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„Trade Union Networks in the Metal Sector in Europe – A Study on Europeanization and Institutionalization of Industrial Relations in the Field“

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ABSTRAKT

Die Erweiterung und Vertiefung der europäischen Integration seit Anfang 1990er Jahren hat auch Auswirkungen auf die Europäisierungsprozesse der industriellen Beziehungen gehabt als eine neue Mehrebenensystem entwickelt wurde und besonders im Industriesektoren ein Institutionalisierungsprozess mit Betonung auf grenzüberschreitende Koordinierungspraxis, Zusammenarbeit zwischen nationale Gewerkschaften und immer stärkere Europäische Gewerkschaftsverbände entstanden hat. Durch politökonomische und soziologische Erklärungsansätze ist es möglich diese zwei Prozesse zu beschreiben und Rahmen für eine empirische Nachforschung auszubauen.

Diese Dissertation widmet sich zu Netzwerktheorien und -Methoden um eine Umfassende Untersuchung über institutionelle Unternehmertum und Beziehungen zwischen Akteure im Metallsektor auf europäischer Ebene zu betrieben und um unterschiedliche Formen der Zusammenarbeit aus verschiedenen Gruppen- und Blockanalysen identifizieren zu lassen. Eine Netzwerkanalyse beschreibt dementsprechend einen relationalen Forschungsansatz und in diese Dissertation umfassen die zentralen Bedingungen für Netzwerkaktivitäten, Netzwerkstruktur und Positionierung der Akteure. Diese werden durch Netzwerkanalyse und Policy Netzwerk Analyse untersucht mit Hinsicht auf Netzwerkführung als erklärender Faktor für Wirksamkeit, Beständigkeit und Legitimität des Netzwerkes und einzelnen Netzwerk-Akteure.

Die zentrale Fragestellung der Dissertation besteht darin, wie die Europäisierungs- und Institutionalisierungsprozesse industrielle Beziehungen im Metallsektor auf europäischer Ebene geprägt haben und wie das institutionelle Feld sich entwickelt hat. Weiterhin, auf Netzwerkebene werden unterschiedliche Formen der Netzwerkzusammenarbeit und Netzwerkeigenschaften behandelt um eine Gesamtansicht über den Stand der Europäisierungs- und Institutionalisierungsprozesse und die wechselseitige Beziehung zwischen die Gewerkschaften in einem Mehrebenensystem der industriellen Beziehungen durchführen zu können; ein Thema, die wertwolle neue Einblicke liefern kann. Eine Kombination von quantitativen und qualitativen Forschungsmethoden ermöglicht eine vertiefte Analyse des Forschungsobjektes.

ABSTRACT

The expansion and deepening of European integration since the early 1990s has had an impact on the field of industrial relations as a new multi-level system has developed through the Europeanization process especially in industrial sectors and an institutionalization process with emphasis on cross-border coordination practice, cooperation between national unions and ever-stronger European trade union federations has emerged. Through approaches drawing from political economy and sociology, it is possible to describe these two processes and develop a framework for empirical research.

By applying network theories and methods it is possible to conduct a comprehensive study on institutional entrepreneurship and relations between actors in the metal sector at the European level through different group and block analytical methods. Accordingly, network analysis offers a relational approach and the central attributes used in this dissertation include network activities, structure and positioning of actors. Network analysis and policy network analysis are applied to investigate these.

This dissertation focuses on the shaping of industrial relations in the metal sector in Europe through Europeanization and institutionalization processes and the development of an institutional field. Furthermore, at the network level, different forms of network cooperation and network characteristics are investigated to provide an overall view of the state of Europeanization and institutionalization processes and the relationships of trade unions in a multi-level industrial relations system in order to provide valuable new insights. A combination of quantitative and qualitative research methods allows a deeper analysis of the research object and thus a better overall view.

CONTENTS

1 INTRODUCTION

Industrial relations can be defined either as exchange relations between labor and capital and in some cases even the state or as power relations in the workplace between the employers and the employees (although these are usually referred to as employment relations), both implying the structural inequality between the parties. Macro trends such as globalization and Europeanization have also affected industrial relations and production chains, challenging trade union to adapt to it and manoeuvre in this new context by engaging increasingly in cross-border activities and coordination. Similarly, trade unions have been faced with new challenges brought about by increased labor transnationalism that has meant increased divergence of industrial relations and increasing international competition. These challenges have put the national trade unions under duress to reconfigure their modus operandi regarding development of international cooperation not only because of differences in national industrial relations systems but also because of economic discrepancies between countries; something that has been reflected on wages and units of production, leading to the threat of regime competition and wage dumping.

Against this background, deepening European integration since the early 1990s has seen a weakening of European trade unions vis-à-vis capital, increasing further after the creation of the Eurozone some 10 years later. At the same time, the political dynamics of European integration have changed, leading alongside the economic crisis also to a political one of the European project. In 2001, a directive by the European Parliament on creating a European market for corporate control by removing national barriers to hostile takeovers was voted down with the pressure from organized labor. Two years later in 2003, a compromise was reached on the Takeover Directive (2004/25/EC). Similarly, 2004 and 2006, the proposal for a Services Directive was met with fierce resistance among organized labor especially in Austria, France and Germany, only to be redrawn into a compromise. In the end, in both cases, through the intervention of the case law of the European Court of Justice (ECJ), partial adjustments to Commission's initial aims were made.

European integration, and especially the Single Market and Economic and Monetary Union (EMU) have changed the field of industrial relations in Europe. While trade unions rely on their national systems of industrial relations and represent foremost workers from their own countries, meaning that their main power resources emerge from national setting, including their membership and institutional support. At the same time multinational corporations (MNCs) have managed to improve their capacity for regime competition because of the free movement of capital that is one of the three pillars of the European Union (EU). Arguments have been made (e.g. Streeck 1998;

Scharpf 2010) that Europeanization will inevitably strengthen the position of employers over the trade unions. However, for example at the metal sector trade unions have been able to respond to the employers' pressure over economic and political Europeanization with institution building and top-down coordination of collective bargaining at the European level. In this regard, EMU has indisputably been a driver for horizontal Europeanization of industrial relations and trade union cooperation.

Trade unions are best suited to soften the effects of capitalist market forces when they manoeuvre at the same level with these (Ebbinghaus & Visser 1994). As globalization and Europeanization have shifted the focus from national to international field, trade union movement has also responded to this by adjusting their organizational borders from national to international, establishing new institutional layers above the national ones. Whereas the labor movement has throughout its history been international, albeit with different emphasis than today, the creation of a new European layer of industrial relations on the employees' side has not been followed by the employers, who still perceive globalization and Europeanization in a different way; something that is also evident in the institutional logic and modus operandi of the employers' associations. As employees have wanted to build a social partnership, while the employers have been more interested in acting primarily as interest groups in the political arena (Greenwood 1997), establishing a true European level of industrial relations has been difficult. Helped by the liberalization process, the main goal for the MNCs and employers' (business) associations has been to separate themselves from the regulatory constraints of national and sub-national labor and production markets and not follow the same path on the international level. This has led to fierce opposition to the introduction of regulatory frameworks like multinational collective bargaining (Hoffmann et al. 2002). Instead, some MNCs have started to conduct company-specific bargaining rounds in different countries in order to reflect better their own economic situation (Foden et al. 2001; Fetzer 2009; Da Costa et al. 2012). As the European integration deepened in the 1990s, it was mainly defined by economic liberalization by international means (Streeck 1998), leaving industrial relations primarily to the national arenas.

Trade unions rely mainly on two sorts of strategies in trying to influence policies at the European level: public action and political lobbying. The political clout of trade union activities and institutions at the European level has its roots in the political recognition of the European social partners as co-stakeholders of social policy by the European Commission that started during the Delors presidency in the 1990s. The aim was to acquire support from the trade unions for the Commisions' European vision (Martin & Ross 1999) as well as downplay workers fears of the

consequences of Single Market. The integration of social protocol in the Maastricht Treaty lead eventually to the introduction of European Social Dialogue Agreements, European Works Councils and Directives on Posted Workers as well as Information and Consultation Directive that form the core of the European Labour Law. These ambiguous plans to develop the European-level industrial relations structures with the reliance on the support from the European Commission have helped to integrate the European Trade Union Federations (ETUFs) to the Europeanization process (Erne 2008). However, it has also been argued (e.g. Gobin 1997; Waddington et al. 1997) that the political and ideological relationship between the European Commission and the ETUFs that has been strengthened by the financial dependence has actually hindered the development of transnational trade unions from emerging as independent and powerful actors that draw their legitimacy from the grassroots labor movement. Meanwhile, it has also been argued (Pernot 1998; Gobin 2005) that by gaining access to the European political arena through participation in the European Economic and Social Committee and the ETUFs, national trade unions have become Eurocratic in their policy-making at the cost of a genuine European labor movement.

Still, regardless of the perspective, the ETUFs have potential to provide a useful framework for transnational trade union networks by helping to create forums for joint-action among national trade unions (e.g. Larsson 2014). While the ETUFs have evolved into de facto partners with the European Commission, the liberal market policies introduced since the 1990s have had the national trade unions to distance themselves from the Commission and actually oppose its agenda more often (e.g. Taylor & Mathers 2004; Turnbull 2006; Bernaciak 2008) as evidenced by the European rallies against the closure of Vilvoorde plants in 1997 and Nokias's Bochum plant in 2008 and the demonstrations against the Draft Service Directive in 2004 and 2006 or against the harsh austerity measures in 2010 and 2014 on the European Day of Action.

National trade unions' European identity has been the subject of a few studies. Huijgen et al. (2007) argued that a European identity can only emerge if other institutions are pulling in that direction too, pointing to the aforementioned close ties the ETUFs have with the European Commission. On the other hand, Turner (1996) noted that the interest representation at the European level is mostly "structures without action", since the establishment of formal organizational structures has not coincided with the involvement of rank-and-file in these processes. This can also be disputed in light of the developments especially on the aforementioned European Days of Action some 15 years later. Instead, gradual institutionalization of industrial relations has also helped to create an institutional framework that facilitates its own emergence outside of the institutional framework. In

the similar vein, Streeck (1999) questioned whether European Works Councils (EWCs) were European and not just extensions of national structures. Following Streeck's argument, Schroeder & Weinert (2004) wrote that it was not in the trade unions interest to have their competencies regulated at the European level, hence, giving up their autonomy over national matters. Whereas formal institutions and power relations are important for the decision making, the informal institutionalization of trade union movement and its impact on industrial action should not be overlooked. Therefore, the international trade union structures should be analyzed through their ability to foster cooperation and enhance mobilization, not only based on their decision-making power.

However, not all national trade unions are equally eager to engage at the European level. In principle, European dimension is part of the fundamental niche of all the national trade unions, yet not everyone actually acts like that. Therefore, it is necessary to analyze how individual trade unions have adopted pro-European attitudes and realized them through resource allocation. In general, national trade unions can be conceived as part of the European multilevel polity in which they operate (Gray & Lowery 1996). Hence, Europeanization can also be seen as a result of a process where the scope of this niche expands beyond national borders, making it possible to explain variation among national trade unions to expand the scope of their European niche as a response to European integration (Howell 2002). This reflects the argument by Mau & Verwiebe (2010, 21-24) of Europe as a space of social experience and connectivity.

At the same time, especially trade union confederations have been losing influence at home through the shift from sectoral to company level of industrial relations in many countries in order to improve the competitivess of transnational companies through competition over unit labor costs and productivity and from national to sectoral levels in others (e.g. Eiroline 2002)[1]. Together with national diversities and involvement of the national states this offered the possibility for regime competition, while also setting workers operating in different locations in different countries against each other, eroding international labor solidarity (Hancké 2000). The European sovereign debt crisis that started in 2009 weakened the capital and helped the labor to reinvent itself (Bieler et al. 2015; Erne 2012), but the European Integration project is still dominated by the Commission's business-friendly approach and the corporate lobbying of the European Roundtable of Industrialists over the

[1] An ongoing update on the development of industrial relations in all EU member states can be found under https://www.worker-participation.eu/National-Industrial-Relations

European Trade Union Congress (ETUC) and sectoral European trade union confederations (Clua Losada & Horn 2015; Horn 2012), although recently the Juncker Commission has become more labor friendy in their approach.

Compared with the situation in other continents, industrial relations in Europe are characterized by a relative broad basis of representation, strong organizing at the sectoral level and a separate institutional (European) layer consisting of the ETUFs that representi the interests of national trade unions against the European Commission. While industrial relations systems have traditionally been embedded within the national settings that have been developed through the years, since the early 1990s they have been faced with both internal and external challenges due to the changes in the society and the deepening of European integration (e.g. Vos 2006; Hyman 2001a; Lecher et al. 1998). Because of this integration process, trade unions that have traditionally been representing labor force within the context of national labor markets following different organizational models have been forced to adapt to this changed situation. For this reason, international and European trade union federations have provided a new institutional platform to gather national trade unions under a single umbrella, trying to decrease internal competition between them and instead increasing solidarity and information exchange. Especially since the EU enlargement in 2004, 2007 and most recently in 2013, labor transnationalism has taken new forms amid uneven economic development (Pulignano 2009; Bieler & Lindberg 2011; Bieler et al. 2015) with potential for cooperation on more equal grounds, where the sense of increased equality through network trade unionism can potentially enhance the positive sides of cooperation over the demand for competition between trade unions.

With these developments having taken place, a significant shift in the way research on industrial relations is being thought has been underway (e.g. Keller & Platzer 2003; Bechter et al. 2011), emphasizing sectoral similarities instead of national differences in industrial relations. Embedded in this discussion, the aim of this study is to concentrate on the so far under-developed macro level of European industrial relations research, with the scope on trade union network structures in the European metal sector. Similarly, although much more researched, the micro level with the emphasis on trade union strategies towards Europeanization is in focus here through the prism of networks.

Metalworking is one of the oldest industrial sectors in Europe as well as a key sector, due to among other things the large number of people it employs. It is made up mainly of export-driven large

companies and MNCs and has overcome massive restructuring since the 1980s. With a long tradition of strong trade unions and advanced structures for joint decision-making as well as coordinated action it has been at the forefront of Europeanization process. It was also one of the first to add a European dimension to organizing labor, with the creation of the European Metalworkers' Federation (EMF) in 1971. The choice of European metal sector as the focus of this study reflects its advanced coordinative structures that have been in place for a long time. Until its dismantling in 2012 and founding of IndustriALL Europe, interdependencies built through the EMF's organization in tackling issues with European or global scope were at the forefront. The main internal work in the EMF was carried out in the three policy committees and their select working parties (collective bargaining, industrial policy and company policy), which were responsible for shaping the guidelines for the trade union strategies and targets at the European level. The successor to EMF, new IndustriALL, also has a similar organizational structure. The EMF's strategy was based on two pillars: joint-commitment to European guidelines and political determination of EMF minimum standards, which all affiliates were expected to oblige. While coordination of collective bargaining at national level was regarded important in preventing mutual undercutting of bargaining targets, the political determination of European minimum standards lauched by the EMF has become an important tool in helping to create a pathway for wage increases to follow the increased productivity and improve working conditions to secure a safe work place and better well-being at work. These issues have generally enjoyed a support of all the sides in the social dialogue.

Trade unions' activity at the European level can best be described through network governance that manifests itself through informal social systems in contrast to more bureaucratic and institutional structures (e.g. Powell 1990; Provan & Kenis 2008). Network governance emerges through nonhierarchical clusters of organizations that interact through horizontal exchange patterns and where relationships are dependent on flows of resources between each actor, relying on reciprocal lines of communication to succeed. By advocating structural embeddedness in an organizational field, network governance reflects the extent to which an organization's mutual contacts are connected to one another (Granovetter 1992, 35) and form, hence, directly or indirectly a network of organizations. Structural embeddedness describes not just the current interactions among participants but also the likelihood of future interactions and how likely the network members are to be aware of these interactions (Granovetter 1985; 1992). Due to decoupling, this type of network is constantly evolving as the members try to reposition themselves based on the new connections available to them, always seeking new information, ways to access key resources and move into a

power position within the network to be able to influence the decision-making and control the means as well as the agenda of the network. In short, the more structural embeddedness there is in a network, the more information there is about each network member available for everyone else in the network and eventually more constraints there are on each member's behavior (Burt 1992). While these prototypical networks do not take into consideration variables such as historical and institutional background of network members nor their resources, it can still be used as a higher-level theory on the development of the field of European industrial relations, where national trade unions are embedded in the European arena through institutional arrangements through the ETUFs and with different forms of network governance regulating the process. A multilayered picture of institutional field develops, including both formal and informal network structures.

These informal network structures or clusters within a network are characterized by their temporality that leads to ever-changing and potentially overlapping membership, making it harder to keep track of them. Maguire et al. (2004) have called them un-networks in emerging organizational fields, reflecting on their attributes as potential networks of organizations rather than already established networks (Gray 1985). Institutions in mature fields are characterized by their diffusion throughout the field, routinized interactions legitimacy among actors, whereas emerging fields are made of proto-institutions, which are more narrowly diffused and only loosely organized domains (Lawrence et al. 2002). The theory of institutional entrepreneurship offers a way to explore how actors are able to affect the emergence of institutions and transform existing institutions regardless of the path dependences. The origins of institutional entrepreneurship can be found in DiMaggio's (1988) analysis that aimed to reintroduce actors' agency to institutional analysis. Maguire et al. (2004, 657) have described institutional entrepreneurship "activities of actors who have an interest in particular institutional arrangements and who leverage resources to create new institutions or to transform existing ones". This reflects DiMaggio's (1988, 14) conceptualization of institutional entrepreneurship that emphasized seizing the opportunity as the main factor behind the emergence of new institutions as institutional entrepreneurs manage to tie disparate sets of institutions together (Garud et al. 2002). A theoretical framework of institutional entrepreneurship consists of reintroducing agency, interests and power into the institutional analyses, while also incorporating actors and interests into it.

