational costs that might arise from lack of credibility in the eyes of foreign investors and home countries; and economic costs including the arbitration costs[8] and potential losses of already established investments (Aisbett 2007; Elkins et al. 2006). Moreover, signing a treaty with a developed country would bring political constraints as a natural consequence of power asymmetries between the contracting parties of the bargain (Salacuse and Sullivan 2005; Sornarajah 2004). Given these

[8] Aisbett argues that an average case carried to an arbitration institution costs approximately $1.5 to 2.5 million US$ (Aisbett 2007).

heavy burdens, countries that have already well-established legal institutions and investor-friendly practices might be less likely to sign BITs.[9]

As stated earlier, signature of a BIT is not necessarily against either protectionist measures or integrationist policies unless otherwise accorded. Host countries can impose protective tariffs, adhere to customs unions or bring tax incentives to third parties to attract more foreign investment (Vandevelde 2000). Although developed nations might sometimes recognize developing parties certain exit strategies of the provisions of a regular BIT, as well as protectionist measures for some sectors or industries; it is quite limited due to the power asymmetries mentioned above. This variation in terms of the provisions of bilateral investment treaties depend on the power equilibrium between the contracting parties, as well as on the level of interdependence between them (Sornarajah 2004). In other words, only some powerful developing countries might get these privileged provisions recognized in treaties (e.g. China-UK)[10] (Peterson 2004). Moreover, negotiating countries may also refuse to conclude treaties when strict conditions are imposed (e.g. BIT negotiations between Singapore and the US) (Tobin and Rose-Ackerman 2003).

Contrary to the arguments about the potential pejorative consequences of BITs for developing countries in catch-up process, some authors claim that these treaties play a catalyst role in good governance. Accordingly, these treaties by providing fair and equitable treatment are serving against corrupt government systems, thus to development of peripheral countries (Peterson 2004). Moreover, signing a BIT with a 'young' market economy such as the Eastern European countries can also have an educational function for government officials in these countries in terms of understanding the dynamics of neoliberal economy. In addition, signing a BIT and other provisions brought by these treaties also lessen the likelihood of host countries' reverting to the socialist economy (Vandevelde 1993). Consequently, it has been argued in the literature that investment policies in general or BITs in particular can be used to

[9] However, according to the analyses of Elkins et al., such a claim is wrong and countries with better "law and order" reputations are more likely to sign more BITs (Elkins et al. 2006). In my opinion, this "puzzling" (Elkins et al. 2006) result is due to high numbers of BITs signed by potential 'home' countries, or in other words capital exporting developed countries. Such an argument necessitates detailed econometric analyses with control variables for developed central nodes in the bilateral investment network. Though, it is well beyond the scope of this thesis.

[10] For further information about the BIT between China and the UK and the provisions recognized for the infant industries in China, see Peterson, 2004, p.5.

promote certain political objectives or foreign policies such as good governance (Egger and Pfaffermayr 2004; Salacuse and Sullivan 2005; Vandevelde 2000).

2.4. RELATIONSHIP BETWEEN BILATERAL INVESTMENT TREATIES AND FOREIGN DIRECT INVESTMENT

Foreign direct investment has grown faster than the international trade and domestic production since 1970s (Kahai 2011). In 1973, the annual amount of total FDI was about US$ 25 billion (Salacuse and Sullivan 2005). Annual volume reached 1.97 trillion US$ in 2007, even though its increasing trend had been interrupted to some extent as a result of the global financial crisis since then (1.24 trillion US$ in 2010) (UNCTAD 2011c). Hence, not only this trend but also the determinants of FDI as well as the relationship between bilateral investment treaties and foreign direct investment have been subject to several studies. Although the results of these analyses vary as a result of the sample sizes and methodological preferences, most of the recent studies stressing this relationship highlight the positive effect of bilateral investment treaties on foreign direct investment flows.

2.4.1. Foreign Direct Investment Flows between the Core and the Periphery

Whilst some authors hypothesize that the direction of the BIT is in parallel to the vector of FDI flows (Elkins et al. 2006), I find this operationalization choice largely problematic due to the fact that BITs are "reciprocal" in nature (Hallward-Driemeier 2003; Peterson 2004). In other words, provisions introduced by a treaty shall apply to both contracting parties. Therefore, the international investment network having emerged from these treaties should also be undirected. On the other hand, given the fact that most BITs are signed between a developed and developing country, direction of FDI flows is often towards the developing country due to vast differences in financial and technological capacities of contracting parties. In that sense, empirical studies usually focus on developing countries and their gains in terms of increasing FDI attractiveness as a result of signing a BIT or in other words committing to legal guarantees for foreign investors' rights.

Since most developed states have substantially larger GDPs, small developing states such as the Seychelles, Luxembourg, East Timor, Mongolia, Liberia, Angola, the Republic of Congo, Iceland, Cyprus and Montenegro are the top ten receptor countries when inward FDI flows to

GDP ratios are taken into account[11] (UNCTAD 2011b). Hence, such a concentration on developing countries can be understood to some extent. As a matter of fact, the share of G8 countries in total inward FDI flows of the world was about 34.3% in 2011. When other eleven G20 countries are also considered (except the European Union), this ratio rises to 58.1% whereas remaining 158 countries in my analysis share the remaining 32.4%[12]. This huge difference between the core and the periphery is expectedly larger in outward FDI flows where the shares of the core and periphery are in turn 65% and 27%. Hence, even though the developing world seems to be the main benefactor of inward FDI flows; foreign investment and BITs signed between the developed or emerging countries, albeit rare, are also noteworthy since they are the main receptors in absolute terms. However, in none of the empirical analyses below potential gains of home countries are analyzed. I believe that this thesis, by analyzing the relationship between country-level centrality measure and FDI, fills a gap in the empirical investigation of economic benefits of BITs.

"Vertical" multinational companies of which headquarters have usually been located in developed countries play the most crucial role in foreign direct investment (Egger and Pfaffermayr 2004). Liberal theorists argue that an investor always seeks access to larger and/or protected markets for the highest profit, and internationalization of production has become necessary for MNCs that want to reduce the cost of production in order to become competitive in global markets (Vandevelde 2000). Usually, MNCs take investment decisions according to a number of macroeconomic and legal indicators that make an investment environment favorable or not. These conditions can be categorized as "economic factors, factors that are related to political, social, and cultural environment and factors related to the magnitude of transaction costs in host countries" (Kahai 2011). Among these conditions, traditional determinants of the FDI such as the purchasing power, cost of production including the availability of low wage labor force or excessive natural resources (i.e. cost factors), the quality of the infrastructure, the geographical location and favorability of the host country (e.g. being landlocked or close to major markets), market and the legal quality in the host country are still the most salient ones (Nunnenkamp and Spatz 2002; Tobin and Rose-

[11] For more information and statistics on FDI, see: http://unctadstat.unctad.org/ReportFolders/reportFolders.aspx?sCS_referer=&sCS_ChosenLang=en ,consulted on 11.03.2012.

[12] In addition to Hong Kong and Macao that are excluded from the bilateral investment network (which is explained in the third chapter), other countries that has not signed any BITs share the remaining FDI flows.

Ackerman 2003). In fact, most salient characteristics of BITs do not cover any of these aspects. What is aimed by these treaties is, as stated in previous subchapters, bringing an insurance mechanism against discriminatory treatment in host countries (Vandevelde 1993). Hence, overestimating the role played by BITs as a determinant of FDI would also be inadequate.

On the other hand, institutional quality (i.e. domestic legal and bureaucratic system) or sometimes "post entry restrictions" (Nunnenkamp and Spatz 2002) are discussed to be significant explanatory variables for FDI by researchers. Concluding a BIT would be a more favorable and easy solution for developing countries, especially for the least developed ones, than restructuring the whole economy in order to maintain credibility in the eyes of foreign investors. Though, this theoretical assumption is debated by some researchers to be statistically insignificant and BITs were argued to bring legal guarantee for investor rights and play a complementary role to good institutional quality and local property rights rather than substituting them (Hallward-Driemeier 2003). Others are skeptical about this argument. Neumayer and Spess find significant evidence for a substituting effect of BITs for institutional quality with a larger dataset (Neumayer and Spess 2005). Consequently, bilateral investment treaties, albeit debatable, have a positive impact on foreign direct investment flows as the substitution of good institutional quality which is often argued to be a significant determinant of FDI attractiveness in the literature.

2.4.2. Foreign Direct Investment as an Instrument of Development

In the previous subchapters, a basic example of prisoner's dilemma was revealed. Developing countries, especially the least developed ones in need of FDI, trade a considerable amount of their policy alternatives (in other words their economic sovereignty) in return for FDI. FDI, thus BITs which have been discussed to be provocateur or at least catalysts of these flows, has become almost the sole instrument left in the hands of developing countries since 1980s due to the sudden drop in traditional development assistance from the developed world. This decline can be explained by various factors such as the debt crises or tighter budgets of developed economies (Neumayer and Spess 2005). In retrospective, the economic liberalization has also resulted in structural changes in developing markets in terms of allowing foreign investments, liberalizing their private sector, privatizing the state enterprises,

and ending state planning (Salacuse and Sullivan 2005). Thence, such structural changes has provoked a great deal of growth in international FDI flows and made BITs an important topic for researchers.

Foreign investment, when directed towards production instead of service sector, may be benefiting for a developing state in a variety of ways such as augmenting the capital supply of the state and the domestic savings, providing foreign exchange, increasing the labor productivity through education and technology and making the domestic sector more competitive (Vandevelde 2000). Contrarily, portfolio investments will not necessarily augment the production by the means listed above. Instead, they may result in financial shocks due to its speculative nature as has been witnessed in many developing countries including Turkey throughout the 1990s. Moreover, it would have an adverse affect on domestic savings by provoking cheaper loans and consumption. It may also have a longer term detrimental effect through budgetary deficits. In this sense, developing countries try to attract FDI rather than portfolio investments.

However, even green field investment is sometimes destructive in the eyes of domestic investors who are not ready for international competition. Moreover, technological transfer can also be limited by provisions of BITs or the investor itself (Vandevelde 2000). Globalization or internationalization of production phenomenon does not necessarily result in the transfer of technology but mostly in specialization in low-cost intermediate goods. The social consequences of such investments and structural changes can also be devastating due to clashes between a small group of rentier and highly skilled labor that can benefit from these investments and the majority that cannot.

Since BITs are also debated as being protectionist in nature, protectionist characteristics of investment environment in host countries can also be attractive in the eyes of foreign investors. Firstly, entering into a protected market gives an investor a valuable opportunity of being unrivalled; and secondly, host countries can offer investment incentives to certain foreign investors to attract more FDI (Vandevelde 2000). In this context, countries that are willing to negotiate BITs and which are powerful enough to insist on applying protectionist economic policies for domestic investors and infant industries can also be appealing for some foreign investment decisions. Consequently, high degree centralities of some countries, which

will be explained in detail in chapter four, can be understood to some extent by the favorability of their protected markets in the eyes of foreign investors. Hence, although they constitute rare examples in the contemporary international economy, some countries can benefit from the FDI-increasing effect of BITs and the protectionism at the same time.

2.4.3 Literature Review on Empirical Studies Investigating the Relationship between Foreign Direct Investment and Bilateral Investment Treaties

An interesting phenomenon about the FDI inflows is that some countries, which are not central nodes in the international investment network in terms of the BITs they have signed, can be amongst the main receptors of inward FDI flows. For example, while countries like Brazil and Nigeria do not sign as many treaties as other African or Latin American countries, they seem to attract more FDI (Hallward-Driemeier 2003; Neumayer and Spess 2005; Peterson 2004). Therefore, one might argue the ineffectiveness of the bilateral investment treaties in attracting additional investments. In fact, early studies investigating this causality usually find statistically insignificant relationship between BITs and inward FDI flows. However, recent studies provide statistical evidence to the contrary. Consequently, relative success of some countries in attracting FDI without sacrificing sovereignty by binding rules of a BIT is explained to be because of the already established and investor friendly legal systems.

Empirical research finds somewhat contradicting results in explaining the potential outcomes of signing a BIT in terms of attracting more FDI from the home country. Whilst some authors find statistical evidence for the fact that each BIT reduces the amount of inward FDI flows, others (Neumayer and Spess 2005) strongly oppose this claim. In fact, certain authors argue that introducing different lags following the year of signature results in significant but moderate causality (Hallward-Driemeier 2003; Vandevelde 2000). This moderate effect of BITs on FDI flows becomes even lower for countries with weak legal and institutional structures that are unfavorable for investors (Hallward-Driemeier 2003). In fact, there is no consensus on this finding, too. Some authors suggest that countries with relatively risky investment environments gain more from BITs in attracting FDI flows (Tobin and Rose-Ackerman 2003).

Introducing diverse lags varying from one to five years is a strategy often included in the recent analyses reviewed in this subchapter. Given the fact that the average lag between the signature and ratification of a BIT is about 2.24 years, shorter lags may be one of the reasons why some authors cannot find empirical evidence while others can. In fact, Egger and Pfaffermayr find a stronger positive correlation between increasing FDI flows and ratified BITs than with not ratified BITs (Egger and Pfaffermayr 2004).

Neumayer and Spess provide a brief review of some of other empirical works analyzed in this section that examine the causality between FDI and signature of BITs. They find some methodological problems regarding the sample size and methodologies incorporated in these works. According to them, all other works; including Hallwad-Driemeier's research which does not find a statistically meaningful effect, Tobin and Rose-Ackerman's work that only finds a positive effect at low levels of risk and finally Salacuse and Sullivan's work that can only reveal a positive correlation between signing a BIT with the US and increasing inward FDI flows to a host country; are not robust enough to produce similar results when large-N datasets are analyzed (Neumayer and Spess 2005).

Another methodological issue highlighted problem by Aisbett (Aisbett 2007) is about endogeneity and reverse causality in the relationship between increasing FDI flows and conclusion of a BIT. Author argues that when controlled for country specific BIT proliferation rate and time-specific control variables, the relationship is not statistically significant (Aisbett 2007). Moreover, a BIT is more likely to be concluded when higher increases in FDI flows are observed. In other words, BITs were argued to bring guarantees to existing FDI flows (Aisbett 2007). It is also suggested in the same article that BITs cannot generate credible commitment, thus neither decrease expropriation risk (Aisbett 2007) nor can they create a signaling effect for third country investors (Aisbett 2007). In fact, such claims, albeit notable, are far from being convincing in light of Neumayer and Spess' criticisms to other studies, especially the one about the sample size[13].

Furthermore, these studies rarely emphasize the signaling effect, in other words spill-over effect of BITs. Hallward-Driemeier concludes that the credibility and the signaling effect as a consequence of BITs are related to the degree of corruption and institutional quality in a host

[13] There are only 186 BITs observed between 1982 and 1999 in the dataset of Aisbett (Aisbett 2007).

state (Hallward-Driemeier 2003; Salacuse and Sullivan 2005). Indeed, spill-over effect is debated to be one of the most significant consequences of signing a BIT and a strong determinant by the Neumayer and Spess (Neumayer and Spess 2005). Other significant determinants affecting the inward FDI flows in their research are market size, rapidly growing economies, higher numbers of BITs concluded, having abundant natural resources and high number of trade agreements with developed countries (Neumayer and Spess 2005).

According to the authors finding a strong correlation between signing a BIT and attracting more inward FDI, signing a BIT would increase the FDI flow between 43.7 and 93.2% (Neumayer and Spess 2005). Others such as Salacuse and Sullivan find a significant correlation, albeit low or moderate, between the rule of law, exports, inflation rate and the inward FDI flows (Salacuse and Sullivan 2005). Their findings also indicate a strong impact, 112 to 157% increase, on inward FDI flows if a BIT with the US has been signed by a developing country. When a country is less developed, projected effect would be even more (Salacuse and Sullivan 2005). Consequently, authors argue that if a country desires to attract more FDI, then committing to tighter standards through a BIT would be beneficial[14]. That is because foreign investors would prefer less risky investment environments that would be established due to tighter standards in a BIT with the US (Salacuse and Sullivan 2005).

[14] These tighter standards can be argued as the ones included in the OECD draft convention on the protection of foreign property which is covered in previous subchapters. Given the fact that these authors (Salacuse and Sullivan 2005) underline the importance of tighter standards that OECD countries incorporate in BITs of which they are contracting parties, imposed conditions and provisions of such conventions might be argued as advantageous, especially for the least developed countries in heavy need of foreign capital.

CHAPTER 3. BILATERAL INVESTMENT NETWORK

3.1 SOCIAL NETWORK ANALYSIS LITERATURE

3.1.1. Social Network Analysis in International Relations

Social network analysis (SNA) is not a unified set of theories about actors' behaviors; rather it is a framework for analysis and a set of methodological tools that allow examining dependent or non-autonomous behaviors of actors. Actors in a network are linked to one another, and these linkages may either define, enable or restrict their behaviors (Hafner-Burton et al. 2009). Hence, network analysis does not solely concentrate on the individual attributes of actors but also aims identifying the underlying patterns of associations among them (Hafner-Burton and Montgomery 2010). Moreover, perhaps the most prominent feature of SNA in terms of empirical investigation is the fact that it enables assessing the whole structure of a network of interactions. In other words, not only the first-order (dyadic and direct) investment ties but also second and higher-order indirect interactions are taken into analysis. These interactions as a whole provide researchers descriptive information about topological properties of the network and also underlying dynamics that comprise the network (e.g. globalization, growth, policy transfer) (De Benedictis and Tajoli 2011; Fagiolo et al. 2007).

As Maoz argues (Maoz 2009), interdependence in the international system is not merely a result of direct relations as most studies associate (e.g. investment or trade), rather it is an integrated notion in which multiple dimensions of interactions among states play key roles. In addition to the direct ties that might also be observed through traditional methodologies, there are indirect ties that represent higher order relations among nodes. Some tools of SNA, that enable pointing out distinct clusters within the entire network, can demonstrate "hidden structures" that are constituted by these indirect ties (Maoz 2011). These indirect relations or hidden patterns add complexity to both the understanding and interpretation of dynamics in networked structures. Without SNA, it would not be easy to detect these patterns and indirect ties in large-N samples. Indeed dyadic analyses become scarce in an integrated international system where actor behavior is not shaped only by its independence to a certain actor, but rather to the structure consisting of a group or groups of actors.

There are two theoretical lenses in social network analysis. First one studies networks as actors themselves. These networks behave as homogenous actors and shape the outcomes in an international system. Second one, on the other hand, takes networks as structures in which agents interact with one another and constitute the structure. Thus, the structure is both a product of these interactions and also a source of influence on the behaviors of agents (Kahler 2009). As a matter of fact, it is argued in this thesis that behaviors of individual agents (i.e. countries) shape and are shaped by the bilateral investment network in which they form bilateral investment ties with strategic expectations such as material (e.g. increasing FDI flows) and nonmaterial (e.g. social power) benefits. Hence, a constructivist approach to international relations, particularly to the political economy of bilateral investment network has been adopted as the main theoretical lens of this thesis. Constructivists such as Waltz, take agents and more importantly the structure as a result of strategic interactions between these agents (i.e. interstate relationships and their interaction with their environment) as the starting point of constructivist theory. From this perspective, social network analysis provide a powerful toolkit to constructivist researchers to analyze international structures that shape and constrain behaviors of these actors (Kahler 2009).

Since 1960s, social network analysis has been applied in diverse fields of natural sciences, especially in mathematics, physics, biology, computer science and social sciences such as sociology, economy, anthropology and psychology. Although there are some early examples in the political science literature, these studies were usually conducted by sociologists (Hafner-Burton et al. 2009; Maoz 2011) or benefited from network metaphor or graph theory in particular but cannot be classified as applications of SNA since tools of network analysis were not introduced as methodological instruments in such studies (Kahler 2009; Maoz 2011).

In fact, the application of SNA to the field of international relations by political scientists is quite recent and still burgeoning. International relations scholars have started to adapt this essential framework in understanding networked structures only after 1990s (Hafner-Burton et al. 2009). Despite this considerable lag in comparison with other fields of social sciences, SNA has rapidly started to be used in analyzing international inequality, human rights movements and advocacy organizations, communication networks, terrorist and criminal networks as well as policy transfer (Kahler 2009).

Hafner-Burton and Montgomery accurately underline the importance of SNA in international relations research: *"Network tools in general, and centrality concepts in particular, offer new ways to measure and test long-standing concepts and theories that have yet to be fully explored, and they offer new insights into the nature of politics as a set of relations among actors at all levels involved in relationships of all kinds"* (Hafner-Burton and Montgomery 2010). Given the fact that international relations is considered as a "set of interconnected networks" (Maoz 2011), and the network metaphor on diverse relations had been examined in the early neorealist literature especially to highlight the power relations within the international system (Hafner-Burton et al. 2009); application of social network analysis to diverse subfields of the field may allow empirically testing for most international relations theories.

Relations among states can substitute or at least complement the general understanding of power in a relational and relative sense which is, in fact, argued to be what power is in the neorealist literature (Kahler 2009). As a matter of fact, early examples of application of this methodology in 1990s were usually on conflict studies benefiting from large-N correlates of war (COW) datasets including relational data on material power. More relational data in terms of IGO affiliations and multilateral organizations have increased interest in SNA and studies applying it to other areas in the international relations literature.

In the field of international political economy, most of the literature applying SNA has concentrated on networked structure of the international trade. Other than bilateral trade flows, diverse studies referred in this thesis, albeit very limited, concentrate on regional trade agreements. To my knowledge, first empirical study using SNA in explaining real-world socioeconomic systems is of Wasserman and Faust (Wasserman and Faust 1994). Since then, a number of diverse economic studies have been conducted, and application of SNA to empirical political economy has become widely accepted in the literature (Fagiolo et al. 2007).

Despite its increasing application, Maoz reveals that only less than 3% of 657 articles applying SNA are in the field of international relations in a recent literature review (Maoz 2011). As argued in the introductory chapter, this burgeoning literature, albeit discouraging to a certain extent, opens an exciting path for young scholars to learn and use this approach in

order to fill the gaps in the literature. Considering the recent advanced changes not only in computer programs but also in the SNA methodology, social network analysis can and should be applied to other areas than conflict literature and international trade. This thesis investigating the networked structure of international investment regime through bilateral investment treaties aims to fill the gap in the literature through this relatively new perspective and framework.

3.1.2 How this Thesis is Different from Existing Empirical Research?

In this thesis, I mainly benefit from three literatures concentrating on the empirical analyses of the relationship between FDIs and BITs, the networked structure of international trade and the networked structure of bilateral investment treaties. However, this thesis is different from these literatures to a large extent.

As Lupu and Traag underline, dyadic analysis in a networked structure such as international trade or international investment assumes independence of a dyad than any other dyad within the network. Assuming "independence in order to study the interdependence" (Lupu and Traag 2010) leaves indirect ties aside. SNA, on the other hand, incorporates these linkages into analysis. Hence, differently than existing research on the relationship between foreign direct investment and bilateral investment treaties, examining this relationship through the networked structure of bilateral investment treaties would increase the understanding of this relationship by adding the indirect ties and their potential effects and help analyze the structural effects that are usually excluded from existing research.

As indicated in the previous subchapter, SNA applications to international political economy mostly concentrate on the networked structure of international trade. International investment is a type of social interaction between countries like trade and bilateral investment treaties serve as a linkage in this interaction (Kim and Shin 2002). Though, the reasons why trade and bilateral investment networks are formed differ to a large extent. Since access to information and accordingly increasing the soft power has long been argued to be one of the most prominent reasons of the formation of networks (Wong 2008), researchers interested in the trade network do not stress such issues.

For the BIT network, on the other hand, in addition to attract foreign investment flows or bring legal guarantees to their investments abroad; access to information, increasing their prestige and soft-power through increased number of direct and indirect ties are also salient reasons why this network has been formed. Hence, differently from the existing research applying the SNA to the field of international political economy, BITs are hypothesized to increase material and nonmaterial power of countries through direct and indirect relations in the network.

To my knowledge, there are at least two analyses (Pinto et al. 2011; Saban et al. 2010) concentrating on different aspects of a bilateral investment network. Whilst Pinto and his colleagues, approach the investment protection network[15] through a simulation of a network formation game (portfolio optimization) (Pinto et al. 2011); Saban and his colleagues propose a growth model that aims replicating network characteristics (Saban et al. 2010). This thesis is also different from these studies in the literature, due to following reasons. First, an updated and extended dataset has been compiled and used. This dataset provides me a complete history of the network evolution while other research concentrates on a short period or an incomplete history. Second, the longitudinal design of the analysis helps examining the changing patterns of the systemic and unit-level characteristics and provides readers a dynamic perspective on bilateral investment network. Third, bilateral investment network has not been examined from different theoretical lenses in the international relations literature, particularly from the perspectives of the constructivism, institutionalism, neoliberalism, world systems theory and neorealism. Besides, not only system-level descriptive statistics or growth models are taken into analyses but also diverse analyses on lower levels, namely region and country-level analyses are introduced. Lastly and perhaps most importantly, the evolution of bilateral investment network, and its repercussions on real-world power politics are not yet examined in a comprehensive and descriptive manner. While assessing the dynamics and evolution of the networked structure of bilateral investment treaties by analyzing possible outcomes of structural positions in the bilateral investment network, this thesis aims generating a preliminary step in this manner in order to encourage further research on this topic.

[15] Authors have chosen labeling the networked structure of bilateral investment treaties as investment protection network (Pinto et al. 2011).

3.2 DATASET AND METHODOLOGY

As stated earlier, the dataset on bilateral investment treaties compiled for this thesis is much more comprehensive than similar empirical research in three different literatures concentrated on the relationship between foreign direct investment and bilateral investment treaties, and on the evolution of the bilateral investment network.

Two datasets, first compiled by the International Center for Settlement of Investment Disputes (ICSID 2011) and the second constructed by the United Nations Conference on Trade and Development (UNCTAD 2011a); were merged in order to constitute a dataset covering all bilateral investment treaties notified to these two international institutions. The dataset UNCTAD provides is of substantial value for researchers in analyzing the structure and evaluation of the international investment network emerging from bilateral investment treaties. UNCTAD, as stated by other researchers (Büthe and Milner 2008), is a reliable source for such data given its favorable position in the eyes of developing countries. The dataset of ICSID, on the other hand, is compiled by the declaratory statements of the signatory parties. Even though these two datasets claim to cover all the BITs signed among listed countries, their records were sometimes contradictory and/or missing. In case of contradictory information especially for years of signature and entry into force, I chose to include the ones given in the UNCTAD datasets and publications. Hence, while compiling the BIT dataset all entries were cross-checked from the UNCTAD publications (UNCTAD 2000, 2007) and the online dataset (UNCTAD 2011a). Consequently, the dataset in this thesis covers 2940 treaties signed by 177 different countries until the end of 2011.

I coded whether or not there is an agreement between a country pair in a given year. Opting for the signature year instead of the year of ratification is preferred because signing an agreement is a serious indication of credible commitment in the eyes of foreign investors. In case of missing signature or ratification years, I did not exclude the BITs due to two reasons. Firstly, these datasets I benefited may be inaccurate since they comprise either the deposited or declared agreements. In fact, there is no legal requirement for signatory parties to declare such an agreement and usually they only become subject to judicial examination in case of a dispute. Moreover, treaties that have not entered into force or at least given so in these datasets constitute less than one-fourth of all observations and 14% of these non-ratified

treaties have been concluded in the last three years. Given the average difference between the year of signature and year of entry into force (i.e. ratification date) (2.24 years), 80% of them will probably be ratified before this thesis would be published (Skovgaard Poulsen and Aisbett 2011) Another important observation about such non-ratified treaties is the fact that these treaties are clustered in some countries which indeed might reveal a pattern. This pattern, as well as a rational calculation of potential costs and benefits of such treaties, can be explained by different domestic political and bureaucratic systems that do not require the ratification of international treaties. Even though it requires further investigation and is well beyond the scope of this thesis, ratification years are also coded as a separate variable in order to be able to perform robustness checks on ratified treaties.

With respect to country coverage, I have tried to include all sovereign countries that have signed at least one bilateral investment treaty into my dataset. However, some countries had to be excluded because of different reasons. Since countries like Czechoslovakia, Yugoslavia or Serbia and Montenegro had either been divided or dissolved; unlike other research (Saban et al. 2010), I chose to exclude these nodes from the network and only included the BITs concluded by these nodes if these BITs were listed in the datasets to be signed by their successors. These treaties are legally binding, and successor states are hypothesized not to lose any existing investment advantage recognized by the international community. Nevertheless, for some countries such as the successors of the Union of Soviet Socialist Republics, succession is a complicated issue and no treaties of the USSR are found in the datasets. Hence, only the agreements signed by Russian Federation as a separate political entity signed since 1989 were taken into account. Consequently, newly formed countries if they enjoy advantages of the BITs signed by their predecessors were included in the analyses of earlier periods even if they did not exist formally[16]. However, this operationalization while decreasing the number of countries in the network eliminates duplicate treaties thus methodological errors that may result in overestimating the roles played by some countries in the bilateral investment network.

[16] Although I decided to exclude twenty BITs signed by Yugoslavia, UNCTAD website accepts four of them as being in force for either Serbia or Montenegro. In this case, I had to include these four agreements signed before the official foundation of these two countries.

Furthermore, for countries that have changed their official names due to various reasons such as unification or separation (i.e. Brunei, Democratic Republic of Congo, Burma, Vietnam, Benin and Burkina Faso) and do not have remarkable succession issues; I merged multiple entries in order not to underestimate their weight in the international investment network. Moreover, Palestine, Hong Kong and Macau, albeit being active entities in the bilateral investment network, are not included into the analysis due to a number of reasons: Firstly, they are not sovereign states. Whilst Palestine was given a non-member entity status in the United Nations, Hong Kong and Macau are special administrative regions (SAR) of China. Second, Hong Kong was under the colonial rule of Great Britain until the fourth period in analyses (1997). That would cause methodological difficulties having taken country-level measurements into consideration. Thirdly and most importantly, all partners of Hong Kong and Macau have also concluded BITs with China. And lastly, some explanatory variables that are introduced in the empirical analysis in chapter five are missing for these entities. The decision not to include Palestine and these two SARs might also result in an underestimation of these entities'' roles, especially Hong Kong's relatively central position in the network (15 BITs were concluded and with mostly central nodes) and share in the annual inward foreign direct investment flows. A list of 177 countries included in the dataset, and the number of BITs signed by these countries in diverse periods is given in the Appendix A.

In cases where two countries sign duplicate BITs in different time periods, only the first one is taken into account because the later treaties are usually revisions or amendments (Saban et al. 2010). Since all BITs are comparable in their substantive and procedural provisions (Skovgaard Poulsen and Aisbett 2011), no weighting procedure is applied.

"Since a network is a set of units and a rule that defines whether, how and to what extent any two units are tied to each other" (Maoz 2011), bilateral investment network takes individual countries as nodes and investigates how and to what extent these nodes are tied to each other through bilateral investment treaties. Given the bilateral character of the BITs, this network is expectedly a single-mode, or in other words relational network.

A node represents a country in the bilateral investment network and a tie between two nodes is a dichotomous measure capturing adjacent nodes[17] (Wong 2008). Thus, the sociomatrix or adjacency matrix in the bilateral investment network is characterized as a symmetric 177x177 binary matrix where xij=xji=1 if there is an existing link between nodes i and j[18]. These matrices are analyzed by using the UCINET VI program (Borgatti et al. 2002) to obtain country, region and system-level indicators used in other analyses that were done in STATA 12 (StataCorp 2011)[19].

In graphs introduced in the following subchapters, that represent the networked structure of the bilateral investment treaties in diverse periods, each link (edge) represents the presence (dichotomous) of a bilateral investment treaty within two nodes (countries). In undirected networks resources can be transferred through a tie to both ways while this flow is destined from one location or unit to another in a directed network (Hafner-Burton and Montgomery 2010). Even though one party usually has more FDI resources than another, as stated in the previous chapter, provisions of a BIT are binding for both contracting parties. Arrows in each direction represent the non-directed or bilateral characteristic of such ties.

Hypothetically, the World Trade Organization rounds would have differing impacts on the frequency of BITs signed in related periods. Therefore, I divided the dataset into six diverse periods corresponding to diverse WTO rounds. First five periods include nine years and the last one examines the 2004-2011 period thus the last eight years (time periods and related GATT/WTO rounds are given in the Appendix B). Moreover, introducing these different periods also helps to overcome the annual variation that may be a result of individual deals and individual country efforts (Tobin and Rose-Ackerman 2003). Dynamic network modeling, which is different from the analysis of single networks, allows a longitudinal analysis of the evolution of a certain network. Network characteristics in a given network in each period and their variance explain the structure, characteristics and most importantly the evolution of a network over time (Hafner-Burton et al. 2009). Although SNA still lacks methodologically necessary tools and techniques for dynamic modeling of networks with

[17] If two nodes are connected in the bilateral investment network, they are called “partners” or “nearest neighbors” (Fagiolo et al. 2007).
[18] In the network analysis, the ties of individual nodes are represented by xij which symbolizes the relation from actor i to actor j and (i; j = 1,.., n), where xij is dichotomous (existence of a tie).
[19] All datasets including sociomatrices for diverse periods are made available online over http://www.mertmoral.com/data

changing size (Maoz 2011), conventional methodologies can capture these changes based on the unit or system level characteristics derived from SNA. Similarly, this thesis while analyzing the changes of the system, group or unit level characteristics employs such a method. More specifically, centrality measures employed to demonstrate unit level attributes as well as network characteristics in six different periods were used in diverse logistics regressions in order to evaluate the effects of different explanatory variables on bilateral investment treaties in these periods.