Actors' agency, interests and power emerge through cooperation and coordination, which are about forming a network of actors with (usually) similar orientations in a particular organizational field. In social sciences networks have been studied as new forms of social organization (e.g. Callon

1986) and multi-organizational governance (e.g. Mayntz 1993; Rhodes & Marsh 1992; Benz et al. 1992, Provan & Kenis 2008; Goerzen 2007), while in the economics network industries have gained ground (e.g. Fichert et al. 2007). Whereas cooperation and coordination are at the heart of industrial relations research, there have been less attempts to approach these through network analysis (e.g. McMillan & Casey 2010; Svensson & Öberg 2005).

Policy network are characterized by a set of relatively stable relationships which are non-hierarchical and interdependent (Börzel 1997), linking a variety of actors with shared interests on a certain policy domain and the resources to pursue these shared interests through co-operation. Policy networks can be divided into two forms (e.g. Börzel 1998): the distinctively Anglo-American interest intermediation school that sees policy networks as an analytical tool of governance and alternative form to market and hierarchy and the governance school with roots in Germany and the Netherlands that sees them as a form of governance, where they are usually conceived as a model of state or societal relations in a given issue domain. The governance school considers policy networks as a form of interaction between the state and society that is borne out of non-hierarchical forms of coordination. In general, the intermediation school adopts a practical approach to policy networks, where they are conceived more as overarching analytical tool that can be applied in the study and implementation of policy making. Meanwhile, the governance school offers a more theoretical approach to policy networks in attempting to explain the formation of policy networks. Although they concentrate on public policy and governance, parallels to industry networks can also be drawn based on these as through this approach it is possible to investigate policy networks, where different actors involved in jointly formulating and implementing policies at the European level by coordinating their interests through non-hierarchical bargaining.

1.1 Research Questions

By framing this research into institutional entrepreneurship literature, it is possible to analyze different stages of Europeanization and institutionalization processes. In doing so, this dissertation reflects the changing nature of industrial relations in Europe due to both internal and external factors that have affected the landscape and how the convergence-divergence tendencies in national industrial relations systems have helped shape the trade union networks. The general goal of this study is to demonstrate how Europeanization has manifested itself within the industrial relations research and how trade unions are tied to it in very different ways through structural embeddedness.

There are different views on how trade unions can best make their influence felt at the European level. In their comparative examination of the construction industry in the United Kingdom, Finland and Germany, Lillie & Greer (2007) found that in the face of neoliberalism, the most effective union responses tend to be those that are made relatively autonomously from the state, in contrast to more corporatist, consensus-based models of governance found elsewhere in the European Union. Martin (1996) offered a somewhat different view by arguing that ETUFs help to level the institutional playing field of industrial relations vis-à-vis MNCs by using their enhanced institutional capacity. The MNCs that operate in both in Europe and globally have had a significant role in the creation of European institutions and legislation mainly through the powerful European Round Table of Industrialists (e.g. Marginson & Sisson 2004, 73; Green Cowles 1998, 108-125). These two arguments, however, are essentially viewing the same change from two different angles: from within the system and from the outside. The former emphasizes the role of EU institutions in shaping the playing field, whereas the latter sees companies and their demands for free market as the driving force behind the creation of European industrial relations institutions and legislation. However, both of these views see trade union movement as somewhat passive actor, reacting to the change instead of shaping it.

The increased importance of European cross-border trade union cooperation reflects at least three sets of change. First is the increased scale of market integration, meaning pressure for intensified competition, rationalization and restructuring. Secondly, growing internationalization of companies apparent by cross-border mergers and acquisitions during the last two decades has increased the need for trade union cooperation on issues which can no longer be dealt at the national level. Thirdly, trade unions have understood the need for cooperation instead of confrontation in trying to guarantee the best possible circumstances for the industry in question that will also benefit the workers.

This study focuses on the Europeanization process of industrial relations especially in the metal sector by highlighting the complex nature of trade union networks in the metal sector in Europe under the institutional setting of EMF in 2008-2009 and investigating these networks from different perspectives. The more specific aim of this study is to analyze the roles and positions of the trade unions in the metal sector in Europe by applying network and policy network analytical methods. Trade unions have varying interests and policy preferences that they are trying to bring into the process so that the final decisions being made are as close to their own goals as possible within a certain domain. Trade unions also possess different amount of resources, affecting their ability to

realize their aims, something that is reflected by how they are able to fulfill their potential. According to the policy network perspective, advantageous positions in the policy networks are vital for the actors' pursuit of influence, making the definition of the overall extent of the actors' influence dependent on a combination of network positions and other resources.

The first research question considers the institutionalization process of industrial relations and in particular trade union networks in Europe from emerging to mature institutions by concentrating on the factors that have affected and enabled this process to take place.

1) Institutionalization and Europeanization Processes and Institutional Entrepreneurship

How the institutionalization and Europeanization processes at the metal sector has taken place and been morphed through institutional entrepreneurship into a mature field? What factors have been behind the institutionalization process of industrial relations field at the European level?

The aim here is to identify distinct stages, dynamics and paths in the emergence of the European industrial relations field by focusing specifically on the micro- and macro-level properties. The focus in the empirical study is then to identify commonalities and distinct processes in the emergence of the field to see, how the institutional contradictions arise and how the network of actors is present in the field of industrial relations. This is done by applying the policy network analysis, making it easier to comprehend the connection between policy issues and actors, which is essential when dealing with a multi-organizational network.

To explore this research question, a literature review is carried out, presenting current theories on the institutional entrepreneurship and policy networks, as well as their characteristics. This review is then used to develop a conceptual framework to study the field of European industrial relations from a sociological institutional perspective. A network analysis on the trade unions in the metal sector is then conducted. Building on insights and observations from the network analysis and the extensive literature review, institutional entrepreneurship and institutional contradictions, propositions regarding the macro-level emergent properties in the development of institutionalized European trade union networks are being developed with the focus on clusters and cohesive subgroups as part of the network structure.

The second research question concentrates on the convergent and divergent factors affecting the

national industrial relations systems amid Europeanization process, while also looking at trade union networks' role in steering this process.

2) Convergence or Divergence

Within the Europeanization process, the main research questions are:

In what form can convergent European trade union networks be compatible with the trend towards growing divergence within and between national industrial relations systems?

To analyze this research question, a literature review on Europeanization with emphasis on convergence and divergence is being carried out. Theoretically this draws from the Varieties of Capitalism (VoC) framework by trying to set the field in which the trade union network exists. In the empirical part of this research, the network analysis tries to unveil whether there indeed are observable convergent and/or divergent tendencies in the trade union network and whether these are network-wide or restricted to some regions and clusters within the network.

The third and fourth research questions address the role of individual trade unions within the network by concentrating both on the macro and micro level of analysis.

3) Network Formation and Structure

On the macro (network) level, the main research questions are:

How trade union networks have been formed? Which network attributes are supporting this process? What kind of structure do they have and what type of governance structures exists in these networks? How this network governance structure has affected their performance?

4) Actor-Centered Networks

On the micro (actor) level, the main research questions are:

How the individual trade unions are able to manoeuvre within the network in trying to shape their own role in it i.e. why some trade unions are more central in the network than others? Conversely, why are some unions less influential? How these networks have shaped Europeanization of industrial relations and inter-trade union relations and in which policy domains?

To analyze the third and fourth research question, a literature review on social network analysis is presented, focusing first on the more general accounts of network structure and then specifically on the ego-level actors' positioning in the network. After this a network analysis is conducted to illustrate the network. These research questions investigate, what connects and engages the trade

unions to advance the Europeanization process. In particular, the focus is on understanding the underlying structural properties, together with individual traits and embeddedness-related characteristics, referring to the legitimacy of the actors and their behavior in the institutional field that enable agency. This enables the understanding on why some trade unions engage in the field while others do not and explains what impacts their level of engagement. It is known that the European level of industrial relations in the metal sector concentrates around some of the bigger trade unions from the EU15, whereas ETUFs like the EMF have not been able to fully accommodate the preferences and needs of trade unions especially from the new member states, leaving them somewhat outside.

Although these research questions concentrate specially on trade union networks, they also reflect a more general theoretical contribution to distinguish the formation and emergence of power structures in the network as well as policy interests in the field. From this perspective the research question aims to provide additional evidence of how structure and agency are related and what kind of structural conditions and mechanisms trigger action and interest to facilitate shifts towards power positions in the field.

1.2 Research Focus

In the first part of this study, the concepts and characteristics of (policy) networks and network governance will be subjected to a theoretical analysis by trying to build a framework that encompasses the scope of the empirical study. Throughout the years there has been a considerable amount of research on organizational practices and arrangements that take a network-like form. The traditional way of looking at organizations has been through the familiar market-hierarchy continuum (e.g. Williamson 1975), while the network form and its salient features did not arise until the early 1990s (e.g. Powell 1990). The network strand of literature concentrates on horizontal and lateral patterns of exchange, with independent flows of resources and reciprocal lines of communication functioning as joints or ties. Following this, the theory of institutional entrepreneurship (e.g. DiMaggio 1988; Battilana 2006) will be presented to show, how new networks arise by focusing on the relationships connecting actors in a network and the institutional change it brings instead of focusing simply on the attributes of actors.

After the theoretical presentation of networks and institutionalist attributes, the phenomena of Europeanization, both from a political-economic as well as from an industrial relations view, will be subjected to an analysis of the concept that in turn will enable the analysis of conditions for

Europeanization processes. The focus will then be narrowed down further to formulate both general and sector specific assumptions about the complex interaction between institututional, economic and actor-specific factors. The main level of analysis in this study is the transnational sectoral level; In particular the aim is to see what attributes are central for the development of European trade union networks and how the Europeanization process of industrial relations has affected this.

Sectoral dynamics and interaction between actors have characterized the emergence of a European system of industrial relations. European sectoral level provides the main platform for coordination of collective bargaining and social partnership within the European framework. With the emergence of Eurozone and Single Currency, framework for common monetary policy has been adopted help harmonize the diverging degrees of coordination and to maintain macroeconomic stability within the EU, where collective bargaining systems are still national. Limited labor mobility and the lack of any EU-wide system of financial compensation along the lines of the American model (e.g. Eichengreen 2007) means that the task of economic adjustment falls to wages. Hence, especially the trade unions have a key role to play in coordinating wage bargaining based on collective agreements within the EU. On the other hand, cooperation can also take other forms, like solidarity within the trade union movement in Europe or lobbying for legislation that would help keep jobs in Europe. To succeed in these, networks of trade unions offer a good solution.

The empirical part of this study investigates trade union networks in the metal sector in Europe from different angles related to power, positioning, background variables and policy issues. A special emphasis will be given to the integration of trade unions from Central and Eastern Europe (CEE) and South Eastern Europe (SEE) in the European level networks. These trade unions have gone through an enormous change, a paradigm shift since the early 1990's, having been forced to adopt new modus operandi as being representatives of employees instead of being part of the state corporatism that, though weakly institutionalized, aimed at the effective management of diverse interests through economic fluctuation and structural reform (Pravda 1983). The change from corporations within state enterprises with forced membership to voluntary interest organizations concentrating on collective bargaining and social dialogue vis-à-vis private management and employers' associations was sudden and they were forced to adopt to the new situation without any previous experience. Partly because of this, industrial relations in the CEE countries are still highly fragmented with the trade unions focusing their activities at workplace level, while the sectoral and cross-sectoral levels have remained underdeveloped. Similarly, aside from Slovenia the entire region has experienced decreasing collective bargaining as MNCs have

become dominant actors in several industries, bringing their own industrial relations practices with them. Where existing, employers' associations are mostly lobbying organizations, while bipartite dialogue does not exist in practice. Instead a vertical tripartite dialogue is in place in many countries, conducted separately by employers' associations and trade unions with the state.

Also, still lacking behind in the socio-polito-economic developments to their Western European counterparts, a question of interest in representation at the European level has been valid, since the issues discussed at the European level are not necessarily the ones that the trade unions from CEE and SEE find relevant in their own national setting. Another emphasis will be on non-institutionalized networks that emerged alongside the institutionalized EMF networks as well as potential, hidden un-networks (Maguire et al. 2004) and the common nominators for their members.

Especially directly after the EU enlargement in 2004, there were fears of management's race to the bottom strategies that would make it impossible at least in the short term for trade unions from new and old EU member states to cooperate (e.g. Marginson 2006; Vaughan-Whitehead 2003). However, others emphasized a more positive scenario with potential for mutual gains (e.g. Meardi 2004). From the beginning, most initiatives took place at the company level (e.g. Kahancova 2009) as sectoral level trade unionism was underdeveloped in most of the new EU member states. Yet, there was place for reciprocal cooperation between trade unions from the EU15 and the CEE because of the MNCs' strong position in the metal industry (Kohl 2008). However, the trade unions are not on an equal level, but rather the cooperation between trade unions has concentrated on containing East-West underbidding, strengthening trade unions' capacity and improving working conditions at the plant level in the CEE. While this has been a successful strategy at the company level, similar development is much harder to accomplish at the sectoral level due to the weakness of sectoral collective bargaining, limited resources available and lack of natural bargaining partners to engage with, leading to weaker overall regulation.

From the European perspective, the Eastern enlargement of the EU since 2004 has also underlined the need for coordinated wage policy. Regime competition between new and old member states became reality as poor labor standards and weak trade unions gave MNCs an incentive to move their production to new member states. This slowed their willingness for labor market reforms and has hindered the development of efficient and effective social policy institutions and sustainable industrial relations systems.

Whereas national, cross-sectoral and company levels of industrial relations that have received most attention, interest formation and cooperation at the transnational (European) sectoral level has been has been given relatively little systematic focus. Pursuing certain joint, international interests and policies are more likely to succeed when negotiated within more narrowly defined sectoral limits instead of pushing for general interests at a macro level. This greater degree of homogeneity is strengthened as a result of increasing regionalization of the European Economic Area (EEA). The European Single Market has further helped to create opportunities to develop cross-border regional cooperation in certain sectors (e.g. Gollbach & Schulten 2000) to form natural regional economic areas.

In order to present the network perspective of European trade unionism, some theoretical assumptions about the network structure will be made to accommodate a metal sector-specific investigation, which is followed up by examining their plausibility for this study. In doing so, it is possible to take into account different perspectives, assumptions and conclusions in the field of European industrial relations and the different spheres of Europeanization that have affected this. The results of the empirical network analysis are drawn from four different views to the trade union networks in the European metal sector: power, position, resources and structure. These will be raised in the theoretical part of this study in order to explore both how network relations affect individual trade unions in their quest for influence on the European level as well as the feasibility of the trade union networks in enhancing Europeanization of industrial relations. In the conclusions, a summary of the research will be presented along with the prospects for the future of the Europeanization of industrial relations and potential for deepening role of trade union networks.

2 LITERATURE REVIEW AND THEORETICAL FRAMING OF THE THESIS I: NETWORK AND INSTITUTIONAL APPROACH

There has been significant interest in networks as theoretical framework especially since the early 1990s as better computers and software became available, enabling more advanced analysis with bigger data. However, conceptual frameworks and key terms that have been employed across the literature have created a complex and often confusing picture of the field. To conceptualize the network theories better, a division can be made between sociological social network analysis, political policy change and policy outcomes analysis and finally, public administrative approach. The oldest of these is the sociological tradition, which dates back to the 1930s, whereas the political science literature emerged in the early 1970s, and the public administration research in the mid-1980s. Although all of these have contributed important insights and frameworks to their respective disciplines, only recently has a cross-theoretical research stream emerged (e.g. Berry et al. 2004).

Social network analysis draws from sociology by concentrating on social relationships and the individual intentions of actors to engage in a social web of relations that take a shape of a network. In this regard, it does not emphasize motivation of actors, as that would indicate goal-directed action deriving from within an individual, thus reducing that individual to an actor, stripped of all contextual social influences. Sociological approach emphasizes socialization and norms, ideas as well as structures provided within a social context, both facilitating and constraining the range of behaviors that individuals exhibit, while at the same time shaping the ways in which behavior is being received by the environment. One of the key concepts here is the embeddedness thesis (Granovetter 1985) that emphasizes the relationship between action and context and was created as a response for Williamson's transaction-cost theory (1975). Following the embeddedness thesis of Granovetter (1985), a variety of contextual influences form the core of human behavior, while individuals have a range of intentions from political influence to prestige, affection and attachment. As can be seen, this characterization of the embeddedness of network participants in complex and conflicting role expectations has gained support from numerous sociologically oriented network studies, like Krackhardt's (1990) thesis on social action within the network depending on the actors' structural positions.

Another aspect of social networks concentrates on the organizational networks, largely dismissing the embeddedness assumption. Here the focus is on goal-oriented action underlying the activities performed by organizations, thus, emphasizing rational action over individual action and seeing economic outcomes as dependent variables. One of the main conceptual works in this field focuses

on Burt's (1997) definition of how managers' access to social capital brings contingent value to their organizations, how economic rewards tend to accumulate when structural holes are being filled and weak ties between internal and external members of a group emerge (Granovetter 1973).

The second research tradition within the network analysis concentrates on policy networks. It is based on the literature on policy change and the assumption of individuals being are rationally instrumental while actively participating in the policy process both as individuals and as members of organizations. This approach draws from Mancur Olson's (1965) work on the importance of collective-action incentives and its action-based approach, even though the process of policy change it encompasses reflects individual decision makers' strive for finding satisfying solutions that can be adopted to solve specifically defined problems.

Finally, public management networks offer a method to implement policy more effectively (Provan & Milward 1995; Agranoff & McGuire 2003). Drawing from an instrumental orientation, Agranoff & McGuire (2003) referred to networks as multi-organizational arrangements for solving problems that cannot be solved by individual organizations, whereas Provan & Milward (1995), emphasized resource dependence in explaining why networks offer an effective mechanism for addressing complex policy problems.

Several streams of literature have explored the emergence of networks. This study deals with three different aspects: (1) social networks as theory and policy networks as their empirical application. This differentiation is done in order to frame the analytical concepts and conceptual models that will be used in this study. (2) network coordination as a form of process from input to outcome helps to transform the somewhat stagnant models to include the process of network transformation. (3) literature on institutional analysis, especially in the field of emerging institutions, is important in understanding the framework on which the networks function. By framing the network literature in an institutional setting, the existing research on the emergence and development of institutional entrepreneurship and the influence of institutional contradictions on actor-level agency can be used to form the theoretical base and analytical perspective through which the empirical analyses of this thesis are undertaken.

Table 1. Three Traditions of Network Analysis reflecting Berry et al. (2004)

	Social Network Analysis	**Policy Networks**	**Public Management Networks**
Behavioral assumptions	"Intention" from embedded context, contingent value	Rational pursuit of actors' preferred policies	Effective service delivery, instrumentalism
Methods	a) Case studies b) Blockmodeling c) Euclidian distance analysis d) Regression analysis e) Dynamic network modeling	a) Case studies b) Regression analysis c) Times series d) Event history analysis	a) Case studies b) Regression analysis c) Euclidean distance analysis
Underlying questions	Network structure and position as results and antecedents of action, attitudes and outcomes	How policy actors achieve desired policies? How actors' network roles influence policy outcomes?	Comparative network performance; How managers' actions affect network outcomes? What types of networks exist and how they differ?

2.1 Social Network Theory and Policy Networks

Social networks as a theory refers to a social relationship between actors in a network by reducing social structures to nodes and ties. At the most basic form, social network forms a map of all of the relevant social ties between the nodes. Social network theory draws from sociology that emphasizes the role of social relationships and structures as being more important than the attributes of individual actors and, hence, giving less emphasis on individual agency i.e. the ability for actors to influence their performance since network structure dictates their ability to manoeuvre. There are three different perspectives to social network theory: Egocentric, sociocentric and open system (e.g. Marsden 2002; Hannemann & Riddle 2005). In egocentric networks the focus is on an individual actor and its relations, whereas sociocentric networks focus on the pattern of connections in the network as a whole and are closed networks by default. In open system networks, form of information or material transfers into or out of the system are in focus and hence, the boundary lines are not clearly defined. Due to the lack of clearly-defined boundaries, this type of network is considered the most difficult to study as it requires complete network data.

For a long time, social network analysis was reduced to a methodological approach for analyzing a particular kind of data. However, the application of policy network analysis has only emerged during the late 1980s and early 1990s, encompassing constellations of public and private actors to

generate and implement policies from local level to communities and to global collective action, covering a very broad area of theories from middle range ones to deeper meta-theoretical orientations such as structural-functionalism, structuralism and variants of methodological individualism (Schneider 2006a). As overviews of policy network analysis have shown (e.g. Schneider 2006a; Börzel 1998; Kenis & Raab 2003; Kenis & Schneider 1991), policy networks cover a wide array approaches from structural-functionalism, theories of exchange, resource dependence, governance and interest intermediation to rational choice theory, with the field continuously changing as old fields seize to exist and new ones emerge.

The first approaches to apply policy network theories in the 1970s and early 1980s (Laumann & Pappi 1976; McCord 1980) focused on holistic structural-functionalist explanations as well as system theoretical applications, the 1980s and 1990s saw political analysis emerge with a shift towards actor-and decision-centered perspectives. With the adoption of these individualistic approaches to explain political processes and policy outcomes, the new emphasis was given to preferences, resources and strategies of the policy actors along the structuralist focus on relations and institutional arrangements (Burt 1982; Coleman 1990). However, these analyses have not included broader structural environments such as polito-economic macro structures and cultural factors. These remain often outside the analytical picture, hence, overlooking asymmetry, inequality, power and constraints. Since the early 1990s, however, new versions of system theory have emerged, emphasizing relational analysis. This new system theory combines coherently actor-centered analysis and structural nestedness (Auyang 1998; Bunge 2000) on micro and macro levels of analysis.

In order to successfully integrate individualistic, structuralist and environmentalist perspective into one coherent system approach, empirical analysis of actors' behavior needs to be included. By shifting focus to the interaction of multiple causal relations and constraints that reflect institutional norms and resource dependencies, Schneider (2005) constructed a framework of un-planned policy development that emerges as a result of aggregated interactions between actors. This process results in the reconceptualization and reconfiguration of policy-making, although policy actors are still constrained by the possible and legitimate options available for them since they are embedded within economic, political and cultural sphere(s).

The circumstances, under which trade unions must work, vary greatly across Europe, depending on the local industrial relations system and the broader polito-economic environment. Requiring the

conceptual and theoretical tools to apprehend both empirically relevant behavioral aspects as well as different institutional and structural aspects that form the basis of the strategic alternatives available for the policy actors. In a traditional view, policy actors are mostly formal institutions like governmental actors or advocacy groups and policy networks offer them informal linkages to engage with each other in trying to form coherent policy spaces (Mayntz 1986, Rhodes 2006). On the other hand, informal policy networks are found in policy spaces that lack institutional structures (Peterson 2003) and have the potential to facilitate successful management of second-order collective action problems[2] by coordinating the activities of policy actors with the intention of creating new institutional forms that help to resolve collective problems bi- or multi-laterally within the network context.

Policy actors' motive to intervene in a policy process stems from their desire to involve other policy actors in solving the policy problems together (Laumann & Knoke 1987). Problem-solving processes area at the core of policy development as the intentions of policy actors specify the goals, means, and resources available for the policy network to deal with a certain problem. Policy actors' self-interests and the anticipated effect of policy outcomes on them means that they are interested in shaping the policy decisions in the best possible way depending not only on their abilities and instrumental resources, but also on their structural position in the policy space. This policy space is not a tabula rasa on which the social forces confront each other, but rather an institutional space regulated by historically-shaped rule systems (Schneider 2005). Moreover, because of the interdependencies in the network, the realization of the interests of one actor depends on their ability to take the other actors into account. Hence, securing one's interests requires bargaining and exchange instead of pure coercion. Yet, this does not imply that the actors are completely equal, as structural and resource dependent factors affect their position.

2.1.1. Cooperation, Coordination and Collaboration: Levels of Interorganizational Action

The organizational relationships in a network can range from cooperation, which is the least formal arrangement to collaboration, in which a new entity or new roles are being created. These three levels of interorganizational action are often treated as one to describe a relationship between organizations, but in reality they differ by nature with regards to function, structure and durability.

[2] According to Olson (1965), first-order collective action problems refer to the problems of initiating collective action while second-order collective action problems deal with the management of collective action organizations.

Cooperation is defined as a very informal interaction with loose connections, which strives only to informal interaction where no binding decisions are made. These ad hoc cooperation networks function fluidly and their membership is potentially ever-changing. Hence, cooperation among organizations is typically informal, without a defined structure or planning effort that supports and assists each organization to meet its goals within and towards the network. Organizations aim to share information with each other while still retaining their autonomy and authority (Graham & Barter 1999; Reilly 2001). This type of joint action usually occurs in networks that are in developing fields where the network governance has not yet been established.

Coordination has a more formal nature, seeking to find ways of organizing through planning and division of labor. The coordinated effort offers a possibility to implement policies or practices that would be too broad for one actor to achieve alone (Alter & Hage 1992; Alexander 1997). Within this context the collective action of the member organizations involved can be conceptualized as a social action system, in which independent processes, tasks and functions emerge through a division of tasks between the members in a coordinated way (Parsons 1951). Although organizations may come together to establish a coordinated effort and share compatible goals, they remain separate and continue to function independently. Coordination provides a range of options, since a unit or organization responsible for coordination steers this process and is tasked with coordinating the decisions and activities of an interorganizational system within a certain field or policy area when an issue or problem needs to be solved (Alexander 1997). In order for cooperation to be successful, it is critical for the member organizations to share a common raison d'être and a long-term commitment to the common cause.

The furthest organizations can go in their quest for joint action before amalgamation is collaboration, which involves a much more elaborate process and more formal planning through institutionalized structures (Vegso 1986). When collaborating with each other, the organizations join their forces to achieve a mutual goal by aiming to establish a more durable relationship (Reilly 2001). Unlike coordination, in which the goals and resources of the organizations remain separate, collaboration involves developing new goals by using shared, common resources. Thus, the members define together how to approach a broader set of targets in a long term. Ownership, control and resources are shared in collaborative networks, with a commitment to mutual relationship and goals (Mattesisch & Monsey 1992) that leads to a jointly developed structure and therefore shared responsibility over the collaboration, leaving little room for free-riding among

members, since the member organizations are so tightly intertangled with each other. In short, organizational collaboration draws upon the collective strength, knowledge and expertise of every member in order to achieve through a joint effort more than a single organization could ever accomplish by creating institutional structures.

Some of the most common dangers of collective action develop when wrong type of action is undertaken or when it is based on a misunderstanding. Collaboration is not necessarily a better approach than coordination or cooperation, even though it gives stability to the network. On the other hand, stability can also mean difficulties in adapting to the changing environment, thus making the network potentially more vulnerable. Also, collaborative network requires better commitment from the parties, making it more respected in the eyes of outsiders than loose ad hoc networks. One of the main problems is that the grounds for cooperation can sometimes be vague, as the organizations are not necessarily sure what they want from it and with whom to cooperate. Also, because these networks are not institutionalized, identifying them is not always that simple. Therefore, these structures can be called un-networks, where "membership"[3] is defined as not being known to the members (Maguire et al. 2004). Because these un-networks may not exist, although there would seem to be demand for them, the organizations are using their scarce resources inefficiently and not fully accomplishing their potential. Based on Table 2 these networks would most likely fit into the cooperation model, since they do not possess shared resources yet at this point and are very flexible. This is however, bound to change once they have established themselves by morphing into networks.

Table 2. Three Levels of Networking: Cooperation, Coordination and Collaboration (freely interpreted from Hickey 1986; Vegso 1986)

Cooperation	Coordination	Collaboration
-Short term -Informal relations -Ad hoc information sharing -Separate resources	-Longer term -More formal relations -Constructed communication channels -Shared access to resources	-Long term -More pervasive relations -Institutional communication channels -Shared resources

[3] It is debateble, whether loose cooperation networks or un-networks can have membership because of their nature, hence the quotation marks.

Collaboration networks aim to accomplish policy objectives that could not otherwise be solved through a single agency (Agranoff & McGuire 2003) by bringing together multiple actors to address sometimes complex problems. However, collaboration networks are not the primary choice of organizing, but rather only adopted after the failure of single agency (Bryson et al. 2006).

Due to their nature, networks are prone to internal and external risks that have the potential to undermine their very essence and functionality. According to the risk hypothesis (Snijders 2011) actors seek to form bridging relationships when the cooperation involves low risks, as well-connected and popular actors try to maximize their access to information, whereas transitive and reciprocal relationships that help to maximize the credibility of the actors (i.e. bonding relations) occur more often when risks of defection increase. Some studies have been able to demonstrate that in their quest to gain access to (informal) power actors tend to connect with popular actors in a network to form a centralized bridging structure that enables efficient information transmission in coordinating policies (Berardo & Scholz 2009). Actors can also seek reciprocal bonding relationships to get support for small joint-projects, and hence learn whether or not to trust their network partners or not. The dynamics of partner selection are most observable in newly-formed policy domains, where policy actors actively seek new partners to alleviate the effects of policy dilemmas (e.g. Schneider et al. 2003). In policy domains where coordination problems pose little risk of free-riding and defection, actors are likelier to seek contacts that provide efficient information transmission (Berardo & Scholz 2009).

2.1.2. From Resource-Based Perspective to Social Network Theory

In management and economics, the emergence of a resource-based perspective has helped give an important theoretical tool to view organizations as a portfolio of resources (Prahalad & Hamel 1990). From this perspective, physical organizational resources like organizational finances or non-physical resources such as reputation or trust are recognized as important factors that help enhance competitive advantage for an organization (Barnett et al. 1994). Apart from internal resources, Gulati et al. (2000) demonstrated that organizations' abilities vary considerably based on their network resources that influence their competitive advantage. This leads to suggest that the resource-based view is only able to provide a partial explanation of the factors enhancing competitive advantage in interconnected organizations (Lavie 2006). Hence, following Granovetter's (1985) argument, organizations need to be viewed as embedded in collaborative social networks, where a collection of loosely or closely connected organizations share resources with each other and help network members to achieve some of their strategic objectives through

these structures. While there has been exploration on collaboration networks, though usually from different perspectives (e.g. Oliver & Ebers 1998), the complexity of the phenomenon demands the inclusion of multiple facets. Although certain institutional barriers can hamper collaboration, actors often favor this form of joint action, because it addresses the obstacles with resource scarcity, diffusion of information and interdependency of organizations, all of which illustrate wicked policy problems (Provan & Milward 2001; O'Toole 1997).

Another perspective on network collaboration has emphasized an external perspective to explain, how involvement in collaboration networks can benefit organizations as the interorganizational linkages help provide access to resources of network partners (Gulati 1995a). A research strain exploring the specific effects of network structure on organizational performance has been able to reveal the influence network structure wields over resources, capabilities and opportunities that form the main building blocks of the network (e.g. Ahuja 2000; Stuart 1998). The benefits of network position are vital because central actors have potentially greater access to resources due to their position (e.g. Ibarra 1993). However, it could also be argued that bridging structural holes among active network members is the most important factor attributing to enhancing organizational outcomes (Burt 1992). As could be seen, social network theory represents an important complementary perspective to the resource-based view of organizing and building organizational competitive advantage, as network structure and actors' characteristics allow the actors to access external resources that help enhance their capabilities, while still relying on the internal resources too (Arya & Lin 2007).

While most of the literature on strategic management that draw from the resource-based view and the social network perspective have primarily concentrated on network members' strive for competitive advantage over their competitors through superior resources and capabilities (Gulati 1995a), studies on non-profit organizations have emphasized the emergence of collaborative networks (e.g. Alter 1990) due to simultaneous effects of reduced funding and enhanced community expectations. Still, there has been almost no empirical research on how organizational competitive advantage emerges in non-profit network environments. While non-profit organizations do not compete against each other in the same way firms do, they still rely on each others' competencies and resources to survive (Hardy et al. 2003). While some empirical research has emphasized normative indicators of formal collaboration (e.g. Rowley et al. 2005), studies of non-monetary outcomes of collaboration have been relatively rare, with almost the sole exception being the study by Todeva & Knoke (2005) on strategic alliances. However, both monetary and non-monetary

outcomes that non-profit organizations can produce through collaboration networks have gained even less attention. In their study, Arya & Lin (2007) examined non-profit organizations' access to funds (monetary outcomes) and reputation, competence and access to human resources (non-monetary outcomes) that accumulate to their performance in collaboration networks. By demonstrating, how the organizations' own resources along with network partners' resources and structural attributes in the non-profit collaboration network context can both contribute to and hamper the strive for organizational competitive advantage. This view can be broadened also to public policy research, as will be witnessed next.

2.1.3. From Collaboration Networks to Policy Networks

Whereas the literature on collaboration networks concentrates on network outcomes in profit- and non-profit environments, policy network literature emphasizes network members' common interests and policy positions as they acknowledge that cooperation is required to pursue shared interests and hence, need to rely on exchange of resources (Börzel 1997). Policy networks can overcome the problems of horizontal coordination by combining the autonomy of actors in the market form of organizing (Williamson 1985) and the ability of hierarchies to pursue selected goals to control their anticipated consequences (Börzel 1997). The ability of policy networks to intentionally produce collective outcomes through voluntary bargaining despite diverging interests of their members (Kenis & Schneider 1991) requires communication and trust, unlike in case of exchange or strategic interaction, where maximization of self-interest through cost-benefit calculations can produce bargaining dilemmas. As policy networks are characterized by a set of actors interlinked through relatively stable, non-hierarchical and interdependent relationships (Börzel 1997). Furthermore, policy networks can offer solutions to problems that bureaucracy or market that rely on established, hierarchical and formal boundaries are not able to tackle. Contemporary policy-making relies on sharing responsibilities for policy-making between state and non-state actors as they try to negotiate and implement viable solutions in order to avoid the downside of bureaucracies[4] as well as those of markets[5].

The policy network literature does not define the concept of a policy network, affecting its explanatory value (Börzel 1998). Similarly, because policy networks are associated with steering

[4] These include limited perspectives and resources, rigidness of bureaucracy as well as outdated knowledge
[5] The inability to produce collective goods, creation of external effects and social inequalities leads to market dysfunction

without identifying the agent and object of this process, applying policy network approach becomes difficult. Scharpf (1978) described this dilemma by arguing that policy networks have a tendency to underestimate the importance of structural factors as facilitating forces. Hence, a distinction can be made between a process of steering between actors within a policy network, the process of steering by policy networks, with the latter referring to the extent to which the policies resulting from policy networks are more suitable for governing than the policies resulting from other modes of coordination.