3.3 SYSTEM LEVEL CHARACTERISTICS AND HISTORUCAL EVOLUTION OF THE BILATERAL INVESTMENT NETWORK

3.3.1 Network Characteristics

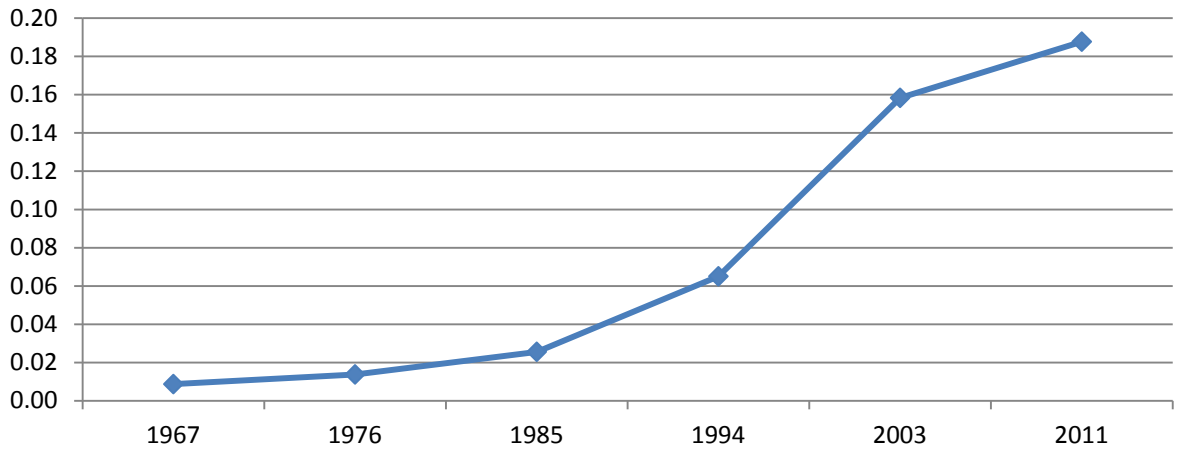
The evolution of the international economic system is defined by the degree of international integration which is a function of the number of economies that are connected to one another, the number of ties between them and the proportionality of ties to the size of their economies (Arribas et al. 2008). International investment flows and bilateral investment treaties would expectedly indicate a similar evolution to the international economy in general, given the fact that FDI flows since 1960s has become an essential instrument by developed and developing countries for different reasons. Hence, increasing density over time corresponds to increasing integration at the global level (De Benedictis and Tajoli 2011), thus interdependence between actors in terms of international investment ties (Roth and Dakhli 2000). Since FDI flows throughout the world are demonstrated to be increasing more than trade flows, and bilateral investment treaties bring legal guarantees to these flows, this increase in the international integration is not an unexpected phenomenon.

Since 1959, not only the number of countries that are integrated into the international system but also the number of direct and indirect ties between them has significantly increased. Complexity of networks increases in parallel with the number of units and number of ties connecting these units (Maoz 2011). Hence, what we would expect from the expansion of bilateral investment treaties since 1959 is that the bilateral investment network becomes complex over time. Though, the trend of this increase in the complexity and the density when controlled for six periods of nine-year time intervals demonstrate divergent characteristics due to the system and country-level structural changes in each period.

The density of a network can be explained as a function of the number of existing ties to the maximum number of possible ties $|Ny|(|Ny|-1)/2$. Density at each period measures the number of existing ties to the number of possible ties. Same measure has been used in similar research (Manger et al. 2012) in order to demonstrate the system-level trend that might affect actor behavior to form or not to form additional treaties. On the other hand, while introducing system-level density measure, my main purpose is to explain how and to what extent global

integration in the bilateral investment network has evolved over time. Figure 1 shows the increasing density trend in six periods between 1959 and 2011.

Figure 1. Density of the Bilateral Investment Network



Since six diverse periods in parallel with the GATT/WTO rounds were used in order to assess dynamic evolution of the bilateral investment network, an analysis of the density of the bilateral investment network in each period would expectedly indicate different patterns. Accordingly, the number of existing ties and existing countries in the international system differ from earlier research because of the dataset and different operationalization choices explained in the previous subchapter. Hence, changes in density do not reveal a perfect linear growth as stated by other researchers (Saban et al. 2010). Rather, what is observed in the graph above is a non-linear growth differing from earlier periods since the Uruguay round in 1994. In fact, fourth and fifth periods in which BIT proliferation reaches its peak represent more than 140% increase in the density of the whole network while the same increase was calculated as 58% in the second, %86 in the third, and 19% in the last periods. By the end of 2011, the overall density of the bilateral investment network is about .1877 which means that about 19% of total possible agreements have already been concluded. Despite the fact that this density reveals a model in which BITs are concluded with only selected partners, this is still a high density in a complex network structure. In fact, the decrease in the trend in the last period necessitates further investigation and will be examined in the next section.

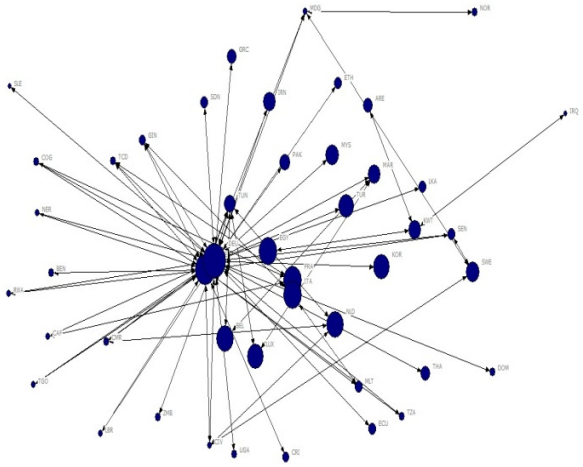
Fagiolo and his colleagues suggest that when the researcher has sufficient theoretical explanations to justify his analysis through binary undirected networks, node-level

distribution of ties provides him a valuable source of information to understand the structural properties of a network (Fagiolo et al. 2007). Increasing mean number of the ties each node has is in parallel with my first hypothesis that the bilateral investment network has become denser since the negotiations for the Uruguay Round. In fact, a similar increase in the density of the international trade network is argued in the literature to be consistent with the globalization (Kim and Shin 2002). However, the most striking increase in the mean number of ties is observed in the aftermath of the Uruguay Round in the fourth period covering the years between 1994 and 2003, when the BIT network witnessed a boom in terms of new BITs concluded. Figure 2 including the graphed structure of the network in diverse periods provides a simple demonstration of this sudden increase in the network density.

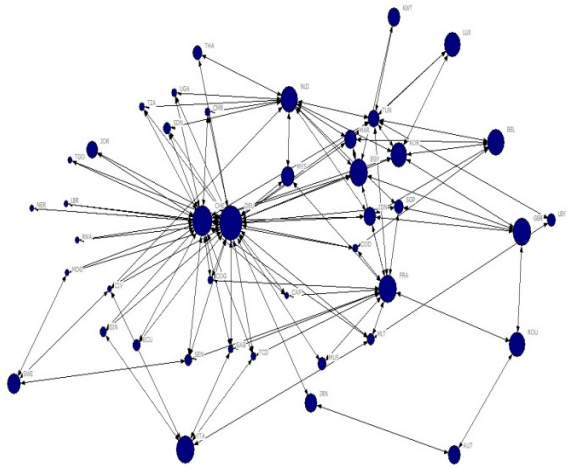
Another network characteristic that can capture such an effect is the geodesic distance which can be defined as the length of the shortest path between any two nodes. This network characteristic is argued to reflect the cohesiveness or interconnectedness by some researchers (Kim and Shin 2002). Hence, what we would expect by increasing interconnectedness is a decrease in the geodesic distance. Consequently, distance-based cohesion, in other words the compactness score of the bilateral investment network has raised from 0.026 in 1967 to 0.583 in 2011. Average distance among reachable pairs, on the other hand, has decreased to 1.88 in 2011 from 2.35 in 1967 (since the network in 1967 was not connected, and there were only 46 countries that had concluded at least one BIT). To explain this decrease in a different fashion: if an investment is to be made in a certain country to benefit from its strategic connections (i.e. regional integration incentives) with other countries; a MNC or a home country can choose investing in any country within the network to reach a central country having strategic relations in less than two steps in 2011. Though, such a choice would not be possible until 2003, since the geodesic distance was more than two in earlier periods. Thus, a BIT that would connect a home country to a relatively central host country which has strategic political ties may provide greater market access due to short geodesic distances and increased density of bilateral investment ties. This opportunity to negotiate strategic BITs can also be captured by the unit-level betweenness centrality measure, which is going to be explained in the following chapter.

Figure 2. Bilateral Investment Network in Consecutive Periods

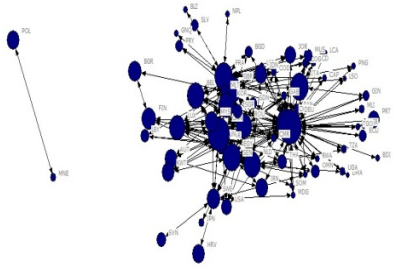
Bilateral Investment Network in 1967



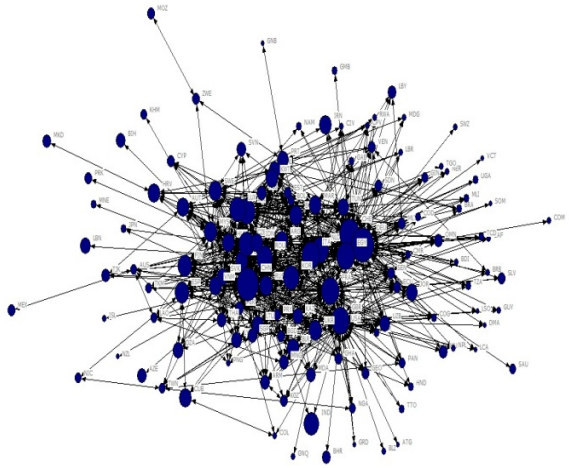
Bilateral Investment Network in 1976



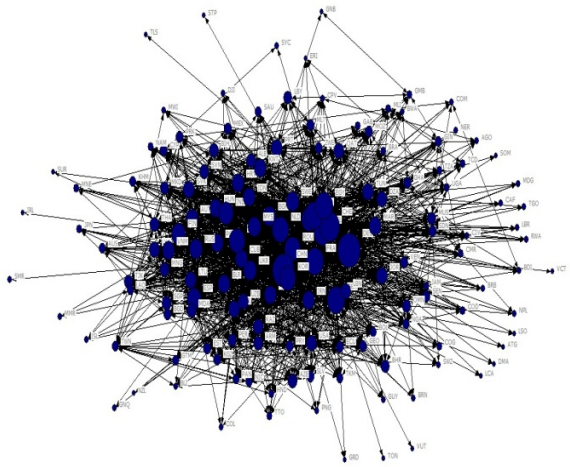
Bilateral Investment Network in 1985



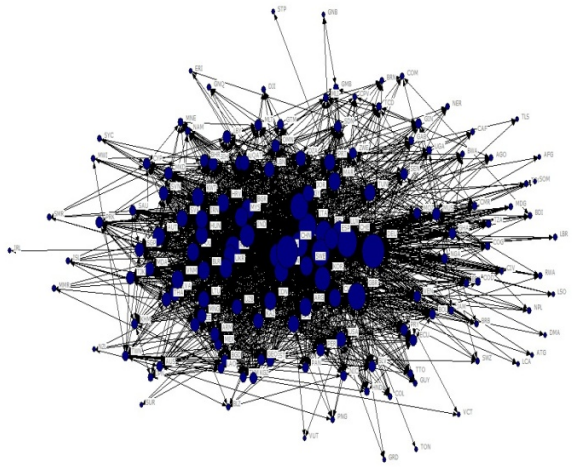
Bilateral Investment Network in 1994



Bilateral Investment Network in 2003



Bilateral Investment Network in 2011



Clustering coefficient is the percentage of pairs of a node's partners that also share direct ties among themselves. Higher clustering coefficient than network density correspond to a statistically more clustered network and preferential attachment than a random expansion of the network (Fagiolo et al. 2007). Since foreign direct investment, thus bilateral investment treaties are argued to be mutually beneficial (cooperative) in the previous chapter; a random distribution of BIT ties among countries is highly unlikely[20]. Thus, evolution of the network is collective which is shaped by and that shapes the behaviors of more than 90% of sovereign states. Consequently, preferential attachment hypothesis enables tracing transnational production chains through bilateral investment treaties concluded by different countries constituting the steps in a production chain. Moreover, clustering coefficient is also noteworthy because highly clustered networks demonstrate strong geographical patterns since short-distance links matter more than long-distance ones (Fagiolo et al. 2007). Geographical proximity might not necessarily be the cause of high clustering coefficients. In fact, there are other indicators that might group countries such as the degree of development, historical relationships or imitation might also generate such a conclusion. Though, such similarities among nodes that might constitute the reasons why clustering coefficient has increased are going to be empirically explored in the fifth chapter whereas the next subchapter investigates the causes of the historical evolution of system-level structural changes.

3.3.2 Historical Evolution of the Bilateral Investment Network

While it is argued by some researchers that globalization phenomenon can be observed through increasing integration in the international economy (Kim and Shin 2002), this explanation is far from being convincing for the bilateral investment network. Network density has increased substantially since 1959, but this trend has lost its pace in the last period. This slowdown was explained in the literature by either the saturation of the network (Pinto et al. 2011; Saban et al. 2010) or the negative learning experience developing countries

[20] In order to test whether or not the observed increase in density is due to randomness, pairwise correlations are introduced by researchers (De Benedictis and Tajoli 2011). A similar test is conducted for the bilateral investment network in this thesis. Pairwise comparisons between diverse time periods in analyses demonstrate no pattern of randomness (the probability is always .000).

have started to face (Skovgaard Poulsen and Aisbett 2011). In fact, there is no scientific evidence proving a decrease in the global integration in these years.

Extremely high costs of appealing to dispute resolution mechanisms, in addition to possible economic sovereignty costs associated with BITs, are discussed to be one of the reasons why some countries do not choose to sign such treaties in the first place or have stopped signing more (Skovgaard Poulsen and Aisbett 2011). According to the authors suggesting this hypothesis, if and when potential costs are more than potential benefits of a bilateral investment treaty, host countries do not choose to sign additional treaties (Aisbett 2007; Saban et al. 2010). Hence, increasing number of disputes might have resulted in a decreasing number of BITs in the last years (Skovgaard Poulsen and Aisbett 2011). Even though this rational calculation argument is of lower priority in comparison with the saturation of the network argument in their article, Saban and his colleagues also advocate that these costs might explain why the growth of the BIT network has slowed down (Saban et al. 2010).

Saturation, on the other hand, can be explained by the maximum possible density that can be reached. Theoretical maximum density is always 1, and it refers to a situation in which all units are equally connected to others, and all possible interactions have been sustained. Indeed, diverse hypotheses that are tested in dyad-level empirical analyses in chapter five and network characteristics explained in this chapter refute this theoretical expectation. In a saturated network all possible BITs should be signed or at least most of these potential linkages should be sustained. However, as demonstrated earlier, the network density is still about %19 which means that an average unit can sign up to four times more agreements than it has as of 2011. Besides, approximately 20% of the world countries are still out of the network.

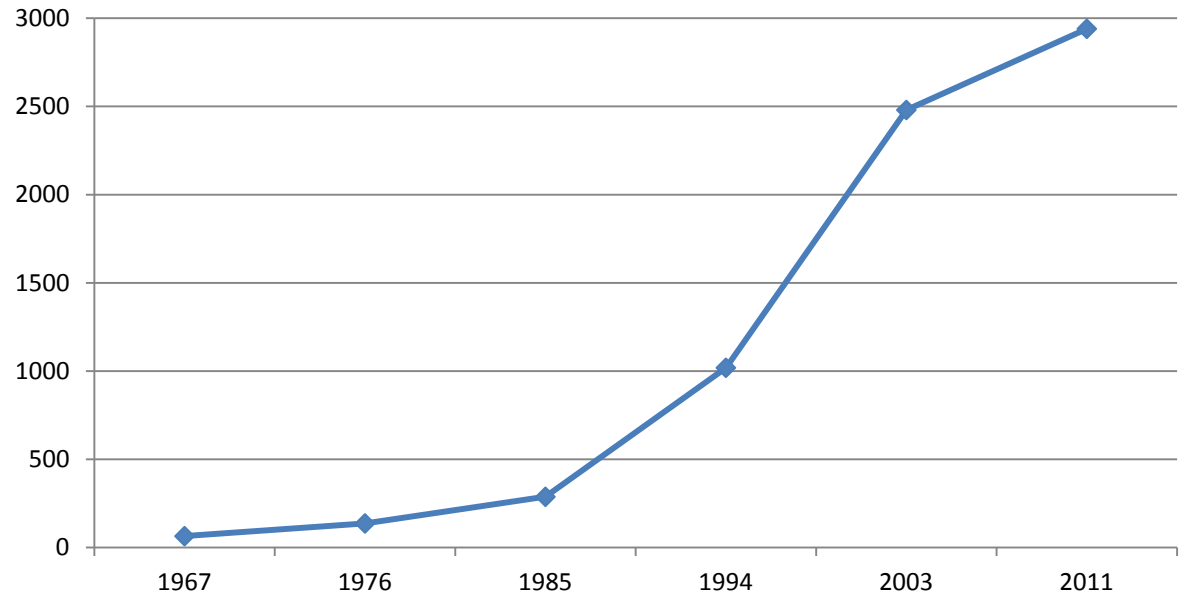
I believe that each of these arguments is credible to some extent given the fact that the number of concluded agreements in the last period is lesser than the last two periods. However, one should take the dynamics of the global economy into consideration while assessing these causalities. Particularly, international investment climate in the aftermath of the global financial crisis have become more prone to disputes arising from investment claims. Since most MNCs and a number of central countries in the bilateral investment network have experienced economic downturns in the last years, the impact of the global crisis on BITs

would be considerable. Besides, as stated in the last chapter, FDI flows in 2007 have diminished due to the same reason, namely the global financial crisis. Since most active nodes in the network are mainly European powers, the so called Euro crisis might have reduced their pace of signing BITs to some extent. Increasing unemployment in closer locations with more political and economic benefits might have promoted intra-EU investments. There is also a growing understanding in the literature that dispute settlement mechanisms within regional and multilateral trade organizations (i.e. NAFTA and the WTO) have replaced dispute resolution mechanisms introduced by BITs. Lastly, since the effect of BITs in increasing the inward FDI is found to be doubtful in the literature review of empirical research; these countries might have decided not to conclude additional treaties, if they find the material benefits lesser than the costs of new BITs. Nonetheless, these hypotheses require further investigation and are well beyond the scope of this thesis. On the other hand, BITs are still the most popular form of international investment promotion as well as international treaties despite this slowdown in the pace of BIT proliferation in the last period (Saban et al. 2010).

Networks can grow either at the new node level or at the internal edge level. The former represents the growth through the addition of new units into the network, while the latter corresponds to a situation in which existing nodes generate or remove edges (ties) between themselves. As a matter of fact, the bilateral investment network reveals characteristics of both types of growth (Saban et al. 2010). Accordingly, new nodes will join the network if the network produces enough or more benefits than potential costs associated with being outside the network (Wong 2008). Moreover, they would increase the number of their ties as long as the material or nonmaterial benefit from existing ties continues. Even though the growth at the new node level stops in the fifth period, growth at the internal edge level is observed in each period due to new BITs concluded. There are two reasons why the bilateral investment network has significantly grown since 1959 and especially since 1990s. First, the number of states in the international system, explaining the growth at the node level, has increased significantly due to decolonization and dissolution of some states. Second, the number of bilateral investment treaties, explaining the growth at the internal edge level, has increased spectacularly due to reasons argued in the previous chapter such as the dissolution of the USSR and the increased influence of emerging economies.

Dividing the fifty-two year BIT history into six different periods reveals significant temporal variance in the network. This is caused by structural changes such as GATT/WTO rounds or financial crises that interrupt FDI flows. Whilst in the early periods, BIT formation under the leadership of European countries and usually with ex-colonies had been partially inclusive, the later periods indicate a more integrated world economy with increasing number of ties as well as substantially increased number of countries integrated into the international system. These six periods have distinct patterns in terms of the number of BITs concluded. For example, while the first period between 1958 and 1967, including the Dillon and Kennedy rounds, cover only 65 treaties and a cumulative percentage of 2.21 of all bilateral investment treaties, the following periods respectively include 2.45, 5.13, 24.86, 49.69 and 15.65 percents. Figure 3 demonstrates the number of treaties concluded (growth at internal edge level) in each period, and Figure 4 reveals the growth at the node level in each period.

Figure 3. Growth At the Internal Edge Level

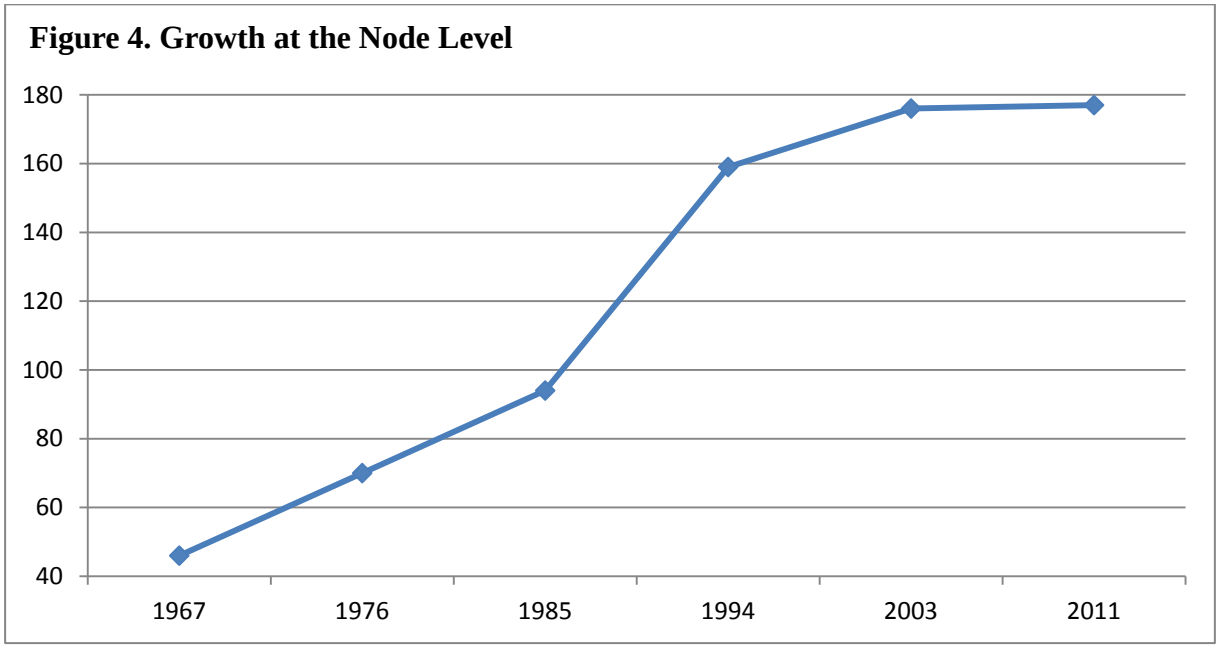


As stated earlier, the fifth period covering nine year long post-Uruguay round BIT proliferation includes roughly half of all treaties. Not only in the BIT network, but also in other analyses concentrated on international trade (Manger et al. 2012), Uruguay round has been considered as a milestone in the evolution of the international economy. The formation of the WTO at the end of this round, in addition to individual efforts to develop plurilateral investment ties (i.e. RTAs), and a multilateral framework regulating the international trade

(i.e. the MAI initiative) had a considerable effect on the integration of diverse economies in this period. Therefore, while others observe the effect of the Uruguay round as an interruption on their time-series analyses (Manger et al. 2012), in this thesis the fourth period between 1985 and 1994 covers the negotiations of the Uruguay round whereas the evolution of the bilateral investment network since the Uruguay round is observed in the following periods between 1995 and 2011.

By 2011, only a small number of least developed countries are not party to any bilateral investment treaty. More than 90% of the inward global investment and 92% of the outward FDI flows are hosted by 177 countries included in this analysis. Countries like Germany, China, Switzerland, France, Egypt and Great Britain have concluded more than hundred BITs with others. With three thousand BITs in force, bilateral investment treaties form a dense network. Compared to the preferential trade agreements (PTA) network that is defined as "spaghetti bowl" or "noodle bowl" with reference to Asia (Manger et al. 2012), BIT network is a more complex and bigger bowl without any doubt. Besides, even though these results reveal a pattern of increasing density over time, such low levels do not correspond to full integration in international investment yet.

Figure 4. Growth at the Node Level



Given the decreasing geodesic distance, one might argue that the bilateral investment network has become no longer concentrated around a few core countries (i.e. first comers). In fact,

from the third period onwards what is observed from the decreasing geodesic distances is a rise of emerging (middle strata) countries that adds a South-South aspect to early examples of North-South agreements. Such a pattern is observed in the international trade network by other researchers (Dorussen and Ward 2010). Moreover, the increase in the number of BITs concluded; thus the density in general is consistent with the increasing FDI throughout the world since 1970s and the increasing worldwide economic integration.

In parallel with this increase in direct ties between middle strata countries, network density and network centralization has increased. Even though it has been explained to some extent in the previous subchapter; an interesting phenomenon that can be observed through the analysis of the evolution of the bilateral investment network, which is in parallel with the neoclassical economic theory is the fact that the network has become decentralized even though it became denser. Kim and Shin (Kim and Shin 2002) observe a similar pattern in their study on international commodity trade and argue that fundamental causes of this decentralization are the development of countries in the middle strata the so called semi-periphery and increasing intraregional ties rather than interregional densities. Whilst the former hypothesis will be examined through country-level centrality measures in the fourth chapter, region-level densities will be examined in the next subchapter in order to assess the latter.

3.4 REGION LEVEL CHARACTERISTICS AND EVOLUTION OF THE BLATERAL INVESTMENT NETWORK

Since the international investments or FDI flows are hypothesized to be largely independent from geographical proximity, and these flows are more likely to go towards where factors of production are relatively cheaper; geographical proximity and regionalism incentives are expected not to have a significant impact on investment decisions. Such an expectation is in parallel with the advances in the transportation, communication and technology and the globalization of production phenomenon that have taken place since the 1980s. On the other hand, integration theorists argue that global integration as a result of increasing density at the system-level cause and is caused by acceleration in the region level integration or in other words regionalization incentives (Kim and Shin 2002). Following the European Union, other regional multilateral agreements (so called preferential trade agreements) are examples of this trend in the international political economy. As stated earlier, these agreements such as the Chapter XI of the North American Free Trade Agreement or Chapter IV of Title III of the Treaty of Rome (i.e. the Chart of the European Union) may also include investment provisions like BITs (Pinto et al. 2011). Other salient aspects of these agreements are related to the basic motives of relatively less developed member countries in adhering to these integration incentives. Such motives can be listed as benefiting from the negotiating advantage that these agreements bring in, and promoting investment through sustaining larger markets that would attract third party countries and MNCs from these countries. Thus, these regionalism incentives result in greater regional markets and economies of scale for MNCs that are localized in members of these regional integration incentives (Manger et al. 2012). In this manner, through an analysis of BITs concluded within and between diverse regions, it becomes possible to analyze the intra and interregional integration levels.

Groups in subsystemic level analyses are usually defined by clustering algorithms that group a number of countries sharing similar ties (thus, roles) in a complex networked structure (Lupu and Traag 2010). In order to divide nodes that constitute a network into diverse subgroups, different block modeling and clustering algorithms[21] can be applied. Then, these

[21] Hierarchical clustering has been used by several researchers in order to test the validity of world systems theory (Hafner-Burton and Montgomery 2009). This methodological tool SNA offers use the geodesic distance measure between diverse nodes in order to single out clusters that are more densely or closely connected to one

groups are used to investigate the relationships between groups of nodes in order to demonstrate group-level structures (Hafner-Burton et al. 2009). On the other hand, some studies incorporate ready-decided groups in order to study the effect of certain integration movements, as well as geographic patterns (Kim and Shin 2002). Given the characteristics and nature of the bilateral investment network, second methodology is applied in this thesis despite its potential shortcomings that would underestimate the extent of connectedness of some regions that are relatively poorer (e.g. Africa), thus less likely to have an equal number of intraregional ties.

In developing the following analysis about the subsystemic or regional level integration within the bilateral investment network, I primarily benefited from the methodology of early research on international trade (Kim and Shin 2002; Lupu and Traag 2010). In order to evaluate the regionalization hypothesis, 177 countries in the analysis were divided into six regions, namely Asia, Europe, Africa, North America, South America and Oceania (a list of countries according to these regions is also given in the Appendix C). Indeed, such a categorization is different from the regional divisions of the UN since Americas were divided into two for theoretical purposes (UNdata 2012). In order to examine the effects of regionalization attempts in North America (i.e. NAFTA) and in South America (i.e. MERCOSUR), on bilateral investment treaties such a division was largely beneficial. In fact, this categorization is consistent with other studies in the IPE literature (Kim and Shin 2002). Even though this measure, as other researchers argue (Kim and Shin 2002) is not a direct method to examine the regionalization attempts, it still produces significant results in understanding the globalization phenomenon by comparing interregional and intraregional densities with the worldwide trend.

Regionalization, in parallel with the trade network examined by other researchers (Kim and Shin 2002), is more advanced in Europe than other regions. In 2011, intraregional density in Europe is 0.596 while South America scores 0.409, and scores of Asia, Oceania, North America and Africa are respectively 0.363, 0.2, 0.138 and 0.107. Given the fact that intraregional density is calculated as a function of existing ties to the maximum number of

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another. However, given the dichotomous and reciprocal nature of the ties in the bilateral investment network, such an algorithm is not found to be theoretically relevant. Instead, coreness scores in each period were analyzed in the following chapter.

possible ties in a given region, number of countries in a region does not create a reliability problem. However, it should still be kept in mind that low interregional and intraregional densities of Oceania is a natural consequence of relatively smaller number of countries in this continent that are not central nodes in the bilateral investment network whereas intraregional density in Asia is surprisingly high given the fact that this regional category includes more than one fourth of all observations in the dataset. In other words, most Asian countries are central nodes in the bilateral investment network and despite the higher number of countries located in Asia, high intra and interregional densities observed in this continent require a detailed investigation.

An investigation of the evolution of intraregional density demonstrates a more comprehensive and largely descriptive pattern. For example, intraregional densities of the three continents with highest scores have emerged in different periods. Intraregional density in Europe has significantly increased in the fourth period between 1994 and 2003, following the collapse of the Soviet Union, and related to the purpose of new Eastern European countries to juxtapose to the political and economic sphere of the European Union. Asia has witnessed a significant increase in the same period between 1994 and 2003 that covers the increasing interest in Asia to the regionalization attempts such as the ASEAN+3, Chiang Mai and APEC initiatives in this period (Higgott 2005). In a parallel fashion, intraregional density in South America has extraordinarily raised from 0.03 to 0.242 points in the third period between 1976 and 1985. However, the most significant increase is still measured in the following period between 1985 and 1994 when intraregional density in South America surpasses the same measure for Asia. This consistent increase is because South America has experienced salient regionalization; thus integration movements before Asia (i.e. MERCOSUR). Since then, a certain level of economic integration has been sustained. Consequently, this high score observed in the fifth period did not change between 2003 and 2011. Furthermore, it was argued in the second chapter that although these countries were against any multilateral investment agreements, they have supported an ad hoc solution under the form of bilateral investment treaties to investment disputes. Hence, their adoption to structural changes is expectedly faster than other countries in the international system.

Table 1. Interregional and Intraregional Densities of the Bilateral Investment Network												
Continent	**Asia**						**Europe**					
Year	**1967**	**1976**	**1985**	**1994**	**2003**	**2011**	**1967**	**1976**	**1985**	**1994**	**2003**	**2011**
Asia	0.00	0.00	0.01	0.07	0.28	0.36	0.00	0.02	0.05	0.06	0.33	0.40
Europe	0.00	0.02	0.05	0.06	0.33	0.40	0.00	0.01	0.03	0.05	0.54	0.60
Africa	0.00	0.00	0.01	0.07	0.07	0.09	0.02	0.04	0.05	0.07	0.16	0.19
North America	0.00	0.00	0.00	0.09	0.06	0.06	0.00	0.00	0.02	0.08	0.17	0.20
South America	0.00	0.00	0.00	0.06	0.07	0.09	0.00	0.00	0.01	0.07	0.30	0.32
Oceania	0.00	0.00	0.00	0.02	0.05	0.06	0.00	0.00	0.01	0.01	0.05	0.05
Continent	**Africa**						**North America**					
Year	**1967**	**1976**	**1985**	**1994**	**2003**	**2011**	**1967**	**1976**	**1985**	**1994**	**2003**	**2011**
Asia	0.00	0.00	0.01	0.07	0.07	0.09	0.00	0.00	0.00	0.09	0.06	0.06
Europe	0.02	0.04	0.05	0.07	0.16	0.19	0.00	0.00	0.02	0.08	0.17	0.20
Africa	0.00	0.00	0.01	0.06	0.08	0.11	0.00	0.00	0.00	0.07	0.02	0.02
North America	0.00	0.00	0.00	0.07	0.02	0.02	0.00	0.00	0.01	0.09	0.13	0.14
South America	0.00	0.00	0.00	0.06	0.02	0.02	0.00	0.00	0.00	0.06	0.19	0.19
Oceania	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
Continent	**South America**						**Oceania**					
Year	**1967**	**1976**	**1985**	**1994**	**2003**	**2011**	**1967**	**1976**	**1985**	**1994**	**2003**	**2011**
Asia	0.00	0.00	0.00	0.06	0.07	0.09	0.00	0.00	0.00	0.02	0.05	0.06
Europe	0.00	0.00	0.01	0.07	0.30	0.32	0.00	0.00	0.01	0.01	0.05	0.05
Africa	0.00	0.00	0.00	0.06	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00
North America	0.00	0.00	0.00	0.06	0.19	0.19	0.00	0.00	0.00	0.01	0.01	0.01
South America	0.00	0.02	0.03	0.06	0.41	0.41	0.00	0.00	0.00	0.00	0.10	0.10
Oceania	0.00	0.00	0.00	0.00	0.10	0.10	0.00	0.00	0.00	0.00	0.10	0.20

Another reason why some countries rapidly sign several BITs was argued to be related to their political and economic objectives to integrate themselves into the international economy

by committing to investment liberalization and investors' rights. This phenomenon is clearly observable in Europe in the third period, when recently democratized Eastern European countries have created bilateral investment ties with EU members. Accordingly, an increase equivalent to the third period cannot be observed in any other period. In fact, after the accession of Estonia, Latvia, Lithuania and perhaps more importantly (due to their central positions) Poland and Czech Republic; intraregional density only increases by 0.052 points in the last period (that is approximately one sixth of the increase in the previous period and essentially related to the BITs concluded by Bulgaria and Romania before their accessions). Since intraregional investments within the EU are not regulated by the BITs, such a decrease in the trend might be expected. A similar argument can also be suggested for North America. As the Chapter XI of the NAFTA agreement includes similar provisions to BITs, intraregional density in North America is lower than other regions in which diverse regionalization initiatives of lower levels of integration take place.

Indeed, Africa does not reveal a similar pattern with Europe or Asia despite the fact that regionalization initiatives under the form of sub-regional economic communities in Africa commenced in 1963 (i.e. the Charter of the Organization of African Unity). An important cause of this lower score compared to other regions is related to the economic capacities of countries located in this region. Since these countries usually aim attracting FDI rather than protecting their investments abroad, they prefer signing BITs with capital exporting countries. However, the strange BITs examined in the previous chapters constitute a substantial majority of existing BITs in Africa but they are still far from increasing the intraregional density to comparable levels of interregional ties of Africa with other regions. For example, intraregional investment ties between Africa and Europe is in all periods higher than interregional density in Africa. In 2011, the intraregional density between Europe and Africa is almost two times of the intraregional density in Africa with a score of 0.192. Since major central nodes in Europe usually have colonization histories with African countries and share common languages, such investment ties are expectedly higher than any intraregional relationship between Africa and other regions. In fact, it is still interesting to observe the sudden increase in the intraregional density between Asia and Africa in the fifth period. Such an increase would be argued to be in parallel to the changing foreign policy objectives of some leading Asian countries, as well as their structural shift towards the core and economic

concerns growing in parallel to this shift. Besides, African countries have long captured the attention of developed and emerging economies because of their natural resources.

The results of these comparisons are similar to the findings of other researchers in their study on international trade (Kim and Shin 2002). Especially in the aftermath of the globalization wave, what we witness is a constantly rising interregional density even in higher ratios than intraregional density. Interestingly, even Asia having the second highest intraregional density is more densely connected to Europe. In fact, only South American and European countries are more densely connected to their neighbors than their ties with. This finding is also consistent with the IPE literature that highlights the higher level of integration in Europe than other regions observed in this thesis (Ravenhill 2008).

Given the fact that the intraregional and interregional densities in Oceania are lower than all other continents, countries on this continent can be considered as laggards in the BIT race. Although they have sustained some interregional ties with South America, Asia and Europe; interregional densities calculated for this region is far less than other regions. Indeed, the most active period for the countries in Oceania is observed to be the fifth period between 1994 and 2003. Since then, there is only a slight increase in the interregional density between Asia and Oceania, but none in other ties. In other words, Oceania seems to be an isolated region in terms of BIT ties with other regions.

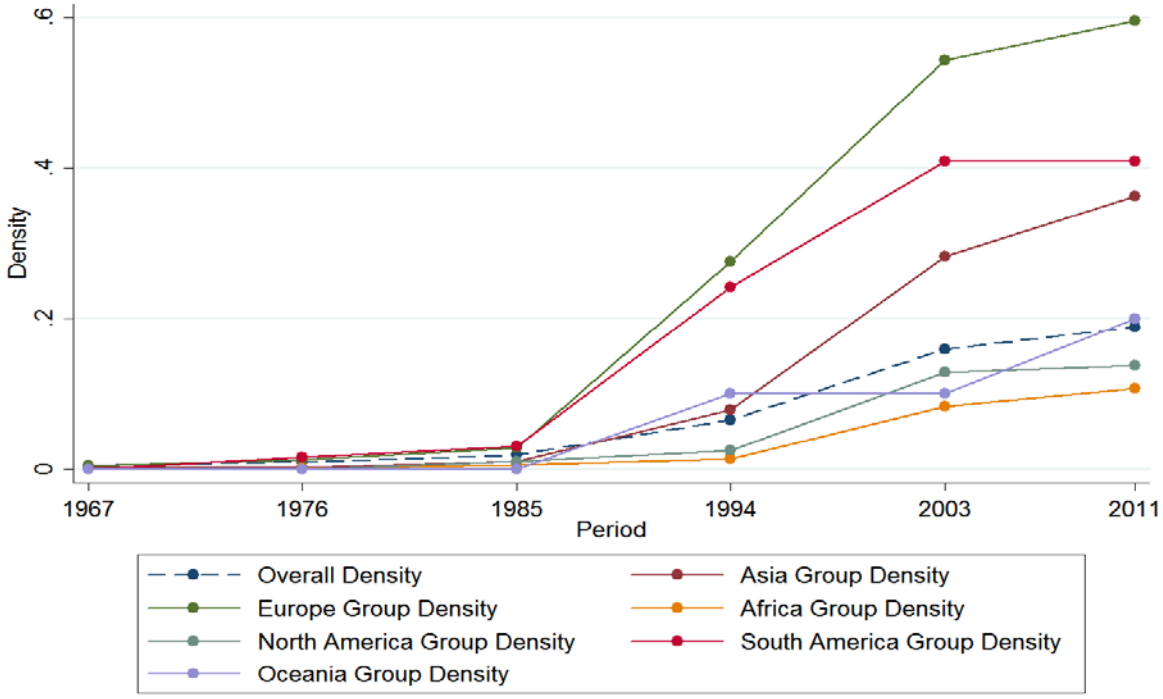
To summarize the findings, Asia is more than four times densely connected to Europe than Africa and South America in 2011, whereas interregional density between Europe and South America is slightly lower than the same score computed between Europe and Asia. Even North America is more loosely connected to South America than Europe is. Interestingly the lowest score for the interregional density is measured between Oceania and North America. Whilst the former can be related to the historical clash of interests between the rich northern countries and poorer southern countries of Americas, the latter can be argued to be an expected outcome of the APEC initiative. Though, these assumptions require detailed investigation.

In regions where regionalization movements result in more tighter integration, what we would expect is higher FDI attractiveness, due to the desire of foreign investors to become insiders in order to benefit from interregional trade promotions. On the other hand, intraregional

investment flows would follow this trend in the longer term (Roth and Dakhli 2000). Higher intraregional densities in Europe, South America and Asia prove such a presumption. Moreover, such investments are not necessarily under the guarantee of a BIT since major regionalization incentives might also include investment-related disputes in various agreements so called RTAs. In fact, the lower intraregional density in the North America, as discussed earlier, is a strong proof to this argument.

Changes in the intraregional and global density in the bilateral investment network are shown in Figure 5. A plausible explanation about the constantly and rapidly increasing intra and interregional densities compared to the network density is that the global integration takes place in a slower pace than regional integration initiatives. In fact, globalization and regionalization, albeit coexisting, have differently evolved at least in the bilateral investment network.

Figure 5. Intraregional Densities in Given Periods



In the literature, Eastern European countries were observed to be less connected to the other nodes in comparison with the Southern Asian countries that are equally open to integration. Moreover, in parallel with my results, North America and Oceania were found to demonstrate lower levels of openness and connectedness (integration) while South America in contrast to

my findings is also categorized in this category (Arribas et al. 2008). What is argued by Weiss for the intraregional integration is similar to the literature applying SNA on international trade. She suggests higher densities to be observed for Northern intraregional investments than interregional ties of the continent. As a matter of fact, even though she is right for Europe and partly for the South America (Though, these countries are not rich Northern countries by definition); her examples for the intraregional patterns for Asian countries and Japan's role in investment are not adequate because intraregional density of Asia is well beyond its interregional ties with Europe (Weiss 1998). Again intraregional densities in the bilateral investment network differ from other research on international trade. In the international trade network, higher intraregional densities are observed for every regional subset except Africa (De Benedictis and Tajoli 2011). In my opinion, since geographical proximity is not equally important for investment decisions; inconsistent findings with the IPE literature that usually concentrate on trade flows, are understandable.

CHAPTER 4. CENTRALITY IN THE BILATERAL INVESTMENT NETWORK

Nodes become visible when they become involved with others, and there are two types of visibility according to Wasserman and Faust which are centrality and prestige (Wasserman and Faust 1994; Wong 2008). Prestige is directional in nature and specifies a choice (i.e. preferential attachment to certain nodes that are thought to be more prestigious than others) (Wong 2008). On the other hand, centrality can be defined through a number of different measures that are betweenness, closeness and degree centralities. In addition, eigenvector centrality which is a function of degree centrality can also be categorized as another form of centrality measures. In the following subchapter, these diverse measures of centrality in the social network analysis will be briefly explained.

4.1 CENTRALITY IN SOCIAL NETWORK ANALYSIS

In a network, some nodes are more central than others as a result of the quantity, as well as the quality, of interactions they have with other nodes. Social network analysts use different centrality measures in order to assess these differences. Political scientists, on the other hand, suggest different explanations about what each measure may bring to a central node, or in other words how do these different measures differentiate in the real world politics. Accordingly, it is argued in the literature that degree centrality provides a central node political power arising from having several direct ties to others in a network; whereas betweenness centrality comes from linking diverse groups that are not directly connected. Being (on) this bridge between different (groups) of nodes gives central actors considerable brokerage capacity and define their betweenness centrality. Closeness centrality, on the other hand, is being proximate to any other actor in a network (Hafner-Burton and Montgomery 2010). For the purposes of this thesis, eigenvector or "access centrality" (Hafner-Burton and Montgomery 2012) – a function of degree centrality- that captures the linkages with other well connected nodes in a network, is hypothesized to be another important measure (Hafner-Burton and Montgomery 2010). Accordingly, the political power in terms of the eigenvector centrality comes from having direct relationships with powerful actors in a network who usually have the ability to manipulate the decisions of multilateral negotiations or trends in a network.

Degree centrality and related analyses are used by some researchers in their analyses (Kim and Shin 2002). Degree centralization in a given network is the function of observed number of ties of a certain actor to the theoretical maximum number of ties. Since bilateral investment network consists of 177 countries that have concluded at least one BIT as of 2011, maximum number of ties possible a node can possess is 176 (N-1). The most active country in terms of concluding BITs is Germany with 135 ties with other nodes through BITs. Hence the degree centrality of Germany is 76.7 (135/176) in 2011. Degree centrality, as well as the eigenvector centrality, is proportional to the number of potential ties in a network. Thus, although the number of nodes varies to a considerable extent due to the growth of the network at the node level, these centrality measures might capture the centrality in a comparable fashion. Moreover, all centrality measures can be normalized in order to compare the importance of

actors in different networks that have differing actor and tie numbers (Gilardi (forthcoming)). Accordingly, Germany has a normalized degree centrality of 0.767 as of 2011.

Degree centrality is used by Hafner-Burton and Montgomery in order to assess socialization in a network. States with a higher degree centrality become more influential, thus more successful to socialize others (Hafner-Burton and Montgomery 2010). As Saban and his colleagues prove that, new nodes entering into the international network choose to sign treaties with popular nodes (i.e. central nodes) in the bilateral investment network (Saban et al. 2010); this socialization phenomenon proves why some countries such as Germany have sustained their degree centrality through all periods while most nodes having integrated into the bilateral investment network in the following periods become laggards in terms of gaining a central position.

Furthermore, actors with a higher degree centrality "have more choices" (Hafner-Burton and Montgomery 2010) in order to redirect their investments to other countries under the guarantee of a BIT. For example, in the bilateral investment network China had a degree centrality four times of Oman or Peru in 2011. This difference is because China is linked to more countries than Oman or Peru, thus has a potential access to more markets in the bilateral investment network. Since BIT network is bilateral in nature and inward FDI attractiveness is perhaps the most prominent reason why these countries negotiate BITs, it may be argued that China is four times more likely to attract FDI than these two countries due to her larger access to capital exporting economies. Access also gives China more political power than Peru or Oman in this network by providing her a better control on investment resources. Moreover, this access can improve the understanding of why some states with a higher degree centrality are able to use their political power on others through economic means such as coercion, agenda setting or "identity/interest alteration" (Hafner-Burton and Montgomery 2009, 2010, 2012). As stated in the second chapter, China used this bargaining poweragainst the United Kingdom in order to loosen the provisions in the BIT between these two states.

In a different fashion, closeness centrality is linked with efficiency and pace in the literature. It is a function of geodesic distance measuring how close an actor to others and to what extent it can quickly interact with them in a given network (Wasserman and Faust 1994). Closeness centrality provide a political advantage to a central node to more quickly spread and acquire

resources than any other non or less central node in a given network. Through their central structural positions in a network (i.e. being the shortest path in terms of geodesic distance), actors can collect and disseminate information or other resources and has a first mover advantage (Hafner-Burton and Montgomery 2010; Wong 2008). Hence, a central actor in a given network is hypothesized to adopt herself more quickly to changing conditions in a dynamic network structure. On the other hand, in the latter stages of network formation first-mover advantage can be lost; thus centrality has to be sustained or improved for the first-movers while newcomers should build it (Wong 2008). As a matter of fact, this is what we witness in the BIT race. While first comers such as Netherlands, Tunisia and Indonesia increase the number of bilateral ties that connect them to other nodes in the network within the latter stages, countries in search for FDI attractiveness or soft power adapts a faster pace in concluding BITs. Hence, China's or South Korea's rapidly increasing centralities are examples of such constructed centralities in parallel with their catch-up processes as emerging economies. As a matter of fact, closeness centrality has lost its importance in parallel with the augmenting density and declining geodesic distance in the network. Hence, in this thesis closeness centrality measures are not included in any analyses[22].

Betweenness centrality measures the ability of an individual node to exist between other nodes in a network. It is largely different from previous centrality measures given the fact that whilst a country has high closeness or degree centrality scores, it might not have a control on the flows between other nodes. In other words, a node with a relatively lower degree centrality can have a higher betweenness centrality in the network due to its structural position linking other nodes. This measure is calculated as half the sum of all dependency scores for the nodes to which a certain node is connected. According to Scott, betweenness centrality is built upon the concept of dependency. If a node in a network controls the flows (i.e. material or nonmaterial flows such as information) to a certain node, then it is hypothesized that the latter is dependent to the former. In such cases, nodes having an absolute control on these flows are described as "structural holes" (Scott 2000).

As of 2011, Germany has a betweenness centrality score more than two times of France or Italy. This relative advantage gives Germany more power to control the flow of valuable

[22] Besides, since this measure cannot be calculated in a methodologically correct sense in non-connected networks; it cannot be employed in the bilateral investment network until the fifth period.

resources such as money and information. Moreover, due to its position as a bridge connecting a substantial number of other countries in the bilateral investment network that do not have direct access to one another, Germany has the political power that result in its domination in the agenda setting, "rule making" (Wong 2008) and "naming and shaming" that helps her have a more pivotal role in the global governance (Hafner-Burton and Montgomery 2010). Indeed, this difference in terms of soft power is quite adequate having considered the recent Euro Crisis and bail-out plans in which nonmaterial power, in addition to its material resources and ties (i.e. investment), provides Germany such a capacity in terms of setting the agenda of the EU and naming and shaming crisis-hit members of the union. Indeed, there is always the so called "negative agenda-setting power" by which central nodes can preserve the status quo by limiting the applicability of a new norm (Wong 2008). In this context, understanding of betweenness centrality and agenda-setting power associated with it should not be solely limited to imposing certain draft treaties to others. Central nodes can serve the status quo by bringing additional guarantees or sabotaging any attempt for a multilateral investment treaty by softening the conditions of existing BITs. However, these central nodes should not be seen propagandists by other nodes so that they would not lose their credibility in the eyes of other nodes in the network (Wong 2008).

High betweenness centrality is often defined as being a gatekeeper in the network (Fagiolo et al. 2007). When a developing country concludes more BITs with especially developing countries that have extended resources, its dependence on a certain country for FDI would decrease. Hence, diversifying partners, or in other words increasing degree centrality, also corresponds to a decrease in interdependence to particular investment partners. In such context, betweenness centrality only matters when a given country connects nodes that do not have other ties.

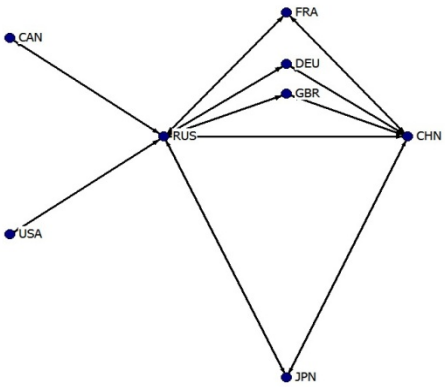
Suppose a country with only one BIT connects it to the bilateral investment network. Since the broker has the ability to regulate the information flow between the main group of interconnected nodes and an individual node that is only connected to the broker, this country does not have any other option but to depend on its broker and will be isolated to a large extent due to limitations that this broker may bring to the flow of information. Since other causes than being a central node and having material capabilities can play more influential roles in agenda setting, central nodes might not set the agenda in a network by themselves.

However, at one point any new norm must pass through them since they control the information dissemination to most other nodes (Wong 2008). In fact, this is the situation in which three countries as of 2011 find themselves. Sao Tome and Principe having its one and only bilateral investment tie with Portugal; Tonga having been solely connected to United Kingdom; and Ireland having been only linked to Czech Republic depend solely on the information made available by these brokers. If the number of brokers is raised to two, Somalia, Vanuatu, Antigua and Barbuda, Dominica, Saint Lucia, East Timor, Grenada, Saint Vincent and the Grenadines and Guinea-Bissau also find themselves in relatively non-comfortable positions in terms of information flows. United Kingdom and Germany play the brokerage roles for six countries while Portugal is one of two brokers for two other countries. This absolute brokerage ability, indeed, gives a country a considerable political power in terms of betweenness centrality and should be taken into account in any analysis applying SNA.

It can also be argued that in parallel with the increasing density of the bilateral investment network, the importance of betweenness centrality or in other words indirect ties among countries has decreased (Dorussen and Ward 2010). Hence, whereas betweenness centrality has a significance especially for the earlier periods and for countries that still controls information flows to some countries (due to the limited number of interactions of such countries), degree centrality is hypothesized to be more salient in terms of understanding the political power of countries.

In the sample network model that takes the bilateral investment treaties as of 2011 among the major powers into the analysis, all centrality measures explained in this subchapter are calculated. While the graph of this sample network is given in the Figure 6, Table 2 represents the adjacency matrix of this network that is extracted from the dataset employed in this thesis.

Figure 6. Sample Network



Since France, Germany, Japan, and Great Britain are identical in terms of the number of direct ties they possess; their degree centralities would expectedly be equivalent. Besides, they are all connected to China and Russia; thus their eigenvector centralities as well as betweenness centralities also do not differentiate. However, the degree centralities of Canada and the US, which are solely connected to Russian Federation but did not choose to sign bilateral investment treaties with any other country including China, are equal to the half of the former group. In fact, Russian Federation has concluded all BITs possible in the 8x8 sociomatrix while China has sustained 71.4% of possible ties (five of seven possible BITs).

Table 2. Sample Adjacency/Sociomatrix

	CAN	CHN	DEU	FRA	GBR	JPN	RUS	USA
CAN	0	0	0	0	0	0	1	0
CHN	0	0	1	1	1	1	1	0
DEU	0	1	0	0	0	0	1	0
FRA	0	1	0	0	0	0	1	0
GBR	0	1	0	0	0	0	1	0
JPN	0	1	0	0	0	0	1	0
RUS	1	1	1	1	1	1	0	1
USA	0	0	0	0	0	0	1	0

On the other hand, as seen in the Table 3, their betweenness centralities differ to a large extent due to the fact that China cannot control the flows (e.g. information) between Canada or US and the rest, since there is no BIT among these two countries and China. As a matter of fact, Russian Federation has a considerable brokerage capacity since she can also control indirect flows between the nodes where there is no direct tie.

Table 3. Centrality Measures for the Sample Network

Country	Degree C.	Betweenness C.	Eigenvector C.	Closeness C.
CAN	14.29	0.00	22.83	53.85
CHN	71.43	14.29	71.05	77.78
FRA	28.57	0.00	42.83	58.33
DEU	28.57	0.00	42.83	58.33
JPN	28.57	0.00	42.83	58.33
RUS	100.00	66.67	81.08	100.00
GBR	28.57	0.00	42.83	58.33
USA	14.29	0.00	22.83	53.85

In other words, if we suppose that these eight countries do not have any other bilateral investment ties in the bilateral investment network, Russian Federation would have an absolute control on the information flows to the United States and Canada. Expectedly, this is not the case for the actual network. After examining the relationship between centrality and power in the international relations theory in the next subchapter, centrality scores in different periods will be examined in chapter 4.3.

4.2 CENTRALITY AND POWER IN INTERNATIONAL RELATIONS

Smith and White indicate that "explicit or implicit state policies…, developmental strategies…, may alter a country's structural position in the international economy" (Smith and White 1992). Accordingly, while some developed countries have solely economic concerns in signing these treaties such as bringing legal guarantees to their investments abroad or becoming attractive through the credible commitment to foreign investor rights; others might have distinct foreign policy objectives. These foreign policy objectives are briefly examined in previous chapters in terms of sustaining good economic relations with rival countries (e.g. BIT between the US and the Russian Federation) or demonstrating commitment to the necessities of contemporary neoliberal economy (e.g. BITs concluded by post-socialist countries). Hence, while some developing countries in serious need of FDI sign these treaties for their survival, others aim at increasing their material and nonmaterial power through more central positions in the bilateral investment network. Accordingly, Maoz argues that not only survival but also well-being of countries heavily depends on power and influence they acquire through diverse types of interactions in networks (Maoz 2009). In this subchapter, the relationship between centrality and power will be thoroughly examined.

Structural realists like Waltz argue that power in the international system is a compared advantage of capabilities among a number of countries. Hence, power is a relational and relative distribution of capabilities, albeit usually defined as being entirely material (Hafner-Burton and Montgomery 2009).

In contrast to the traditional view of power as the possession of material capabilities, contemporary researchers have started to emphasize the relational power between two or more countries. This new perspective to the understanding of power comes from the interactions that connect diverse actors in networks. These ties might be either material (such as the FDI or trade flows) or social (such as the alliances) and together determine a country's power in relation to other actors. Hence, a country's structural position in a given network compared to others as a result of these ties is the source of its influential capability on others (Hafner-Burton and Montgomery 2009, 2010). This structural position or in other word 'importance' in a network comes from centrality and is not necessarily correlated with the material capabilities of an actor. In fact, while some powerful countries in terms of their

material capabilities are not central in a network, others with relatively less material resources might become more central, thus influential in specific topics or aspects of the international relations. The bilateral investment network, indeed, exhibits some of these characteristics. For example, while the USA –a traditional laggard- is not among the top twenty most central countries as of 2011, it has the largest material capabilities including the military capacity. On the other hand, Hafner-Burton and Montgomery (Hafner-Burton and Montgomery 2010) argue that military capacity due to possession of a nuclear weapon might marginalize a powerful country in terms of material capacity and require a third party broker for sustaining diplomatic relations to others. This necessity for a mediator, indeed, might reduce the relative capacity of an actor. In fact, this need for mediators is why brokerage capacity (i.e. betweenness centrality), explained in the previous subchapter; thus being the broker of politically isolated countries generate a considerable influential capacity in a network. This distinction between the material capability and the brokerage role in a network is, indeed, explained in the literature by the difference between the soft and hard powers.

Social power as a function of centrality is argued to be an appropriate measure of power within networks that provide informational or normative links to nodes (Kahler 2009). Given the normative nature of bilateral investment treaties in bringing a regulatory framework to the unregulated international investment regime, and their status as customary international law; most central countries in the bilateral investment network enjoy a substantial amount of soft or social power through central positions, and informational and normative links to a large number of countries.

Although it is usually debated in the IPE and international law literatures that bilateral investment treaties are signed with solely economic objectives, the findings in this thesis demonstrate a different pattern. If these treaties were signed with solely economic concerns, then one would expect that the most central countries in this network would be either the most developed countries with highest outward FDI stocks or the least developed countries aiming to attract FDI for their survival through a number of distinct ties with these developed countries. In each case, one would expect a high correlation between the income levels and centrality scores. Though, the correlation between material and nonmaterial capacities of central nodes reveal a different pattern.

It is an interesting puzzle how and to what extent soft power, derived from the structural positions of countries within the bilateral investment network, differs from material capabilities or in other words hard power. In order to assess whether these two different means of power are different from one another, a simple correlation calculation is made. Accordingly, whilst nominal GDP value of a country (controlling for the population) as of 2011 is 17.05%; per capita level GDP (PPP) is 40.84%, and material capabilities [CINC score (Singer et al. 2011)] is 34.16% correlated with the degree centrality as of 2011. On the other hand, betweenness or information centrality that captures the brokerage ability of nodes in a given network is slightly less correlated with the same indicators of material capability. In fact, partial correlation does not exceed 45% when degree centralities in IGO, MTA and RTA networks are taken into analysis. Expectedly, while MTA and RTA networks, as well as the bilateral investment network, are argued in the literature to be related directly to the financial benefits, they are all positively correlated with the per capita income levels, although in small ratios. On the other hand, degree centrality in the IGO network is negatively correlated with the GDP per capita (PPP) as of 2011. In this context, it would not be a plausible explanation that rich or more powerful (i.e. material power) countries conclude more BITs than others. In fact, centrality in the bilateral investment network is independent than material capacities of countries to a large extent. However, this low correlation is hypothesized to be also related to the foreign policy objectives of central nodes aiming to increase their soft power and influence through a number of direct and indirect ties in the bilateral investment network.

Contrary to the conventional wisdom about the globalization solidifying inequalities among different countries, Hafner-Burton and Montogomery (Hafner-Burton and Montgomery 2009) argue that unequal access to networks lessen inequalities in terms of social capital among states. These inequalities generate the social dimension of power politics. Similar to what others describe as soft power, social capital according to these authors is determined by the access to other states in the international system through different types of ties (Hafner-Burton et al. 2009; Hafner-Burton and Montgomery 2012). Authors cite Bourdieu while describing social capital. According to Bourdieu, the social capital is “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition” (Hafner-Burton and Montgomery 2009). Accordingly, they suggest that economically disadvantaged states might

benefit from central structural positions in RTA networks. However, membership in the network does not guarantee a perfect equilibrium of access to material benefits; primarily middle income countries benefit from this new field of power politics (Hafner-Burton and Montgomery 2009)

In terms of the distinction between material and so called social power resulting from the structural position in a given network, it can be argued that some states that are militarily less powerful than others choose to invest in their social power . However, there is no rule against a country to invest in both types of power as witnessed in the two most central countries, Germany and China, in the bilateral investment network. Moreover, Hafner-Burton and Montgomery argue that such investments in social power can deepen the gap between those who are more skilled in constructing and expanding their structural positions in a number of distinct networks and others who lack the necessary skills. According to these researchers, such practices are most likely observed among middle income, open and connected countries (e.g. Northern European countries) and they may have an upper hand in terms of social power on poorer countries in the longer term (Hafner-Burton et al. 2009).

In addition to soft or social power explained above as a consequence of structural positioning of states in a network, in parallel with the conventional description of power in the neorealist literature asserts that material capabilities can be increased through social relations (Hafner-Burton et al. 2009; Hafner-Burton and Montgomery 2009). Bilateral trade and bilateral investment flows are examples of such relations that significantly increase the material power of a state. In other words, the more ties a state establishes with others in a networked structure of trade or investment, the more financial benefits it will gain according to neoclassical economic theory. Hence, becoming a central node in a network is by all means a consequence of a rational calculation of decision makers from a statist perspective. Even though some authors question the limits of this rationality especially for developing countries in heavy need of FDI (Skovgaard Poulsen and Aisbett 2011), most BITs can be understood in such manner. Indeed, what is hypothesized in this thesis is that all countries especially the developing ones increase their centrality in the bilateral investment network for possessing more material and nonmaterial capabilities.

In networks where exchange or bargaining is observed, simple measures of connectedness may not capture power relations to a satisfying extent. In this manner, betweenness centrality is used in order to capture the role of brokerage in these exchanges (Kahler 2009). Closeness centrality is also a valuable indicator for assessing state power through their capacity of adaptability to the changes in the international structure. Accordingly, countries that have the capacity to adapt better to a changing conditions would have more benefits than others especially in turbulent times (Weiss 1998). Hence, they adapt to the unregulated investment environment or to the rapidly liberalizing international regime through the conclusion of BITs or promotion of investment liberalization by additional clauses included in these treaties.

4.3 CENTRALITY AND CORENESS IN DIVERSE PERIODS

Kenneth Waltz describes power as a "comparison of capabilities of a number of units" (Hafner-Burton and Montgomery 2010). Through a comparison of the brokerage (betweenness centrality) and direct access (degree centrality) capabilities of 177 countries in the dataset employed in this thesis; power relations among world countries in terms of their nonmaterial capabilities will be analyzed in this subchapter[23].

Since degree centrality is the share of a node's ties to the maximum possible number of ties in a given network, changes in the degree centrality from one period to another correspond roughly to the number of BITs signed in each period. Having taken these changes into consideration, some countries can rapidly become central nodes within the whole network whereas others remain constant in terms of their structural positioning. These countries, overachievers, are usually eastern European and Middle Eastern countries that have been aiming to integrate themselves into the contemporary neoliberal economy especially in the aftermath of the collapse of the USSR. Moreover, some others either with geostrategic purposes or solely economic concerns substantially increase their degree centrality. Among the overachiever in terms of degree centrality Poland seems to be the most successful one and Lebanon, Bosnia Herzegovina, Macedonia, India, Greece, South Africa, Turkey, and Iran follow her. Among countries that have entered into the bilateral investment network before 1976, persistent achievers are Sri Lanka, Dominican Republic, South Korea, Egypt, Ethiopia, Pakistan and Malaysia, in addition to Greece, Turkey and Iran that have increased their centrality more than twenty times. Due to space issues, centrality scores in diverse periods are not reported or examined here. Indeed, noteworthy examples and different findings than the literature are examined in this subchapter, whereas centrality measures for all countries in each period are given in the Appendix D. Figures 7 and 8 respectively demonstrate the degree and betweenness centralities in 2011.

[23] While interpreting centrality measures, researchers face some problems regarding the endogeneity. Since summary statistics as well as centrality measures in networks are endogenous by definition, this problem has to be negated. For a more detailed examination of the endogeneity problem and potential solutions to other problems in interpreting the SNA outputs see (De Benedictis and Tajoli 2011).

Figure 7. Degree Centrality (2011)

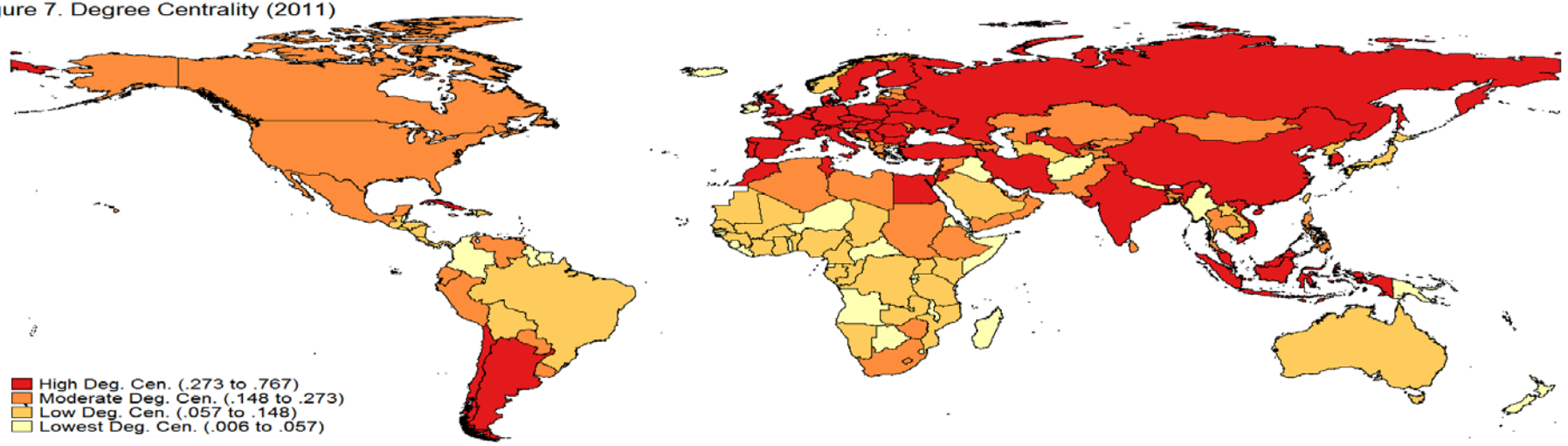
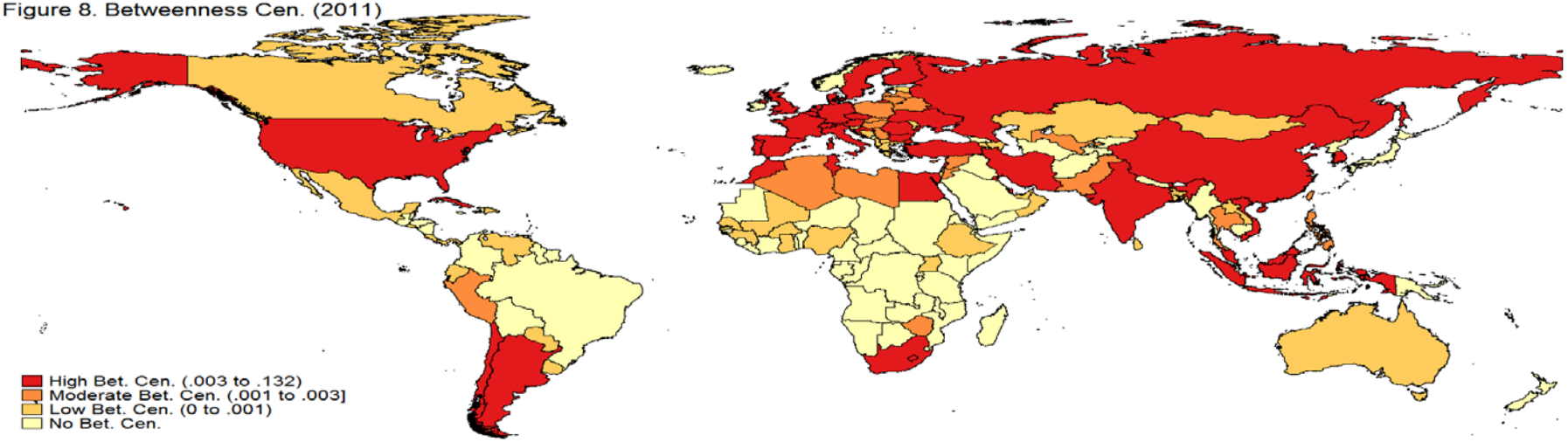


Figure 8. Betweenness Cen. (2011)



European powers such as Switzerland, Netherlands, Great Britain and Germany have been the first-movers in the BIT network as indicated by their scores of centrality in 1967. However, their increasing centrality in the next period is due to another phenomenon observed by Katzenstein. According to him (Katzenstein 1985), OECD's Draft Convention on the Protection of Foreign Property (1970) has inspired these countries to utilize bilateral investment treaties in order to regulate uncertainties in the international investment regime. Katzenstein also explains why Sweden is not a central country in the bilateral investment network despite its pivotal role in the FDI network. Since Sweden has chosen to invest in its welfare regime at the expense of inward FDI flows, she has employed a code of conduct and opened an office to bring bargaining rights to the government and welfare provisions to the trade unions. Germany, in addition to having the first-mover advantage since the very first BIT in 1959, has also been the most central country in all periods in terms of degree centrality, as stated in the previous chapter. Such a finding is consistent with other studies having demonstrated Germany as the most central country in different networks (Roth and Dakhli 2000).