Many of the concepts in policy network approach draw a parallel with the concepts of social network analysis, with both relying on actors, attributes and relations. However, the conceptualization of relational variables in the social network analysis offers opportunities to analyze network structures more consistently than the policy network literature, while also allowing the identification of different structures within a network (Wasserman & Faust 1994). On a hindsight, social network analysis is unable to explain policy networks as a mode of governance, because it does not recognize the conceptual linkage between structural outcomes of a network and the formation of policy outcomes through network processes. Two processes can be distinguished: (1) a process of bargaining over policy positions, referring to steering in networks where attributes are exchanged amongst the actors involved and (2) a process of steering by networks, where policy networks are employed as a mode of governance (Dassen 2010). Composition variables of a policy network indicate the interplay between the actors and all attributes they employ when interacting with others in the network, with the relational variables that connecting the actors in a policy network being associations among policy positions and ties indicating interdependence between the actors. Because actors cannot unilaterally produce a policy outcome, they need to reposition themselves to form shared policy positions. Therefore, individual actors' try to affect the policy positions of other actors by steering them towards certain cohesive subgroups that have evolved around certain policy positions that they favor.

Actors cannot realize their goals in a policy network without cooperation because they rely on mutual dependency. However, dependency can also lead to conflict and tensions that are part of durable cooperation everywhere (Scharpf 1997). Similarly, for network resources to be distributed equally among its members, a network does not need to have a dominant member to do this (Knight 1992). Networks are not born in a vacuum, but rather their formation reflects their members' past inequalities that are embedded into existing rules. Therefore, changing network rules might lead to power struggle between actors (Burns & Flam 1987, 75) as they try to establish their own policy

goals within the network context. Barach & Baratz's (1962) concept of "mobilization of bias" can be applied here to explain, how network approach gives focus to invisible forms of power, meaning rules that shape the problem definitions and function as gatekeepers for actors trying to enter the network. Differences in the distribution of resources become viable as network members rely on them to influence the network processes and control the interaction within the network through their own organizational capacities.

Network form of governance means that even the less powerful actors are able to influence decision-making either by threatening to use their veto-power or by using their resources to block the decision-making process, thus creating a stagnation or blockade of the network. Therefore, more powerful actors cannot act alone but need to acknowledge others' policy preferences also. Some degree of convergence of perceptions is vital for a policy network to function, as consideration of other actors' interests enhances the quality and support of powerful actors' own policy initiatives too. From a network perspective, the involvement of actors is required for network to function effectively and efficiently as the actors need to apply their expertise and knowledge to handle policy problems.

In recent times, policy networks domain has broadened from focusing strictly on the linkages between state and business or other economic interests to encompass even other societal actors engaged in policy formulation processes. In the field of public policy, two different schools of policy networks exist: Interest intermediation and governance. Although, these two schools are not mutually exclusive, there are great differences between them (e.g. Rhodes 1988; Rhodes & Marsh 1992). The former sees policy networks more broadly as relationships between interest groups and the state, while the latter reflects on the specific form of mechanism to mobilize political resources through governance based mainly on non-hierarchical coordination, opposed to hierarchy and market (Börzel 1998).

Most scholars regard policy networks as interest group intermediation processes that take place in either the policy formulation or policy implementation stages. While some have argued that policy networks can not constitute the dominant pattern of governance in polities such as the EU because of their omnipotent nature (Ansell 2000; Peterson 2001), others (e.g. Coleman & Skogstad 1990) have generally been more cautious, suggesting that policy-making can proceed via policy networks and should therefore be included in the empirical investigations. A common critique of policy networks and in particular the interest intermediation school reflects the fact that independent

variables are characteristics of components within the network that help to explain both the nature of the network and the policy process, but they are not network characteristics an sich (e.g. Peterson 2003; Dowding 1995), hence reducing the applicability of theory building to these characteristics, making it reductionist. For a policy network theory, the properties of the network rather than the properties of network members should be used for explanation, like has been done in the sociological social network analysis tradition that has applied algebraic methods. The governance school comes closer to the development of policy networks as a framework as it operates at a higher level of abstraction and conceptualizes policy networks as a governance structure in a changing polity, giving less concern for specific policy outcomes. While these are valid arguments, the policy networks approach should neither be ignored because of them, nor be understood strictly as a theory either.

Table 3. Two Approaches to the Study of Policy Networks

	Interest Intermediation School	**Governance School**
Definition	- Policy networks as an analytical toolbox - Framework for analyzing changes in state-society relations in public policy making - Relatively straightforward, descriptive and practical model	- Policy networks as a form of governance - Form of governance aiming to bring a change in the structure of polity that reflect state-society relationships - Multidimensional prescriptive and theoretical model
Explanatory power	- Explaining all kinds of relations between public and private actors in public policy-making a) Actors forming linkages to make up the policy network structure for negotiating and implementing policies b) Reflecting the status and power of particular interests the actors have c) Influencing the effectiveness of policy-making processes and outcomes	- Combination of theories to explain specific relations between public and private actors in public policy-making a) Actors form flexible relationships to share resources and collective action in policy-making b) Flexible relationships as part of an ongoing process of policy-making c) Acknowledging the difficulty of determining the influence of policy networks on the effectiveness of policy-making processes and outcomes
Problems	- Static model that does not have the ability to explain how policy networks change - Does not systematically link the nature of a policy network with the character and outcome of the policy process	- Idealistic model that has limited explanatory power because it does not form a unitary theory - Does not account for resistance to change and other ambiguities and deficiencies of policy processes

2.1.4. Interest Intermediation School of Policy Networks

Until the 1970s, pluralistic view was dominating the research on relationship between the state and societal interests i.e. interest intermediation (c.f. von Alemann 2011), before being challenged by the neocorporatist theory (Schmitter & Lembruch 1978, Lembruch 1984). However, as Börzel (1998) elaborated, both of these models have been criticized for their logical consistency and weak connection to empirical research (e.g. Jordan & Schubert 1992; Rhodes & Marsh 1992). Instead, the pluralistic view aimed to describe state and pluralist group relations through pressure pluralism, state corporatism, societal corporatism, group sub-government and corporate pluralism (Jordan & Schubert 1992). Therefore, it could be argued that the whole pluralism-neocorporatism -dichotomy

should be with a new typology, drawing from Scharpf's theory of EU legitimation by effectiveness (2003). This reflects the Schattschneider dictum (1960) of organization as mobilization of bias in praparation for action, where organized interest groups decide which concerns to include in the political negotiations. Similarly, existing practices of interest representation at the European level reflect the challenges liberal democratic models raise. Whereas interest intermediation has been at the forefront in the mainstream EU research, relatively little research has been conducted on interest intermediation in the CEE and SEE that have not yet fully incorporated dominant the liberal democratic model (e.g. Demidov 2017; Börzel & Buzogany 2010; Piattoni 2006; Iankova & Turner 2004). Demidov (Ibid.) refers to the situation in the CEE and SEE as a hybrid model of interest intermediation that draws from the inherent features of the partnership within the context of the EU.

There is a wide variety of literature on interest groups and civil society in the EU context dealing with interest groups' organizational practices, strategies and decisions when applying European agenda in a national setting (e.g. Sanchez Salgado 2014; Quittkat & Kotzian 2011; Berkhout & Lowery 2010; Kriesi et al. 2007). Similarly, most of the research on the impact of the EU on domestic policies draws from the Europeanization literature, hence, omitting the impact of the EU membership on modes of interest intermediation nationally. Instead, most of the analysis concentrates on establishing the ground rules on how the EU mode of interest intermediation affects domestic patterns and produces convergence or divergence and naturally, what accounts for this variation. These quasi-pluralistic patterns of interest intermediation at the EU level are not necessarily applicable to the national level (Schmidt 1999). Starting point for this type of policy network analysis is the level where these relations take place. Instead of treating the relations between government and corporations or industry as sectoral level interests, they should be treated at the sub-sectoral level to distinguish better the hierarchical difference between the two parties.

There have also been attempts to use policy networks to demonstrate a specific type of public-private linkage rather than to describe specific interests of public actors. As a prime example of this are the issue networks (Heclo 1978) that will be discussed more thoroughly later. In this case the network approach is an alternative to both pluralistic and neocorporatist models and policy networks are treated as a meso-level concept of interest group intermediation that reflect different modes of power distribution (e.g. Rhodes & Marsh 1992; Jordan & Schubert 1992; van Waarden 1992). Common for all of these policy network typologies is seeing them as power dependency relationships in which resources are being exchanged between the government and interest groups (Börzel 1997). Jordan & Schubert (1992) used a more narrow, three-dimensional criteria that

includes level of institutionalization (stable or unstable), the scope of policy-making arrangements (sectoral or trans-sectoral) and the number of participants (restricted or open), whereas van Waarden (1992) distinguished a broader seven-dimensional version that includes actors and their strategies, function, structure, institutionalization, rules of conduct, power relations.

Establishing rules of conduct in a network is fundamental, as a means of governing organizational participation and bringing compliance with organizational norms to the network (Benson 1977). Evans (2001) extended these ideas to policy networks, epitomizing the complex nature of relations linking network members. Even though there are rules in place governing the networks, they can be ever-changing and contradictory, consisting of gaps in enforcement of them, leading to the actors following their own self-organized agendas instead. It has been showed (e.g. Pemberton 2003) that policy networks are complex structures that may be characterized by rivalry between network member fractions as well as subversion of strategic goals and tactical plans required to achieve them. Policy networks are characterized by self-organization, meaning that interested parties are able to join or leave the network, serving only their situational self-interests instead of greater network-level interests. Furthermore, policy networks form a cluster of organizations connected to each other through resource dependencies and differ from other forms of organizing and other networks through the structure of these resource dependencies (Benson 1982). Rhodes (1988) identified five types of policy networks based on three criteria: (1) the degree to which the members are integrated to the network, (2) the characteristics of the network members and (3) the distribution of resources among network members. Later, Rhodes & Marsh (1992) used actor and network levels of policy network analysis to distinguish the degree of integration. Using this distinction, forms of policy networks can be understood reflecting the density of these networks, ranging from highly integrated policy communities to loosely integrated issue networks, with professional networks, inter-governmental networks and producer networks in between these two (Ibid.). However, there are different interpretations of policy communities as they can be tightly integrated unitary policy networks (Rhodes 1997; Rhodes & Marsh 1992) or networks with a broader spectrum of members and potential members sharing a common interest in a certain policy domain (e.g. Wright 1988).

Similarly, Wilks & Wright (1987) distinguished three different modes of policy networks: Policy universe, policy communities and policy networks. The broadest form of networks is policy universe that consists of a broad range of both members and potential members who share a common interest in a certain policy domain. Policy communities include also those potential

members who not only share an interest in a particular policy domain but are also ready to exchange resources in order to improve the overall network relations. Finally, real policy networks are just an interlinking process between the outcomes of those exchanges within or between policy communities. Using this distinction to define policy networks makes it also easier to apply the correct analysis of a certain type of policy network.

Another aspect of interest intermediating policy networks deals with heterogeneous and homogeneous networks. In policy network literature the ambiguous role of network homogeneity has received less interest than network heterogeneity (c.f. Börzel 1997; Börzel 1998; e.g. Sandström & Carlsson 2008; Jasny & Lubell 2015). The former refers to diverse types of actors with different interests and resources, indicating low cohesion among the actors, but at the same time openness for new constructive ideas to mediate their interests and solve policy problems through policy networks (Adam & Kriesi 2007). Meanwhile, there has been less research on homogeneous networks, where many similar actors with congruent values, mutual interests and equal resources participate in policy processes. Examples of these include professional networks (e.g. Burley & Mattli 1993), epistemic communities (Haas 1992) or principled issue networks (Sikkink 1993). Still, whereas in traditional networks active actors try to form communication ties to the opposing parties and big actors with small ones, so they can justify their case and work out compromise solutions, striving for homophily appears contradictory. Since policy networks serve as a resource for influence and settings for negotiation, the rationale for building a relation in a negotiation should be to influence others in the network through persuasion or coercion. The cost of forming and maintaining a link, when the attributes of the target organization are similar is pivotal for this. This means that even homogeneous networks have their advantages as (1) the cost of forming a tie is lower when the preferences are already close, (2) when actors have similar attributes but different preferences, negotiations on network targets become easier and finally, or (3) forming a network tie is more efficient when the target actors' preferences are closer, because of the shape of the utility functions of the actors. Following the social capital literature interconnectedness is pivotal for adopting comprehensive policy decisions and this can be done through bonding ties (Coleman 1990; Putnam et al. 1993). In the policy network research higher level of interconnectedness refers to a process where concrete policy measures are being negotiated between opposite sides (Fischer 2014).

To summarize, interest intermediation school of policy networks reflects sectoral policy making by concentrating on organizing and examining institutionalized exchange relations between the state and corporatist or business organizations. Interest intermediation school draws from the existence of

relative status or power of particular interests in a policy domain that in turn influence policy outcomes, although it does not necessarily determine them. There have been, however, attempts to formulate a more exact version of this, by attaching some explanatory value to the different types of policy networks (c.f. Knoke 1990; Sciarini 1996; Marin & Mayntz 1991).

2.1.5. Governance School of Policy Networks

In contrast to the interest intermediation school, the governance school interprets policy networks as a specific mechanism to mobilize (political) resources when they are widely dispersed between public and private actors (Börzel 1997). There are two different applications for policy networks in governance literature. It can be either seen as an analytical model in the policy analysis or more theoretically as to imply the structural relationships, interdependencies and dynamics between network members (Schneider 2005). From the traditional governance perspective, relative stability of policy networks and their ability to mobilize and pool scattered resources help to encourage collective action that results in a common policy. Hence, policy networks are seen as a process framework referring to mostly informal interactions between public and private actors striving to solve collective action problems jointly in a non-hierarchical manner within a policy domain.

Governance policy networks provide a perspective for the analyzing situations where it is not possible to explain a given policy by centrally concerted policy action that aims to reach shared policy goals. Instead, by coordinating their actions through interdependencies it is possible to conceptualize the governance of networks and separate interdependent organizations based on their resources and interests (Börzel 1997). In this model, actors' role is to form linkages to exchange different resources required for the formulation, decision-making or implementation of certain policies. These linkages differ in their intensity and frequency, constituting the structure of a policy network. Resource exchange between the actors and cost-benefit calculations of specific strategies are determined by these governance-structures, making it possible to draw conclusions about the actors' behavior (Windhoff-Heritier 1994). However, governance approach of policy network analysis can only partly explain why and how single actors are linked with each other because policy networks only provide a framework for different actors' behavior and examine their interaction in a policy sector, enabling only an analysis of this interaction. Instead of being a theory, Kenis & Schneider (1991) described policy network analysis as a framework for regional configurations and their structural characteristics.

Another perspective within the governance school regards networks as ubiquitous, primary form of governance or as a networked polity within domain -specific contexts, such as the EU (e.g. Ansell 2000), where a wide variety of public and private actors meddle within the same policy subsystem that relies on the horizontal, self-organizing coordination (Adam & Kriesi 2007). Organizationally, these arrangements emerge in complex domains where institutionalized policy-making procedures depend on outside resources for their success. Because of their comparative advance in informational processes and institutional agility, private actors have a key role in the formulation and implementation of policies and at the same time offer a solution for coordination problem (Börzel 1997). It is also possible to look at policy networks as something more than just the behavior of a certain actor. As a product of inter-organizational relations, social structures bear greater explanatory power than personal attributes of individual actors (Wellmann 1988). Therefore, the focus should be shifted from individual actors to the set of relationships that constitute inter-organizational networks and governance of these networks (e.g. Kenis & Schneider 1991, Kooiman 1993; Mayntz 1993).

2.1.6. From Markets and Hierarchies to Policy Networks

Usually the general coordination in a society as modes of organizing or steering the governing process can take two different forms: markets or hierarchy. They can be applied to the economy, to the public administration and to the government as a whole. However, according to Powell (1990), uncertainty and increasing international, sectoral and functional overlap of societal sub-systems mean that policy networks as a mode of governance help offer a crucial advantage over market and hierarchical forms of governance (see Table 4 for the summary of the three forms of organizing).

Table 4. Markets, Networks and Hierarchies (Powell 1990)

Attributes	**Markets**	**Networks**	**Hierarchies**
Organizational basis	Contract, property rights	Complementary strengths	Employment relationship
Relation of actors	Independent	Interdependent	Dependent
Goals of organizations	Profits	Reciprocal gains	Careers
Means of organizations	Prices	Relationships	Routines
Mode of organization	Competition	Competition and cooperation	Cooperation
Control	Horizontal	Horizontal and vertical	Vertical
Coordination	Horizontal	Horizontal and vertical	Vertical
Conflict resolution	Dealing	Trust and reputation	Supervision
Flexibility	High	Medium	Low

Unlike market form of organizing where market failure means that production of negative externalities and hierarchies leads to a situation where the majority wields power over the minority (Scharpf 1992), network form of organizing provides the possibility for horizontal self-coordination through voluntary bargaining systems. However, these systems are prone to unwanted outcomes as finding a consensus might be difficult due to other network members trying to block certain policy processes. Also, rational actor's willingness to compromise might be weak when the policy decisions do not follow its preferences and it might want to defer from cooperation instead of complying (e.g. Ibid.).

Organizations are not completely autonomous in the bargaining process, since the inter-organizational structure of horizontal coordination between them is based on mutual trust and reciprocal gains. There might be pressure for organizations to pledge to the inter-organizational bargaining, rendering their self-interest, while adding to the insecurity caused by inter-organizational coordination. Hence, the bargaining system constitutes of the linkage between inter- and intraorganizational decision-making processes along horizontal coordination across several levels of governance, leading to conflicts stemming from the structure of the system (Benz 1992). Dysfunctionality of self-coordination can be overcome by relying on horizontal self-coordination within the network that bears similarity with hierarchy (Scharpf 1993).