Aside from Germany; China, Switzerland, France, Egypt, Great Britain, Italy, Netherlands, Belgium, South Korea, Luxembourg, Czech Republic, Romania, Turkey, India, Spain, Finland, Bulgaria, Ukraine and Russian Federation are the other most central countries in terms of degree centrality. Among these countries BRIC countries can easily be spotted, in addition to traditional great powers of Europe, Benelux countries and the EU member countries that have joined the union in the fifth wave of accession. Furthermore, there are regional powers that also serve as regional hubs for investment decisions in certain regions such as Middle East and East Asia such as Turkey, Egypt and South Korea. One interesting example is Ukraine which has significantly increased its centrality in the last two periods similar to other post-Soviet countries.

The second hypothesis of this thesis was how and to what extent emerging economies have sustained a catch-up in terms of FDI attractiveness and soft power, through central structural positions in the bilateral investment network. Increasing centrality of Asian NICs and BRIC (except Brazilian example which is explained in the second chapter) confirms the validity of my hypothesis to a large extent. These emerging economies are also noted for their centrality

in other research concentrated on different aspects of the international political economy (De Benedictis and Tajoli 2011; Fagiolo et al. 2007; Smith and White 1992).

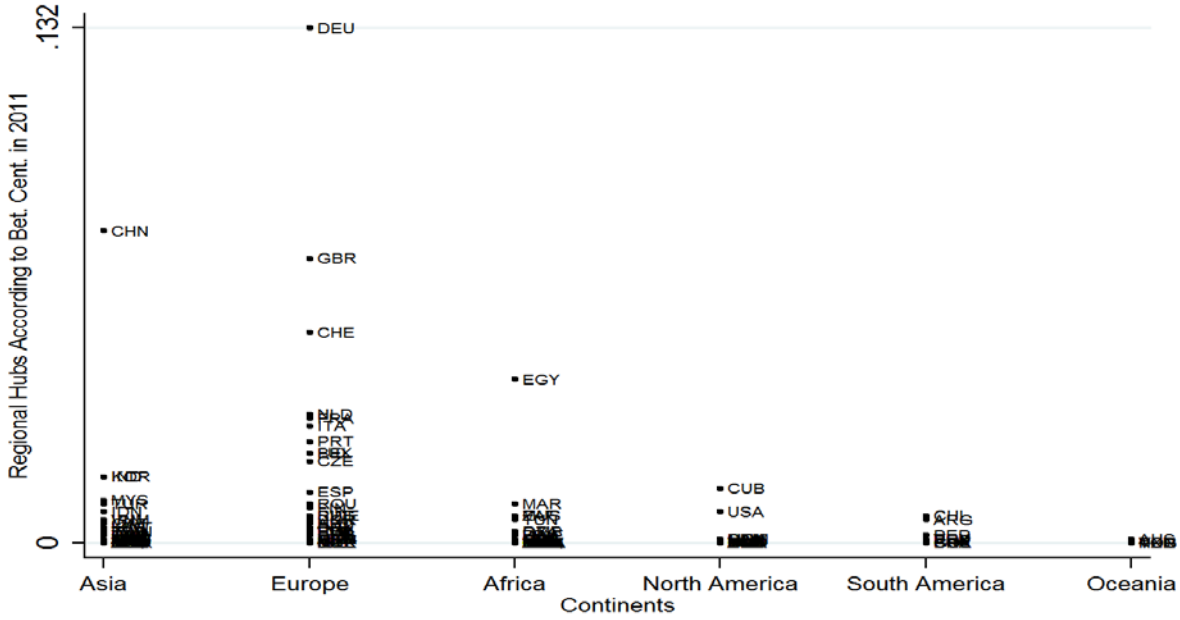
Regulation of the multilateral investment regime, such as the WTO agreement in 1994 or regional integration movements that have started including investment related provisions, can be defined as structural changes that affect actors' behaviors. Responses of countries to these structural changes vary. Whilst some countries may react to these structural changes more quickly, others become laggards in adapting to the new requirements or limitations of the international system. Hence, decreases in the betweenness centrality in later periods, especially after some degree of network saturation (growth at the node level stops in 2003) can be understood as a lagged reaction to changing patterns. Such decreases can indeed reflect less FDI attractiveness or lower soft power while countries that can reach faster increase their centrality, thus FDI attractiveness and/or soft power. Normalized betweenness scores, given in the Appendix D, reveal such pattern for some countries that have been relatively central nodes in the earlier periods due to their ties with less central countries of the period. Most of these countries that could not adapt to the changing environment of the global investment regime are European powers. Accordingly, United Kingdom, France and Switzerland are in this category. Malaysia, Romania, Poland, Tunisia, Australia, Zimbabwe and Hungary are other underachievers since 1994[24]. When we analyze the overachievers in terms of increasing betweenness centralities in the last two periods, India is the most successful country. In addition, two other BRICS countries, China and South Africa, are in this group. Other overachievers are Belgium, Italy, South Korea, Mauritius and Finland.

United States' and Canada's relatively low centrality scores, compared to other major powers in the international system, might be explained by the NAFTA and Mexico's degree centrality to some extent. Since BITs signed with Mexico provide European investors a pivotal hub in the region for their investments, Mexico has become a gatekeeper for North American investments. If RTA network (including the NAFTA) would be combined with BIT network, Mexico's betweenness centrality due to its role as an export platform would expectedly rise. Mexico does not need to provide further guarantees to North American investors through BIT ties since the Chapter XI of the NAFTA treaty has similar provisions. Therefore, without

[24] However, it should be noted that another reason why these countries have decreasing betweenness centrality scores in later periods is because of the increasing density, thus the growth at internal edge level.

being connected to Canada or the United States, its betweenness centrality becomes relatively lower. On the other hand, European investments in Mexico that aims greater market access in North America, such as Volkswagen's Mexico facility (Ingram et al. 2005), and BITs concluded to protect them increase its degree centrality to a considerable level.

Figure 9. Regional Hubs in the Bilateral Investment Network in 2011



Other researchers have previously indicated that a comparison of betweenness centralities of countries in the same region might reveal regional hubs within the network[25] (De Benedictis and Tajoli 2011). Assumingly, countries with higher betweenness centralities in each region would control a higher amount of flows (i.e. investment, information, or transportation); therefore be more influential than others given their role of brokerage. Germany, United Kingdom and Switzerland are the regional hubs in Europe whereas China, South Korea and Turkey play a similar role in Asia, and Cuba and the US are the regional hubs in North America. Even though Chile's betweenness centrality in 2011 is more than other nodes in South America, there is not a significant difference, thus a single regional hub cannot be identified in this region.

[25] Despite the fact that the importance of geographic proximity is lesser in FDI flows, thus in bilateral investment network when compared to the international trade, I find this comparison reliable given the fact that intraregional ties are demonstrated to be denser than interregional ties in the bilateral investment network.

Other findings of country-level analyses are also consistent with the literature. Accordingly, not only in intraregional trade within the EU as analyzed by other researchers (Roth and Dakhli 2000), but also in the bilateral investment network major European countries such as the Great Britain, Portugal and Spain demonstrate a consistent upward trend in terms of degree centrality over time. Again in a similar fashion, some researchers have found that while high levels of integration is achieved by Canada, China, Germany, Netherlands, Russia and South Korea, low levels are observed in Australia, the USA and Japan (Arribas et al. 2008).

Low centralities of the United States and Japan, in fact, constitute one of the most intriguing puzzles of the bilateral investment network. Since they are respectively the first and the third greatest markets in the global economy, they were expected to be central nodes in the bilateral investment network. The US and Japan respectively generated 24.85% and 4.25% of outward FDI throughout the world in 2010. Even though Japan has more outward FDI than inward FDI, United States also attracts 18.35% of annual inward FDI flows of the world (UNCTAD 2011b). However, USA is the 48th and Japan is the 132nd most central countries in the bilateral investment network as of 2011. As a matter of fact, one can argue that material capabilities of such countries do not necessitate any legal guarantee for their investments abroad since they can easily coerce others by their material capabilities. However, such an argument necessitates further investigation and perhaps detailed case studies in which the use of force by these states becomes apparent. Another potential cause behind this finding is argued to be one of the reasons why US has been a laggard in the BIT proliferation. Its insistence on the Hull Rule in the earlier periods and its insistence on tighter conditionality reduced the number of countries willing to negotiate BITs with the US. The latter argument is also true for Japan. Nonetheless, given the centrality scores of other developed countries that also impose tighter conditions in their BIT negotiations, this finding still necessitates a detailed examination.

While assessing the PTA centrality, Hafner-Burton and Montgomery find similar results for Japan and the United States (Hafner-Burton and Montgomery 2012). Even though they do not indicate causality for this finding, Feenstra does. According to him, another reason why Japan and the US are laggards in the BIT proliferation is due to their different production regime than other countries (Feenstra 1998). Since other countries, usually the most central nodes in my analysis, import the inputs for capital intensive goods to a large extent (for example, as of

1980 the share of imported inputs of total intermediate purchases is about 60% in Canada, 42% in France, 64% in Germany and 48% in United Kingdom); these two countries choose not to import their inputs and specialize vertically. On the other hand, these two countries are found to be the hubs of the RTA network by other researchers in a contradictory fashion with my findings (Manger et al. 2012).

In conclusion, non-central actors in earlier periods which are among the twenty most central nodes of 2011 have markedly tightened the gap in the long term. While developed countries are expected to do so, others especially developing countries have unexpectedly augmented their material and nonmaterial capacities in the bilateral investment network. Moreover, another observation can be made for the decreasing differences between these countries in later periods of the international integration. It is argued in this subchapter, as well as in the previous chapter on system-level characteristics, that a decreasing difference in country-level centrality scores, or in other words decentralization of the network in general, might reveal a core/periphery pattern. Increasing clustering coefficient in the later periods supports such assumption (Fagiolo et al. 2007; Roth and Dakhli 2000). Despite the fact that no clustering algorithm has been introduced for revealing the core periphery structure in this thesis, coreness scores for different periods will be used in order to assess this theoretical expectation.

As stated earlier, according to the network theory or in general structuralism, structures or relations shape individual attributes of actors (Hafner-Burton et al. 2009; Kim and Shin 2002; Wasserman and Faust 1994). In a similar fashion, world system theorists argue that these individual attributes are not independent but consequences of the structural positions of units in international exchange (Kim and Shin 2002; Smith and White 1992; Wallerstein 1974). Consequently, SNA and particularly network metaphor have long been used in order to reveal patterns of célèbre core-semiphery-periphery in the field of international trade.

Empirical investigation of world systems theory through SNA in the literature is not new. Since 1979, there are a number of diverse studies aiming to discover core-periphery clustering of countries in the international system by examining the trade relations (Fagiolo et al. 2007). However, such a study on international investment in my knowledge has not yet been conducted.

It is argued in the previous chapter that foreign direct investments play a significant role on the income levels of developing countries. Besides, BITs safeguarding these investments indirectly facilitate technology and social capital transfer to these peripheral countries. On the other hand, it is also argued that there are additional economic, political and sovereignty costs associated with these treaties. Even so, developing countries try to conclude additional BITs and commit themselves to the provisions of these treaties. Hence, BITs and good investment relations they maintain are assumed to sustain the shifts of developing countries from periphery to core. Most world system theorists underline this possibility that countries in the global system can move from one group to another but this structural change is mostly of a "dependent development" characteristic (Smith and White 1992).

From the perspective of the world systems theory, it can be argued that except the example of China the core countries are mostly major European countries that have started the BIT proliferation in order to protect their investments, especially in their ex-colonies. Moreover, overachiever countries that have climbed in the ranking might be explained as the growth of middle stratum, so called semi-periphery, rather than shifts to the core from the peripheral positions. Accordingly, Wallerstein argues that semi-peripheral countries are the ones that benefit the most from the geographical relocation of the production (Kim and Shin 2002) in times of economic downturn which, indeed, supports my argument about the countries serving as regional hubs in internationalized production chains. This economic downturn in the international economy corresponds to the second and third periods in my analysis when these contemporary core countries have steadily increased their centrality.

Conversely, it is argued in this subchapter that even (peripheral) countries with lower or no degree centralities in the early periods of the bilateral investment network have managed to shift to more central/core positions. This finding, similar to the analysis conducted by Kim and Shin (Kim and Shin 2002), fits well with the neoclassical economic theory rather than world systems theory. In fact, neoclassical economists argue that trade and investment liberalization result in specialization in specific goods and services; thus, countries generate and benefit from comparative advantages in these sectors (Kim and Shin 2002). Hence, globalization of production or increasing complexity of the bilateral investment network from the perspective of neoclassical theory will promote economic growth and allow all countries to change their structural positions in the international system. From this perspective, all

possible shifts to upper levels can be linked to this economic growth hypothesis in neoclassical theory.

On the other hand, according to world systems theory these shifts are not likely given the fact that inequality between countries favoring the core is a natural consequence of international exchange (Kim and Shin 2002; Smith and White 1992; Wallerstein 1974). A similar phenomenon is observed for the international investment. Most G8 countries are amongst the central nodes in the bilateral investment network, and they attract most of the inward FDI flows. Such asymmetrical characteristic of the foreign direct investment and bilateral investment treaties give notion to the world systems theory that argues unequal exchange as one of the most fundamental characteristics of the international system that discourages structural shifts from one cluster (e.g. periphery) to uppers.

Centralization is another issue in which these two theories contradict. If as neoclassical economists argue that if the bilateral investment network would become more decentralized over time, then shifts from periphery to core would be more likely due to rapidly increasing ties of developing countries. On the other hand, if the international network become more centralized or constant over time as the world system theorists argue, non-reciprocal investment ties from core to periphery would result in deepening of the gap between these groups of countries (Kim and Shin 2002). As analyzed in chapter three, bilateral investment network reveal a decentralizing pattern since the variance increases from 2.314 in 1967 to 261.162 in 2011. On the other hand, coreness scores in diverse periods of interest demonstrate to some extent which countries position themselves in the core and periphery. If there is such a shift from peripheral positions to the core, then the neoclassical hypothesis will be fully applicable to the bilateral investment network.

However, some emerging countries in the last years such as the Asian Tigers have managed to move from the peripheral positions to the core not only in the international economy in general but also in the bilateral investment network. In this manner, like international trade (Kim and Shin 2002), the bilateral investment network also proves that neoclassical theory is more suitable to the patterns emerging from the evolution and dynamics of the bilateral investment network. Figure 10 reveals the changing coreness scores of top twenty countries according to their coreness scores in 2011 (For coreness scores, see Appendix C).

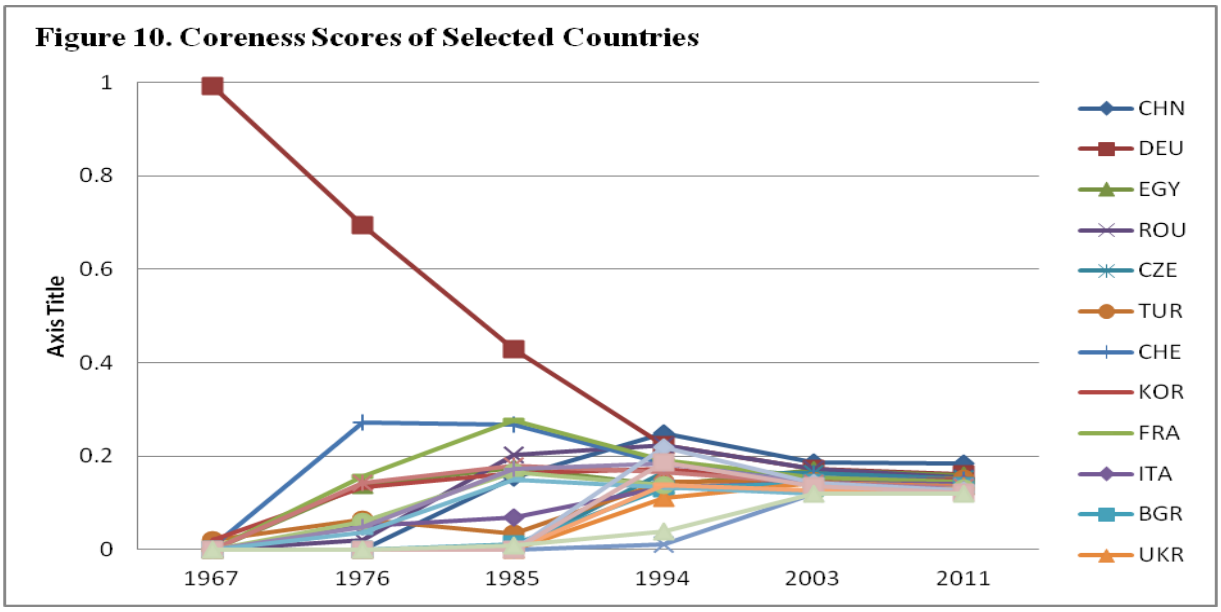


Figure 10 or in general the coreness scores reveal that structural shifts from peripheral positions to the core are observed in the bilateral investment network. Hence, rather than polarization and homogeneity as world systems theory claims; complexity and heterogeneity as predicted by neoliberal theory has increased. In this sense, it is not possible to confirm the applicability of the world systems theory for the bilateral investment network. It is not only because centrality in this network confers primarily to nonmaterial capabilities, so called soft or social power; but also due to the fact that foreign direct investment flows, albeit largely dependent on first-mover countries that have long positioned themselves in the core, have been directed towards the emerging middle-strata countries especially in the last years.

CHAPTER 5. EMPIRICAL ANALYSES

5.1 EMPIRICAL INVESTIGATION OF THE INTERNATIONALIZATION OF PRODUCTION

In previous chapters, I examine the increase in foreign direct investment flows, finding them to have far exceeded the growth in international trade since 1980s. Furthermore, the effect of developing countries in this increase is found to be statistically significant and more important than developed economies in the aftermath of the Uruguay Round. Accordingly, these countries are observed to have increasingly attracted such investments and become important players in the globalized production chains of MNCs (Büthe and Milner 2008). However, this substantial increase in the foreign direct investment flows and the economic activities of MNCs has raised relatively less attention among researchers. Even though globalization of production has been brought into the debate in the literature in parallel with and as a consequence of the structural change in the international economy since 1980s (Feenstra 1998), Gourevitch and his colleagues argue that there are only a few empirical studies investigating internationalized production chains (Gourevitch et al. 2000).

Internationalization of production is argued to be the distinguishing feature of the contemporary phase of globalization (Scheve and Slaughter 2004). Moreover, it is also found to be the driving force of economic integration in the literature (Weiss 1998). In fact, to the extent of my knowledge no empirical study in the literature traces this phenomenon through bilateral investment treaties concluded between countries constituting different steps in these production chains. Hence, my purpose in this subchapter is to present a preliminary example through an empirical analysis of two different production chains that are investigated in the literature by different authors.

The internationalization of production can briefly be described as a geographical relocation of certain steps of production through owned subsidiaries and internationalized production chains (Gourevitch et al. 2000) in diverse countries where lower factor and transaction costs or availability of diverse resources as inputs motivate foreign investments. Briefly, the effect on this phenomenon of the neoliberal economy or globalization in general might be explained through the increased access to information and liberalization of labor and capital (Gourevitch et al. 2000).

This disintegration of the production process is conducted through the combination of manufacturing or services performed abroad and in the home country. Such a horizontally-integrated mode of production represents a shift from vertically-integrated so-called Fordist production with an objective of gaining more profit by outsourcing some parts of the production process that are usually labor extensive (Feenstra 1998).

Low production costs are the most salient determinant of the globalization of production. On the other hand, another important determinant for the foreign investment decisions that received relatively less attention in the literature is labor skills. In this manner, I believe that expertise and education are equally important for goods that are especially capital intensive. Differences in labor in terms of skill and cost are parallel with the positions of countries in a production chain. In the HDD industry which is investigated by Gourevitch and his colleagues, the average labor cost in China is shown to be $.39 in 1999, whereas it was about $1.5 in Thailand and Malaysia and $6.29 in Singapore (Gourevitch et al. 2000). Accordingly, one might expect that whilst some countries would concentrate on labor intensive steps on the production chain, others would play more important roles in the final assembly or in the production of capital intensive parts or products. Thus, differences in skill and cost of the labor force explain why some countries have witnessed substantial shifts in the relocation of production activities and in the value chain (Gourevitch et al. 2000).

Aside from the cheap factor costs, MNCs usually take advantage of regulatory or trade policies in host countries through direct investments or in an indirect manner through subcontractors located in these countries (Feenstra 1998; Scheve and Slaughter 2004). Accordingly, Gourevitch and his colleagues underline the importance of public policy that welcomes foreign investments, in addition to the proximity to greater markets, suppliers and service activities (Gourevitch et al. 2000). Since MNCs provide considerable material benefits to host countries[26], public policy becomes a salient determinant for foreign investment decisions. First, through subsidies and tax holidays governments can promote certain investments. Second, in addition to company-specific economic policies; general incentives that include those provisions of BITs that were thoroughly examined in the second chapter are

[26] For example, Gourevitch and his colleagues argue that Seagate was the largest private employer in Thailand and Singapore in 2000 (Gourevitch et al. 2000).

diverse investor friendly policy options in the hands of developing countries. Hence, authors claim that public policy is also an important means of generating comparative advantage vis-à-vis other countries (Gourevitch et al. 2000). Thus, not only the differing horizontal integration capacities of MNCs (Gourevitch et al. 2000), but also through BITs and other public policies adaptability of countries to competitive pressures of the international structure are important determinants of how and to what extent countries benefit from this phenomenon.

Furthermore, Gourevitch and his colleagues argue that MNCs take previous investments of their competitors and customers in certain host countries into consideration before deciding on their investments (Gourevitch et al. 2000). In that regard, the signaling effect of BITs, which is also examined in the second chapter, might shape the FDI decisions and attract foreign investors to host countries.

In order to understand the dynamics of "multinational production regimes" (Kim and Shin 2002) researchers use process tracing techniques (Feenstra 1998; Gourevitch et al. 2000). In a similar fashion, it is necessary to trace BITS over these production chains in order to assess the validity of the underlying assumption of this thesis. It is assumed in this thesis that real world investment flows can be understood through an examination of BITs that bring legal guarantees to these investments. Since BITs are not multilateral in nature, such production chains diffused between more than two countries necessitate a series of BITs. However, capital can indirectly arrive at its destination through a number of intermediate countries and subcontractors (Arribas et al. 2008). Hence, not only foreign investments in a particular host country but also direct or indirect investments in third countries may constitute diverse steps in a production chain (Feenstra 1998). In this way, if there is a direct investment without the indirect intervention of a subcontractor of another country, then the process might be traced through BITs that the home country of a MNC concludes. Moreover, such direct investments should be legally protected by BITs in order to be apparent in our network.

Two empirical investigations are taken into consideration in this subchapter. They focus on the production chains of hard disk drives (Gourevitch et al. 2000) and Barbie dolls (Feenstra 1998). It should be noted that production and value chains beyond these two sectors, especially in the consumer electronics and information technology industries have been

internationalized since the 1980s. For example, American MNCs have internationalized their production chains particularly in Asian countries where factors of production are relatively lower (Gourevitch et al. 2000; Kahler 2009).

Although these two examples use the same technique for the investigation, they differ to a large extent since the former is a capital intensive product that necessitates highly skilled labor and a more complex production chain whereas the latter is an example from the toy industry that largely benefit from low cost labor. However, labor cost only represents a small percentage of final assembly costs in the HDD industry (about 5%). In fact, the biggest share in the production cost in this sector is in research and development which takes place in developed countries such as the US and Japan (Gourevitch et al. 2000).

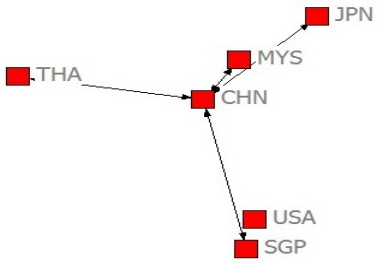
Seagate's production chain, as the leading MNC in this industry, is observed to be diffused in six different countries: United States, Singapore, Malaysia, Thailand, and China. In this production chain, while the final assembly is made in the US (5%) and Singapore, other parts of production are diffused in Malaysia, Thailand and China. As stated earlier, the differences in terms of skill and cost of labor define which part of the final product is assembled where. Since the labor costs cited above reveal the differences in terms of skilled labor in these countries, the most important Asian country in this production chain is Singapore. Thus, Singapore, one of two primary locations of final assembly in the hard disk drive industry, hosts 64% of the world production (Gourevitch et al. 2000).

In addition to the example of the production chain of Seagate in the HDD industry, the examination of Barbie doll production provides another example. In this production chain, raw materials are obtained from Taiwan and Japan, but assembled in Indonesia, Malaysia, and China whereas the molds are produced in the United States. For a $10 Barbie doll, 35 cents cover Chinese labor, 65 cents go to raw materials and $1 covers transportation and overhead including the profits of manufacturing firms. From the sale, the producer MNC, Mattel, earns at least $1 and the rest of the cost covers the product's transportation, marketing, wholesaling and retailing in the United States (Feenstra 1998). Figure 12 observes these production chains through BITs concluded between countries constituting different steps in consumer electronics and toy industries.

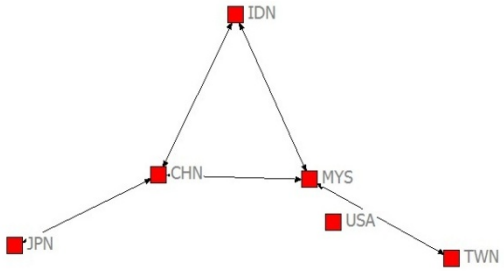
As shown in Figure 12 revealing the BITs between countries that are part of the production chains of Seagate and Mattel (extracted from the dataset employed in this thesis), both production chains include the same number of countries. However, Thailand and Singapore, which are important countries for the first production chain, are not part of the second which is a labor-intensive example. Instead of these two countries, Taiwan and Indonesia are part of the production chain in the Barbie Doll production. Since not only labor costs explain these differences between Asian countries, degree centralities of all countries in these two production chains are given in the Figure 13.

Figure 11. Production Chains of Investigated MNCs

Production Chain of Seagate



Production Chain of Mattel



In Figure 12, although the Asian countries in these two examples are part of the ASEAN+3 or the APEC initiatives, it is observed that they are all part of the BIT networks of observed production chains. In other words, investment and trade related provisions of these regionalization incentives do not reduce the need for BITs to bring further legal guarantees to these investments.

From a conventional perspective, low factor costs of production should be the main argument behind the relocation of the production, so-called internationalization of the production phenomenon. However, developed countries with relatively expensive factor costs still receive the majority of inward FDI throughout the world. Hence, the evidence contradicts the

expectation. Weiss underlines the importance of technology related expenses which are more costly than variable costs (i.e. labor and raw materials) in order to explain such contradiction. Hence, the inexistence of BITs between the US and Japan, albeit they are the main benefactors of this phenomenon, should also be investigated (Weiss 1998).

The USA, because of the reasons explained in other chapters, has not concluded bilateral investment treaties with any other country in the network. I believe that most prominent reason behind the US' choice is related to its differentiated production regime. As argued in the fourth chapter, US' production regime is different from other great powers. The US does not specialize vertically, and US-based MNCs invest in other countries, mostly Asian, for final assembly. Accordingly, Feenstra points to this different production regime in his article. While the final assembly of HDDs produced by a sector-leader MNC, Seagate, is taken place in Singapore, the final assembly of another sector leader MNC, Mattel, is done in China. On the other hand, other great powers observed in Feenstra's article choose to assemble their production largely in their home countries (Feenstra 1998). In other words, the 'made in' label in the consumer electronics sector led by the US and Japan usually refers to other Asian countries, whereas central great powers in the bilateral investment network choose to specialize vertically and mostly names of these countries are written on made in labels.

Figure 12. Degree Centrality Scores of Examined Countries

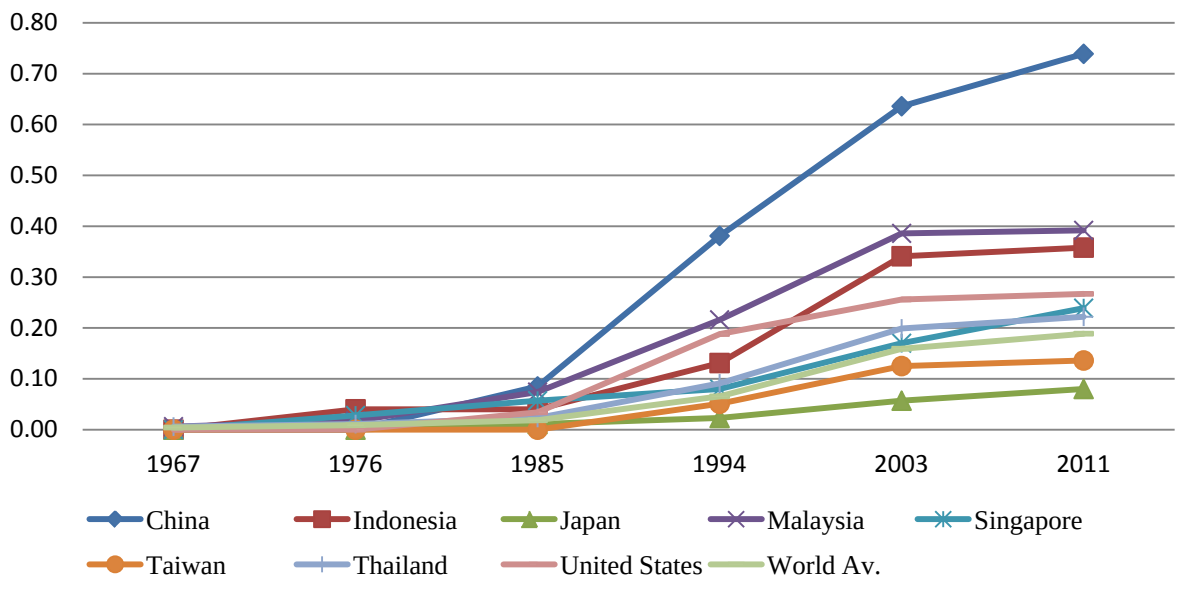


Figure 12, on the other hand, reveals the changes in the structural positions of these countries in the bilateral investment network after these production chains were investigated by Feenstra and Gourevitch. Accordingly, what is observed in Figure 13 is that almost all Asian countries that have benefited from the internationalization of production have increased their degree centralities more than the world average. However, Japan, the other example, which is found to be an outlier in the bilateral investment network reveal a similar pattern to the global trend. On the other hand, countries such as Indonesia, Malaysia, and China that are underlined by their cheap factor costs in the empirical investigations referred in this section are the most successful ones in the last two periods. Since these countries are arguably playing more important roles in the labor intensive steps of these production chains, it might be hypothesized that the phenomenon of the internationalization of production phenomenon results in a new international division of labor.

What is underlined by researchers claiming the emergence of a new international division of labor paralleling the increasing globalization is the fact that capital flows towards to the Third World can be explained by lower factor costs of production in these countries (Smith and White 1992). On the other hand, in both hypotheses, catch-up process or structural shifts from one level to the uppers are limited due to strong path dependence in the global system. Consequently, despite these internationalized production chains, the control of the MNCs (thus the control on the production) is in the hands of US-based multinational firms. Thus, authors argue that the internationalization of production does not mean losing control of the production chain (Gourevitch et al. 2000). Moreover, as stated earlier, low labor cost as the primary motivation for FDI decisions constitute a small percentage in the total production costs. Indeed, not only the largest share of profit but also the largest share of the production costs (i.e. R&D) stays in home countries. In that sense, despite the enormously developing economies of Asian NICs and some BRICS countries playing important roles, there is a consensus in the literature about the growing difference between core and peripheral countries as a result of these internationalized production chains.

Although the path dependency in the global system is often discussed in the literature, nonmaterial gains of countries or soft power in the bilateral investment network is not thoroughly investigated. Since this thesis mostly investigated the effect of central structural positions on nonmaterial gains of countries (i.e. soft power), I believe that this empirical

investigation of internationalized production chains over the BIT network will present a preliminary step for future research. Contrary to the theories arguing against the decentralization of the world economy, what I observe at least for nonmaterial power is an increasingly decentralizing pattern and a rapid tightening of the gap between core and peripheral countries. Conversely, most Asian countries in the production chains observed in this section seem to have already caught up to the core countries of previous periods.

5.2 SIMILARITY AND INTERDEPENDENCE IN DYADIC ANALYSIS OF BILATERAL INVESTMENT TREATIES

In the second chapter, bilateral investment treaties were examined from a historical perspective, and from the perspectives of the international law and international political economy. It is discussed that BITs have changed their nature since 1990s, especially in the aftermath of the Uruguay Round, and become a widely used instrument in regulating the international investment regime. From the historical perspective, whereas the previous BITs were usually between two countries having noticeable differences in terms of their material and nonmaterial capacities; an investigation on contemporary examples might indicate a contrasting pattern. In this subchapter, these different patterns and diverse explanations from the sociological institutionalism literature will be empirically analyzed. Furthermore, from the perspective of the international political economy; other potential reasons than FDI related economic objectives, such as foreign policy objectives about why a growing number of countries have concluded these treaties are also argued in the second chapter. In this manner, dyad level empirical analysis also serves to assessing whether or not these treaties are of political or solely economic character.

5.2.1 Contracting Parties from the Perspective of Sociological Institutionalism

In sociology, there are distinct types of isomorphism which can be broadly defined as the inclination of different organizations to conform to their institutional environment. Coercive isomorphism underlines coercive factors as causes of this isomorphism while mimetic isomorphism reflects the adoption of practices that are prevalent in other organizations through imitation. On the other hand, normative isomorphism can be described to take place due to the effect of certain professionals that share common understandings about the practices (Gilardi (forthcoming)). Nevertheless, there is always a counterargument, homophily[27], against this institutional isomorphism theory (Gilardi (forthcoming)). In this subchapter, similarities and dissimilarities between the contracting parties of BITs in different periods will be examined in order to improve the understanding of contracting parties and test these two hypotheses which are often discussed in the literature.

[27] Homophily refers to the situation in which countries sharing same characteristics become more likely to sustain ties that connect them.

Political scientists and sociologists argue that information diffusion takes places in networks through copycat behavior, persuasion or coercion (Hafner-Burton and Montgomery 2010). In fact, information diffusion theory corresponds to what was argued in the second chapter by the draft treaties that are frequently employed by developed actors. As indicated, bilateral investment treaties have become alike, since most leading countries have adopted similar draft agreements in negotiations with their relatively less developed partners. Given the fact that these countries are usually the most central ones in the network, such a diffusion of information in a conscious fashion might be possible through coercion (i.e. when the partner is in need of FDI), persuasion (i.e. when the developed party has the influential capacity due to the power asymmetries between contracting parties) and imitation (i.e. when the newcomers to the bilateral investment network prefer negotiating treaties with these central countries).

Thence, information or policy diffusion in the bilateral investment network might be observed through the draft agreements with similar provisions, and acceptance of neoliberal economic ideas in terms of investment liberalization and investment promotion. In fact, international policy diffusion is a systematic adoption of policy decisions in other countries. Since the cumulative number of BITs, as well as the number of countries integrated into the bilateral investment network, has substantially increased in later periods; systematic adoption of provisions of BITs, which is also consistent with the customary international law status of these treaties, is also discussed in the second chapter.

In the second chapter, coercion is debated to be the reason why some developing countries have been obliged to adopt tighter conditions in their BITs with developed OECD countries. Developed OECD countries with more material and nonmaterial capabilities have salient influential capacity on the behaviors of others because of the power asymmetries they use in order to diffuse certain policies (Goderis and Versteeg 2011). Thus, not only legal guarantees to existing foreign investments in a host country but also foreign policy objectives can be diffused and promoted through BITs. Indeed, an example for such promotion of foreign policy objectives is the investment liberalization which is discussed to be aimed by the US in BIT negotiations, in contrast to investment promotion which ought to be the major purpose of these negotiations.

Neorealist theory argues that the anarchic structure in the international system forces countries to be aware of changes in the relative power of other actors (Baccini and Dür 2011). Accordingly, a treaty signed by a competitor or rival state should theoretically force others follow the former in order to retain their relative power and structural position (Baccini and Dür 2011). Hence, competition is the second form through which policy diffusion might be observed. Competing for relative power or material benefits such as foreign capital are different means of policy diffusion as a consequence of competition (Goderis and Versteeg 2011).

The third type of policy diffusion is learning (Goderis and Versteeg 2011). "Bayesian learning", which can be defined as change in the beliefs of individual actors related to the choices of others, can take place if any country receives material benefits from concluding a treaty. In that sense such learning experience, in addition to the realist understanding of power, can be understood as a reason why nodes augment their centrality in the bilateral investment network. Conversely, it is widely accepted that such learning may be "channeled" through social networks of which actors are members (Goderis and Versteeg 2011). Furthermore, as some authors argue "learning through legal similarity", or in other words as theory of sociological institutionalism describes it -normative isomorphism-, might play a prominent role in the policy diffusion. In this context, actors with similar backgrounds (i.e. cultural or economic similarity) are intended to adopt similar policies and instruments (Goderis and Versteeg 2011). Such practices are revealed in the second chapter to take place in the meetings of francophone countries in which more than forty BITs were signed.

Lastly, it is argued in the literature that acculturation or in other words adoption of behavioral patterns of the surrounding culture is the fourth category under which policy diffusion can be observed (Goderis and Versteeg 2011). Since BITs become the main institutional instruments in regulating the international investment flows, countries take these treaties for granted without even considering their potential benefits and costs. In other words, global blueprints might be adopted not because of their effectiveness but due to their legitimacy in the international system. Indeed, Neumayer and Spess describe this belief as the signaling effect of BITs. Credible commitment in the eyes of foreign investors through a number of strange BITs might also be considered to be serving to legitimacy rather than economic benefits. Hence, the content becomes less important than the social interaction in which adoption of

such policies result (Goderis and Versteeg 2011). I think this may be the case why some countries do not benefit from the BITs they conclude to a large extent, whilst others significantly do so. This assumption is, in fact, proved by interviews conducted for other research on BITs (Skovgaard Poulsen and Aisbett 2011), which reveals the lack of information in bureaucrats and diplomats who have signed them about the provisions of these treaties.

Heterophily, in contrast to homophily, refers to situations in which two actors form ties in order to maximize their advantages or minimize their disadvantages (Hafner-Burton et al. 2009). Dyadic interdependence might be one of the reasons why a pair of countries concludes a BIT. Thence, dissimilar countries might be more likely to conclude BITs among themselves. Assumingly, most BITs that aim bringing legal guarantees to foreign investments or attracting more FDI by committing to investor rights would be in this category given the hierarchical structure of contracting parties. As a matter of fact, only some BITs would capture the homophily argument if they are signed between role and structurally-equivalent countries, or in other words between two developed or two developing countries that share common attributes.

Assessing whether homophily or the heterophily is the reason why countries adopt similar structural positions and conclude similar treaties is empirically difficult. According to Gilardi (Gilardi (forthcoming)), dyadic approach and spatial regression are two methodologies that can be benefited in this manner. Since the former makes it easier to take relational variables into account and allows a direct operationalization of different types of interdependence, dyadic approach is used in this chapter for the empirical analysis of bilateral investment treaties. In fact, there are other examples in the literature that benefits from the same methodology on empirical analyses on non-directed dyads in assessing whether or not separate events are present in a dyadic relationship in a given period (Baccini and Dür 2011; Gilardi (forthcoming)). Dyads observed in the logistic regression are non-directional; thus there is no distinguishing feature between countries X-Y and the reverse country pair Y-X.

Dyadic dependence through which the institutional isomorphism is tested has two dimensions according to Maoz (Maoz 2009). While the *extent of dependence* can be measured by the magnitude of change in an actor's behavior as a result of a unit change in another, the *scope*

of dependence is the number of dimensions through which interdependence takes place. In addition to traditionally tested international trade flows between two nodes in a given network, other military, political or economic relations between pairs of a dyad can affect the scope of dyadic dependence. In the next subchapter, different explanatory variables that are hypothesized to affect the scope of dyadic dependence and homophily between contracting parties will be briefly explained.

5.2.2 Explanatory Variables

Demonstration effect is one of the important findings of research concentrated on the relationship between FDI and BITs. Accordingly, authors argue that the experiences of others influence behaviors of similar countries. Such similarity can be attributed to geographic proximity or other factors causing a cultural relationship that makes the communication easier (Baccini and Dür 2011). In addition to these relationships between a country pair in a dyad, which are hypothesized to increase the similarity and thus decrease the likelihood of a BIT; other explanatory variables, such as nominal GDP, GDP per capita, and colonial heritage are often incorporated in conventional gravity models of trade (Stein and Daude 2002). In my understanding, bloc formations in the Cold War Era (i.e. alliances) and foreign policy objectives (e.g. coercion) are also crucial indicators in assessing whether homophily or heterophily result in conclusion of bilateral treaties. Hence, these explanatory variables tend to disclose any pattern in dyadic relations rather than just being politically relevant. Moreover, contrary to the arguments in the literature that emphasize the political character of these agreements, I believe that BITs, which are negotiated on similarities and dissimilarities between a country pair, would be observed less frequently than those concluded with economic concerns. Indeed, it is stated in the second chapter that the main purpose of these treaties is to bring legal guarantees to existing investments and attracting inward FDI through commitment to legal guarantees to foreign investor rights. A dyadic analysis investigating these patterns would also reveal whether or not factors other than FDI-related economic objectives play a pivotal role in the conclusion of these treaties. Summary statistics for all variables incorporated into the dyadic analysis in this section are given in Table 4.

Cultural Similarities and Interdependence:

While compiling the dataset for this thesis, one of the salient features of early BITs that captured my attention was that BITs were more frequently concluded between colonized countries and their colonizers. Developed countries with histories of imperialism have higher income levels than the relatively younger ones. They may have benefited from their historical ties with younger countries in order to exploit the investment opportunities in these countries.

Hence, I found incorporating a dichotomous variable useful to check the validity of this claim and coded the 'colrel' variable from the COW dataset (COW 2002) that controls for whether there is a history of colonization between two countries. In order to not overestimate the importance of these historical ties among countries, I limited the historical background with the First World War and only coded these ties as positive if the colonial history extended past 1914. Moreover, in order to check whether being colonized by a certain country, thus speaking the same language or sharing a similar cultural heritage, would increase the probability of signing a BIT, I included a 'culrel' variable[28]. This independent variable will be positive if a country pair is colonized by a same country. Diverse studies in the literature also incorporate these variables as time-invariant explanatory variables (Baccini and Dür 2011; Elkins et al. 2006; Goderis and Versteeg 2011; Lupu and Traag 2010; Neumayer and Spess 2005; Pinto et al. 2011; Stein and Daude 2002).

Political Relevance:

In the COW dataset (Singer et al. 2011), politically-relevant dyads are defined as country pairs in which include the presence of a major power within the international system in a given year . Major power status has been attributed according to the national capabilities index (CINC). The COW dataset identifies seven countries as major powers in the 21st century. Since these major powers are also developed G8 countries, dyads in which one of these countries is present are coded as positive under a dichotomous variable, labeled as 'g8rel'. According to the second hypothesis tested in this thesis, emerging countries have become more influential in the bilateral investment network in later periods. In order to test

[28] Despite the fact that sharing the same language increases the similarity of countries, thus represents a potential competition in terms of investment attractiveness; it also reduces the transaction costs by eliminating language differences and associated costs (Hegre et al. 2010; Stein and Daude 2002).

this hypothesis, I generated another explanatory variable based on the G20 grouping. 'Glastrel' takes a positive value if a country in a given dyad is an emerging G20 member. Differences between the coefficients of these two variables in successive periods are hypothesized to explain the diverging patterns of preferential attachment of developing countries to the former or the latter group.

Income Level:

Another important aspect of material power is related to the economic capacities of countries. Since I argue in the second and fourth chapters that middle-strata countries have started to increase their influence in the bilateral investment network through various treaties with other semi-peripheral and peripheral countries, two different variables are incorporated into the analysis in order to evaluate this argument and that of the diversifying patterns of contracting parties.

Classification of countries according to their per capita income levels is a method used in other research (Manger et al. 2012). Although there are a number of macroeconomic indicators I might have incorporated into the analysis, I chose the GDP per capita (ppp) and borrowed the data from the IMF dataset in order not to overestimate the importance of some countries with larger populations or underestimate the differences in income levels by not taking inflation into account. Since diverse cut-offs for the categorization were possible, I chose to divide observed values into three categories representing high-income, middle-income and low-income countries.

Like RTA formation, but unlike bilateral trade flows; BITs are, as expected, between a high-income and a medium or low-income country. On the other hand, as stated in the previous chapter, there are strange BITs between two low-income countries; whereas the changing patterns of the international investment regime, as well as the catch-up of some emerging countries, makes BITs between middle-income and low-income countries likely. In this context, what we witness, I believe is that the purpose of middle income countries to benefit from the promising markets and natural resources in low-income countries. Besides, low-income countries aim to attract more FDI by committing themselves to liberalization of the investment regime and to investor rights through bilateral investment treaties.

Moreover, such a categorization is intended to capture hierarchy in the network that is observed in diverse analyses. A hierarchical categorization is also hypothesized to change the probability of tie formation to some extent (Manger et al. 2012). In fact, I incorporated two dichotomous variables based on GDP (ppp) per capita: The first one accounts for the similarities between countries of the same income level, and receives a positive value if such a relationship is present ('increl'). The second indicator accounts for dissimilarities and codes a positive value for economically relevant dyads taking if one party is categorized as high-income level and the second one is in a lower income category ('econrel').

Geographical Location:

Unlike trade, it might be argued that investment decisions are less dependent on transaction costs since overseas investments constitute most foreign investments. On the other hand, the globalization of production phenomenon has increased the importance of geographical proximity in terms of reducing the transaction costs between a country pair which both constitute different steps in a production chain.

Moreover, countries that are close to one another are more likely to have similar income levels or roles in the international economy that make them competitors in terms of FDI attractiveness. Although employing three different variables to capture geographic proximity reduces the degrees of freedom to some extent; I incorporate three explanatory variables into the analysis that indicate the continents on which countries are located and the distance between and contiguity of a country pair.

The literature suggests that distance and contiguity are imperfect but complementary measures which appropriately capture contiguous countries with capitals far apart (Baccini and Dür 2011; Goderis and Versteeg 2011; Oneal and Russett 2005). I measure distance between capital cities in metric values using Gleditsch's dataset (Gleditsch 2012). The first category in 'geogrelkm' includes distances less than 1000kms, the second category is between 1000 and 2500 kilometers, the third is between 2500 and 5000, the fourth is between 5000 and 7500 and the fifth includes the distance between capitals in excess of 7500 kilometers. Contiguity, 'contigrel', is a different measure I adopted from the COW dataset and EUGene (Bennett and Stam 2000). It is a six-point scale that takes a value of 1 if two countries are contiguous on land, 2 to 5 if two countries are separated by water and 6 if they are not

contiguous. In addition, identifying the continent countries are located on is another measure sometimes employed by researchers as a control variable (Lupu and Traag 2010). Hence, I introduce a dichotomous variable ('contrel') coded using data from the United Nations web site (UNdata 2012) which takes a positive value when two countries in a selected dyad are located in the same region and controls for a potential impact of regional integration incentives.

Structural Position in the Bilateral Investment Network:

Structural equivalence assesses the similarity of actors' positions in a network by measuring the share of same ties with same actors (Gilardi (forthcoming)), and assumes that structurally-equivalent nodes will behave in a similar fashion (Hafner-Burton et al. 2009) as a result of having the *same pattern of ties* (Roth and Dakhli 2000). On the other hand, there is a difference between structural equivalence and role equivalence. Countries of similar income levels that are competitors in FDI attractiveness may be role equivalents, but they may become structurally different as a result of their choices in terms of concluding bilateral investment treaties with diverse countries. Hence, structural difference does not necessarily correlate with the income levels or actual investment flows.

Polillo and Guillén (Polillo and Guillén 2005) argue that structurally-equivalent actors may imitate one another due to competitive pressures (Gilardi (forthcoming)). Either because they try to generate a legal guarantee for their investments abroad or because they aim to attract FDI through BITs, two competitor countries in a dyad would less likely to sign a BIT. Consequently, I assume that the structural equivalence scores and likelihood of concluding a BIT would be negatively correlated.

Incorporating a measure for structural equivalence is indeed not an original methodology. Maoz and his colleagues have introduced the same measure to test if affinity, the similarity of preferences between a country pair reduces the probability of conflict (Dorussen and Ward 2010). In order to measure such similarity, structural equivalence scores were obtained from the BIT network for each period. Then, these scores were recoded into four point scales according to equal frequencies of structural equivalence scores in 2011. Since structural equivalence in a given period is hypothesized to have an effect on the behavior of actors in the following period, these scores are lagged for one period.

Table 4. Summary Statistics for Independent Variables

Definition	Variable	N	Min	Max	Std. Dev.	Mean
Same Continent	contrel	31152	0	1	0.42	0.22
Distance btw. Capitals	geogrel	31152	1	5	1.17	3.96
Contiguity	contigrel	31152	1	6	0.72	5.88
Dyad Including a G8 Country	g8rel	31152	0	1	0.28	0.09
Dyad Including an emerging G20 Country	glastrel	31152	0	1	0.33	0.12
Same Income Level	increl	31152	0	1	0.41	0.22
Economically Relevant Dyad	econrel	31152	0	1	0.47	0.34
Shared NATO Membership	natorel	31152	0	1	0.15	0.02
Shared COMECON Membership	comerel	31152	0	1	0.23	0.06
Shared Non-Alignment Membership	nonalrel	31152	0	1	0.13	0.02
Colonized by the Same Country	culrel	31152	0	1	0.31	0.11
History of Colonization	colrel	31152	0	1	0.09	0.01
Structural Equivalence in 2011	se2011	31152	0	3	1.11	1.52
Structural Equivalence in 2003	se2003	31152	0	3	1.11	1.3
Structural Equivalence in 1994	se1994	31152	0	3	0.8	0.41
Structural Equivalence in 1985	se1985	31152	0	3	0.29	0.05
Structural Equivalence in 1976	se1976	31152	0	2	0.22	0.03
Structural Equivalence in 1967	se1967	31152	0	1	0.11	0.01

Historical Alliances:

I believe that one of the salient characteristics of both the Cold War and post-Cold War periods is related to the political preferences of countries in the form of bloc memberships. Although certain countries have converted into market economies, thus adopted neoliberal economic policies in the post-Cold War era, such historical ties remain crucial in determining

contemporary economic interactions. Therefore, adding dichotomous variables controlling for past alliances into the dataset was vital for understanding the foreign policy choices. Moreover, such variables would also capture why tighter relations among certain groups of countries are observed whereas others do not choose to cooperate in terms of investment opportunities. A change in the alliance choices of a country would more likely result in diversifying and augmenting the number of interactions. Such differentiating choices are assumed to be more likely to be observed in post-Soviet countries adopting a different economy policy. Therefore, incorporating three binary variables that take positive values if two countries were members of the same bloc, namely NATO, the Warsaw Pact/COMECON and non-alignment; would control for the BITs concluded with foreign policy objectives rather than solely FDI related concerns. Other researchers also introduce similar measures into their analyses in order to capture the political change in particularly ex-socialist countries (Egger and Pfaffermayr 2004).

Time Trend:

In a dyadic analysis, there is always the risk of underestimating the endogeneity arising from the interdependence or the attractiveness of a country in a dyad to others non-connected. In addition to time-varying variables and node-level characteristics, structural effects should be incorporated into analyses in research spanning a long term (Manger et al. 2012). In addition to the structural equivalence scores for different time intervals that control for structural changes in the network, incorporating period dummies that capture the time trend is intended to resolve this potential problem. Hence, same period dummies that have been introduced in the analyses in chapters three and four are analyzed in this subchapter as dependent variables to control for the effect of given explanatory variables on the BITs concluded at the end of each period.

5.2.3 Dyadic Analysis on Bilateral Investment Treaties

Dyad-level logistic analyses on the conclusion of bilateral investment treaties in consecutive periods with same explanatory variables provide the reader an understanding of the changing patterns of contracting parties, as well as changing objectives of these countries. Before explaining the findings of analyses, it should be noted that the dichotomous variable capturing

the shared membership in COMECON or the Warsaw Pact perfectly predicts failure before 1990s as these ex-socialist states are founded after the dissolution of the USSR and there is no succession issue in the referred datasets. Hence, this variable is only incorporated into the analyses from fourth period onwards. It should also be noted that no separate logistic regression for the first period is reported because the structural equivalence scores are lagged for one period. Though, such a loss is acceptable given the fact that only 65 treaties were concluded before 1967. Coefficients and standard deviations for each variable in diverse periods are given in Table 5.

The most prominent effect on the likelihood of a BIT would expectedly be observed through different economic factors, because BITs are argued to be concluded by mostly economic concerns rather than any other cause. Assumingly, if one part of the dyad is of the upper or middle-upper income level at the global level, then the probability of the presence of a BIT would be higher due to the investment opportunities that might be generated by richer countries. Incorporating GDP (ppp) per capita into the analysis may also serve to assess the validity of the claims about the cost of production that makes a home country favorable in the eyes of foreign investors, since green field investments are usually directed toward countries where the cost of production is relatively cheaper. In other words, lower income levels would result in higher desire on both the investor and receptor countries to maintain good investment relationships. Hence, while countries with low levels of income would desire to attract FDI, countries with higher income levels would desire to direct their investment opportunities to places where the cost of production is relatively lower than their countries. In this manner, I would assume that if one part of the dyad has a higher income level than the other part would have a lower income. However, certain characteristics of contemporary production networks and the literature may contradict this assumption. The literature suggests that even the richer countries choose to invest in one another for capital intensive products. Moreover, soft power in particular or prestige in general is desired by countries with large capabilities. These countries would not hesitate to use their influence in order to balance their relative power (Dorussen and Ward 2010). Hence, what I expect if a given dyad includes a great power is that coercive mechanisms can take place in order to conclude a BIT.

Two dummy variables controlling for developmental levels of signatory parties reveal different patterns. The coefficient of the ‘econrel’, which controls for the existence of

economically relevant dyads, is found to have a greater effect before the Uruguay Round than it has in the post-Uruguay Round period. Both variables, namely the 'increl' and 'econrel' are statistically significant at 99% confidence interval in all periods. Moreover, despite its decreasing importance in the post-Uruguay round period, the presence of a high income country in a dyad has always a greater likelihood than a country pair of similar income levels. Hence, I may argue that although strange BITs are underlined to become apparent by scholars, as it is indicated in the second chapter, BITs between countries with similar income levels are rare when compared to frequency of hierarchical structure between contracting parties.

In parallel with the decreasing trend of treaties signed with developed G8 countries in later periods until 2011, the coefficient of 'increl' expectedly and significantly increases since early 1980s. This finding, in addition to the centrality scores of these middle-strata emerging countries discussed in the fourth chapter, largely proves my hypothesis that emerging countries have increased their salience in the bilateral investment network since 1990s. A comparison of coefficients of these two variables until the negotiations of the Uruguay round (i.e. third period starting in 1986) reveals that the likelihood of a BIT emerging between a developed and a developing country is less than that of a BIT between an emerging and a developing country. Indeed, the coefficient of the politically relevant dyads (i.e. if a country is a G8 member) in the fifth period is statistically insignificant. This finding is consistent with the internationalization of the production theory and will be examined in the following subchapters in detail.

Another important finding of the dyadic analysis concerns cultural similarity. The dichotomous measure, labeled as 'culrel', was intended to capture the effect of two countries sharing similar cultures as a result of being colonized by the same country. Despite its significance in almost all periods, its effect on the likelihood of conclusion of a BIT is negative except the last period.

Given the explanation in the second chapter about the conferences organized by leading European countries gathering countries having colonial relationships and the series of BITs concluded in these organizations in the last years, such an effect is expected. Moreover, I might argue that due to the saturation in the bilateral investment network, such agreements are

intended to serve to signaling effect rather than being signed with direct economic objectives. Accordingly, participant countries to these conferences conclude several BITs and demonstrate their commitment to investment promotion and good political relations with the organizer country.

Like cultural similarities, geographical proximity between contracting parties is also hypothesized to have a negative effect on investment decisions, thus on the likelihood of bilateral investment treaties that serve to bring legal guarantees to these investments. Unlike trade; contiguity, distance and the experience of being located on the same continent do not have significantly positive effects on investment decisions, especially in earlier periods. Contiguity, for example, is only statistically significant in the third period. Contiguity is measured on a six point scale adopted from the COW dataset. A coefficient score of .221 corresponds to a 24.8% increase in the probability of concluding a BIT until 1985 for one point increase on this scale. Since this six-point scale ranges from sharing a land border towards sharing no border, it can be argued that this finding proves that countries having no shared borders have a likelihood of 124% more than a country pair sharing a land border. In a similar fashion, 'geogrelkm' reveal that the effect of geographical proximity is always statistically-significant and negative. Geographical proximity is controlled by a five-point scale on different cutoffs and for the third period in which the coefficient of 'contigrel' is also significant, its analyzed effect on the likelihood is -34.9% for each point increase on the scale. In other words, if the distance between a country pair is more than 7500 kilometers, their likelihood of concluding a BIT is 139.6% more than a country pair close (less than one thousand kilometers) to another. 'Contrel', another measure controlling for location on the same continent, indeed demonstrates a different pattern. Its effect shifts from negative to positive starting from the fourth period onwards. Hence, being located on the same continent has a positive effect on the likelihood of a BIT since the Uruguay Round. Given the increasing intraregional ties in the same period and regionalization incentives which were discussed in the third chapter and in addition to the phenomenon of internationalization of the production that necessitates less transaction costs between countries playing different roles in a supply chain, this finding is consistent with my expectations. Besides, it provides convincing evidence to support my second hypothesis arguing that regional subsets have become apparent in the aftermath of the Uruguay Round.

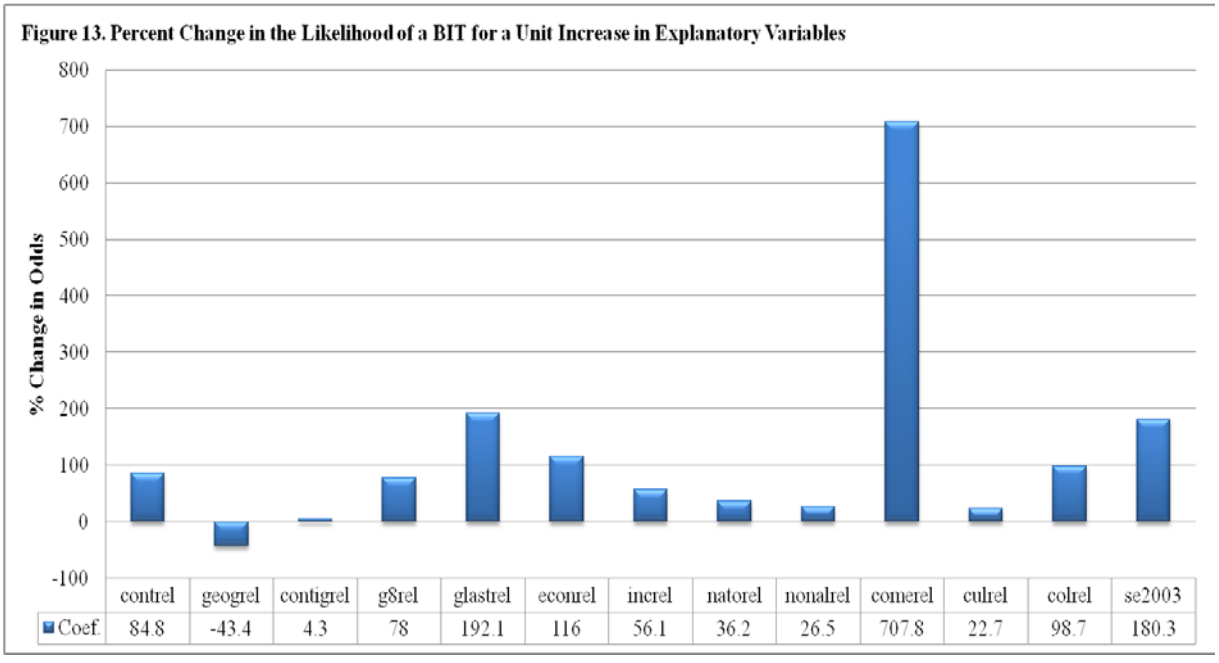
Table 5. Logistic Regression Results for Each Period					
Variable/Period	1968-1976	1977-1985	1986-1994	1995-2003	2004-2011
contrel	-1.538***	-0.704***	0.048	0.389***	0.614***
	-0.250	-0.150	-0.070	-0.050	-0.050
geogrelkm	-0.567***	-0.368***	-0.339***	-0.438***	-0.570***
	-0.070	-0.050	-0.030	-0.020	-0.020
contigrel	0.143	0.221**	0.000	0.017	0.043**
	-0.110	-0.090	-0.030	-0.020	-0.020
g8rel	1.035***	1.173***	0.805***	-0.019	0.577***
	-0.190	-0.120	-0.070	-0.060	-0.050
glastrel	0.371*	0.380***	1.120***	0.954***	1.072***
	-0.200	-0.140	-0.070	-0.050	-0.050
econrel	3.358***	2.119***	1.132***	0.646***	0.770***
	-0.720	-0.260	-0.100	-0.060	-0.050
increl	2.401***	0.801***	0.713***	0.335***	0.445***
	-0.730	-0.280	-0.100	-0.060	-0.060
natorel	-0.638	-0.044	1.431***	0.689***	0.309***
	-0.420	-0.260	-0.100	-0.100	-0.090
comerel			1.260***	1.890***	2.089***
			-0.140	-0.100	-0.110
nonalrel	1.026***	0.815***	-0.395***	0.287***	0.235***
	-0.320	-0.230	-0.150	-0.080	-0.080
culrel	-1.031**	-0.801***	-0.831***	-0.120*	0.205***
	-0.420	-0.260	-0.120	-0.070	-0.070
colrel	1.437***	1.525***	1.090***	0.413***	0.687***
	-0.290	-0.200	-0.150	-0.150	-0.150
se1967	2.829***				
	-0.210				
se1976		1.353***			
		-0.080			
se1985			1.243***		
			-0.060		
se1994				1.112***	
				-0.020	
se2003					1.031***
					-0.020
Constant	-6.623***	-5.869***	-2.798***	-1.626***	-2.344***
	-0.960	-0.580	-0.200	-0.140	-0.150
N	31152	31152	31152	31152	31152
Pseudo R-sqr	0.238	0.214	0.194	0.255	0.280
Note: *p<0.10, **p<0.05, ***p<0.01					

Historical alliances between contracting parties is another valuable indicator hypothesized to have an effect on the BIT proliferation. Since it is argued in the second chapter that ex-members of the COMECON/Warsaw Pact have concluded a number of BITs with NATO members following their independence in order to demonstrate their commitments to liberal economy, I was expecting the dichotomous explanatory variable capturing shared membership to NATO in the third period to have a significant effect. Expectedly, this variable in the fourth period has more effect than either the shared membership to COMECON or Non-Alignment Movement. In fact, shared membership to the Non-Alignment Movement is significant in all periods contrary to 'Natorel' which is only significant in the aftermath of the dissolution of the USSR. However, the coefficient of the shared membership in Non-Alignment Movement in the fourth period when the 'Natorel' reaches its peak is negative. Shared membership in COMECON/Warsaw pact, on the other hand, significantly increases the likelihood of conclusion of a BIT since 1990s. Indeed, increasing coefficient of 'comerel' corresponds to more frequent BITs between the ex-members of the socialist bloc. This finding is quite interesting given the attempts of Eastern European countries to align themselves with the European Union and needs further investigation.

Lagged structural equivalence scores are intended to reveal structural similarities in a dyad. Assumingly, the more structural equivalent two countries are, the less likely it is there will be a BIT between them. It should be noted that these scores are converted to a four point scale on which 0 corresponds to greatest structural equivalence and a score of 3 corresponds to structurally different country pairs. Since structural equivalence is different from role equivalence, which is hypothesized to be covered by the 'increl' variable that controls for similar income levels; regression results confirm that structurally-equivalent countries are less likely to conclude BITs when compared to similar country pairs. Indeed, the coefficients of this variable are higher than other explanatory variables. For example, for the second period where the coefficients of similar income level (increl) and structural similarity are comparable, role equivalence increases the likelihood by 1003%. On the other hand, one point increase in the structural similarity decreases the probability by 1593%. As the structural similarity score for a given dyad can be between 0 and 3, a three point decrease in the similarity predicts that a BIT between two dissimilar countries (no structural equivalence) would be roughly 48 times more likely. Since role equivalent countries are not necessarily

structurally-equivalent, such a finding proves my assumption that the heterophily explanation is more powerful than the homophily argument. In other words, similar countries are in general less likely to conclude BITs. This finding is also compatible with the literature which states that structural equivalence is found to be negatively correlated with dyadic international trade (Ingram et al. 2005).

The findings of the dyad-level logistic analysis on similarities and dissimilarities between contracting parties of bilateral investment treaties in diverse periods are briefly examined above. Although these differentiating patterns in successive periods provide the reader an understanding of dynamics and evolution of the structural changes in the bilateral investment network, it will be more explanatory to graph the analysis of the coefficients. Figure 11 reveals the odds ratios of all explanatory variables that have statistically significant effects at a 95% confidence interval on the likelihood of all BITs observed in this thesis.



According to graphed odds ratios above, the effects of explanatory variables differ to a large extent. Because some of these independent variables are dichotomous, their interpretation is simpler than other variables on different scales such as contiguity (contigrel), structural equivalence (se2003), and geographical proximity (geogrel). A unit increase in these dichotomous measures refers to the presence of examined relationship between country pairs for contrel, g8rel, glastrel, econrel, increl, natorel, nonalrel, comerel, culrel and colrel. If two

countries are located on the same continent, the likelihood of a BIT increases by 84.8%. Although geographical proximity and contiguity decreases this likelihood to a certain extent, it remains indeed is a high percent change in the likelihood. However, for each unit increase on the five-point geographical proximity scale, the likelihood diminishes by 43.4%. In a similar fashion, a unit increase on the contiguity scale of the COW dataset corresponds to a 4.3% increase in the likelihood of a BIT. In other words, if two countries are on the same continent but far from one another by 7500kms, the likelihood would decline by nearly 240%. Differences between the dyads containing a developed G8 country and an emerging G20 country were examined earlier. Accordingly, the likelihood of a BIT is about 114% more if the dyad includes an emerging country. In that sense, it is possible to claim the relative influence of emerging economies in the bilateral investment network in the last years when compared to developed economies. This finding, indeed, is a natural consequence of the efforts of these emerging economies, especially the Asian NICs and BRICS countries following the negotiations of the Uruguay Round. Moreover, it might be due to the fact that most of these countries have become home countries contrary to their situations as host countries especially in the earlier periods before their catch up processes. However, such an argument necessitates a detailed empirical analysis and a directional network design in which the source and destination of FDI flows, thus bilateral investment treaties are taken into account.

Economically-relevant dyads which are intended to capture the heterophily between the contracting parties in contrast to dyads containing a country pair of similar income levels have a considerably larger effect on the likelihood of a BIT. Furthermore, the most striking effect is observed on the dichotomous variable capturing the shared membership to the COMECON/Warsaw Pact. If two countries were members of the socialist bloc, their likelihood of concluding a BIT increases by 708%. When compared to the effects of shared membership in NATO or Non-Alignment Movement, this effect is substantially high. Indeed, similarity in terms of historical bloc membership is the only measure that has a significantly higher effect than heterophily. Again, cultural similarities are less effective in explaining BIT incidence than hierarchical dyads in which history of colonization is present. And lastly, for a unit increase in the structural equivalence score of the dyad corresponds to a decrease of 180.3% in the likelihood of a BIT. Since this score is measured on a four-point scale, a perfect

structural similarity has a higher effect on the likelihood than even the shared membership in the COMECON/Warsaw Pact. In other words, a structurally-equivalent country pair is about 720% less like likely to conclude a BIT than a dissimilar competitor dyad.