Policy networks offer a solution to collective action problems by applying communication and mutual trust to engage in non-strategic action, distinguishing policy networks from other non-hierarchical forms of coordination structure. Still, by acknowledging the relevance of trust and communication, policy networks rely on their capacity to overcome problems of collective action that is not possible to emerge within a rational institutionalist framework (Müller 1994) as rational actors are by definition striving to maximize their own interests (Börzel 1997). Although there is no universally shared theory of policy networks, two distinctive theoretical foundations can be observed: power dependence or social exchange theory and rational choice theory (Lahno 2007; Rhodes et al. 2008). The research tradition of policy networks is burdened with various categorizations of different types of networks. Applying Rhodes' (1997) classification of policy networks, policy communities, professional networks, interorganizational networks, producer networks or issue networks can be distinguished from the research literature (Table 5).

Table 5. Classification of Policy Networks (modified after Rhodes 1997; Coleman & Perl 1999; Rhodes et al. 2008)

Type of policy network	**Characteristics of the policy network**
Policy communities	Stability, highly restricted membership, vertical interdependence, limited horizontal articulation
Professional networks	Stability, highly restricted membership, vertical interdependence, limited horizontal articulation, serving interests of a profession
Interorganizational networks	Limited membership, limited vertical interdependence, extensive horizontal articulation
Producer network	Fluctuating membership, limited vertical interdependence, serving interest of a producer
Issue network	Unstable, large number of members, limited vertical interdependence

The type of policy networks is dependent on three variables: (1) stability or fluidity of a network membership and decision-making structure, (2) exclusion or inclusion of a variety of actors with different objectives and (3) the strength of resource dependencies and network members' dependency or independency on each other for resources such as expertise and legitimacy.

Policy communities are better than issue networks to steer or control the policy agenda, whereas issue networks tend to be more flexible to take on new tasks and find new creative solutions for them through multi-level governance (Peterson 2003). Also, following the strength of weak ties - argument by Granovetter (1973) relatively loose issue networks offer more effective channels of communication than tightly-integrated policy communities as they rely on reciprocity, whereas policy communities are composed of actors who have created well-established relations with other actors in the network and are communicating frequently with each other. A policy community tends also to have core and a periphery, with the core members being the ones who set the rules of the game (i.e. agenda of the network) and define the main policy direction of the community (Smith 1993). Actors on the periphery, on the other hand, do not have enough resources to exert continuous influence on decisions. In contrast to policy communities, issue networks are fluid in their nature, consisting of high number of organizations with variable degree of commitment (Heclo 1978). The nature of issues in these networks is very fluid, meaning that they are usually formed around specific policy issues. There is not as strict core-periphery division within issue networks and actors on the periphery tend to limit their attention to policy issues that are of particular interest to them. Hence, issue networks are dependent on mutual commitment of dependence.

A central question about policy networks revolves around the way they are being organized with policy actors seeking network contacts to increase their own resources and gains in the institutional collective action sphere. Policy network perspective has been adopted widely in political science, including in research on health services (Provan & Milward 1995), environmental issues (Bressers et al. 1995; Schneider et al. 2003; Sabatier & Jenkins-Smith 1993; Sabatier & Jenkins Smith 1999), and regulatory practices (Gormley 1986; Wang & Scholz 2009). While these studies differ greatly in both their conceptual development and methodological approaches, they all share the common belief that functioning of networks influences the evolution of public policy processes. However, these studies have not managed to develop a theory on how networks evolve among interest groups and other organizations in the first place, instead concentrating on explaining the linkages between networks and policy outcomes.

Interest groups' policy preference similarities offer an important determinant for policy networks (Hojnacki & Kimball 1998; Koenig & Brauninger 1998). Likewise, there is a wide range of self-organizing mechanisms that enable informal coordination of formal action (e.g. Bardach 1998; Scholz & Stiftel 2005), although many policy network applications have not been able to integrate the dynamic, self-organizing nature of voluntary institutions (e.g. Granovetter 1985; Ostrom 1990)

with the institutional collective action dilemmas at central (Heclo 1978; Laumann & Knoke 1987) and local levels of governance (Laumann & Pappi 1976; Bardach 1998; Scholz & Wang 2006). Whereas the network structure is in a continuous flux, reflecting the un-coordinated individual choices, over time networks tend to stabilize at least for a while as the most effective relationships are the stable ones and influence the impact of network on individual and institutional behavior.

There are two ways to reach an outcome that satisfies all the members of a policy network. Formally, this can be done through reconciliation of interests in form of bargaining or by implementing problem-solving methods to reach an optimal performance. However, there has not been shared understanding on whether problem-solving is better than bargaining in producing common outcomes. Proposed solutions have varied from institutional consolidation of a network (Scharpf 1993) to finding a solution for distribution of resources and costs of a network (Zintl 1992; Scharpf 1992) to systematic combination of positive coordination (i.e. problem-solving) and consideration of outside influence in the decision-making (Scharpf 1994). Policy networks are not decision-making domains, but rather offer a platform for network members to form channels of communication for sharing information and exercise influence over each other without the need for typical constraints such as formal rules or assignments of responsibility.

Besides providing informal linkages, networks can also be used to reduce transaction cost in complex decision-making situations as they provide a platform for sharing experiences. They also reduce insecurity by promoting mutual information exchange and by helping to counterbalance power asymmetries through informal channels that go beyond the formal structures (Benz 1992). However, policy networks can become quasi-institutional arenas with their own structure and coordination mechanisms (Benz 1995), thus, adopting hierarchical attributes that are against the basic principles of networks. Since policy networks tend be very resistant to change and are often not exposed to outer control, this might lead to a lack of legitimacy (Scharpf 1993). Hence, while performing functions necessary to overcome the deficiencies of bargaining systems, and through their inability to replace formal institutions because of their own deficiencies, networks themselves can create a dilemma that is not easy to solve.

2.2 Network Governance and Coordination

Because of their assumedly non-hierarchical form and the autonomy of their members, most literature on organizational networks regards them as cooperative endeavors without explicitly addressing network governance. However, some form of governance is required for goal-directed

organizational networks to function properly and to ensure that network members engage in collective action and network resources are acquired and utilized efficiently and effectively. The overall functioning of the networks is still a bit under-researched topic, with some theoretical holes that need to be addressed. Functioning of a network refers to the process in which certain network conditions lead to different network-level outcomes, while also helping to understand how certain network design produces certain network-level outcomes. Additionally, management of networks amid the tensions that can arise when coordinating through a network are part of the network functioning. There are considerable advantages of network coordination, including enhanced learning outcomes, resource-efficiency, capacity to address complex problems and greater understanding of positions and targets of network members (e.g. Alter & Hage 1993; Brass et al. 2004). Although in a simplistic form, networks are able to develop structures that are borne out of interactions among network members, but these can also be seen as products of strategic decisions made by network administrators and participants, adding governance and coordination to the process.

Network governance approach and social network analysis differ in three respects: (1) The unit of analysis for network governance is the network, seen as a form of governance, whereas social network analysis focuses on micro-level (ego) perspective, (2) network governance approach focuses on organizational aspects of network results (coordination mechanisms, governance forms, social aspects of interaction etc.), while social network analysis deals with structural configurations of networks to explain actors' outcomes. Finally, (3) network governance tackles strategically, how networks can effectively manage organizational and interorganizational arrangements in order to reach network goals, whereas social network analysis does not include the agency of individuals derived from the network structure (Provan & Sydow 2008, 691-716).

The following chapter will discuss more thoroughly the different aspects of network governance and coordination from a policy network perspective, concentrating especially on network goals, competencies, effectiveness and legitimacy at both network and actor levels. Studying effectiveness and influence has been problematic both at the organizational (Goodman & Pennings 1977) and network (Provan & Milward 2001) levels. There have also been some attempts to attain a community stakeholder view to measure effectiveness of network-level outcomes (Provan & Kenis 2008) on issues where network participants have mutual interest.

2.2.1 Network Governance and Goal-Setting

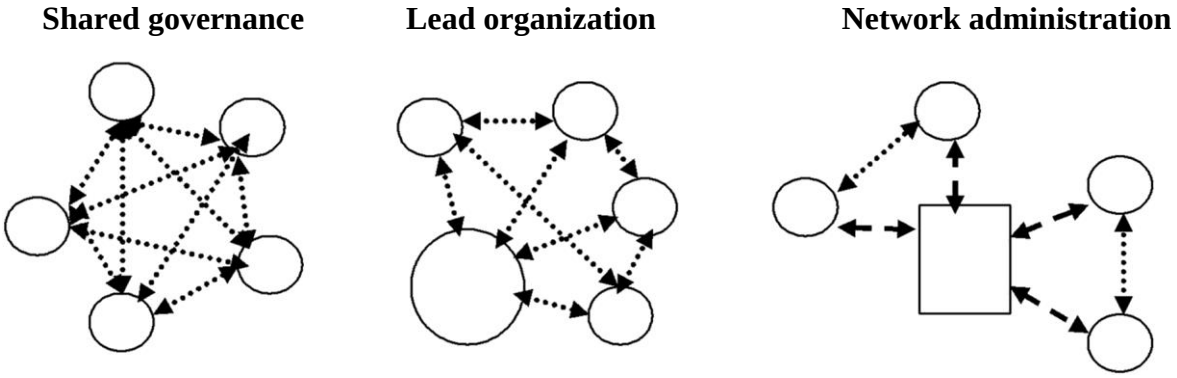
Network governance requires setting goals and defining membership for the network, meaning that an effective network cannot be an open one. Homophily or similarity can be used to explain actors' attraction to others with similar preferences or attributes, and thus, the formation of network relationships (e.g. Monge & Contractor 2003; Powell et al. 2005). The same logic also applies for individuals participating in a network on behalf of their organization, although instrumental reasons offer a better explanation than organizational attractiveness or similarity when dealing with motives of organizations in a network.

Organizations can strive for collaborative relationships, reflecting their specific goals in a network. However, if the purpose of the network is goal-setting, also network-level goals alongside organizational goals guide organizational action. These goals include formation of a broader consensus to oppose demands of non-network members, the ability to form new common policy guidelines and engaging all network members for a shared cause. Network goals may also be process-oriented. Working to reduce competition or conflict among participants or implementation of a policy are two of the most common features of this. When there is a general consensus on broad network-level goals in the absence of hierarchy regarding both the content and the process, network participants are more likely to be committed to the network and work together towards a shared goal. Van de Ven (1976) referred to this as domain similarity to describe the extent to which organizations share such constitutive elements as general and specific objectives of the organization, expertise, issues or sources of resource as a stimulus for inter-organizational relations.

Consensus on network goals has also important implications for network governance, as high goal consensus gives an advantage when building network-level commitment, although there may be big differences across networks on agreement on network-level goals and how network members can pursue their own goals through network-level involvement. Yet, networks can still function effectively with only moderate goal consensus among the members (Kenis & Provan 2008). However, this might pose a challenge to governing the network relationships as self-governed networks are most effective when the members can agree on fundamental network-level goals, while making their own contribution to broad network goals alongside also attaining their own goals. In other cases, there may be little incentive to involve the whole network when goal consensus among the members is low. Instead, in these cases the focus is on smaller units (blocks, triads etc.) within a network.

It is possible to identify three forms of network governance based on goal-consensus: shared governance model, lead organization -governance model and network administration model (Provan & Kenis 2008, Figure 1). The first of these refers to a self-governed network where all or most of the network members are involved on a relatively equal basis. Unlike the two other forms of network governance, shared governance networks can be highly decentralized, involving all or most of the network members on an equal basis and being un-coordinated. Another form of shared governance is the lead-organization model networks where the members have moderately low goal-consensus. Lead organizations make most strategic and operational decisions on behalf of the network (e.g. Graddy & Chen 2006) either through formal or informal channels and are therefore the most suitable for attaining network-level goals in cases when network members are not able to agree on fundamental network level goals on their own or may only be partially committed to those. This situation may not be optimal to the long-term sustainability of the network, but in the short term, the lead organizations can help to maintain a broader, network-level focus than the network participants would be able to achieve otherwise on their own. Network administration form of governance is typical when goal-consensus among involved organizations is moderately high, since it requires greater involvement by at least a specific subset of network members to succeed. These members form a governing body of the network and are expected to be committed to network-level goals and to govern the network strategically without taking stand on their own on the network goals. The administrative leaders and hired network staff (usually some sort of secretariat) are given the task to ensure that the network functions properly by working with all members on a daily basis and enhancing commitment to the network and its goals. Thus, goal consensus may be quite strong in this form of network governance; at least within the core actors of the network. The other network members in the periphery or semi-periphery can be less committed and involved in network functions, showing only modest goal consensus, while leaving the overall strategic work voluntarily to the network administrators and the members of the core. Yet, while the network members might agree on network-level goals and on the role of a network administrator, there might not be strong agreement about how network members should get involved.

Figure 1. Forms of Network Governance



2.2.2. Competencies, Flexibility and Stability in Network Governance

Regardless of the specific reason to join a network, whether it is the need to gain legitimacy, enhance performance, acquire information or to attain more resources, all network members try to achieve targets that would not be possible to achieve independently. Hence, a common agreement on best network governance forms is required in order to achieve network-level goals and individual goals (Provan & Kenis 2008). Burt (1992) addressed this issue by focusing on the concepts of dense and brokered networks and whether they are effective in producing new ideas and for sharing information. However, there is still external and internal pressure facing the network (Provan & Kenis 2008) regarding the nature of the network performance by network members and the external demands the network members face together. Both of these relate to network-level competencies that take shape in form of interdependence between network members and require network-level coordination and governance. These conditions favor lead organization or network administrator models of governance, which require special skills and dedication to help facilitate network-level needs. Likewise, buffering and bridging [6] may also require varying degrees of competencies at the network-level that are only possible to achieve through network governance (e.g. Lynn 2005). Abovementioned network competencies are needed since it would be difficult to withstand pressure from an external stakeholder to coordinate activities and to respond to external demands and regulations without centralized action accomplish through shared governance as this would be giving a diffuse response.

[6] Buffering refers here to protecting the network from environmental shocks, whereas bridging includes lobbying, seeking out new members, acquiring funding and building external legitimacy for the network.

When talking about networks, descriptions such as adaptable and flexible are often being used (Huxham & Vangen 2005). It is their flexibility that gives networks their advantage over market or hierarchies (c.f. Powell 1990). Through network formation organizations are able to efficiently work together to achieve specific goals that require combined resources and expertise; something that could not be accomplished through hierarchical models of governance (Kapucu & Van Wart 2006) or where market would lead to internal competition for resources instead of cooperation. Networks enable organizations to change their relationships and develop ties to others ad hoc, as the external environment and the needs of the network members change (Larson 1992) allowing them to gain from mutual opportunities in a non-hierarchical way.

Alongside flexibility, stability is also needed for a network to become sustainable over time. More than with flexibility, network governance is required for stability, since stable networks enable its members to develop long-term relationships within the network while at the same time helping them to collaborate accordingly in order to maximize network-level outcomes. Essentially, flexibility is important for ensuring rapid network responses, but as Provan & Milward (1995) showed, stability is also required for developing a consistent channel to respond to stakeholders and governing the network efficiently. Somewhat paradoxically, stability is best maintained through formal hierarchy, however, by governing networks as if they were bureaucratic entities means that fundamental network characteristics are being lost. Still, it is not impossible to adopt a governance structure that is both stable and flexible; it just requires frequent reassessment of structural network mechanisms by the network members and the ability to make changes even though they may be disruptive. None of the three network governance models is able to fully overcome the tension between flexibility and stability in network governance, but shared governance comes closest, since it is highly flexible and adaptable, shaped and monitored by the participants themselves constantly. As there are changes in network membership, shared network governance is best suitable for members' adaptation to the new network since the members are directly involved in decision-making without any hierarchical or bureaucratic structures. Shared governance is hence best suited for short-term project-oriented ad hoc networks (Jones et al. 1998). Networks governed by an administrator are likely to be much more formal, emphasizing stability over flexibility. Once the structures are imposed on participants either through brokers, or by establishing them once networks have become mature, network members can outsource the governance to an administrator. Lead organization governance can be placed somewhere in between the other two models, as it is characterized by a balance between stability and sustainability that is maintained by the lead

organization. Because the lead organization often has an emergent role in the network, there is likely to be some flexibility in how the network shapes up.

2.2.3. Network Inclusiveness, Effectiveness and Legitimacy

Main tensions for organizations are usually found between efficiency and effectiveness as well as longer-term strategies and short-term maneuvering. However, with network governance the primary tension is often between the need for administrative efficiency and the need for membership involvement through inclusive decision making, because the success of networks is dependent on building trust through collaboration (e.g. Alter & Hage 1993; Uzzi 1997). Still, when aiming to build greater trust among network partners, collaboration is seldom an efficient practice, as greater involvement of network members in the decision-making process also means more time-consuming and resource intensive processes. Participation and involvement can be enhanced through shared governance in the decision-making process, although this is dependent on the size of the network since large networks are usually more inefficient. While participation level might be high in the beginning in shared governance, as the network becomes more established and long-term engagement is required from the members, involvement of some members may drop because of waning enthusiasm or lack of resources (Weiner & Alexander 1998). This results in concentration of power and centralization of network governance and in some cases finally in loss of members outside of core, because they do not feel having their views being represented anymore. Therefore, network efficiency can be increased by adopting the lead organization model, where the members can reduce the constraints of direct involvement through concentration of power. While the lead organization governance can bring more efficiency, the tradeoff is reduced commitment of other network members and increased focus on the needs of the lead organization, unless a loop is created for the other organizations to have wield influence over the network-level decisions as well. Still, network administration model of governance is likely to provide greater balance than either of the other two models by emphasizing structured and representative participation on decisions about key strategic issues and hence absorbing tension between efficiency and inclusiveness, while network administrators (usually hired staff) are assumed with the routine administrative tasks and daily functioning of the network. This model offers a compromise as increase in administrative efficiency may be viewed by members of the network as being bureaucratic, and thus, inconsistent with network goals.