Consequently, I argue that the pattern of contracting parties of BITs has changed over time. However, the hierarchical structure or the dyadic interdependence which corresponds to the heterophily is still and largely observable in these treaties despite this changing pattern. In that sense, this hierarchical structure gives space to international policy diffusion through the imitation of successful central countries by developing countries, as well as through persuasion and coercion. Besides, learning through similarity when compared to acculturation is less likely to have an impact on this policy diffusion. Proliferation of bilateral investment treaties and evolution of the bilateral investment network orients the behavior of countries in this manner. Indeed, the most salient effect is observed on competitive pressures of the international economy. Competition among developing countries in terms of attracting foreign investments, and competition among emerging and developed countries in terms of exploiting investment environments shape the behavior of countries to a large extent.

5.3. NORMATIVE NETWORKS AND THEIR EFFECTS ON FOREIGN DIRECT INVESTMENT

In this section, diverse empirical analyses on the potential effects of normative networks on foreign direct investment will be conducted. While doing so, different explanatory variables that are commonly used in existing empirical studies referred in the second chapter will also be taken into the analysis in order to assess the effect of structural positions in given networks in an accurate sense. Moreover, diverse findings in the literature will be compared to the findings of OLS regressions with an objective of constituting groundwork for future research.

My main assumption behind analyzing the effects of structural positions in different networks on FDI flows relies upon the general assumption in the literature "market attractiveness evaluations drive firms foreign direct investment and market entry decisions" (Roth and Dakhli 2000). MNCs examine legal, economic and political situations in host countries, while assessing their market attractiveness. More specifically, market potential and investment risk due to economic and political uncertainty drive these assessments to a large extent.

As stated in previous chapters, host countries aim augmenting their credibility in the eyes of potential investors by signing additional treaties. In that regard, bilateral investment network and other normative networks might be argued to be complementary to the institutional structure of host countries. Indeed, institutional structure is the principal determinant of political stability which in turn reduces the likelihood of differential treatment to foreign investors. While evaluating the political and legal investment environment in a host country, MNCs would take existing bilateral ties of a country into account. Hence, structural position of a country in a network, thus its relative attractiveness vis-à-vis its competitors is a determinant of future FDI decisions (Roth and Dakhli 2000). In fact, structural positions of countries in given networks have quite recently started to be introduced as explanatory variables in econometric analyses. To my knowledge, Roth and Dakhli's research on the FDI attractiveness of a country having been affected by its structural position in the RTA network was the first one in this regard (Roth and Dakhli 2000).

In terms of the dependent variable, inward FDI flows for a given country in 2010, UNCTAD dataset provides two options to researchers. The first one is the share of inward or outward

FDI flows to the GDP of a host country, whereas the second one is the share of these flows to the total amount of flows throughout the world. Even though the first option is chosen by Hallward-Driemeier (Hallward-Driemeier 2003) and Neumayer and Spess (Neumayer and Spess 2005) in their analyses, I chose to introduce nominal GDP as an explanatory variable while taking the annual FDI flows/Total World share as my dependent variable. Although I could not include Malta to my analysis as a consequence of this operationalization, the reason of this choice was not to lose five more countries since FDI/GDP shares of these countries were not provided in the UNCTAD dataset from where I obtained the related statistics (UNCTAD 2011b).

5.3.1. Independent Variables

Structural Position in the Bilateral Investment Network

Centrality as a determinant of material and nonmaterial capabilities in a given network is explained in detail in the fourth chapter. For the purposes of this thesis, betweenness and degree centrality scores were selected as explanatory variables measuring the structural positions in the bilateral investment.

Neumayer and Spess explain the variance in FDI flows by the "cumulative number of BITs a developing country has signed with OECD countries, weighted by the share of outward FDI flow the OECD country accounts for relative to total world outward FDI flow" (Neumayer and Spess 2005). Although no weighting procedure has been applied in any analyses in this thesis, what I do by incorporating these centrality scores into the analyses in this chapter is quite similar to this procedure. Since degree centrality is a function of ties a node possesses to the maximum possible ties in a network; this measure takes all existing ties of a node into account instead of existing ties with only OECD countries.

Centrality measure has not been frequently introduced in empirical analyses in the international relations literature. In a very recent literature review conducted by Maoz (Maoz 2011), it is stated that only three studies namely the ones of Ward (Ward 2006), Von Stein (Von Stein 2008), and Dorussen and Ward (Dorussen and Ward 2010) benefit from this unit level attribute as an explanatory variable in the analyses. However, none of these studies concentrate on the bilateral investment network or the relationship between BIT proliferation

and FDI attractiveness. In that regard, this thesis by introducing the centrality in the bilateral investment network into the analysis on inward FDI flows is the first empirical study in the literature to my knowledge.

Structural Position in Different Institutional Networks

Affiliations or shared memberships to certain institutions and their effects on interactions among member countries constitute an increasingly researched topic in the international political economy and conflict literatures. Since this approach has been subject to various studies (Ingram et al. 2005), I introduced the betweenness centrality in the IGO and RTA networks as other explanatory variables for the analyses on FDI attractiveness. I believe that introducing the structural positions in Intergovernmental Organizations and Regional Trade Agreements networks[29] is also crucial for comparing the bilateral investment network with others. However, in cases where all nodes are connected to one another (e.g. affiliational networks), analyzing the effect of degree centrality can be misleading (Wong 2008). In order to overcome this problem, for affiliational networks betweenness centrality scores of observed countries are used to capture the effect of either the brokerage capabilities of the actors in between two (groups of) nodes that are not directly connected or their structural importance for the network in general.

Since 1990s, global economy has witnessed a sharp increase in the number of preferential or regional trade agreements that has given naissance to the 'new regionalism'. These plurilateral trade agreements in certain geographic regions might also include investment provisions (Baccini and Dür 2011; Pinto et al. 2011). Therefore, including unit-level RTA network centrality into the analysis might capture the effect of these treaties on FDI attractiveness of a country. Hence, similar to the BIT network, centrality of a node in the RTA network is analyzed in order to assess its potential effect on inward FDI flows. By introducing an explanatory variable capturing the betweenness centrality of observed countries in the RTA

[29] Intergovernmental Organizations and Regional Trade Agreements Networks are affiliational networks (Maoz 2011). In such kind of networks, there are affiliations (e.g. Institutions, groups, events) in addition to the nodes as separate units of analysis. Ties between nodes represent shared membership to given affiliations. Thus, these networks have to be converted into co-affiliation sociomatrices (Hafner-Burton and Montgomery 2012; Maoz 2011). In order to compute centrality scores, these affiliation matrices (two-mode datasets) were converted into one-mode data by the cross-product method on UCINet (Borgatti et al. 2002). Basically the procedure converts the mxn affiliation matrix into a standard mxm (actor by actor) adjacency matrix. These matrices were used to compute betweenness centralities of each country examined in the bilateral investment network.

network, this thesis aims testing the findings of previous research and comparing them with the effect of centrality in the bilateral investment network.

As argued in the third chapter about the region-level integration in the bilateral investment network, regional trade agreements have become subject to various research on foreign direct investment. Egger and Pfaffermayr take EU and NAFTA membership into the analysis because these supranational institutions include provisions about interregional investment that might affect investors' choice to some extent (Egger and Pfaffermayr 2004). Furthermore, RTAs have been argued to be playing a prominent role on FDI by reducing the transaction costs and recognizing foreign investors access to other and greater markets for outputs as well as inputs (Büthe and Milner 2008; Roth and Dakhli 2000). On the other hand, their informational and political effects are more salient and constitute an equally important credible commitment to the bilateral investment treaties. Credible commitment through plurilateral treaties is threefold: First, countries through the conclusion of PTAs commit themselves to dispute resolution mechanisms and legally binding regulations. Second, these treaties usually promote trade and investment liberalization, thus generate a strong commitment to liberal economic policies. Third, through other mechanisms than legal punishment, diplomatic pressures and "naming and shaming" are also noteworthy obstacles for the dynamic inconsistency problem (Büthe and Milner 2008; Manger et al. 2012).

Although, dummy variables controlling for signature of regional trade agreements are introduced in empirical analyses in the literature (Neumayer and Spess 2005), I chose to incorporate a somewhat different variable to check for the same effect. I constructed a separate dataset and computed the betweenness centrality in this network in order to control for all regional trade agreements cited by Ravenhill (Ravenhill 2008).

In the IPE literature, IGOs are analyzed to assess whether or not they have a positive effect on the liberalization of investment. Though, in most studies such correlation is found to be statistically insignificant or having only a marginal role (Ingram et al. 2005). On the other hand, intergovernmental organizations and diverse bureaucratic chambers (e.g. WTO secretariat) within them provide valuable information and monitoring to the states (Büthe and Milner 2008). According to the neorealist understanding of power, such monitoring and information capabilities provide countries an opportunity to understand power equilibriums

within the international system. In that regard, betweenness centrality in the IGO network might be associated with a greater control on information that is crucial for FDI decisions. As a matter of fact, this might explain why countries choose to adhere to such institutions in the first place despite significant costs associated with membership.

Table 6. Scoring Coefficients of Factors

Variable	Factor1	Factor2	Factor3
lngdp	0.1677	-0.0359	0.3545
lngdppc	0.5272	0.1825	-0.2802
natcap	0.0661	-0.0698	0.0857
freeho	-0.0329	0.1918	0.1456
expprim	0.0314	0.1372	0.0392
expmanu	0.1217	-0.1710	0.2227
exppetg	-0.0526	0.1379	0.0726
lidevc	-0.0764	-0.2491	0.4564
midevc	-0.0063	0.0081	-0.1938
hidevc	0.0064	0.2543	0.2287
emerging	0.1370	0.3238	0.1490
oecd	0.1719	-0.3883	0.0554

Since all IGOs are not equal in terms of their capacities to increase mutual interaction, socialization and information transfer among their members (Hafner-Burton et al. 2009), I had to make a distinction between the IGOs which are listed in the UNCTAD dataset (UNCTAD 2011b) and WorldTradeLaw.net[30]. Consequently, I divided these IGOs into two categories and excluded some of them if those IGOs are not focused on investment related issues. Even though the purposes (whether they are found to promote or regulate social or economic interactions), as well as the scope and capacity (importance) of IGOs differ to a large extent (Ingram et al. 2005), such a choice of excluding some of them can be subject to criticism. In this respect, several IGOs that are also subject to RTAs are excluded from the IGO network but included into the RTA network due to their expected effects on regionalization incentives and multilateral trade. Moreover, some IGOs having social purposes are excluded from the IGO network given the fact that their expected effect on international investment is lower than economic ones. Thus, only a small number of IGOs that have salient purposes in terms of

[30] For further information on the IGOs listed in the World Trade Law dataset. See the list of Free Trade Agreements notified to the WTO through http://www.worldtradelaw.net/fta/ftadatabase/ftas.asp, consulted on 11.03.2012.

international investment were compiled as affiliations in the IGO network. Lists of these IGOs and RTAs are given in the Appendix E, so that further research can replicate the findings in this thesis.

Aside from these centrality scores in diverse normative networks, I introduced three factor scores composed of commonly used macroeconomic, institutional and categorical variables in the literature. Since scoring coefficients of explanatory variables are given in the Table 6, and summary statistics for all variables in the empirical analyses are provided in Table 7; only brief explanations of other explanatory variables are given below.

Table 6. Summary Statistics for Independent Variables

Definition	Variable	N	Min	Max	Std. Dev.	Mean
Inward FDI Share	infdiperctotw	176	-1.30	18.35	1.70	0.51
Outward FDI Share	outfdiperctotw	176	-0.65	24.85	2.15	0.52
Betweenness Cen. (IGO)	bc_igo	177	0.00	0.02	0.00	0.00
Betweenness Cen. (RTA)	bc_rta	177	0.00	0.07	0.01	0.00
Degree Cen. (BIT 2011)	dc_2011	177	0.01	0.77	0.16	0.19
Degree Cen. (BIT 2003)	dc_2003	177	0.00	0.73	0.15	0.16
Betweenness Cen. (BIT 2011)	bc_2011	177	0.00	0.13	0.01	0.01
Betweenness Cen. (BIT 2003)	bc_2003	177	0.00	0.14	0.02	0.01
Nominal GDP (log)	lngdp	177	5.37	16.49	2.25	10.45
GDP per capita (log)	lngdppc	177	4.93	11.71	1.57	8.50
National Capabilities	natcap	177	0.00	0.19	0.02	0.01
Freedom House Sc.	freeho	177	1.00	7.00	1.97	3.43
Primary Goods Exp.	expprim	177	0.00	1.00	0.15	0.02
Manufactured Goods Exp.	expmanu	177	0.00	1.00	0.33	0.12
Petroleum and Nat. Gas Exp.	exppetg	177	0.00	1.00	0.28	0.08
Little Income	lidevc	177	0.00	1.00	0.46	0.31
Middle Income	midevc	177	0.00	1.00	0.42	0.22
High Income	hidevc	177	0.00	1.00	0.34	0.14
Emerging	emerging	177	0.00	1.00	0.23	0.06
OECD Member	oecd	177	0.00	1.00	0.40	0.19
Factor Score 1	factor1	177	-1.70	2.94	0.96	0.00
Factor Score 2	factor2	177	-2.47	3.93	0.87	0.00
Factor Score 3	factor3	177	-1.82	3.65	0.89	0.00

Institutional Quality

Hallward-Driemeier finds a positive impact of BITs on FDI attractiveness if higher institutional quality is sustained before the conclusion of a BIT, or in other words when a well established legal environment is already present (Hallward-Driemeier 2003). In a similar fashion, Neumayer and Spess incorporate diverse explanatory variables constructing the International Country Risk Guide's composite political risk index to control for existing institutional quality before the signature of the BIT (Neumayer and Spess 2005). Since this dataset covers only 140 of 177 countries examined in this thesis, I could not incorporate this explanatory variable due to lack of data.

Instead, I chose to control my results by the Freedom House scores[31] which were available for all countries. These scores include four diverse questions to measure the rule of law under the category of civil liberties. Although there is a wide belief in the literature about their imperfectness to measure democracy levels, these scores are also commonly introduced for controlling differences in democracy levels among diverse countries (Büthe and Milner 2008). In fact, they provide a comparable and longitudinal dataset that enables researchers control for the effect of regime type on the conclusion of international treaties. Hence, this score would assumingly capture the institutional quality, in addition to the democracy levels.

Macroeconomic Indicators

Despite the conflicting findings about the effect of BITs on inward FDI flows as stated in the second chapter, there is a consensus on the introduction of macroeconomic indicators in a host country into the analyses. Accordingly, economic environment in a host country is considered in the literature to be much more salient than the political environment in the eyes of foreign investors while deciding on an investment (Pinto et al. 2011; 2009). In this regard, I chose to introduce two highly correlated indicators for the market size and per capita income level.

Market size is analyzed to be the most significant explanatory variable in previous research on FDI attractiveness. It is hypothesized that the larger the host country is, the larger the

[31] For more information and data of Freedom House scores, see: http://www.freedomhouse.org/reports, consulted on 12.03.2012.

economic gains of a potential investment will be (Baccini and Dür 2011; Salacuse and Sullivan 2005). Moreover, greater market size corresponds to the greater amount of abundant capital in terms of the outward FDI. However, without controlling for the population or a function of it -GDP per capita-, I believe that the effect of market size becomes questionable. Accordingly, some emerging markets with relatively higher populations attract high amounts of FDI because of low labor costs which might be explained by per capita level GDP despite the size of their economies (e.g. BRICS economies).

Since income difference among the core, semi-periphery and periphery is quite obvious, the distribution the macroeconomic variables are largely skewed. In order to overcome this problem, I used natural logarithmic transformations of GDP per capita (ppp) and nominal GDP as other authors have done so (Neumayer and Spess 2005).

Categorical Variables

UNCTAD FDI statistics provide researchers several country classifications to assess whether or not the following dichotomous variables have meaningful effects on FDI flows.

The first category includes the variables ‘expprim’, ‘expmanu’ and ‘exppetg’ which categorize the observed economies according to goods or resources they export. Since these goods or natural resources might affect the investment choices to a large extent, I find these variables useful to introduce in the analyses on FDI attractiveness. Accordingly, while ‘expprim’ gets a positive value for exporter countries of primary goods, ‘expmanu’ captures developed economies exporting manufactured goods. Assumingly, the first category would capture less developed economies with low labor costs, thus more likely to receive larger amounts of FDI from the developed world which is captured by the second category. ‘Exppetg’, on the other hand, singles out countries with abundant petroleum and gas reserves. Natural resources, especially petroleum and natural gas, of a country can also play a decisive role in attracting foreign investors (Neumayer and Spess 2005).

While some resource rich countries conclude BITs, it would be inadequate to expect full protection of investor rights given the domestic political systems of these countries (i.e. political instability), especially in LDCs in Africa (Tobin and Rose-Ackerman 2003). Hence, not all BITs should be treated equal. In order to differentiate such BITs from others, three

dichotomous variables are included in the analysis. These variables divide the developing economies into three categories for low income, middle income and high income levels. Moreover, as thoroughly debated in previous chapters, emerging economies have become influential actors in the international investment regime since 1980s. In order to control for these economies that are not necessarily in any other categories listed above; I decided to adopt the related category from the UNCTAD dataset. However, since this variable does not cover Eastern European economies and other regional powers found to be central in the country-level analysis in chapter 4 such as Turkey; I decided to incorporate a dummy variable for the OECD membership.

5.3.2 Country-level Analyses on Foreign Direct Investment Flows

Explanatory variables, which are observed in the previous subchapter, are included in OLS regressions in order to assess their effects on inward and outward FDI flows. In order not to commit a common error in empirical studies by incorporating information from later years into the analysis of earlier phenomenon (Oneal and Russett 2005), these independent variables were only taken into account for analyzing their effects on centrality and inward FDI as of 2011[32]. In other words, differently than the previous subchapter, all models in this subchapter investigate the variance in FDI flows for only the latest period examined in this thesis. Further studies should address this issue, by collecting time-varying data and through more sophisticated time-series analyses, in order to help understanding of the changing patterns of diverse explanatory variables.

It should be noted before explaining the regressions results that models 2,4 and 6 observes the inward and outward FDI flows of 174 countries by excluding the outlier countries in the bilateral investment network, namely the US and Japan, from the analyses. Since these countries are argued to control a substantial extent of the FDI flows in the global economy without concluding equal number of BITs to other great powers, I believe that such a choice is understandable. By excluding these two countries, less skewed distributions of inward and outward FDI flows are sustained. In addition, when these countries are not included in

[32] Latest available FDI statistics in the UNCTAD dataset are of 2010. Since there are only 6 BITs concluded in 2011, centrality scores of nodes in the bilateral investment network were not recalculated. Such calculation, indeed, would not change the findings of the OLS analyses given the fact that they would augment centrality of a country by negligible proportions.

analyses not only the significance levels, but also the effect of certain variables change to a large extent. For example, the difference in the significance of degree centrality in the bilateral investment network as of 2011 between the models 5 and 6 for both inward and outward FDI flows is quite intriguing. Indeed, this largely differentiating coefficient of the degree centrality proves my argument in other chapters about the different institutional instruments, foreign policy objectives and production regimes of these countries that eventually result in lower centrality scores. However, I also find this difference, albeit theoretically justifiable, largely problematic for my research and any further study on the bilateral investment network. From a critical perspective, these two countries are observed to be not necessitating any legal guarantee or material and nonmaterial incentives that a BIT may bring. This finding, on the other hand, diminishes the salience of these treaties for the international investment regime even though they are widely used by remaining economies.

International and supranational institutions can increase within institution interactions such as trade or investment as observed in the emergence of the European Community (Ingram et al. 2005). In that context, incorporating potential effects of betweenness centrality in different networks of regionalization initiatives and intergovernmental organizations into the analyses would clarify the institutional effect on FDI decisions to a large extent.

Although preferential trade agreements (affiliations observed in the RTA network) are argued to be significantly increasing FDI in previous research (Büthe and Milner 2008), in none of the models above betweenness centrality in the RTA network has a statistically significant effect on inward or outward FDI flows. This insignificant effect, indeed, is puzzling because it does not explain why developing countries despite grave costs associated with these regional trade agreements increasingly conclude such treaties. In that regard, it might be assumed that these trade agreements, albeit their significant effects on trade flows do not augment material capabilities (i.e. investment) of central nodes in the RTA network. A possible explanation might be inquired about the number of RTAs examined in the RTA network. Since the list of international institutions observed in these two networks is given in the appendix, one can easily spot the higher frequency of regionalism incentives in Africa. Since African economies are not amongst the major host or home countries in terms of FDI flows, insignificance of the effect of RTA can be explained to some extent. In order to overcome such a problem, a detailed investigation on the integration levels of different RTAs

included in the RTA network should be conducted. When and if these RTAs are weighted according to the integration levels and investment provisions, I believe that the effect of advantaged structural positions in the RTA network might reveal a different pattern. However, given the purpose of the empirical analyses in this subchapter which is only providing a preliminary example for the comparison of diverse normative networks, such effort would be beyond the scope of this thesis.

On the other hand, betweenness centrality in the Intergovernmental Organization Network reveals a significant impact on the inward FDI flows. Hence, if a country has a control on the information flows between diverse (groups of) countries in the IGO network, its share in the FDI flows throughout the world increases to a significant extent. Though, a similar effect is not observed on outward FDI flows. Such finding can be associated with the relatively less central positions of capital exporting developed economies in the IGO network. In fact, the significant and positive effect of brokerage positions in the IGO network necessitates a detailed explanation.

Table 7. OLS Regression Results												
	Inward FDI						Outward FDI					
Var/Model	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
bc_igo	74.813*	70.217***	71.850*	64.360***	79.170**	64.898***	20.76	16.28	17.38	7.99	26.70	3.96
	-38.15	-20.79	-38.13	-20.36	-38.94	-22.43	-46.75	-17.51	-46.77	-16.69	-47.72	-20.54
bc_rta	-5.65	-5.88	-5.32	-4.96	-3.46	-4.95	-8.27	-8.03	-7.78	-6.55	-5.41	-7.71
	-11.58	-6.31	-11.52	-6.15	-11.71	-6.74	-14.19	-5.31	-14.13	-5.04	-14.36	-6.17
bc_2003	9.86	21.622***					12.34	32.321***				
	-7.94	-4.44					-9.73	-3.73				
bc_2011			13.62	27.759***					15.87	39.771***		
			-8.82	-4.85					-10.82	-3.97		
dc_2011					-0.44	0.908*					-0.62	1.920***
					-0.90	-0.54					-1.10	-0.50
factor1	0.695***	0.379***	0.674***	0.342***	0.807***	0.444***	0.941***	0.421***	0.922***	0.378***	1.086***	0.456***
	-0.13	-0.07	-0.13	-0.07	-0.15	-0.09	-0.15	-0.06	-0.16	-0.06	-0.18	-0.08
factor2	-0.337**	-0.05	-0.321**	-0.02	-0.403***	-0.138*	-0.660***	-0.198***	-0.646***	-0.165***	-0.745***	-0.303***
	-0.14	-0.08	-0.14	-0.08	-0.14	-0.08	-0.17	-0.07	-0.17	-0.06	-0.17	-0.07
factor3	0.469***	0.281***	0.460***	0.263***	0.497***	0.312***	0.530***	0.233***	0.521***	0.211***	0.566***	0.266***
	-0.13	-0.07	-0.13	-0.07	-0.13	-0.08	-0.16	-0.06	-0.16	-0.06	-0.16	-0.07
Constant	0.391***	0.250***	0.377***	0.228***	0.511**	0.200*	0.467***	0.222***	0.456***	0.197***	0.628**	0.05
	-0.13	-0.07	-0.13	-0.07	-0.20	-0.12	-0.16	-0.06	-0.16	-0.06	-0.25	-0.11
N	176	174	176	174	176	174	176	174	176	174	176	174
R-sqr	0.30	0.44	0.31	0.47	0.30	0.37	0.35	0.63	0.35	0.66	0.34	0.51
Note: *p<0.10, **p<0.05, ***p<0.01												

Betweenness centrality in the IGO network has a smaller variance when compared to the same score in the bilateral investment network. Thus, its predicted effect is lesser than the BIT network despite its larger coefficient. For example, the predicted difference in the inward FDI flows of two countries with a 0.021 points difference in their betweenness centralities in the IGO network would be ceteris paribus about 1.72 points (see Model 4 for inward FDI flows)[33]. However, the difference between most and least central economies in terms of the betweenness centralities in the bilateral investment network is 0.761 in 2011. Predicted difference in the inward FDI flows, on the other hand, is about 21.34%. Even though the effect of structural positions in the IGO network is lower than the bilateral investment network, it is still an intriguing finding and necessitates detailed explanation.

In addition to dispute settlement mechanisms that might be present under the umbrellas of intergovernmental organizations (e.g. the WTO), they also provide an opportunity for negotiations before the dispute settlement by gathering the parties of the dispute through diplomatic relations. Moreover, these organizations promote standardization, reduce transaction costs and regulate some interactions despite the fact that international investment is not one of the areas fully regulated by these international institutions. Besides, not only the shared membership in the IGOs but controlling the information in the IGO network can help central nodes (i.e. betweenness centrality) to find buyers and coordinate communication and transportation (Ingram et al. 2005).

The effect of degree centrality in the bilateral investment network on inward and outward FDI flows is less than the effect of betweenness centrality. A unit increase in the normalized degree centrality score is found to have a positive effect of 0.908 point increase on the share of inward FDI a country receives to the total world flows in 2011 (see Model6), the effect of betweenness centrality is, in fact, about 30.5 times higher. However, it should be once more noted that the variance in the degree centrality is more than the variance in betweenness centrality. In that sense, I believe that a comparison of these two scores would help the understanding of the difference between the effects of brokerage capacities and soft power that the bilateral investment network provides to countries.

[33] Since the dependent variables are percentages or shares of inward and outward FDI flows towards or from a country, predicted effects will be described as percentages hereinafter.

China is the most central country in terms of degree and betweenness centrality scores in the bilateral investment network in 2011. Turkey, in contrast, has a low betweenness centrality score when compared to its degree centrality in 2011 which makes her the 13th most central country in the network. Difference in the degree centrality of these two countries is 0.295 while the difference in the betweenness centrality is 0.122. Given the coefficients of degree and betweenness centralities in models 4 and 6, such differences result in a predicted positive effect on the inward FDI flows by respectively 0.27% and 3.39% (all other variables held constant). For the outward FDI flows, differences in their degree and betweenness centrality scores reveal a predicted increase of respectively 0.57% and 4.85% in the outward FDI flows (see models 4 and 6 for outward FDI flows). Given these differences, it might be argued that the control on information flows between (groups of) nodes or being a regional hub has a more salient effect than the number of BITs concluded. Thence, this difference proves my underlying assumption in this thesis that structural positions of countries in the bilateral investment network constitute a salient indicator of FDI. Besides, applying SNA framework to the networked structure of bilateral investment treaties is crucial in understanding such differences in terms of material and nonmaterial capabilities of diverse actors because the difference in the number of BITs signed by a country does not equally explain the variance in either inward or outward FDI flows. However, it should also be noted that the effect of BITs is found to have a significantly positive effect on inward FDI by employing a more comprehensive dataset than previous research.

Consequently, since the degree centrality in 2011 has a coefficient of 0.908, an average BIT would have a projected positive effect of 0.005 points increase in the share of inward FDI flows. Given the total FDI flows throughout the world in 2010, this increase corresponds to an amount of approximately 640 million US$. In that regard, the findings of empirical analyses in this subchapter are largely consistent with the findings of Neumayer and Spess among empirical studies referred in the second chapter (Neumayer and Spess 2005).

Centrality scores in one period can increase the FDI flows towards a country in the following period as a result of formed ties with others in the previous period. Since “interaction within networks can shape future interactions” (Wong 2008), lagged centrality scores would significantly explain the variance in inward FDI flows. Consequently, repercussions of a certain BIT or a cumulative number of BITs concluded in a given period will expectedly

increase the probability of other nodes' willingness to form ties with a given node in the following period. This effect is usually hypothesized in the literature as the signaling effect and assumed to increase the attractiveness of a country in the eyes of foreign investors.

As a matter of fact, it is revealed in the literature review on empirical analyses investigating the relationship between BIT proliferation and FDI that some authors find no or marginal signaling effects of these treaties (Aisbett 2007; Hallward-Driemeier 2003). However, I find these findings to be largely questionable. I believe that an investment of a well known MNC is likely to change the perceptions of other investors about a certain country. In view of that, some authors give the example of investments of Intel in Costa Rica (Stein and Daude 2002). Until this investment has taken place in 1997, Costa Rica had concluded only five BITs four of which were with the most central nodes of the epoch (in an affirmative fashion of the preferential attachment hypothesis argued in the previous chapter). In fact, the number of BITs concluded by Costa Rica (with mostly the capital exporting and emerging countries) has increased to twenty-one since then. In a parallel fashion, share of inward FDI flows to its GDP has augmented to 3.94 in 2010 from 2.82 in 1994. Given these observations, underestimating the potential investments that a particular investment might cause and signaling effect of the BITs bringing legal guarantees to these investments would be inaccurate. Hence, signaling effect of BITs should be tested more carefully in order to make such assumptions.

Signaling effect, as it is covered in previous chapters, correspond to a potential spillover effect of signing a BIT. If a country signs a BIT with especially developed countries, foreign investors would assume the given country as a credible candidate for future investments due to its commitment to the protection of investor rights. Even though Neumayer and Spess find a moderate effect of signaling effect on FDI decisions (Neumayer and Spess 2005), I chose to test this hypothesis in the first and second models that takes betweenness centrality scores of previous periods into account as the main explanatory variable. Through analyses of lagged centrality scores, betweenness centrality in previous periods might be assessed whether or not they have a signaling effect on future FDI decisions.

As the last two observed periods in this thesis respectively take snapshots from the evolution of bilateral investment treaties in 2003 and 2011, projected signaling effect for one period lag

covers eight years. In other words, by introducing the betweenness centrality scores of 2003 into the analysis of inward FDI flows in 2011, it is hypothesized that BITs concluded until 2003 shape the investment decisions in 2011. Since the coefficient of the betweenness centrality in 2003 is also statistically significant, signaling effect of BITs might be argued to be apparent in model 2. Accordingly, a betweenness centrality of 0.01 in 2003 augment the inward FDI flows in 2011 by approximately 2.7 billion US$. Although the predicted effect of this score is lower than the coefficient of the betweenness centrality score in 2011, such an effect is not negligible.

Even though it is a quite simplified explanation, scoring coefficients of three factors introduced in all models employed in this subchapter reveal that each factor emphasizes a particular group of countries. Whereas natural logarithmic functions of GDP per capita and nominal GDP, in addition to the dichotomous measure for OECD membership, score high on Factor 1, it might be argued that relatively developed high income and emerging countries are clustered in Factor 1. Factor 2, on the other hand, covers mostly autocratic and high income developing economies. Besides, low income developing countries score high on Factor 3. In other words, these factors respectively explain the differences in macroeconomic indicators of observed economies from highest to the lowest income levels.

Introducing these factors together into the models demonstrates the variance between these groups of economies in terms of attracting inward FDI. Therefore, model 6 reveals that developed and emerging economies receive a larger share of inward FDI than middle or low income developing economies. Besides, middle income developing economies, which assumingly have low institutional quality due to the scoring coefficient of Freedom House scores for factor 2, are less attractive for FDI decisions when compared to low income developing economies. This finding is also consistent with some empirical studies referred in the second chapter that suggests the importance of institutional quality for FDI attractiveness (Hallward-Driemeier 2003; Neumayer and Spess 2005). Nonetheless, not only these factors but also other methodological choices for the analyses in this subchapter have some shortcomings and might be criticized.

First, factor scores have to be used because some explanatory variables are highly correlated. For example, since rich countries usually have better institutions, high correlation between

Freedom House scores and macroeconomic indicators generates a collinearity problem in the analysis and results in omission of a crucial explanatory variable. On the other hand, if these variables are excluded from the analysis instead of reducing the number of dimensions, potentially high coefficients on any of these measures might suggest that richer countries get more FDI only because they are rich but not because they have also better institutions (Stein and Daude 2002). Moreover, due to the number of observations and the objective of testing the effects of all normative networks together, introducing all explanatory variables would generate a degrees of freedom problem.

Second, assuming that all institutions have equivalent importance is theoretically inadequate but it is methodologically convenient. Even so, given the scope of this thesis and the explanatory characteristic of such measure; all international institutions employed in RTA and IGO networks were treated as equal. Besides, this simplifying measurement is usually applied in the literature (Hafner-Burton and Montgomery 2012).

Third, these empirical analyses on structural positions of countries might become subject to methodological and theoretical accusations for reverse causality. In other words, the potential effect of BITs on FDI decisions might also be explained by the effect of existing FDI flows on the conclusion of BITs. In that sense, I controlled for this possibility in analyses not reported here due to space issues. The effect of inward and outward FDI flows in previous periods on the variance in degree centrality scores in following periods is statistically insignificant for the degree centrality measure. However, I believe that even an affirmative finding would not decrease the explanatory capacity of BIT proliferation for the FDI flows since such reverse causality is largely explanatory for the BIT network because BITs not only regulate future interactions but also brings legal guarantees to existing investments.

Lastly, authors emphasizing the importance of information in a given network suggest that if a centrality measure is hypothesized to affect node behavior in a given network, than other measures should not correlate with the outcome. Otherwise, the theory becomes misspecified (Enemark et al. 2011). In fact, regression results given in Table 7 confirm the robustness of the assumption that actors have more or less equal access to information in the bilateral investment network since degree centrality does not reveal a comparable effect to the

betweenness centrality. Moreover, as stated earlier, its effect becomes insignificant and negative when all observations are included in the analyses.