Whereas organizational legitimacy stresses network members' need for viability (Suchman 1995), there is also network legitimacy that has both internal and external scope and network governance is

required to manage tensions that are arising from network legitimacy (Human & Provan 2000). Human & Provan (Ibid.) differentiated between three dimensions of network legitimacy: form, entity and interaction. While the first one addresses the legitimacy of networks as an organizational form, entity refers to the need to establish a recognizable network identity (c.f. Rometsch & Sydow 2006) and interaction concerns with the concrete exchange of practices within the network. The purpose of governance mechanisms is to improve internal legitimacy of the network and to maintain collaboration avenues over time. The network cannot function properly if internal network coordination is not deemed legitimate by the members, as it suggests that the members are not committed to maintaining the network. External legitimacy shifts focus to interaction towards other networks. These may be actual or potential competitors. External legitimacy is important because networks with heterogeneous legitimacies connected to a diverse number of organizations in multiple networks have access to critical network knowledge. This often involves legitimacy initiatives through various forms of inter-partnership mechanisms with key network stakeholders (Low 2010).

As a solution to the potential internal legitimacy problem, McEvily & Zaheer (2004) introduced the concept of network facilitators, referring to a third party that is trusted by each network member due to a pre-existing relationship. The role of these facilitators is to foster collaboration among network members, focusing on the dynamic through which trust is built among them. Trust is important for internal network legitimacy, as tensions between the internal legitimacy needs of network members might be in conflict with the external demands. Hence, external network legitimacy refers to activities that may be beneficial to the overall network but not necessarily all of the individual network members (Human & Provan 2000). At the same time, network members might have their own legitimacy concerns, stemming from the needs of their own organizational stakeholders. With network facilitators maintaining network-wide operations, network members are not directly interacting with major network-wide stakeholders, such as affiliates with ambitions throughout the scope of the network, but instead communicate through network administrators.

Effective network governance can be achieved through structures that are responsive to both internal and external legitimacy. Shared governance model is best suited to address internal legitimacy, since it has a strong participatory focus. On the other hand, the lead organization model is especially suited for responding to the external legitimacy, as the lead organization has already gained trust of the network members and can therefore shift its focus on external legitimacy the behalf of the network it represents. Network administrative model attempts to strike a balance

between these two by giving a mandate to the centralized administrative entity to represent the network externally, while at the same time network members can address internal legitimacy through its built-in representative structure (Provan & Kenis 2008).

To summarize the three conceptual models of network governance presented above, every network is faced with different tensions to which there are different solutions. Network governance is never able to address all of these tensions fully, hence it is up to the network as part of the governance process to determine which tensions need to be addressed, whether or not these tensions should be resolved, and how this should be accomplished (Huxham & Vangen 2005). If a network is highly inefficient or lacks internal legitimacy, there is a fear of network members leaving the network or at least greatly reduce their involvement and contributions, diminishing external legitimacy of the network. On the other hand, stable networks that are not flexible are likely to experience the capability of the network's capability to address key concerns to decline over time, because the original network conditions change and the new members might not necessarily agree on the original ground rules and targets set for the network.

2.3 Institutional Theory, Institutional Entrepreneurship and Networks

It can be argued that policy network analysis is actually a variant of institutional theory (Hall & Taylor 1996; Lowndes 1996), brought together by institutional equivalence (Strang & Meyer 1993) that refers to policy makers within a particular institutional domain trying to identify other, similar actors in order to help facilitate the spread of policies. One of the core concepts of the governance school of policy network analysis is actor-centered institutionalism that combines rational choice and institutional approaches. Here, institutions are defined as regulatory structures that are able to provide opportunities and constraints for rational actors who aim to maximize their own preferences (Mayntz & Scharpf 1995). By definition, networks are informal institutions based on agreed rules without a formal governance structure. Instead, they are formed to reduce transaction and interaction costs and help their members to diminish uncertainty (Scharpf 1992). Because of these attributes, networks offer a suitable institutional framework for horizontal self-coordination in situations where hierarchical coordination is not applicable (e.g. Provan & Kenis 2008; Kapucu & Garayev 2016). On the other hand, Scharpf (1994) offered a narrower view, reducing policy networks to merely an organizational structure that has a common goal to produce certain policy outcomes and thus allow the actors to realize their self-interests.

This chapter will look more closely at different stages in institutional process, and how policy networks fit in here. In general, institutional theory draws from deterministic tendencies associated with path dependency, rational choice and sociological institutionalism. Common for all institutitional theories is their basic top-down assumption where higher level of analysis explains processes and outcomes at a lower level (Amenta & Ramsey 2009).

Building a synthesis of the three previously named theoretical institutionalist positions, Scharpf (2000b) introduced actor-centered institutionalism, arguing that institutional rules are understood as external constraints and incentives enable self-interested rational actors to make purposeful choices. Correspondence between actors' orientation and the effectiveness of their action should take into account neoinstitutionalist approaches of rational choice or bounded rationality and the background factors affecting the choices actors make. Scharpf (Ibid.) argued that actors are assumed to be rational and have stable preferences based on their organizational self-interest. Hence, this approach is linked at the actor level to the presupposition of symmetry between the reflexive capacities that are being contained in their normative and cognitive orientations to the effectiveness of action. Tsebelis (1999) on the other hand argued that since institutions determine the choices available to the actors, different institutional structures will produce different strategic alternatives for the actors leading to different outcomes with other actors, while morphing the institutional settings depending on the information they control. Since institutions are defined very broadly in the sociological institutionalism by concentrating on socially constructed perspectives and shared normative notions of appropriateness, path dependency does not necessarily imply an iron cage (Marsden 1999). Instead, change can be understood as a theoretically distinct category influenced shift in network members' shared preferences within the institutional framework in which these interactions take place (Scharpf 2000b).

2.3.1. Organizational Institutionalism and Institutional Entrepreneurship

Organizational institutionalism refers to the relationships between organizations and institutional fields by focusing on the role of formal structures that enable and constrain organizational behavior. It relies on the development of processes through which institutions govern action. This is accomplished through combining institutional logics and structures to organizational forms (Meyer & Rowan 1977; DiMaggio & Powell 1983; Greenwood & Hinings 1996). There have been many empirical studies on connections between institutions, fields and organizations that help to form institutional understanding of organizational action by focusing on the impact institutional forces

have at three levels of analysis: international (Keohane 1989; Meyer et al. 1997), inter-organizational (Leblebici et al. 1991) and intra-organizational (Zilber 2002).

While organizational institutionalism draws from the idea of organizational homophily based on institutional conditions, institutional entrepreneurship approach is more dynamic as it emphasizes the role of actors in affecting, transforming and maintaining institutions and institutional fields. Institutional entrepreneurship has reintroduced agency, interests and power into institutional analyses of organizations (Eisenstadt 1980) by shifting the focus to the emergence of new institutions. Applying an actor-based perspective to institutional analysis, an emphasis is given to actors' interest in particular institutional arrangements and the allocation of resources that is needed to create new institutions or transform the already existing ones. Building on Eisenstadt's notions (Ibid.), the focus is placed on network outcomes and how network structures can contribute to the creation of these outcomes at different levels of analysis. Institutional entrepreneurs are hence seen as actors behind a structural change (Colomy & Rhoades 1994). However, less attention has been given to the emergence, evolvement and change of organizational networks that are important in understanding network dynamics, as outcomes form only a part of the institutional analysis and are not able to explain the institutionalization process without including the formation of network structures that lead to such outcomes. Whereas most of the literature concentrates on relatively mature organizational fields (e.g. Greenwood et al. 2002; Lounsbury 2002), institutional entrepreneurship is usually found within emerging fields (DiMaggio 1991, Garud et al. 2002). Institutional entrepreneurship emphasizes actors' efforts toward their strategic goals by deliberately leveraging resources to create the very institutional structures in which they are embedded in (Doeado 2005; Lawrence 1999).

2.3.2. Power and Institutional Entrepreneurship

In assessing power as part of the neo-institutionalist theory, Gouldner (1954) argued that intervention by the interest groups is essential for the institutions, adding that the outcome of institution building process is shaped by the actors holding different interests. Drawing from this, DiMaggio (1988) argued that interest and group conflict needs to be understood having a role in the institutionalization processes, leading institutional agents to deploy available resources to create and empower institutions, hence, making them institutional entrepreneurs (Dacin et al. 2002). Institutional entrepreneurs' role is to guarantee legitimacy of the institutions by supporting their creation if they deem it to be in their interest. Subsequent versions of institutional theory have adopted a similar, agency-centric conception of power (e.g. Brint & Karabel 1991; Greenwood &

Hinings 1996; Fligstein 1997; Lawrence 1999), while most notably Maguire et al. (2004) embraced it by illustrating how actors' potential to leverage power through influence and agenda setting is embedded in social systems. Closely connected to power is the concept of change, which is steered by agents (e.g. Hensmans 2003) in their quest for establishing new institutions or changing the established ones.

Starting from Weber (1947), power has been an essential part of the organizational theories. However, Clegg (1989) argued power is essentially a contested concept and cannot therefore be verified formally and rationally. Central to Clegg's approach is the rejection of the idea that power is vital for organizational functionality. Similarly, Clegg (Ibid.) also rejected the notion of combining different concepts of power (e.g. episodic, dispositional, facilitative etc.) to produce a better conceptual framework. Still, even by applying Clegg's approach it is possible to acknowledge power as an assumed actor-centric concept that takes institutionalized power relations for granted. Accordingly, such actor-centric analysis shifts focus to a contest between groups possessing power to accomplish their desired outcomes (Pfeffer 1981) as they pursue their interests within legitimized rules of the game.

There have been some empirical studies applying the institutional entrepreneurship framework, most notably by Fligstein & Mara-Drita (1996), who looked at the creation of the European Single Market and found that economic and political crisis or Eurosclerosis that characterized the Europe in the late 1970s and early 1980s strengthened European Commission's central role as a collective institutional entrepreneur and enabled for its part the creation of the Single Market. Phillips et al. (2000) suggested that faced with complex, multi-faceted problems, actors are able to engage in inter-organizational collaboration while taking the role of institutional entrepreneurs, while Durand & McGuire (2005) showed, how scarce resources can lead actors to leave an old institutional field and move on to form new institutional fields by adopting the role of institutional entrepreneurs.

2.3.3. Institutional Change

Institutional change reflects the decision-making power and interests of organized actors (Seo & Creed 2002), focusing on the policy preferences that are being revealed though political action (Lukes 1974). With regard to institutional entrepreneurship, all actors are not equally capable of producing desired outcomes because there are only a limited number of positions within an organizational field for the actors to position themselves in (Bourdieu 1990; DiMaggio 1988). Instead, actors' institutional interests and opportunities take form through normative and structural

qualities of these positions (Bourdieu 1992) which they can seize on. This explains, how actors can shape institutions despite facing pressure towards inertia and stagnation (Holm 1995; Seo & Creed 2002). Similarly, DiMaggio (1988) argued that institutional entrepreneurs are vital for institutional change processes, since new institutions can only arise when actors with adequate resources (i.e. institutional entrepreneurs) become engaged in the process.

Conceptually, institutional entrepreneurship emphasizes interested actors' efforts to influence the institutionalization process through leadership and strategies that might involve lobbying for regulatory change or discursive action (Fligstein 1997; Hoffman 1999; Garud et al. 2002; Maguire et al. 2004). Institutional transformation puts actors with key strategic resources at the forefront, as they are being seen as having significant impact on the evolution of institutional fields (Holm 1995; Oakes et al. 1998; Greenwood et al. 2002) in regard to de-institutionalization and institutional transformation (Oliver 1992; Ahmadjian & Robinson 2001). The notion of institutional entrepreneurship as a framework for actor-centric institutional change processes is somewhat problematic because it refers to the debate on structure versus agency. By implying that actors try to disengage from their social context in their quest to change it, a reference can be made to embedded agency (Holm 1995; Seo & Creed 2002) that reflects the tensions between institutional determinism and agency and organizations' innovativeness. Some of the critique of institutional entrepreneurship has been about ignoring the influence of institutional pressure on actors' behavior (Cooper et al. 2008), as well as for its lack of viable endogenous explanation of institutional change (Meyer 2006).

Organizational fields are defined by their degree of heterogeneity and institutionalization. The presence of multiple institutional alternatives can be an opportunity for agency, opening door for institutional entrepreneurship (e.g. Sewell 1992; Clemens & Cook 1999), which relies more on the voluntary institutional setting and is therefore easier to de-institutionalize. While there are ramifications for the degree of institutionalization of organizational fields on the actors' agencies (Tolbert & Zucker 1996) and, hence, also institutional entrepreneurship, strategic action is more likely to take place in relatively highly institutionalized organizational fields (e.g. Beckert 1999) as uncertainty is lower in relatively highly institutionalized organizational fields, reducing the need for secure, stable and predictable institutionalized rules and norms, making actors more likely to engage in strategic action (Ibid.). Similarly, mature institutionalization enables strategic agency to emerge and thereby offers institutional entrepreneurship a better platform than what minimal or extreme institutionalization could do (Dorado 2005). However, there have been counter arguments

(DiMaggio 1988; Fliegstein 1997) that institutional uncertainty might provide opportunity for strategic action as it is best accomplished when the organizational field has no structure (Fliegstein 1997), leading to suggest that unstructured or under-organized domains are able to provide opportunities for institutional entrepreneurship in a manner that mature fields cannot because of their already established structures.

Most of the empirical studies on institutional entrepreneurship have focused on emerging fields that are less structured and face higher levels of uncertainty (e.g. Maguire et al. 2004; Lawrence & Phillips 2004; Déjean et al. 2004; Garud et al 2002; Lawrence 1999; Rao & Sivakumar 1999; Rao 1998), leaving mature fields outside of their scope. As a response, Dorado (2005) developed a typology that involves both the degree of heterogeneity and the degree of institutionalization to determine the extent to which institutional fields can offer opportunities for institutional entrepreneurship. Three dominant forms of organizational fields emerged out of this typology: (1) opaque fields, (2) opportunity transparent fields and (3) opportunity hazy fields. The opportunity opaque fields are highly institutionalized and isolated from the potential influence of other fields and, hence, of new ideas. However, their characteristics do not encourage for action, unlike the opportunity transparent fields that are characterized by the co-existence of heterogeneous institutional arrangements and high level of institutionalization. Finally, opportunity hazy fields offer only a low level of institutionalization by emphasizing volatile action, because of the unpredictable environment agents are faced with (Battilana et al. 2009b).

Apart from field-level conditions, also actors' social positions have been highlighted in the literature on institutional entrepreneurship (DiMaggio 1988; Dorado 2005; Leblebici et al. 1991; Garud et al. 2002). By emphasizing the actors' social position within an institutional setting, their perception of the field and access to resources are important in trying to engage in institutional entrepreneurship (Lawrence 1999). Institutional entrepreneurs can be found both at the margins of an organization fields (e.g. Leblebici et al. 1991; Haveman & Rao 1997; Garud et al. 2002) and between different organizational fields (e.g. Boxenbaum & Battilana 2005). However, other studies have shown that institutional entrepreneurs can also be found at the center of institutional fields (e.g. Shere & Lee 2002; Greenwood & Suddaby 2006).

One of the key concepts within policy network approach is policy change that emphasizes interaction between all important agents within a given institutional arrangement (Rhodes & Marsh 1992). Especially epistemic communities (Haas 1992), advocacy coalitions framework (Jenkins-

Smith & St. Clair 1993) and policy transfer networks (Evans & Davies 1999) can be used to understand the exogenous pressures facing the network. These focus on transfer and reconfiguration that are essential for policy change and the way exogeneous factors such as Europeanization influence it (Ladi 2005).