CHAPTER 6. CONCLUSION

Narrative in social science, as Laitin argues in his tripartite methodology, is essential in three aspects: providing plausibility to formal models, causality to statistical outcomes and theoretical ground for further research (Laitin 2003). In this context, a narrative approach based on empirical findings of social network analysis is adopted in this thesis. Accordingly, in the second chapter, BITs are examined in order to provide theoretical background and plausibility to the system-, region-, dyad- and country-level analyses in following chapters.

Since the very first BIT signed in 1959, nearly three thousand BITs have been signed between more than 90% of sovereign countries throughout the world. Such a state practice and wide acceptation of bilateral investment treaties are argued to be related to their ad hoc characteristic in responding to the necessities of the rapidly growing, though unregulated international investment regime. Although foreign direct investments constitute a substantial share of the GDPs of countries in both the developed and developing world, inexistence of customary international laws and multilateral treaties that regulate the increasingly integrated international investment regime are the main reasons why the number of bilateral investment treaties has significantly augmented.

Investment flows are not merely oriented by MNCs. Rather, states play a key role by welcoming foreign investment (Smith and White 1992). While doing so, perhaps the most notable action of states is bringing legal guarantees against discriminatory treatment through bilateral investment treaties. In that regard, bilateral investment treaties are said to address the need of developed home countries and multinational companies for safeguarding their foreign investments through binding legal norms. When BITs result in “credible commitment”, it is considered a solution to a classical dilemma of interaction. This dilemma, the dynamic inconsistency problem, emerges because countries make promises in the present about certain situations that they may not want to keep in the future (Ingram et al. 2005). Hence, by sustaining credible commitment in the eyes of foreign investors, BITs reduce the risk of differential treatment. Developing countries, on the other hand, benefit from these treaties in augmenting their FDI attractiveness. Hence, BITs are argued to be a win-win bargain despite the hierarchical structure of contracting parties and their potential costs. These costs associated with BITs are sovereignty-related, political and economic. Furthermore, they are

discussed to discourage some countries having already established investor-friendly legal systems.

From the perspective of the international political economy, it is argued in the second chapter that although developing countries heavily need FDI, they are obliged to conclude these treaties to some extent despite the potential burdens of these treaties on domestic investors and available economic policies for their catch-up strategies. However, there is a possibility of negotiating the conditionalities, albeit observed in only exceptional cases where coercive mechanisms become inconsequential as a result of relative power equilibriums between contracting parties. I believe that in the contemporary international investment regime where no multilateral setting comparable to BITs is present, multilateral investment agreements can generate the necessary investment environment that might loosen the conditions usually imposed on developing countries through BITs. Developing countries as a group would be more likely to benefit from such setting since investors and developed home states will become obliged to accept their decisions (Guzman 1998).

Empirical studies in the literature investigating the relationship between foreign direct investment and bilateral investment treaties are also reviewed in the second chapter. Accordingly, it is concluded that bilateral investment treaties are indeed complementary to the institutional quality and are intended to protect existing investments rather than promoting them. On the other hand, some researchers claim that these treaties encourage other treaties because of their signaling or demonstration effect, thus increasing the FDI attractiveness of a country.

In the third chapter, system and region-level characteristics of the bilateral investment network are examined through social network analysis. Since the evolution of the bilateral investment network is observed in nine-year time intervals, which correspond to the diverse GATT and WTO rounds, not only the trend but also the effects of these rounds on the dynamics of the network are analyzed. Accordingly, the evolution of system-level characteristics is found to have resulted in a more complex, decentralized and saturated network in the aftermath of the Uruguay Round negotiations. In addition, increasing clustering coefficient and decreasing geodesic distances in the network are argued to be referring to the decreasing hierarchical structure which was apparent in earlier periods

through the relative centrality of developed first-comer countries. In fact, following the Uruguay Round middle-strata countries have managed to catch-up with these developed nations and the network has eventually become decentralized.

Moreover, increasing density of the network as a result of growth at both the internal edge and node levels is said to be related to the increasing integration in the international investment regime and global economy in general. Arribas and his colleagues argue that geographical dimensions become irrelevant in the globalizing world. This high level of integration necessitates multiplicity of flows and ties (either direct or indirect) in many directions. Dramatically developing technology and decreasing transaction costs enable such integration levels. In fact, interconnectedness or integration in a networked structure is examined by authors using similar measures as were employed in this thesis such as system-level density, clustering coefficient or node-level centrality and region-level connectedness (Arribas et al. 2008).

In order to assess the plausibility of this argument, region-level characteristics of the bilateral investment network are analyzed at the end of the third chapter. Through a detailed comparison of intra and interregional densities of six continents, Europe is found to be the most integrated one in terms of continent's inter and intraregional ties. Asia and South America, on the other hand, are found to be other prominent continents in which highly dense ties are observed to be a result of regional integration incentives and changing foreign policy and economic objectives of NICs and other regional hubs. Moreover, regional integration in the bilateral investment network is observed take place more rapidly than the global-level integration.

International institutions, from a structuralist perspective, are assumed to assist in the development of social networks, either through co-membership or by facilitating interactions. These institutional networks as sources of structural power and through diverse mechanisms (e.g. dispute resolution) can shape the power politics to a large extent (Hafner-Burton and Montgomery 2009, 2012). Accordingly, centrality in the bilateral investment network is argued to be a significant indicator in the fourth chapter in not only augmenting the material capabilities of actors because of economic gains it provides, but also in increasing their influential abilities or soft power. Nonmaterial incentives under the form of soft or social

power and as a function of direct and indirect ties in a network are hypothesized to increase the influence of an actor on others. This relative and relational understanding of power, also consistent with the neorealism literature, is observed to increase with more central structural positions based on the quantity and quality of bilateral investment treaties concluded with other central actors or through brokerage for isolated countries.

As Waltz describes it, a comparison of nonmaterial capabilities in diverse time intervals reveals the diverging power equilibriums at the global level (Hafner-Burton and Montgomery 2009). In addition to first-mover European powers such as Germany, United Kingdom, France and Switzerland emerging economies in Asia and Eastern European members of the EU are found to be central nodes in the bilateral investment network as of 2011. Since the former group is composed of BRIC countries and Asian NICs, it is debated whether emerging economies have managed to extend their access to potential host countries for orienting their outward FDI flows through diversified and augmented number of interactions. In addition, this extended access gives them a nonmaterial power, so-called soft power, which augments their importance in the network in terms of agenda setting and influential ability. Ex-socialist Eastern European countries, on the other hand, are claimed to be committing to liberal economy through BITs they conclude with the developed OECD and EU countries before their accessions. Hence, their primary purposes, in addition to restructuring their economies through increased FDI flows, are also dictated by their differentiated foreign policies.

Even though the findings of country-level centrality scores are largely correlated with the income levels and market sizes of world countries, some intriguing examples are observed to reveal a different pattern. Despite their outstanding shares in global FDI flows, the reasons why countries like Japan and the US are not central nodes are explained by the regional trade agreements they have concluded; their well established and investor-friendly domestic legal systems; insistence on the Hull Rule (i.e. prompt, adequate and effective compensation for expatriated investments) and tighter standards, discouraging foreign policy objectives (i.e. investment liberalization); and perhaps most importantly as a consequence of their different production regimes than other great powers.

Furthermore, the evolution and dynamics of the bilateral investment network, albeit largely dependent on the international investment regime, are discussed from the perspectives of the

world systems and neoclassical economic theories. Since not only emerging semi-peripheral economies but also some peripheral countries have managed to shift to core positions, neoclassical economic theory is found to be more accurate for describing the bilateral investment network. Increasing complexity and heterogeneity in the network, in addition to decentralization of the network, are argued to be other determinants of this assessment.

In the fifth section, similarities and dissimilarities between contracting parties that would result in conclusion of these treaties were analyzed through dyad-level analyses. Even though there were salient asymmetries, thus a hierarchical structure in the early BIT examples, these asymmetries are found to be still significant, though they had less effect on the formation of new ties. Accordingly, emerging countries are found to replace developed G8 countries in recent BITs whereas ex-members of the Warsaw Pact have also increased their ties. In terms of similarities, structural equivalence scores that examine the similarity in a country pair's structural positions, geographic proximity and common colonization heritage are found to have salient negative effects on the formation of BITs. Conversely, similarity in income level is revealed to positively affect the likelihood of a treaty. This finding, defined as role equivalence, is explained by the integrationist and competitive pressures of the global economy. In fact, dissimilar dyads are analyzed to be more likely to form these ties. Accordingly, it is argued from the sociological institutionalism perspective that heterophily or a hierarchical structure might correspond to the diffusion of bilateral investment treaties through coercion, persuasion and imitation. Indeed, political history often witnesses such coercion through conditionality if and when these actors are powerful enough to do so. Having taken the bilateral investment network into consideration, conditionality in BITs is underlined in the draft treaty of OECD countries that is imposed on other actors. Therefore, the evolution of the bilateral investment network towards a more complex and denser character should not only be explained by a simple proliferation of bilateral investment treaties, rather by the diffusion of these legal norms. Investment liberalization and other foreign policy objectives, in addition to the hierarchical structure, are argued in this manner to be diffused to more and more countries in the international system in parallel to the neoliberal globalization.

I empirically investigated the internationalization of production phenomenon in the second subsection of the fifth chapter. This phenomenon is argued by several researchers to be the

main cause of integration in the international investment regime. Through subcontractors and diffused production chains, MNCs play the catalyst role in the globalization. Through an empirical analysis of two production chains, hard disk drives manufactured by Seagate and Barbie dolls produced by Mattel; BITs were examined whether or not they might be traced in order to reveal internationalized production chains. Consequently, this analysis for countries having taken place in these internationalized production chains prove that, BITs might be observed in better understanding the internationalization of production phenomenon. Moreover, labor intensive and capital intensive steps of these production chains were examined and it is found that countries specializing in the labor intensive parts or products have substantially managed to increase their centrality since 2000s. This significant difference between these countries and others where skilled labor augment the cost of the labor is argued to be an interesting puzzle for future research.

Lastly, simple regression analyses introducing diverse networks and commonly consulted explanatory variables in literature on the relationship between FDI and normative networks are conducted in the last subchapter of chapter five. In fact, the effects of IGO network and the networked structure of bilateral investment network are found to have a statistically significant effect on the inward and outward FDI flows. Degree and betweenness centrality measures for the bilateral investment network were compared and betweenness centrality, thus having strategic ties connecting separate groups of nodes , therefore having a control on the information flows and being a regional hub, is found to have a greater effect on FDI. In fact, the effect of a BIT on inward FDI flows is analyzed to be about 640 million US$. However, the effect of the RTA network on inward and outward FDI flows is found to be statistically insignificant in a different fashion than the literature. Moreover, signaling effect is analyzed to be an indicator of inward FDI flows. Since outlier countries were excluded from some models, it is also argued that BITs do not have a significant effect for some countries. USA and Japan, in that manner, are argued to differentiate than other countries observed in this thesis. Finally, a more sophisticated analysis for investigating the potential effects of structural position in normative networks on the FDI attractiveness is recommended for future research.

In this thesis, I mainly benefited from different literatures of IPE, sociological institutionalism, neorealism, structuralism and empirical research on international investment

and trade flows. Perhaps more importantly for my purpose, the literature applying the social network analysis to different aspects of the international relations and its findings are compared to my findings in each section. Even though my findings are largely consistent with earlier research on international trade or the relationship between FDI attractiveness and BIT proliferation, they also differ from and significantly extend them.

Weiss' argument about the myth of powerless state against the globalization is threefold. First, she argues that states have adapted themselves to the necessities of the integrated and globalized international economy. Second, strong states are not victims of this process but rather facilitate it. Lastly, some 'catalytic' states consolidate regional trade and investment networks that serve to the globalization process (Weiss 1998). My analysis of the bilateral investment network, indeed, supports all of these arguments and their plausibility. In sum, it is revealed that countries in the bilateral investment network have adapted themselves to the unregulated international investment regime through bilateral investment treaties. Moreover, through these treaties, developing countries have found an ad hoc solution for increasing their FDI attractiveness in the eyes of foreign investors. Furthermore, European great powers such as the Germany, France or Great Britain have long played pivotal roles in the bilateral investment network and continue to play as of 2011. Other OECD countries, which have not had central positions in earlier periods, have also adopted themselves to changing dynamics of the international system and become dominant players in the network in order to benefit from this process. Lastly, some emerging countries with relatively powerful positions in the network promote foreign investment and consolidate international investment regime in order to juxtapose themselves to the bilateral investment network and gain relatively central positions.

On the other hand, most fundamental contradiction between the findings of this thesis on bilateral investment network and early research on international trade is that commonly used macroeconomic indicators are highly correlated with centrality measures in other research (De Benedictis and Tajoli 2011). Though, this is simply not the case for the bilateral investment network. As expected, most central countries are above a certain income level, but not all high-income countries are amongst most central nodes. Given the fact that centrality in BIT network is argued to augment nonmaterial power, in contrast to what is suggested by researchers concentrated on material power (i.e. international trade); such contradiction is not

unexpected. In fact, when the market size is controlled by nominal GDP instead of per capita income level, the correlation becomes higher but still lower than other networks. Another finding in this context is that when coreness scores are observed instead of centrality measures, most of the greater markets are clustered in the core and semi-periphery. However, some countries including Canada, Colombia, Brazil, Ireland, Norway, Nigeria, Taiwan, Japan and Australia are not considered to be core countries despite their market sizes. The remaining 80% of the greatest markets, indeed, are divided between the semi-periphery (13 countries, 29%) and the core (23 countries, 51%).

Some theoretical and methodological assumptions in this thesis are falsifiable and require detailed explanation. First and foremost, primary assumption of the structuralism that networked structures affect actor behavior is, indeed, why empirical studies applying SNA are widely criticized. Without appropriate theoretical and conceptual lenses, such an assumption becomes far from being convincing. However, since the signaling effect of BITs is analyzed and found significant by several researchers. System-level characteristics, in addition to the unit-level centrality measures, are used in explaining changing actor behaviors in this thesis.

Secondly, in this thesis I argue that nonmaterial gains are one of the primary motivations of countries expanding their ego networks in the bilateral investment network. On the other hand, some authors argue that countries only conclude international treaties for narrow economic gains and foreign policy goals. In fact, actors do not perceive social power to be a conscious goal (Kahler 2009). However, such an argument necessitates ignoring the assumption that actors are competent enough to increase their structural power. Besides, information about the other nodes and edges/ties is also undervalued in such an assumption even though same author accepts that nodes are cognizant of the structure and change it for their interests (Kahler 2009).

Nevertheless, recent research investigating the access to information in networks claim that information in networks might also be limited since not all actors are aware of others' ties (Enemark et al. 2011; Jackson and Watts 2002; Skovgaard Poulsen and Aisbett 2011). Even if some actors might possess more comprehensive cognitive maps of their egonets or the entire network, others do not necessarily have access to full information. This lack of knowledge or in other words limited information environment for some nodes causes underachievement.

Indeed, this would be a serious theoretical challenge against my findings if all actors do not have equal access to information about other nodes. However, this challenge is equally significant for all large-N studies concentrated on different aspects of the international relations; thus it has to be neglected to some extent if SNA framework is introduced. Besides, I would oppose such a conclusion based on the findings of empirical research on the causality between increasing FDI flows and BITs. More precisely, such information is available and carefully evaluated by MNCs while an investment decision is to be made. Furthermore, it is also argued in the literature that competitor countries become similar (i.e. structurally-equivalent) in concluding such treaties with similar donor/home countries (Tobin and Rose-Ackerman 2003). Lastly, most BITs are deposited or notified to the UNCTAD, the ICSID and the WTO of which most countries in the bilateral investment network are members.

Thirdly, another considerable challenge to the findings of this thesis would be demonstrating differences in BITs that are treated equally in the analyses. Content-analyses and exploration of different provisions and the extent of BITs (as stated in the second chapter that some BITs bring tighter conditions), representing a differentiated measurement for some BITs might largely affect the results of empirical analyses in this thesis.

Lastly, like trade agreements, some BITs can be fruits of proximity and similarity. Indeed, this might prove the validity of the homophily argument. In fact, it will also raise questions of reverse-causality: that is whether or not investments among similar countries result in further institutional interactions (Ingram et al. 2005). Even though the latter is considered to be a valid argument for BITs given the intention of developed home states to bring further guarantees to ready-made investments, a dyadic analysis is introduced to test the first question. Accordingly, potential similarities among contracting parties are analyzed through the use of explanatory variables that are commonly introduced in the literature, in addition to the lagged structural equivalence measures in analyses of successive periods. Hence, it is observed that homophily is not a prominent cause resulting in conclusion of bilateral investment treaties.

Countries, as nodes, in this network are examined to assess the centrality in the bilateral investment network and its potential repercussions in attracting inward FDI and increasing social/soft power. Hence, this thesis is not a mere replication of prior research on the

relationship between BITs and FDI or on modeling the growth of the bilateral investment network but a more comprehensive effort having aimed explaining the dynamics and evolution of the bilateral investment network. Empirical analyses in this thesis provide further support to previous research that claims international institutions allow states to make credible commitments. Besides, I believe that this thesis brings a new perspective to the literature by highlighting structural positions of countries in the bilateral investment network as fundamental determinants of material and nonmaterial power.

Since it is argued in the introductory chapter that actors in networks are linked to one another, and these linkages either direct or indirect can be investigated by the social network analysis framework, in this thesis, my primary concern was to describe the networked structure of bilateral investment treaties through the framework of social network analysis. Since the field of international relations is argued in the third chapter to be a product of diverse networks, bilateral investment treaties and the bilateral investment network they constitute was largely explained at all levels of analysis. This descriptive study, in this manner, aims contributing to the broader institutionalism, structuralism, and neorealism literatures by constituting a preliminary step in the understanding of the dynamics and evolution of the bilateral investment network. Given the scope of this thesis, on the other hand, I am aware of the fact that some aspects of this thesis can and should be taken further.

In terms of sociological institutionalism, dyadic-level analysis in the fifth chapter can be enhanced through a detailed content analysis on different examples of bilateral investment treaties. By examining differentiating provisions in similar BITs from diverse periods, I believe that changing patterns in the contracting parties as well as in the provisions of these treaties might be understood in a more accurate manner. Even though the roles of different groups of countries were analyzed whether or not some countries have become more important in the bilateral investment network over time, and emerging economies were found to have done so; a smaller-N qualitative study would serve better to the understanding of this evolution. Similarly, a directed version of the bilateral investment network that takes the direction of FDI flows into account might reveal not only a change in the structural positions of these emerging countries as central nodes in the network, but also changes in their statuses as host or home economies of foreign investment flows. In other words, the reason why emerging countries have become more influential might also be explained by their catch up

processes or their development. Given the increased scope and number of MNCs originating from these economies, especially in the last years, such an assumption is also valid and left unexplored for future research.

A descriptive analysis of bilateral investment treaties and the network they generate provide valuable empirical data to researchers willing to observe nonmaterial sources of power. When and if other institutions and structural changes in other normative networks are examined in such detailed manner, structural positions of nodes in diverse networks can later be used to describe and evaluate social power in more complex models. I believe that a combined measure of integration in diverse networks as Maoz argues (Maoz 2009) is essential for accurately assessing the nonmaterial capabilities of countries.

Although the effect of bilateral investment treaties on international political economy is much lower when compared to international trade or foreign investment flows, an empirical analysis is conducted in this thesis in order to assess the relationship between foreign direct investment and structural positions of countries in the bilateral investment network. Since it is stated that this thesis is a preliminary study in understanding the dynamics and evolution of the bilateral investment network, it can also be taken further through a more sophisticated time-series analysis of FDI flows with node-level centrality, as well as region and system-level density measures. Differently than the nonmaterial power largely examined in this thesis, the material gains provided by central structural positions in the bilateral investment network can therefore be investigated.

I hope that my findings and dataset made available online would encourage further research on these topics and constitute groundwork in the understanding of the dynamics and evolution of the networked structure of bilateral investment treaties.

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APPENDICES

APPENDIX A. NUMBER OF BITS IN EACH PERIOD							
Country Name	1959-1967	1968-1976	1977-1985	1986-1994	1995-2003	2004-2011	Tot.
Afghanistan	0	0	0	0	0	3	3
Albania	0	0	0	16	19	6	41
Algeria	0	0	0	6	33	9	48
Angola	0	0	0	0	5	3	8
Antigua and Barbuda	0	0	0	1	1	0	2
Argentina	0	0	0	35	24	0	59
Armenia	0	0	0	10	22	7	39
Australia	0	0	0	10	10	2	22
Austria	0	2	2	15	40	4	63
Azerbaijan	0	0	0	2	19	20	41
Bahrain	0	0	0	1	16	15	32
Bangladesh	0	0	5	9	11	5	30
Barbados	0	0	0	3	5	3	11
Belarus	0	0	0	10	38	11	59
Belgium	2	3	11	20	33	23	92
Belize	0	0	1	0	6	1	8
Benin	1	0	1	1	9	3	15
Bolivia	0	0	0	14	9	0	23
Bosnia and Herzegovina	0	0	0	1	29	9	39
Botswana	0	0	0	0	7	3	10
Brazil	0	0	0	4	11	0	15
Brunei	0	0	0	0	5	2	7
Bulgaria	0	0	2	25	37	6	70
Burkina Faso	0	1	0	1	11	2	15
Burma (Myanmar)	0	0	0	0	4	2	6
Burundi	0	0	1	3	2	2	8
Cambodia	0	0	0	1	13	7	21
Cameroon	3	0	4	1	7	1	16
Canada	0	1	0	9	16	2	28
Cape Verde	0	0	0	5	4	0	9
Central African Republic	2	1	0	0	1	1	5
Chad	3	1	0	0	7	3	14
Chile	0	0	0	19	34	0	53
China	0	0	15	52	45	18	130
Colombia	0	0	0	3	2	3	8

Comoros	0	0	0	1	6	0	7
Congo, Democratic Republic of the	0	4	2	2	2	5	15
Congo, Republic of the	3	0	0	3	1	7	14
Costa Rica	1	0	2	1	17	0	21
Cote d'Ivoire	4	1	0	0	6	0	11
Croatia	0	0	1	7	44	7	59
Cuba	0	0	0	4	58	0	62
Cyprus	0	0	0	7	11	10	28
Czech Republic	0	0	0	37	43	7	87
Denmark	0	1	3	20	26	5	55
Djibouti	0	0	0	0	5	2	7
Dominica	0	0	1	1	0	0	2
Dominican Republic	1	0	0	0	12	4	17
Ecuador	1	1	1	10	15	0	28
Egypt	1	6	9	21	62	4	103
El Salvador	0	0	1	2	22	0	25
Equatorial Guinea	0	0	1	0	1	5	7
Eritrea	0	0	0	0	4	0	4
Estonia	0	0	0	15	9	5	29
Ethiopia	1	0	0	1	15	13	30
Finland	0	0	5	19	32	16	72
France	3	14	18	31	33	5	104
Gabon	0	4	2	0	7	1	14
Gambia, The	0	0	0	1	7	5	13
Georgia	0	0	0	7	18	5	30
Germany	30	11	16	35	37	6	135
Ghana	0	0	0	7	18	1	26
Greece	1	0	0	17	21	4	43
Grenada	0	0	0	2	0	0	2
Guatemala	0	0	0	0	12	6	18
Guinea	3	0	0	1	12	3	19
Guinea-Bissau	0	0	0	1	1	0	2
Guyana	0	0	0	2	2	4	8
Haiti	0	1	3	0	1	0	5
Honduras	0	0	0	3	10	0	13
Hungary	0	0	0	40	19	2	61
Iceland	0	0	0	1	4	4	9
India	0	0	0	2	55	24	81
Indonesia	0	7	0	16	37	3	63

Iran	1	1	1	0	47	10	60
Iraq	1	0	0	1	1	1	4
Ireland	0	0	0	0	1	0	1
Israel	0	1	2	9	23	4	39
Italy	2	3	3	31	49	12	100
Jamaica	0	0	0	9	7	0	16
Japan	0	0	2	2	6	4	14
Jordan	0	2	2	3	23	23	53
Kazakhstan	0	0	0	15	21	9	45
Kenya	0	1	0	0	4	6	11
Korea, Democratic People's Republic of	0	0	0	1	19	5	25
Korea, Republic of	1	6	3	26	39	16	91
Kuwait	3	1	3	10	29	14	60
Kyrgyzstan	0	0	0	7	18	2	27
Lao People's Democratic Republic (Laos)	0	0	0	7	14	3	24
Latvia	0	0	0	14	26	6	46
Lebanon	0	0	0	1	39	11	51
Lesotho	0	0	2	0	0	1	3
Liberia	2	0	3	0	0	0	5
Libyan Arab Jamahiriya (Libya)	0	2	1	2	11	18	34
Lithuania	0	0	0	20	22	10	52
Luxembourg	2	1	11	20	33	24	91
Macedonia, The former Yugoslav Republic of	0	0	0	1	29	6	36
Madagascar	4	0	0	0	1	5	10
Malawi	0	0	0	0	6	0	6
Malaysia	1	2	10	25	30	1	69
Mali	0	0	2	1	10	4	17
Malta	2	3	2	3	11	4	25
Mauritania	0	1	3	2	10	5	21
Mauritius	0	2	0	1	24	10	37
Mexico	0	0	0	1	19	9	29
Moldova, Republic of	0	0	0	7	28	5	40
Mongolia	0	0	0	13	26	5	44
Montenegro	0	0	1	0	5	11	17
Morocco	3	3	7	11	28	10	62
Mozambique	0	0	0	1	17	7	25
Namibia	0	0	0	3	7	3	13
Nepal	0	0	1	2	1	1	5

Netherlands	3	11	6	27	43	6	96
New Zealand	0	0	0	1	2	1	4
Nicaragua	0	0	0	2	15	3	20
Niger	2	0	0	1	2	0	5
Nigeria	0	0	0	5	14	3	22
Norway	1	0	3	10	3	0	17
Oman	0	0	2	4	15	13	34
Pakistan	1	0	4	8	33	2	48
Panama	0	0	5	1	11	7	24
Papua New Guinea	0	0	2	3	0	0	5
Paraguay	0	2	2	14	9	0	27
Peru	0	0	0	18	12	4	34
Philippines	0	1	2	8	26	0	37
Poland	0	0	1	49	13	0	63
Portugal	0	0	1	16	27	8	52
Qatar	0	0	0	0	32	14	46
Romania	0	3	14	40	27	2	86
Russian Federation	0	0	0	29	28	13	70
Rwanda	2	0	2	0	2	1	7
San Marino	0	0	0	0	1	5	6
Sao Tome and Principe	0	0	0	0	1	0	1
Saudi Arabia	0	0	0	2	11	10	23
Senegal	3	2	6	1	8	5	25
Serbia	0	1	1	1	31	15	49
Seychelles	0	0	0	0	2	4	6
Sierra Leone	1	0	1	0	1	0	3
Singapore	0	5	5	4	16	12	42
Slovakia	0	0	0	27	13	16	56
Slovenia	0	0	1	5	32	2	40
Somalia	0	0	2	0	0	0	2
South Africa	0	1	0	1	36	9	47
Spain	0	0	0	24	36	16	76
Sri Lanka	1	0	15	3	7	2	28
St. Lucia	0	0	2	0	0	0	2
St. Vincent and the Grenadines	0	0	0	1	0	1	2
Sudan	1	2	3	0	18	4	28
Suriname	0	0	0	0	2	1	3
Swaziland	0	0	0	1	4	0	5
Sweden	3	0	10	16	31	9	69
Switzerland	16	12	7	33	36	14	118

Syrian Arab Republic	0	1	3	1	23	13	41
Taiwan	0	0	0	9	13	2	24
Tajikistan	0	0	0	5	18	10	33
Tanzania, United Republic of	2	1	0	1	7	4	15
Thailand	1	1	2	12	19	4	39
Timor-Leste (East Timor)	0	0	0	0	1	1	2
Togo	2	0	0	1	0	2	5
Tonga	0	0	0	0	1	0	1
Trinidad and Tobago	0	0	0	3	5	4	12
Tunisia	5	4	3	20	20	3	55
Turkey	1	0	1	31	35	15	83
Turkmenistan	0	0	0	7	12	4	23
Uganda	1	2	0	0	10	3	16
Ukraine	0	0	0	24	41	5	70
United Arab Emirates	1	0	1	8	21	9	40
United Kingdom	0	5	18	48	29	3	103
United States	0	0	6	27	12	2	47
Uruguay	0	1	1	14	13	4	33
Uzbekistan	0	0	0	13	32	5	50
Vanuatu	0	0	0	0	1	1	2
Venezuela	0	0	0	9	17	3	29
Viet Nam	0	0	0	26	22	11	59
Yemen	0	1	4	1	30	3	39
Zambia	1	0	0	1	9	2	13
Zimbabwe	0	0	0	3	27	1	31
Total	121	131	268	1227	2586	842	5175

APPENDIX B. PERIODS AND THE GATT/WTO ROUNDS					
Year	Number of BITs	Perc.	Cumulative Perc.	WTO Round	Period
1959	2	0.07	0.07		1959-1967 Dillon and Kennedy Rounds
1960	4	0.14	0.2	Dillon	
1961	6	0.2	0.41		
1962	9	0.31	0.71		
1963	7	0.24	0.95		
1964	10	0.34	1.29	Kennedy	
1965	14	0.48	1.77		
1966	8	0.27	2.04		
1967	5	0.17	2.21		
1968	5	0.17	2.38		1968-1976 Pre-Tokyo Round
1969	5	0.17	2.55		
1970	5	0.17	2.72		
1971	6	0.2	2.93		
1972	6	0.2	3.13		
1973	9	0.31	3.44	Tokyo	
1974	14	0.48	3.91		
1975	7	0.24	4.15		
1976	15	0.51	4.66		
1977	11	0.37	5.03		1977-1985 post-Tokyo and pre-Uruguay Rounds
1978	19	0.65	5.68		
1979	11	0.37	6.05		
1980	16	0.54	6.6		
1981	13	0.44	7.04		
1982	18	0.61	7.65		
1983	17	0.58	8.23		
1984	20	0.68	8.91		
1985	26	0.88	9.8		
1986	24	0.82	10.61	Uruguay	1986-1994 Negotiations for Uruguay Round
1987	25	0.85	11.46		
1988	34	1.16	12.62		
1989	48	1.63	14.25		
1990	74	2.52	16.77		
1991	87	2.96	19.73		
1992	127	4.32	24.05		
1993	129	4.39	28.44		
1994	183	6.22	34.66		
1995	193	6.56	41.22		1995-2003 After the WTO
1996	212	7.21	48.44		

1997	174	5.92	54.35		
1998	183	6.22	60.58		
1999	156	5.31	65.88		
2000	134	4.56	70.44		
2001	186	6.33	76.77		
2002	129	4.39	81.16		
2003	94	3.2	84.35		
2004	83	2.82	87.18		
2005	73	2.48	89.66		
2006	73	2.48	92.14	Doha	
2007	60	2.04	94.18		2004-2011 Failed Doha Period
2008	56	1.9	96.09		
2009	75	2.55	98.64		
2010	34	1.16	99.8		
2011	6	0.2	100		

APPENDIX C. ABBREVIATONS, CONTINENTS AND CORENESS SCORES								
Country Name	ISO3	Continent	1967	1976	1985	1994	2003	2011
Afghanistan	AFG	Asia	0	0	0	0	0	0.008
Albania	ALB	Europe	0	0	0	0	0.012	0.016
Algeria	DZA	Africa	0	0	0	0.088	0.093	0.09
Angola	AGO	Africa	0	0.003	0.016	0.062	0.075	0.085
Antigua and Barbuda	ATG	N. America	0	0	0	0.162	0.126	0.108
Argentina	ARG	S. America	0	0	0	0.051	0.073	0.079
Armenia	ARM	Asia	0	0	0	0.007	0.007	0.005
Australia	AUS	Oceania	0	0	0	0.048	0.045	0.041
Austria	AUT	Europe	0	0.008	0.043	0.088	0.115	0.109
Azerbaijan	AZE	Asia	0	0	0	0.014	0.051	0.083
Bahrain	BHR	Asia	0	0	0.032	0.024	0.013	0.014
Bangladesh	BGD	Asia	0.001	0.06	0.167	0.139	0.123	0.132
Barbados	BRB	N. America	0	0.026	0.052	0.021	0.022	0.027
Belarus	BLR	Europe	0	0.026	0.02	0.011	0.023	0.025
Belgium	BEL	Europe	0	0	0.089	0.076	0.062	0.063
Belize	BLZ	N. America	0	0	0.011	0.132	0.142	0.136
Benin	BEN	Africa	0	0	0	0.007	0.036	0.064
Bolivia	BOL	S. America	0	0	0	0.005	0.076	0.086
Bosnia and Herzegovina	BIH	Europe	0	0	0	0.061	0.109	0.115
Botswana	BWA	Africa	0	0	0.013	0.007	0.016	0.016
Brazil	BRA	S. America	0	0	0	0.077	0.057	0.049
Brunei	BRN	Asia	0	0	0	0.019	0.039	0.034
Bulgaria	BGR	Europe	0	0	0	0.016	0.021	0.024
Burkina Faso	BFA	Africa	0	0	0	0	0.013	0.016
Burma (Myanmar)	MMR	Asia	0	0	0	0	0.019	0.022
Burundi	BDI	Africa	0.021	0.106	0.072	0.021	0.014	0.013
Cambodia	KHM	Asia	0	0.009	0.011	0.049	0.05	0.046
Cameroon	CMR	Africa	0.006	0.273	0.268	0.184	0.154	0.151
Canada	CAN	N. America	0	0	0	0.083	0.108	0.093
Cape Verde	CPV	Africa	0	0	0.155	0.248	0.186	0.184
Central African Republic	CAF	Africa	0.021	0.113	0.078	0.029	0.03	0.026
Chad	TCD	Africa	0.021	0.105	0.118	0.049	0.036	0.033
Chile	CHL	S. America	0	0.112	0.093	0.042	0.028	0.035
China	CHN	Asia	0.021	0.106	0.072	0.037	0.021	0.031
Colombia	COL	S. America	0	0	0	0.01	0.011	0.018
Comoros	COM	Africa	0	0	0	0.005	0.011	0.01
Congo, Democratic Republic of the	COD	Africa	0	0	0	0.026	0.023	0.02

Congo, Republic of the	COG	Africa	0	0.026	0.053	0.028	0.048	0.041
Costa Rica	CRI	N. America	0	0	0	0.013	0.109	0.096
Cote d'Ivoire	CIV	Africa	0	0	0	0.04	0.044	0.054
Croatia	HRV	Europe	0	0	0	0.167	0.163	0.152
Cuba	CUB	N. America	0.993	0.694	0.428	0.224	0.174	0.161
Cyprus	CYP	Asia	0	0	0	0	0.016	0.019
Czech Republic	CZE	Europe	0	0	0.032	0.015	0.007	0.005
Denmark	DNK	Europe	0	0.012	0.05	0.113	0.1	0.094
Djibouti	DJI	Africa	0.021	0.065	0.032	0.008	0.027	0.033
Dominica	DMA	N. America	0	0	0	0.033	0.083	0.094
Dominican Republic	DOM	N. America	0.021	0.091	0.052	0.063	0.06	0.05
Ecuador	ECU	S. America	0	0.139	0.175	0.139	0.171	0.159
Egypt	EGY	Africa	0	0	0	0	0.008	0.007
El Salvador	SLV	N. America	0	0	0	0.094	0.109	0.115
Equatorial Guinea	GNQ	Africa	0	0	0	0.081	0.062	0.063
Eritrea	ERI	Africa	0.021	0.065	0.032	0.013	0.043	0.063
Estonia	EST	Europe	0	0	0.053	0.116	0.112	0.117
Ethiopia	ETH	Africa	0.001	0.156	0.277	0.192	0.155	0.146
Finland	FIN	Europe	0	0.111	0.105	0.038	0.037	0.033
France	FRA	Europe	0	0.049	0.173	0.184	0.142	0.13
Gabon	GAB	Africa	0	0	0	0.039	0.061	0.065
Gambia, The	GMB	Africa	0	0	0	0.045	0.052	0.047
Georgia	GEO	Asia	0.021	0.096	0.057	0.024	0.027	0.03
Germany	DEU	Europe	0	0	0	0.007	0.013	0.019
Ghana	GHA	Africa	0	0	0	0.003	0.002	0.002
Greece	GRC	Europe	0	0	0.02	0.007	0.005	0.014
Grenada	GRD	N. America	0.021	0.065	0.032	0.087	0.088	0.086
Guatemala	GTM	N. America	0	0	0	0.01	0.005	0.004
Guinea	GIN	Africa	0	0	0	0	0.032	0.04
Guinea-Bissau	GNB	Africa	0	0	0	0.015	0.013	0.02
Guyana	GUY	S. America	0	0	0	0.017	0.033	0.028
Haiti	HTI	N. America	0	0	0.008	0.038	0.121	0.119
Honduras	HND	N. America	0	0.065	0.069	0.025	0.012	0.01
Hungary	HUN	Europe	0	0	0	0.186	0.137	0.123
Iceland	ISL	Europe	0	0.132	0.116	0.116	0.125	0.115
India	IND	Asia	0	0	0	0.012	0.121	0.136
Indonesia	IDN	Asia	0	0	0	0	0.003	0.003
Iran	IRN	Asia	0.021	0.066	0.048	0.016	0.103	0.107
Iraq	IRQ	Asia	0	0.003	0.004	0.007	0.006	0.009
Ireland	IRL	Europe	0	0	0	0.009	0.012	0.019

Israel	ISR	Asia	0	0.065	0.059	0.059	0.076	0.073
Italy	ITA	Europe	0	0.051	0.069	0.134	0.144	0.141
Jamaica	JAM	N. America	0	0	0	0.057	0.043	0.036
Japan	JPN	Asia	0	0.091	0.085	0.047	0.076	0.105
Jordan	JOR	Asia	0	0	0.028	0.023	0.025	0.027
Kazakhstan	KAZ	Asia	0	0	0	0.082	0.092	0.098
Kenya	KEN	Africa	0	0.013	0.013	0.006	0.016	0.025
Korea, Democratic People's Republic of	PRK	Asia	0	0	0	0.037	0.059	0.057
Korea, Republic of	KOR	Asia	0	0	0	0.005	0.037	0.043
Kuwait	KWT	Asia	0.021	0.134	0.164	0.173	0.145	0.151
Kyrgyzstan	KGZ	Asia	0	0.027	0.055	0.087	0.107	0.118
Lao People's Democratic Republic (Laos)	LAO	Asia	0	0	0	0.033	0.049	0.046
Latvia	LVA	Europe	0	0	0	0.008	0.094	0.099
Lebanon	LBN	Asia	0.021	0.091	0.096	0.031	0.015	0.013
Lesotho	LSO	Africa	0	0.025	0.03	0.016	0.035	0.069
Liberia	LBR	Africa	0	0	0.045	0.015	0.007	0.005
Libyan Arab Jamahiriya (Libya)	LBY	Africa	0.021	0.065	0.202	0.1	0.064	0.06
Lithuania	LTU	Europe	0	0	0.045	0.015	0.007	0.008
Luxembourg	LUX	Europe	0	0	0	0.109	0.099	0.103
Macedonia, The former Yugoslav Republic of	MKD	Europe	0.001	0.037	0.151	0.133	0.12	0.13
Madagascar	MDG	Africa	0	0	0	0.069	0.094	0.094
Malawi	MWI	Africa	0.021	0.117	0.159	0.109	0.112	0.11
Malaysia	MYS	Asia	0	0	0	0.045	0.086	0.084
Mali	MLI	Africa	0.021	0.095	0.063	0.021	0.013	0.022
Malta	MLT	Europe	0	0	0	0.002	0.05	0.059
Mauritania	MRT	Africa	0	0	0	0.001	0.079	0.08
Mauritius	MUS	Africa	0	0	0.052	0.019	0.022	0.025
Mexico	MEX	N. America	0	0.114	0.094	0.054	0.054	0.056
Moldova, Republic of	MDA	Europe	0	0	0	0	0.009	0.012
Mongolia	MNG	Asia	0	0	0	0.008	0.015	0.034
Montenegro	MNE	Europe	0	0	0	0.07	0.095	0.093
Morocco	MAR	Africa	0	0	0	0	0.043	0.054
Mozambique	MOZ	Africa	0	0.026	0.075	0.037	0.032	0.039
Namibia	NAM	Africa	0	0.08	0.052	0.021	0.044	0.053
Nepal	NPL	Asia	0	0	0	0	0.014	0.012
Netherlands	NLD	Europe	0.021	0.094	0.175	0.148	0.131	0.118
New Zealand	NZL	Oceania	0	0	0	0.02	0.027	0.032

Nicaragua	NIC	N. America	0.021	0.091	0.052	0.019	0.014	0.012
Niger	NER	Africa	0	0	0	0.025	0.049	0.049
Nigeria	NGA	Africa	0	0	0	0.004	0.041	0.042
Norway	NOR	Europe	0.001	0.142	0.18	0.166	0.143	0.133
Oman	OMN	Asia	0	0.009	0.044	0.068	0.038	0.033
Pakistan	PAK	Asia	0	0	0.02	0.021	0.011	0.011
Panama	PAN	N. America	0	0	0	0.009	0.009	0.008
Papua New Guinea	PNG	Oceania	0	0	0.045	0.035	0.053	0.074
Paraguay	PRY	S. America	0.021	0.065	0.079	0.066	0.101	0.092
Peru	PER	S. America	0	0	0.089	0.033	0.04	0.048
Philippines	PHL	Asia	0	0	0	0.09	0.066	0.062
Poland	POL	Europe	0	0.015	0.047	0.056	0.084	0.074
Portugal	PRT	Europe	0	0	0.045	0.03	0.014	0.012
Qatar	QAT	Asia	0	0	0	0.218	0.142	0.126
Romania	ROU	Europe	0	0	0	0.005	0.046	0.049
Russian Federation	RUS	Europe	0	0	0.032	0.076	0.086	0.086
Rwanda	RWA	Africa	0	0	0.034	0.086	0.061	0.051
San Marino	SMR	Europe	0	0	0	0	0.067	0.083
Sao Tome and Principe	STP	Africa	0	0.02	0.202	0.224	0.172	0.154
Saudi Arabia	SAU	Asia	0	0	0	0.138	0.127	0.129
Senegal	SEN	Africa	0.021	0.091	0.075	0.024	0.014	0.014
Serbia	SRB	Europe	0	0	0	0.007	0.035	0.053
Seychelles	SYC	Africa	0.021	0.105	0.115	0.04	0.057	0.061
Sierra Leone	SLE	Africa	0.021	0.11	0.158	0.067	0.049	0.052
Singapore	SGP	Asia	0	0.099	0.152	0.076	0.067	0.079
Slovakia	SVK	Europe	0.021	0.065	0.045	0.015	0.01	0.009
Slovenia	SVN	Europe	0	0	0.02	0.016	0.051	0.044
Somalia	SOM	Africa	0	0	0	0	0.002	0.011
South Africa	ZAF	Africa	0	0	0.045	0.013	0.007	0.006
Spain	ESP	Europe	0	0.015	0.028	0.019	0.082	0.099
Sri Lanka	LKA	Asia	0	0	0	0	0.002	0.002
St. Lucia	LCA	N. America	0	0	0	0	0.005	0.006
St. Vincent and the Grenadines	VCT	N. America	0	0	0	0.133	0.096	0.113
Sudan	SDN	Africa	0	0	0.008	0.036	0.094	0.087
Suriname	SUR	S. America	0.001	0.03	0.102	0.108	0.117	0.114
Swaziland	SWZ	Africa	0	0	0	0.008	0.012	0.01
Sweden	SWE	Europe	0	0	0	0	0.004	0.012
Switzerland	CHE	Europe	0	0.01	0.084	0.024	0.06	0.081
Syrian Arab Republic	SYR	Asia	0.021	0.111	0.077	0.026	0.023	0.026

Taiwan	TWN	Asia	0.021	0.091	0.052	0.019	0.009	0.012
Tajikistan	TJK	Asia	0.021	0.079	0.07	0.09	0.08	0.076
Tanzania, United Republic of	TZA	Africa	0	0	0	0.025	0.057	0.07
Thailand	THA	Asia	0	0	0	0.041	0.049	0.052
Timor-Leste (East Timor)	TLS	Asia	0	0	0	0	0.002	0.005
Togo	TGO	Africa	0	0	0	0	0.003	0.002
Tonga	TON	Oceania	0	0	0	0.017	0.02	0.027
Trinidad and Tobago	TTO	N. America	0.021	0.148	0.155	0.129	0.106	0.1
Tunisia	TUN	Africa	0.021	0.065	0.035	0.146	0.148	0.152
Turkey	TUR	Asia	0	0	0	0.022	0.026	0.024
Turkmenistan	TKM	Asia	0.021	0.105	0.065	0.027	0.03	0.033
Uganda	UGA	Africa	0.021	0.105	0.065	0.021	0.031	0.034
Ukraine	UKR	Europe	0	0	0	0.111	0.144	0.136
United Arab Emirates	ARE	Asia	0	0	0.006	0.091	0.066	0.065
United Kingdom	GBR	Europe	0	0	0.045	0.105	0.076	0.069
United States	USA	N. America	0	0	0	0.07	0.109	0.103
Uruguay	URY	S. America	0	0	0	0.008	0.004	0.003
Uzbekistan	UZB	Asia	0	0	0	0.036	0.056	0.054
Vanuatu	VUT	Oceania	0	0	0	0.126	0.106	0.11
Venezuela	VEN	S. America	0	0	0	0	0.003	0.006
Viet Nam	VNM	Asia	0	0.065	0.086	0.036	0.085	0.085
Yemen	YEM	Asia	0	0	0.003	0.01	0.082	0.079
Zambia	ZMB	Africa	0.021	0.065	0.032	0.015	0.032	0.03
Zimbabwe	ZWE	Africa	0	0	0	0.008	0.064	0.057

APPENDIX D. DEGREE AND BETWEENNESS CENTRALITIES IN OBSERVED PERIODS												
Country Name	DC 1967	DC 1976	DC 1985	DC 1994	DC 2003	DC 2011	BC 1967	BC 1976	BC 1985	BC 1994	BC 2003	BC 2011
Afghanistan	0	0	0	0	0	1.705	0	0	0	0	0	0
Albania	0	0	0	9.091	19.886	23.295	0	0	0	0.238	0.085	0.082
Algeria	0	0	0	3.409	22.159	27.273	0	0	0	0.016	0.306	0.261
Angola	0	0	0	0	2.841	4.545	0	0	0	0	0.013	0.015
Antigua and Barbuda	0	0	0	0.568	1.136	1.136	0	0	0	0	0.001	0
Argentina	0	0	0	19.886	33.523	33.523	0	0	0	1.111	0.82	0.602
Armenia	0	0	0	5.682	18.182	22.159	0	0	0	0.03	0.127	0.112
Australia	0	0	0	5.682	11.364	12.5	0	0	0	1.046	0.059	0.097
Austria	0	1.136	2.273	10.795	33.523	35.795	0	0.016	0.016	0.32	0.776	0.539
Azerbaijan	0	0	0	1.136	11.932	23.295	0	0	0	0	0.044	0.109
Bahrain	0	0	0	0.568	9.659	18.182	0	0	0	0	0.031	0.168
Bangladesh	0	0	2.841	7.955	14.205	17.045	0	0	0.096	0.138	0.092	0.079
Barbados	0	0	0	1.705	4.545	6.25	0	0	0	0.041	0.011	0.014
Belarus	0	0	0	5.682	27.273	33.523	0	0	0	0.065	0.287	0.257
Belgium	1.136	2.841	9.091	20.455	39.205	52.273	0.005	0.038	0.348	0.973	1.525	2.345
Belize	0	0	0.568	0.568	3.977	4.545	0	0	0	0	0.014	0.013
Benin	0.568	0.568	1.136	1.705	6.818	8.523	0	0	0.007	0.013	0.046	0.03
Bolivia	0	0	0	7.955	13.068	13.068	0	0	0	0.13	0.05	0.035
Bosnia and Herzegovina	0	0	0	0.568	17.045	22.159	0	0	0	0	0.168	0.08
Botswana	0	0	0	0	3.977	5.682	0	0	0	0	0	0.003
Brazil	0	0	0	2.273	8.523	8.523	0	0	0	0.024	0.027	0.016
Brunei	0	0	0	0	2.841	3.977	0	0	0	0	0	0.001

Bulgaria	0	0	1.136	15.341	36.364	39.773	0	0	0.01	0.413	0.544	0.579
Burkina Faso	0	0.568	0.568	1.136	7.386	8.523	0	0	0	0	0.059	0.052
Burma (Myanmar)	0	0	0	0	2.273	3.409	0	0	0	0	0	0
Burundi	0	0	0.568	2.273	3.409	4.545	0	0	0	0.018	0.036	0.044
Cambodia	0	0	0	0.568	7.955	11.932	0	0	0	0	0.007	0.031
Cameroon	1.705	1.705	3.977	4.545	8.523	9.091	0.109	0.065	0.122	0.054	0.053	0.032
Canada	0	0.568	0.568	5.682	14.773	15.909	0	0	0	0.017	0.128	0.106
Cape Verde	0	0	0	2.841	5.114	5.114	0	0	0	0.026	0.034	0.014
Central African Republic	1.136	1.705	1.705	1.705	2.273	2.841	0.059	0.088	0.044	0.008	0.001	0.001
Chad	1.705	2.273	2.273	2.273	6.25	7.955	0.13	0.169	0.089	0.013	0.029	0.018
Chile	0	0	0	10.795	30.114	30.114	0	0	0	0.492	1.039	0.709
China	0	0	8.523	38.068	63.636	73.864	0	0	1.165	7.209	7.175	8.041
Colombia	0	0	0	1.705	2.841	4.545	0	0	0	0.055	0.001	0.002
Comoros	0	0	0	0.568	3.977	3.977	0	0	0	0	0.016	0.01
Congo, Democratic Republic of the	0	2.273	3.409	4.545	5.682	8.523	0	0.156	0.161	0.035	0.008	0.011
Congo, Republic of the	1.705	1.705	1.705	3.409	3.977	7.955	0.13	0.088	0.044	0.043	0.009	0.017
Costa Rica	0.568	0.568	1.705	2.273	11.932	11.932	0	0	0.035	0.022	0.066	0.053
Cote d'Ivoire	2.273	2.841	2.841	2.841	6.25	6.25	0.198	0.299	0.159	0.021	0.013	0.009
Croatia	0	0	0.568	4.545	29.545	33.523	0	0	0	1.024	0.33	0.406
Cuba	0	0	0	2.273	35.227	35.227	0	0	0	0.034	3.036	1.425
Cyprus	0	0	0	3.977	10.227	15.909	0	0	0	0.001	0.13	0.156
Czech Republic	0	0	0	21.023	45.455	49.432	0	0	0	1.126	2.23	2.133
Denmark	0	0.568	2.273	13.636	28.409	31.25	0	0	0.009	0.193	0.417	0.387
Djibouti	0	0	0	0	2.841	3.977	0	0	0	0	0	0

Dominica	0	0	0.568	1.136	1.136	1.136	0	0	0	0.006	0.001	0
Dominican Republic	0.568	0.568	0.568	0.568	7.386	9.659	0	0	0	0	0.064	0.085
Ecuador	0.568	1.136	1.705	7.386	15.909	15.909	0	0.023	0.37	0.31	0.116	0.083
Egypt	0.568	3.977	9.091	21.023	56.25	58.523	0	0.881	1.626	3.557	5.887	4.168
El Salvador	0	0	0.568	1.705	14.205	14.205	0	0	0	0.002	0.159	0.125
Equatorial Guinea	0	0	0.568	0.568	1.136	3.977	0	0	0	0	0	0.004
Eritrea	0	0	0	0	2.273	2.273	0	0	0	0	0.001	0.001
Estonia	0	0	0	8.523	13.636	16.477	0	0	0	0.17	0.064	0.056
Ethiopia	0.568	0.568	0.568	1.136	9.659	17.045	0	0	0	0.003	0.015	0.099
Finland	0	0	2.841	13.636	31.818	40.909	0	0	0.143	0.164	0.531	0.9
France	1.705	9.659	19.886	37.5	56.25	59.091	0.012	1.836	4.779	6.399	4.448	3.155
Gabon	0	2.273	3.409	3.409	7.386	7.955	0	0.169	0.098	0.013	0.014	0.014
Gambia, The	0	0	0	0.568	4.545	7.386	0	0	0	0	0.257	0.331
Georgia	0	0	0	3.977	14.205	17.045	0	0	0	0.015	0.045	0.039
Germany	17.045	23.295	32.386	52.273	73.295	76.705	4.063	7.739	11.382	18.078	14.097	13.206
Ghana	0	0	0	3.977	14.205	14.773	0	0	0	0.021	0.177	0.12
Greece	0.568	0.568	0.568	10.227	22.159	24.432	0	0	0	0.164	0.165	0.111
Grenada	0	0	0	1.136	1.136	1.136	0	0	0	0.003	0.001	0.001
Guatemala	0	0	0	0	6.818	10.227	0	0	0	0	0.023	0.033
Guinea	1.705	1.705	1.705	2.273	9.091	10.795	0.249	0.082	0.037	0.007	0.071	0.051
Guinea-Bissau	0	0	0	0.568	1.136	1.136	0	0	0	0	0.01	0.004
Guyana	0	0	0	1.136	2.273	4.545	0	0	0	0.006	0.001	0.002
Haiti	0	0.568	2.273	2.273	2.841	2.841	0	0	0.114	0.021	0.007	0.005
Honduras	0	0	0	1.705	7.386	7.386	0	0	0	0.016	0.037	0.027
Hungary	0	0	0	22.727	33.523	34.659	0	0	0	1.114	0.377	0.27

Iceland	0	0	0	0.568	2.841	5.114	0	0	0	0	0.001	0.003
India	0	0	0	1.136	32.386	46.023	0	0	0	0	0.841	1.736
Indonesia	0	3.977	3.977	13.068	34.091	35.795	0	0.757	0.266	0.494	1.143	0.785
Iran	0.568	1.136	1.705	1.705	28.409	34.091	0	0.29	0.056	0.009	0.32	0.58
Iraq	0.568	0.568	0.568	1.136	1.705	2.273	0	0	0	0	0	0
Ireland	0	0	0	0	0.568	0.568	0	0	0	0	0	0
Israel	0	0.568	1.705	6.818	19.886	22.159	0	0	0.025	0.033	0.141	0.132
Italy	1.136	2.841	4.545	22.159	50	56.818	0.011	0.035	0.111	1.824	2.946	3.009
Jamaica	0	0	0	5.114	9.091	9.091	0	0	0	0.06	0.025	0.017
Japan	0	0	1.136	2.273	5.682	7.955	0	0	0.001	0.003	0.004	0.011
Jordan	0	1.136	2.273	3.977	17.045	30.114	0	0.023	0.085	0.024	0.063	0.266
Kazakhstan	0	0	0	8.523	20.455	25.568	0	0	0	0.083	0.083	0.079
Kenya	0	0.568	0.568	0.568	2.841	6.25	0	0	0	0	0.003	0.033
Korea, Democratic People's Republic of	0	0	0	0.568	11.364	14.205	0	0	0	0	0.045	0.048
Korea, Republic of	0.568	3.977	5.682	20.455	42.614	51.705	0	0.372	0.208	0.649	1.492	1.654
Kuwait	1.705	2.273	3.977	9.659	26.136	34.091	0.019	0.84	0.686	0.49	0.526	0.441
Kyrgyzstan	0	0	0	3.977	14.205	15.341	0	0	0	0.014	0.048	0.031
Lao People's Democratic Republic (Laos)	0	0	0	3.977	11.932	13.636	0	0	0	0.037	0.132	0.101
Latvia	0	0	0	7.955	22.727	26.136	0	0	0	0.269	0.356	0.265
Lebanon	0	0	0	0.568	22.727	28.977	0	0	0	0	0.195	0.352
Lesotho	0	0	1.136	1.136	1.136	1.705	0	0	0.019	0.006	0.001	0.001
Liberia	1.136	1.136	2.841	2.841	2.841	2.841	0.035	0.023	0.086	0.02	0.003	0.002
Libyan Arab Jamahiriya (Libya)	0	1.136	1.705	2.841	9.091	19.318	0	0.008	0.01	0.017	0.065	0.225

Lithuania	0	0	0	11.364	23.864	29.545	0	0	0	0.211	0.296	0.266
Luxembourg	1.136	1.705	7.955	19.318	38.068	51.705	0.005	0.004	0.251	0.863	1.419	2.311
Macedonia, The former Yugoslav Republic of	0	0	0	0.568	17.045	20.455	0	0	0	0	0.08	0.091
Madagascar	2.273	2.273	2.273	2.273	2.841	5.682	0.371	0.546	0.151	0.021	0.008	0.013
Malawi	0	0	0	0	3.409	3.409	0	0	0	0	0.007	0.005
Malaysia	0.568	1.705	7.386	21.591	38.636	39.205	0	0.077	0.8	5.786	1.574	1.124
Mali	0	0	1.136	1.705	7.386	9.659	0	0	0.007	0.002	0.074	0.102
Malta	1.136	2.841	3.977	5.682	11.932	14.205	0.047	0.343	0.707	0.19	0.051	0.042
Mauritania	0	0.568	2.273	3.409	9.091	11.932	0	0	0.035	0.011	0.062	0.048
Mauritius	0	1.136	1.136	1.705	15.341	21.023	0	0.036	0.025	0.012	0.536	0.669
Mexico	0	0	0	0.568	11.364	16.477	0	0	0	0	0.049	0.123
Moldova, Republic of	0	0	0	3.977	19.886	22.727	0	0	0	0.006	0.079	0.072
Mongolia	0	0	0	7.386	22.159	25	0	0	0	0.119	0.167	0.135
Montenegro	0	0	0.568	0.568	3.409	9.659	0	0	0	0	0.001	0.013
Morocco	1.705	3.409	7.386	13.636	29.545	35.227	0.18	0.247	1.208	1.178	1.062	1.032
Mozambique	0	0	0	0.568	10.227	14.205	0	0	0	0	0.044	0.049
Namibia	0	0	0	1.705	5.682	7.386	0	0	0	0.002	0.007	0.006
Nepal	0	0	0.568	1.705	2.273	2.841	0	0	0	0.012	0.002	0.002
Netherlands	1.705	7.955	11.364	26.705	51.136	54.545	0.016	0.905	1.246	2.843	3.442	3.274
New Zealand	0	0	0	0.568	1.705	2.273	0	0	0	0	0	0
Nicaragua	0	0	0	1.136	9.659	11.364	0	0	0	0.005	0.047	0.048
Niger	1.136	1.136	1.136	1.705	2.841	2.841	0.035	0.023	0.007	0.002	0.001	0
Nigeria	0	0	0	2.841	10.795	12.5	0	0	0	0.058	0.07	0.064
Norway	0.568	0.568	2.273	7.955	9.659	9.659	0	0	0.019	0.104	0.056	0.026

Oman	0	0	1.136	3.409	11.932	19.318	0	0	0	0.015	0.064	0.075
Pakistan	0.568	0.568	2.841	7.386	26.136	27.273	0	0	0.219	0.226	0.342	0.239
Panama	0	0	2.841	3.409	9.659	13.636	0	0	0.164	0.116	0.063	0.076
Papua New Guinea	0	0	1.136	2.841	2.841	2.841	0	0	0.019	0.069	0.006	0.005
Paraguay	0	1.136	2.273	10.227	15.341	15.341	0	0.006	0.809	0.619	0.117	0.086
Peru	0	0	0	10.227	17.045	19.318	0	0	0	0.429	0.224	0.215
Philippines	0	0.568	1.705	6.25	21.023	21.023	0	0	0.028	0.379	0.415	0.24
Poland	0	0	0.568	28.409	35.795	35.795	0	0	0	2.658	0.65	0.341
Portugal	0	0	0.568	9.659	25	29.545	0	0	0	1.799	3.469	2.619
Qatar	0	0	0	0	18.182	26.136	0	0	0	0	0.395	0.494
Romania	0	1.705	9.659	32.386	47.727	48.864	0	0.147	0.735	4.476	1.31	0.959
Russian Federation	0	0	0	16.477	32.386	39.773	0	0	0	1.34	0.527	0.714
Rwanda	1.136	1.136	2.273	2.273	3.409	3.977	0.035	0.023	0.035	0.011	0.003	0.005
San Marino	0	0	0	0	0.568	3.409	0	0	0	0	0	0.002
Sao Tome and Principe	0	0	0	0	0.568	0.568	0	0	0	0	0	0
Saudi Arabia	0	0	0	1.136	7.386	13.068	0	0	0	0.003	0.023	0.037
Senegal	1.705	2.841	6.25	6.818	11.364	14.205	0.112	0.662	0.496	0.141	0.081	0.092
Serbia	0	0.568	1.136	1.705	19.318	27.841	0	0	0.024	0.008	0.121	0.215
Seychelles	0	0	0	0	1.136	3.409	0	0	0	0	0	0.003
Sierra Leone	0.568	0.568	1.136	1.136	1.705	1.705	0	0	0.019	0.006	0.001	0
Singapore	0	2.841	5.682	7.955	17.045	23.864	0	0.568	0.792	0.242	0.156	0.207
Slovakia	0	0	0	15.341	22.727	31.818	0	0	0	0.56	0.215	0.252
Slovenia	0	0	0.568	3.409	21.591	22.727	0	0	0	0.005	0.107	0.062
Somalia	0	0	1.136	1.136	1.136	1.136	0	0	0	0	0	0
South Africa	0	0.568	0.568	1.136	21.591	26.705	0	0	0	0	0.438	0.659

Spain	0	0	0	13.636	34.091	43.182	0	0	0	1.249	1.363	1.313
Sri Lanka	0.568	0.568	9.091	10.795	14.773	15.909	0	0	1.13	0.352	0.11	0.085
St. Lucia	0	0	1.136	1.136	1.136	1.136	0	0	0.019	0.006	0.001	0
St. Vincent and the Grenadines	0	0	0	0.568	0.568	1.136	0	0	0	0	0	0.003
Sudan	0.568	1.705	3.409	3.409	13.636	15.909	0	0.065	0.085	0.016	0.034	0.016
Suriname	0	0	0	0	1.136	1.705	0	0	0	0	0	0
Swaziland	0	0	0	0.568	2.841	2.841	0	0	0	0	0.013	0.01
Sweden	1.705	1.705	7.386	16.477	34.091	39.205	0.014	0.024	1.441	0.812	0.675	0.659
Switzerland	9.091	15.909	19.886	38.636	59.091	67.045	1.263	3.388	3.321	8.072	5.408	5.366
Syrian Arab Republic	0	0.568	2.273	2.841	15.909	23.295	0	0	0.044	0.066	0.276	0.186
Taiwan	0	0	0	5.114	12.5	13.636	0	0	0	0.286	0.226	0.346
Tajikistan	0	0	0	2.841	13.068	18.75	0	0	0	0.003	0.024	0.037
Tanzania, United Republic of	1.136	1.705	1.705	2.273	6.25	8.523	0.035	0.065	0.031	0.023	0.012	0.012
Thailand	0.568	1.136	2.273	9.091	19.886	22.159	0	0.023	0.047	0.122	0.186	0.242
Timor-Leste (East Timor)	0	0	0	0	0.568	1.136	0	0	0	0	0	0
Togo	1.136	1.136	1.136	1.705	1.705	2.841	0.035	0.023	0.007	0.002	0	0.001
Tonga	0	0	0	0	0.568	0.568	0	0	0	0	0	0
Trinidad and Tobago	0	0	0	1.705	4.545	6.818	0	0	0	0.007	0.014	0.017
Tunisia	2.841	5.114	6.818	18.182	29.545	31.25	0.435	1.231	0.768	1.995	0.929	0.642
Turkey	0.568	0.568	1.136	18.75	38.636	47.159	0	0	0.029	1.086	0.648	1.019
Turkmenistan	0	0	0	3.977	10.795	13.068	0	0	0	0.009	0.015	0.017
Uganda	0.568	1.705	1.705	1.705	7.386	9.091	0	0.065	0.031	0.009	0.146	0.14
Ukraine	0	0	0	13.636	36.932	39.773	0	0	0	0.325	0.564	0.58
United Arab Emirates	0.568	0.568	1.136	5.682	17.614	22.727	0	0	0	0.021	0.079	0.071

United Kingdom	0	2.841	13.068	40.341	56.818	58.523	0	0.149	1.998	11.89	9.432	7.299
United States	0	0	3.409	18.75	25.568	26.705	0	0	0.072	1.114	0.842	0.771
Uruguay	0	0.568	1.136	9.091	16.477	18.75	0	0	0.02	0.178	0.128	0.107
Uzbekistan	0	0	0	7.386	25.568	28.409	0	0	0	0.087	0.175	0.179
Vanuatu	0	0	0	0	0.568	1.136	0	0	0	0	0	0
Venezuela	0	0	0	5.114	14.773	16.477	0	0	0	0.104	0.123	0.102
Viet Nam	0	0	0	14.773	27.273	33.523	0	0	0	0.563	0.706	0.58
Yemen	0	0.568	2.841	3.409	20.455	22.159	0	0	0.191	0.034	0.099	0.049
Zambia	0.568	0.568	0.568	1.136	6.25	7.386	0	0	0	0.002	0.007	0.043
Zimbabwe	0	0	0	1.705	17.045	17.614	0	0	0	1.027	0.276	0.21

APPENDIX E. INTERGOVERNMENTAL INSTITUTIONS IN THE IGO AND RTA NETWORKS		
Abbreviation	Name of the International Institution	Network
ACP	African, Caribbean and Pacific Group of States	IGO
BSEC	Black Sea Economic Cooperation	IGO
CEN-SAD	Community of Sahel-Saharan States	IGO
CEPGL	Economic Community of Great Lakes Countries	IGO
G20	Groups of 20s	IGO
G77	Group of 77s	IGO
G8	Group of 8s	IGO
IGAD	Intergovernmental Authority on Development	IGO
LAS	League of Arab States	IGO
MRU	Mano River Union	IGO
OAS	Organization of American States	IGO
OECS	Organization of East Caribbean States	IGO
OIC	Organization of Islamic Conference	IGO
SAARC	South Asian Association for Regional Cooperation	IGO
UMA	Arab Maghreb Union	IGO
UNASUR	Union of South American Nations	IGO
APEC	Asia-Pacific Economic Cooperation	RTA
APTA	Asia-Pacific Trade Agreement	RTA
ASEAN (FTAs)	Free Trade Agreements signed between ASEAN and third parties	RTA
BAFTA	Baltic Free-Trade Area	RTA
BANGKOK	Bangkok Agreement	RTA
CACM	Central American Common Market	RTA
CAFTA-DR	Dominican Republic-Central America-United States Free Trade Agreement	RTA
CAN	Andean Community	RTA
CARICOM	Caribbean Community and Common Market	RTA
CEFTA	Central European Free Trade Agreement	RTA
CEMAC	Economic and Monetary Community of Central Africa	RTA
CER	Closer Economic Relations Trade Agreement	RTA
CEZ	Common Economic Zone	RTA
CIS	Commonwealth of Independent States	RTA
COMESA	Common Market for Eastern and Sothern Africa	RTA
EAC	East African Community	RTA
EAEC	Eurasian Economic Community	RTA
EC (FTAs)	Free Trade Agreements signed between European Communities and third parties	RTA
ECCAS	Economic Community of Central African States	RTA

ECO	Economic Cooperation Organization	RTA
ECOWAS	Economic Community of West African States	RTA
EEA	European Economic Area	RTA
EFTA (FTAs)	Free Trade Agreements signed between European Free Trade Association and third parties	RTA
EU	European Union	RTA
FTAA	Free Trade Area of Americas	RTA
GCC	Gulf Cooperation Council	RTA
GSTP	Global System of Trade Preferences among Developing Countries	RTA
LAIA	Latin American Integration Association	RTA
MERCOSUR	Southern Common Market	RTA
MSG	Melanesian Spearhead Group	RTA
NAFTA	North American Free Trade Agreement	RTA
PAFTA	Pan-Arab Free Trade Area	RTA
PICTA	Pacific Island Countries Trade Agreement	RTA
PTN	Protocol relation to Trade Negotiations among Developing Countries	RTA
SACU	Sothern African Customs Union	RTA
SADC	Southern African Development Community	RTA
SAFTA	South Asian Free Trade Agreement	RTA
SPARTECA	South Pacific Regional Trade and Economic Cooperation Agreement Trans-Pacific Strategic Economic Partnership	RTA
Trans-Pacific SEP	Trans-Pacific Strategic Economic Partnership	RTA
UEMOA/WAEMU	West African Economic and Monetary Union	RTA