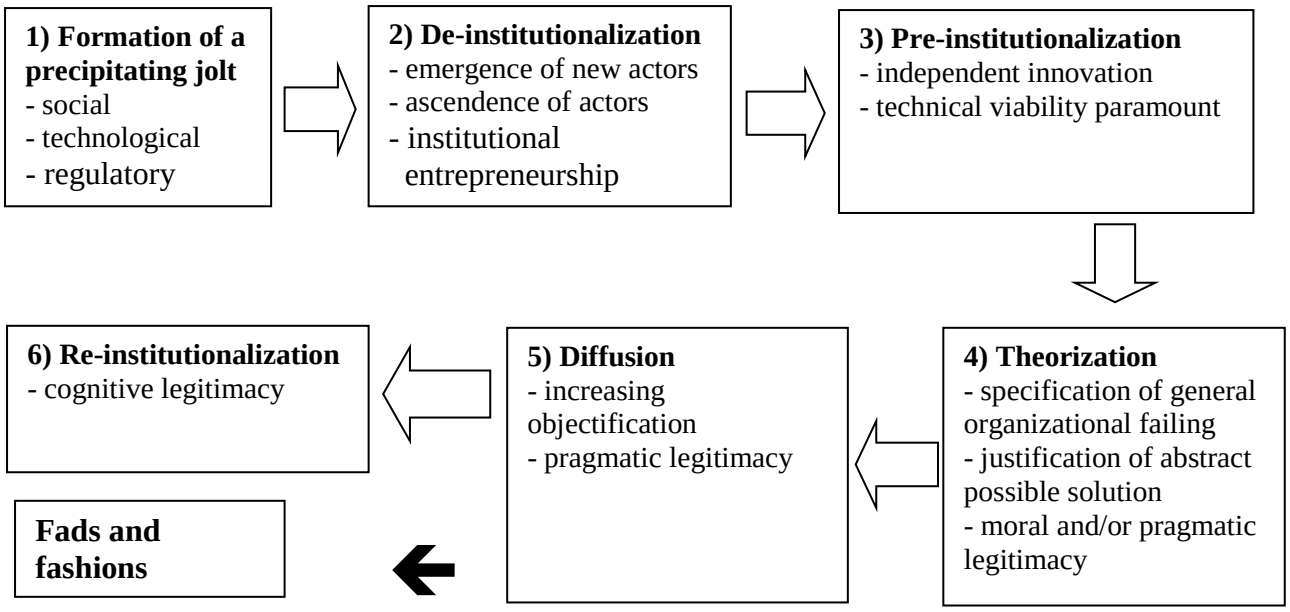
Much attention has been given to institutional change since the early 1990s (e.g. DiMaggio & Powell 1991; Fligstein 1997; Hoffman 1999; Seo & Creed 2002) with the focus on exogenous explanations that change occurs when an external event disrupts the existing institutional arrangements, altering the existing order. Since there are no causal agents involved, the path for change is the result of an unpredictable reconfiguration process. As the change process is context dependent, generalizations on institutional change processes are difficult to make. On the other hand, the endogenous explanations emphasize human interaction that takes place at the individual (Seo & Creed 2002; Zucker 1998), group (Lawrence et al. 2002) or organizational level (Holm 1995) as the foundation of change process. Yet, DiMaggio (1988) stated that institutional entrepreneurs are always seeking new institutions to realize their own interests. This attribute indicates the importance of micro-foundations as sources of institutional change, while also evoking images of rational actors who are disembedded from these institutions.

There are several conceptual and deductive models that combine the interaction between actors, institutions and external events to bring about institutional change. Barley & Tolbert (1997) described institutional change as an incremental modification in which actors develop new institutions by revising current scripts. The model is divided into four stages, starting from encoding institutions into scripts and then enacting scripts into practice, followed up by replicating or revising these scripts and finally externalizing and objectifying them. According to Barley & Tolbert (Ibid.), institutional change implies that by revising scripts behavioral patterns change, since actors' intentional activity is likely to be more effective in causing change than unconsciously or unintentionally deviating from a certain script.

Another perspective on institutional change draws from institutional diffusion across institutional fields that can lead to new institutions evolving. While DiMaggio & Powell (1983) named this process originally "diffusion", it has later been reframed as "travel" (Djelic 1998) or "carriers" (Scott 2003), reflecting divergent assumptions about agency and causality in institutional change. Djelic (1998) argued that actors transpose institutions, leading to human agency being evoked, since institutions rely on agency when they "travel", whereas "diffusion" reflects natural laws they are

subjected to. As can be seen, institutional change has not yet established a shared terminology, reflecting the prevailing disagreement about its mechanisms. Yet, it is possible to draw a conclusion that once an institution has diffused, it fits the local context (Campbell 2004; Djelic 1998). Other interpretations of this modification process include "translation" (Campbell 2004; Djelic 1998; Zeitlin 2000), "bricolage" (Lanzara 1998), and "adaptation" (Zeitlin 2000). "Translation" indicates reformulation but not necessarily redesign of the original institution, while institutional "bricolage" implies to institutions being produced through a process of recombination and reshuffling of pre-existing available institutional attributes. There have only been a few attempts to comprehend alteration processes at a micro level. Zeitlin (2000) described foreign institutions' adaptation to the change as a gradual process. Greenwood et al. (2002) suggested that institutions have to be de-institutionalized before a potential new institution can be formed (Figure 2). De-institutionalization occurs when external events disturb the established institutional order, followed by actors drawing new principles for organizing the institutional field.

Figure 2. De-Institutionalization Model (Greenwood et al. 2002)



As actors face uncertainty following a destabilization of the institutional order, they begin the process of starting to build new institutions to replace the old ones. Hence, new institutions offer a rational solution to field-level problems. This process is not automatic but requires a lead organization to take charge of the institutionalization process, even though the decisions can be reached among all the members of the institutional field.

2.3.4. From Proto Institutions to Mature Fields

Using Bourdieu's (1990) definition, organizational fields can be seen as structured systems of social positions where struggles over positioning become more essential than access, stakes and resources. Institutional entrepreneurship, however, turns focus instead to the relationship between interests, agency and institutions that emerge as organized actors try to realize their interests (DiMaggio 1988).

Most of the studies on institutional entrepreneurship within mature fields see agency as dominant actors' effort to convince other actors to change their practices (e.g. Hoffman 1999; Greenwood & Suddaby 2006) within an embedded institutional structure. However, there are both dominant and dominated actors in fields with the former attempting to establish monopoly over legitimate control mechanisms in the field to secure its reproduction and power (Bourdieu 1992). There are also instances where change can be imposed by actors that are not in a powerful position within a network. On the other hand, there are no clearly defined reference groups for actors in emerging fields to compare themselves with, meaning that they cannot identify isomorphic demands that may arise either. This enables institutional entrepreneurs to act strategically and shape the emerging institutional arrangements to correspond with their own interests while also giving them a central position in the field that is still taking form. Research on under-organized domains in emerging fields (e.g. Trist 1983) has found that while there might be some degree of mutual interests among the actors, it is seldom coordinated, indicating that there might be potential for organizational networks (Gray 1985) where these do not exist yet. Whereas there is diffusion and high levels of acceptance among actors throughout mature fields, emerging fields are only narrowly diffused and characterized by proto-institutions that are only weakly entrenched (Lawrence et al. 2002), making them prone to ever changing struggle for the direction of the field before maturation.

For the study of institutional entrepreneurship, emerging fields are important for three reasons: (1) the actors can act strategically and opportunistically since there is uncertainty over institutional order (DiMaggio 1988), (2) emerging fields have great potential due to their fluid structure that offers the actors the possibility to advance collective action on their own terms while also enabling them to create new institutional configurations (Garud et al. 2002). Finally (3), emerging fields are faced with different challenges than more mature fields as isomorphic pressure becomes less relevant if there are no leading actors or established patterns of institutional conduct to mimic (Maguire at al. 2004). Because no institutionalized channels needed for diffusion have emerged yet and no shared resources available, shared values associated with normative forces also cannot

develop. Therefore, individual actors in emerging fields are not able to rely on coercive strategies and instead need to rely on multilateral agreements to meet the interests of the majority of field. An emerging field exists in an institutional void because it still has not receved external legitimacy, the actors cannot be aware whether the field is actually needed. There might also be resistance from other competing fields whose interest is to prevent the emerging field from arising. Therefore, actors' commitment to the field during this maturation period is essential, while actors in leading roles in establishing the rules for the field must possess the resolution to overcome these difficulties. A lack of commitment can lead to the actors abandoning the field between initiation and take-off process, hence decreasing the likelihood of the field ever becoming fully established and mature.

Proto institutions refer to the second and third stage of Greenwood's de-institutionalization (2002), where new practices, rules and procedures are yet to fully absorb into collaborative relationship within new institutions, since they are not diffused sufficiently yet (Lawrence et al. 2002). If these institutions diffuse adequately, an institutional field will ascend as regulative, normative and cultural-cognitive elements emerge to induce stability and order to the field (Scott 2003). Literature on institutional change processes indicates complexity that characterizes the transformation process from proto institution to mature institution (e.g. Greenwood et al. 2002; Lounsbury 2002), yet only a few studies have actually focused on empirically analyzing, how proto institutions emerge. In their study, Lawrence et al. (2002) showed how intraorganizational, collaborative relationships are required for new practices to develop, whereas Hargadon & Douglas (2001) emphasized the importance of design for the field-level adoption of new technology.

According to Burns & Scapens (2000) institutions with their historical and cultural attributes shape the change process as this is not done in a vacuum. Emergence of a proto institution is hard to identify as it happens, making collection of empirical data on this process therefore very difficult. Hence, empirical studies rely mostly on retrospective accounts and can be biased. Because individuals seldom remember the processes in adequate detail and organizations rarely record their micro-processes of human interaction, the internal validity of the data is weak (Barley & Tolbert 1997). What makes the analysis even harder is the fact that there is a deep-lying disagreement between different disciplines on the emergence of institutional genesis (Abell 1995). For instance, in institutional economics proto institutions are seen as deliberative conventions that are formed when rational actors try to optimize their own interests and try to find partners that agree on these (e.g. Campbell 2004; North 1990; Douglas 1986). Meanwhile, sociological institutionalism treats proto institutions as unintended byproducts of reconfiguration of an institutional field that has been

initiated by an external event and perceives actors as institutionally embedded, unable to form entirely new institutions. Showing, how actors, institutions and external events all affect the emergence of proto institutions puts institutional change into a perspective as a process of creating something new voluntarily or unintendedly.

2.3.5. From Network to Field-Level Theories

In the social science literature, field and network levels of analysis have been disconnected, even though in order to understand the macro dynamics of networks it is also essential to understand, how fields evolve (Powell et al. 2005). This disconnection draws from several aspects of contemporary research, with the majority of research in network analysis examining the formation of ties between two actors and the consequences of particular network positions rather than analyzing the structure of collective action. There are some exceptions to this, however, most notably by Salancik (1995) or McPherson et al. (2001), who noted that longitudinal and temporal data has seldom been applied to social network analysis and Burt's concern that social network analysis has concentrated on cross-sectional network structures (2000), who was concerned that most studies on network structure were cross-sectional. In all, network dynamics have clearly been an under-researched domain. Only recently with the evolution of more advanced software, has it been possible to analyze the network dynamics at the dyadic-level (e.g. Lincoln et al. 1996; Gulati & Gargiulo 1999; Stuart 1998, Giuliani 2010), yet, the evolution of whole networks has received less attention (e.g. Orsenigo et al 2001; Powell et al 2005).

An organizational field is defined as a set of organizations that are involved in shared activities and are subjected to regulatory pressures within a recognized area of institutional life (DiMaggio & Powell 1983). New organizational forms diffuse through organizational fields via coercive, mimetic and normative processes, and while the adoption of a certain form can occur at the actor level, the choice of organizational form is influenced by the field-level conditions (DiMaggio 1991). These fields can take the shape of network positions (Bourdieu 1992), where competing interests are being deliberated (Hoffman 1999). Sociological approach to collective action identifies three types of social structures: social networks, institutions and cognitive frames, with interrelations between these three taking place in an institutional field, leading to the emergence of institutional dynamics that define the structure of the field (Beckert 2010b). By including social networks, institutions and cognitive frames to the analysis it is possible observe, how these structures in the field affect the actors' performance as they try to reconfigure other parts of the social structure in a way favorable to their goals (Powell et al. 2005).

Organizational fields emerge when existing relations are being challenged by social, technological and economic pressures, leading to the reconfiguration of the three models and hence social structures they affect (DiMaggio 1991). Despite the shared understanding of different actors' and organizations' role in formation of a domain, interaction between overlapping networks and regulated re-emergence of network ties over time has remained an under-researched area in institutional literature (Powell et al. 2005). Therefore, it is important to understand the linkage between network dynamics and field structure in order to explain how organizations' behavior influences the actions of other organizations.

Well-established fields are characterized by highly-committed actors, whereas with emerging fields (Fligstein 1997; Maguire et al. 2004), the commitment is bound to be tenuous at best because their domains are still under-organized (Trist 1983; Hardy 1994). Vague commitment to an emerging field is a result of weak dedication and loyalty that is eventually needed to transform a domain into a recognized and well-established field (Powell et al. 2005). A field occurs through the emergence of new and coherent structures and patterns by self-organization (Goldstein 1999), addressing higher-level regularities that result from simple rules and interactions at a lower level (Sawyer 2001). Thus, emergence is a result of macro-level properties that are being formed through an interactional effect between micro- and macro-level social properties. More general properties of emergence in organizational fields include resilience, robustness and coherence (Lissack & Letiche 2002), which include assumptions about the characteristics of self-organization (Goldstein 1999) drawing from the complexity theory.

During the emergence stage, organizations may exit the field because of a lack of confidence in it. Since the process from initiation to emergence of a field is long (Klepper & Graddy 1990), sustaining the commitment of its members becomes crucial when success can still appear doubtful or unlikely. To explain the commitment to an emerging field, the theory of enactment (Danneels 2003) can be applied. It helps to understand how institutional entrepreneurs participate in the formation of new institutional fields by attempting to gethr together and mobilize all the relevant stakeholders. In order to succeed in this, institutional entrepreneurs need to present them with the norms and values of the field and try hence to justify the need for the field by striving to create an environment that enhances internal legitimacy (Lounsbury & Glynn 2001). They encourage the potential members into collective action in what would otherwise be an under-organized domain (Rao et al. 2000). As a result, institutional entrepreneurs start to shape their own perceptions

regarding the field, reinforcing their beliefs that the domain is attractive and that they have something to contribute to it. As the result, the institutional entrepreneurs' commitment becomes stronger, since they start to give the field higher value (DiMaggio 1988).

3 LITERATURE REVIEW AND THEORETICAL FRAMING OF THE THESIS II: PERSPECTIVES ON EUROPEANIZATION AND INDUSTRIAL RELATIONS

In order to understand better, how networks are being (trans)formed because of convergent and divergent tendencies in their environment, a look at the underlying forces of economic and political Europeanization need to be understood. Europeanization hinges on the processes of regional economic and political integration that are just strands for a wider phenomenon. Regionalization as part of Europeanization refers to either a national or supranational region within a continent. In the former case Europeanization is one dimension of regionalization whereas in the latter case regionalization refers to a convergence process within a regional entity like the Benelux, which has no legal position or official institutional structures, but is yet strongly institutionalized.

In explaining the Europeanization, it is important to understand the exogenous factors for policy change and how external factors affect the political institutions, public policies, values and identities of the social partners through the different levels of industrial relations. There are two ways to approach Europeanization that are elevant for this study: Either through international political economy or through the outcomes of the Europeanization process that cascade to the national level. The main driver behind the mechanisms, mediating factors and outcomes that are related to the institutional change and policy change is not the change process in itself, but rather change that manifests itself at the national level and spreads to the European level. Regarding the outcomes of these institutional changes, they are always in progress since there is no definite end on how deep and wide globalization and Europeanization can become. Whether and especially how institutions are transformed due to Europeanization has always been integral for the studies of rational choice, organization theory or sociological and historical institutionalism, which all share similar traits to be put under the new institutionalism (Hall & Taylor 1996; Immergut 1998). New institutionalism has influenced the discussion on Europeanization strongly by focusing on formal and informal structures and rules, change and stability and the role of agents within institutions (Risse et al. 2001; Börzel & Risse 2003). New institutionalism is defined by its exogenous factors, such as mechanisms that lead to specific outcomes like convergence, divergence or inertia, while shaping the main drivers for institutional change. These mechanisms can be divided into soft and hard. The former includes diffusion and mimesis that can both be found at the global level, whereas the design and implementation of policies, without regulatory instruments in form of Open Method of Coordination (OMC) has been profound at the European level. Hard mechanisms on the other

hand are mostly found at the European level and refer to regulatory means as well as adoption of more efficient and effective institutions to enhance deepening of the European integration[7].

The aim of this chapter is to first look at Europeanization as general polito-economic phenomenon before concentrating on its implications for industrial relations. In order to understand the ramifications for Europeanization of industrial relations, this chapter also looks at the VoC discussion and how it has affected industrial relations both at the national and European level. Then finally, this chapter provides a historical-institutional analysis on how in particular Europeanization of industrial relations has been evident at the European metal sector through trade union networks, by looking at the process that started in the early 1950's with the creation of European Coal and Steel Community (ECSC).

3.1 Defining Europeanization

Europeanization has several different meanings, with no clear overall agreement of how far back in history the origins of the concept should be traced (e.g. Radaelli 2004; Radaelli & Pasquier 2007, 38). Recently, theorization on the Europeanization concept has mostly contained a political, sociological and historical approach, although an explicit and comprehensive definition has not emerged. Olsen (2002) identified five different phenomena that refer to constituting Europeanization with regards to both historical and sociological processes. These were Europeanization as (1) changes in external boundaries, (2) developing institutions at the European level, (3) central penetration of national systems of governance, (4) exporting forms of political organization and finally, (5) as a political unification project. In short, these show Europeanization as a transfer of policy with institutional arrangements, rules, norms and capacity building in Europe (Bulmer (2007, 47). Radaelli (2000, 4) took a more EU-centric approach in including processes of construction, diffusion and institutionalization of formal and informal rules, procedures, policy paradigms and shared norms that would be incorporated top-down into domestic discourses, identities and political structures.

Generally, the literature on Europeanization has tended to focus on political processes within the institutional sphere of the EU, excluding processes outside the institutional framework that can also be seen as being part of the Europeanization process. This has led to a research agenda that endorses

[7] This is often referred to as federalization of the EU.

a Eurocentric interpretation of history by focusing on explaining domestic adaptation to European integration through the EU (Börzel 2002). Whereas previously the emphasis was on the processes and extent to which EU member states (and candidate countries for that matter) would be able to adopt EU rules and implement EU policymaking, more recently the focus has shifted to cross-border processes of mimicing and benchmarking to emphasize a more of a reciprocal approach to Europeanization instead of a top-down approach (e.g. Ekiert 2008; Sedelmeier & Schimmelfennig 2005), also while the there have been federalist pressures arising within the political sphere of the EU amid the crisis. This shift in the Europeanization literature has resulted in Europeanization being seen more as a research stream on the impact of the EU that is being analyzed through policy specific case studies.

Europeanization and globalization might seem like two layers of the same phenomenon as both of them are multi-dimensional, including everything from political to social, cultural and economic spheres. Therefore, it might be difficult distinguish between the two and hence the policies they try to promote. Since Europeanization and globalization are often abstract and general macro-level concepts, the key for separating the two lies in the question, whether Europeanization should only be concerned about the European integration process and its ambiguities in the current member states or include even the parts of Europe outside of this process or should they be treated under the globalization discussion? It would seem justified to include all the regions in Europe to a discussion on Europeanization since currently there are no countries left, which do not at least have bilateral agreements with the EU, thus binding them to the "European core values", while also adopting EU legislation and hence, making them "Europeanized" even before the formal admission.

Since the late 1990s there have been attempts to comprehend the relationship between the two; either by seeing Europeanization as a filter for globalization (Wallace 2000) or as an antidote to it (Graziano 2003). The former emphasizes the political-economic sphere of the EU that is reacting to the globalization pressures (Wallace 2000). On the other hand, by conceptualizing Europeanization as an antidote to globalization, it not only filters the pressure of globalization but also as functions as a means of promoting policies and institutional arrangements that try to steer globalization processes towards more socially just developments also outside Europe. In this process that Graziano (2003) called "Europeanization of globalization" the EU is regarded a mediator between the state and globalization, making it external to it. Drawing from the filter-antidote discussion, Scharpf (2002) saw European social model as opposed to the idea of Europe as an antidote for globalization. By regulating national policies through directives, the EU is able to limit member

states' political room to manouvre by endorsing further deregulation and flexible employment conditions. Also, Scharpf (Ibid.) argued that member states' own social policy legislation and not the World Trade Organization (WTO) rules were to blame for limiting the EU's choices on social policy. This reflects the neoliberal "Europeanization of globalization" argument, although not in the same sense as Graziano (2003) meant by seeing the EU as a mediating actor between national states and globalization.

There have also been other approaches to conceptualize the relationship between globalization and Europeanization. One of them (Levi-Faur 2004) argued that Europeanization does not have the same leeway as globalization since it is regulated more strongly and advocates representative democracy alongside open market economy, whereas globalization is geared more towards liberalization. This draws from the idea that Europeanization plays an indirect role in the change process, while global pressures are direct and more prominent. Thus, globalization is the main driver and Europeanization is only able to follow the neo-liberal traits of it by being subjected to it. Similarly, Verdier & Breen (2001) applied a quantitative research design in four different domestic dimensions and observed that within labor and capital markets, globalization was the driving force, while in electoral competition and within the central and local government, the EU had a bigger role.

Both theoretical and empirical research on Europeanization suffer from a product-process ambiguity (Hacking 1999), since it can refer both to a process as well as an end result, making it difficult to distinguish dependent variables from independent ones, as well as domestic factors from European ones. Following the idea presented by Saurugger (1995), a solution might be to adopt a comparative research micro-level framework and concentrate on the actors and their policies instead of just analyzing some general patterns across countries and industry sectors. Another often lightly-taken problem is defining the scope for Europeanization. Olsen (2002) identified five different meanings of Europeanization, ranging from institution building at the European level to multi-level governance and political unification at the cross-national level. Similarly, using Featherstone's (2003) distinction, four different interpretations of Europeanization can be found in the literature: (1) Europeanization as a historical process, (2) as a matter of cultural diffusion, (3) as a process of institutional adaptation and finally (4) as the adaptation to policy and policy processes. The last two categories are using a minimalist interpretation of Europeanization and are closely linked with the

practical operation of the EU[8] (e.g. Radaelli 2003; Kohler-Koch & Rittberger 2006), whereas the former two use a broader approach that sees the whole geographical and cultural Europe as the scope of the analysis (e.g. Mair 2004; Harmsen & Wilson 2000). As can be seen here, besides the challenge of finding a commonly acknowledged definition, there is not just one Europe, but many.

Ladrech (1994) offered a different view on Europeanization by describing it as a process that is different from European integration. While European integration refers to harmonization domestic adjustment of the member states to EU obligations, Ladrech (Ibid.) argued that:

> *"Organizations respond to changes in the perceptions of interest and value that occur in the principles, norms and institutional design of the regime in which they are embedded"*

Therefore, it becomes obvious that the re-orientation of domestic organizational logics is a feature of Europeanization (Howell 2002), meaning that because of different regime backgrounds, harmonization of domestic practices across Europe becomes difficult. Instead, Europeanization should be approached from bottom-up, emphasizing the domestic institutional arrangements that have an important mediating effect on external pressures, while focusing on national-specific adaptation to cross-national inputs (Ladrech 1994).

On the other hand, there needs to be a separation of Europeanization from European integration, where the former describes a two-way process of policy change between the EU and national settings and the latter only a top-down impact of the EU upon its member-states (Featherstone 2003; Risse et al. 2001). However, even while seeing Europeanization as a reciprocal process, the focus has been on the top-down process from the EU level to national settings. Risse et al. (2001) focused on two categories of national settings: (1) Policies that refers to concerns beyond policy content and (2) system-wide national structures that reflect the changes at the national level. This draws parallel with Ladrech's (1994) findings that emphasize national adaptation, while nation states still continue have a part in shaping policy outcomes despite the increasing cross-national emphasis. At the core is the importance of fit between existing structures, policies and practices at the national level and the institutional changes taking place at the EU level. According to Risse et al. (2001), poor fit implicates strong adaptational pressure, while good fit is a sign of weak pressure to adapt to the abovementioned changes top-down process. However, it is important to notice that adaptational pressure does not necessarily lead to change in national settings.

[8] or even more narrowly the EU15 or the Eurozone.

In one of the most comprehensive analyses of Europeanization, Radaelli (2003) divided it into three sub-entities: (1) Europeanization as different processes of construction, (2) as diffusion and institutionalization of formal and informal rules and (3) as procedures, policy paradigms and shared beliefs and norms, which were first defined and consolidated in laying the foundation for the EU. Looking at Europeanization through these sub-entities, a dual process of institutional and policy change that involves both the European and national level emerges. Yet, Radaelli (Ibid.) did not include the two-way process of Europeanization discussed above in his analysis, but instead focused on policy transfer and diffusion as sources of policy change.

3.1.1. Institutional Ramifications of Europeanization

From the institutional perspective, Europeanization has been referred to as the goodness of fit model (c.f. Knill & Lenschow 1998; Knill 2001), where the degree of fit between the European and national processes generates adaptational pressure for the latter to change. Furthermore, high adaptational pressure is unlikely to lead to successful change as it challenges the core administrative traditions and meets institutional resistance (James 2007). Conversely, low adaptational pressure means that little adaptation will be necessary, because the fit between the European and national processes is already good and therefore no change is required (Ibid.). Therefore, adaptation of national processes to European ones is best achieved when there is only moderate adaptational pressure and the core national attributes are left outside.

This idea has been further elaborated by Risse et al. (2001), who proposed a three-step model of Europeanization. Identifying misfit and adaptational pressure as foundations of insufficient conditions for change leads to the nature and likelihood of change in the national processes being explained through five national[9] mediating factors. These are (1) multiple veto points in the national structure, (2) facilitating institutions, (3) political and organizational cultures, (4) differential empowerment of national actors and (5) learning process. The first three are institutional mediating factors, whereas the latter two are concerned with the agency. Multiple veto points in the domestic structure refer to the dispersed power within the national arena and the resistance to the adaptational pressures national actors face from the EU, whereas the existence of facilitating formal institutions deals with the empowerment of national actors are faced with to generate change. Political and

[9] Actually, Risse et al. (2001) use the word “domestic” to refer to the same unit of analysis as “national” that is being used here.

organizational cultures draw from the sociological logic of appropriateness, referring to the institutional factors that are concerned about the dichotomy between consensus-oriented and power-oriented cultures. On the other side, differential empowerment of national actors relates to the rationalist Europeanization argument that emphasizes the role of redistributing power resources within the national arena. Finally, learning process refers to actors' ability to redefine their interests and preferences, leading to reorientation on the European policy agenda. However, it is questionable, whether misfit can bring about change. According to Heritier & Knill (2001), endogenous national policies can affect institutional change regardless of the similarities in policy preferences, while Haverland (2000) showed that the pace and form of adaptation can be explained by variations in national institutional structures regardless of the fit.

As an answer to the challenges presented above, softer mechanisms such as the OMC and institutional benchmarking have been adopted. Börzel (2005) underscored the importance of misfit, by showing how national policies and procedures may be challenged and even overruled at the EU-level with the aim of raising collective, European understanding. However, by interpreting misfit broadly, it becomes analogous to the notion of difference, which does not grasp the potential friction between the two levels in the same way as misfit does. Furthermore, although adaptational pressure can only lead to change only if there is willingness for change (Risse et al. 2001), the analysis needs to include incentives (or lack of them) actors have to initiate domestic change in the absence of adaptational pressure. Therefore, it can be argued that as a result of an intrinsic structural determinism the fit-misfit model fails to comprehend actors' can choices and learning outside of institutional pressures, leaving the model rather one-dimensional.

While much of the literature on Europeanization has focused on institutional adaptation, a broader perspective is required to fully grasp the European ideas and identities that lie in the background, shaping the institutional field. Olsen (2002) argued that the concept of Europeanization should not be limited to changes in the politico-administrative structures and policy content but also include European norms systems, values and policy paradigms that shape the European discourses and identities with national distinctions. Following this path, Dyson & Goetz (2003) identified two generations of Europeanization research (Table 6). The first one emerged in the early 1970's emphasizing the distinction between nation states and Europe as separate units that exist in parallel, while the second generation emerged in the 1990's through the deepening of the European integration, placing greater emphasis on non-institutional adaptation.

Table 6. Two Generations of Europeanization Research (Dyson & Goetz 2003)

First Generation	Second Generation
Top-down perspective. Seeking to explain domestic reactions to pressures from above	Emphasis on both top-down and bottom-up, vertical and horizontal dimensions
Assumed mismatch between European and domestic levels, particularly within legal, institutional and procedural domains	Greater emphasis on interests, beliefs, values and ideas: the political dynamics of fit
Emphasis on reactive and involuntary nature of adaptation	Greater emphasis on voluntary adaptation through policy transfer and learning
Focus on policy and polity dimensions	Greater emphasis on politics and governance
Expected increasing cross-national convergence	Emphasis on differential impact of Europe
Definition of Europeanization in substantive terms, with focus on the end state effects	Emphasis on the impact of Europeanization on domestic political, institutional and policy dynamics

As can be seen from Table 6, second generation provides a wider interpretation of the effects of Europeanization by complementing the first generation of analysis. Similarly, Anderson (2003) divided the second generation of analysis into interests, institutions and ideas. According to him, emphasis should be on interests since they shape policy responses by distributing societal preferences that national actors in their turn apply. On the other hand, ideas enable actors to manage uncertainty over the expected consequences of different choices they make by providing actors with a conceptual toolkit to manoeuvre within the institutional settings. Since actors' performance is affected by institutional arrangements that influence their performance by allocating power, organizing the policy-making structure to provide institutions with opportunities and constraints to advance their policy choices is needed.

Another difference between the first- and second-generation analysis deals with the convergence-divergence paradigm. Cross-national convergence has been widely discussed in the Europeanization discourse, with the emphasis on the role of the first generation of Europeanization analysis in the institutional field. Falling somewhere between the European and national levels is however the regional level of analysis, which stresses regional convergence and differential impact Europeanization has on different regions instead of a uniform European-level convergence. Regionalization is sometimes understood as meaning the same thing as Europeanization i.e. defining continents as regions. However, more often the concept of region refers to the idea of "regions of Europe" or "Europe of regions" (Streeck 1995), where region is understood as an entity

within a greater region i.e. Europe. This interpretation gained ground with the creation of the EUs Committee of the Regions in 1994, which aimed at giving sub-national authorities a say within the EU's institutional framework by highlighting historical cultural homogeneity, where convergence is in-born within the regional system.

While much of the research on institutionalization of Europeanization has focused on the transfer of power from the nation states to the EU (e.g. Massey 2004; Radaelli 2003), others have emphasized transfer of power from central governments to sub-national levels (e.g. Sharpe 1993). The regional (or meso level) has attracted attention since the reform of structural funds in 1988 that marked a shift in how the EU (then EC) targeted regions as the primary level for its economic development programs. Similarly, with the free movement of people, goods and capital following the Maastricht Treaty, regions especially in Central Europe have become multi-national entities, not limited by national barriers and regulations in the same way as before. Referring to these developments, Streeck & Schmitter (1991) introduced the term "Europe of Regions":

> *"transformation of national into regional economies and of sub-national regions into subunits of a supranational economy, which amounts to a regionalization of Europe as well as at the same time a Europeanization of its regions".*

Here the national level becomes less important than the cross-border regional level that can be seen as drivers for the economy and cultural exchange. Polito-regional dimension of the EU has evolved mainly around the European Committee of Regions, but there are also other non-political regional structures in place that mainly treat regions as economic areas.

3.1.2. Policy Networks and Europeanization

In order to understand the basic arguments behind Europeanization, it is important to acknowledge that policy network analysis was originally created to challenge the intergovernmentalist and neofunctionalist views (e.g. Moravcsik 2002; Tranholm-Mikkelsen 1991; Burley & Mattli 1993) that are macro-level theories aiming to describe the European integration as a path (dependency). Neofunctionalism has been criticized for its lack of automaticity and unidirectionality (Schmitter 2002), complaining about the proliferation of potential trajectories. Schmitter (Ibid.) argued that any comprehensive theory of integration should also be a theory about disintegration that is able to explain why countries decide to coordinate their action across a wider range of tasks, while also being willing to delegate responsibility to European institutions (Bickerton et al. 2014). This new intergovernmentalist approach that has gained ground in the post-Maastricht integration undermines the old integration theories that deemed integration as the means to transfer competences from

national to supranational institutions as well as emphasizing the reduction of integration to traditional socioeconomic or security-driven interests that include industrial relations' core targets. However, neither theory is intended to explain the policy outcomes that result from this processing the way policy network analysis is designed to do.

Since the early days of European integration, network governance has been an essential feature of the multi-level governance that has characterized the integration. Moreover, as policy network analysis draws from other theoretical accounts on European multi-level governance, it is able to explain sub-systemic policy-making processes (Peterson 2003), hence, making it compatible with the intergovernmentalist or neofunctionalist accounts of decision-making that explain, how the European integration has changed or evolved as a polity (Ibid.). Policy network analysis is also similar with most other institutionalist approaches to the European integration, adding value to meta-theoretical conceptions about multi-level governance similar to the OMC. The idea that informal, single-domain and mostly self-organized policy networks are at the core of EU governance is amenable to the broader argument about the EU embracing network governance, enabling the actors to use escape routes by embedding multiple overlapping interactions.

Policy network analysis gives emphasis to the integration of actors in policy making and the effect policy network structures have on policy outcomes helps to realize, how the outcomes are determined (O'Toole & Peterson 2001, 299-334). Also, mutual dependency of actors within the policy networks enables to analyze integrating factors of these networks. Sector-specific outcomes can be expected to be depending on whether the sectors in question are loosely-bound issue networks (e.g. industrial policy networks) or more tightly-knit policy communities (e.g. coordination networks with explicit targets and greater integration). One way to study these networks is by looking whether they tend to block significant policy change or are simply muddling through. Coordination outcomes, on the other hand, are far harder to predict when they occur within issue networks.

The EU as a quasi-federal polity enhances governance through policy networks, reconciliating competing values through negotiations and the exchange of resources and values; not through strict hierarchies or pure market structures. Policy network form of governance emphasizes the role of management and legitimacy concerns that may follow (Peterson 2003), as is the case with the EU, where there are legitimacy deficits within the multi-level governance (Moravcsik 2002). This reflects the actors' lack of incentives to engage in the governance of non-hierarchical networks by

using their capacities (Metcalfe 2000). This stands in contrast with the OMC in the European Union that is a soft form of intergovernmental policy-making since it does not result in binding EU legislative measures nor require EU countries to introduce or amend their laws. The OMC has provided a new framework for cooperation between the EU member states by encouraging peer evaluation through knowledge diffusion instead of hierarchy. It offers a new mode of transnational governance by providing a third way between inter-governmentalism and supranationalism as governance paradigms. Radaelli (2003) described OMC as less rigid and more open to participation than the inter-governmental negotiations as it provides new approaches to problem-solving while endorsing openness that is required to reduce legitimacy deficit and increase transparency to govern informal bargaining processes within cross-border networks (Dehousse 2002).

On the surface, it may seem as though most of the EU-level policy networks are horizontal and linked to policy stakeholders' national networks. However, in reality they are mostly led from Brussels and dominated by actors representing national interest groups and EU institutions, leaving sub-national actors without direct power over the EU lobbying. Yet, they are an integral part of multi-level governance at the European level, although it can difficult to see them as facilitators of the sectoral or regional actors. EU-level governance takes place mostly through informal bargaining within the policy networks by helping to build consensus. Through institutional embeddedness policy networks can diffuse norms of good governance, particularly in regions where (civil) society has undergone great changes like in CEE and SEE. From the policy networks perspective, Europeanization can be seen as a source of institutional innovation, as it provides new forms of multi-level governance and new institutional arrangements that take place at the European, national, regional and sectoral levels (Howse & Nicolaïdis 2001). Theories of vertical hybrid network governance that link actors at multiple levels of governance draw from the observation that the EU is evolving into a polity that is organized as a network and is defined by shared sovereignty rather than vertical transfer from lower to a higher level (e.g. Rhodes 2017; Peterson 2003; Keohane & Hoffmann 1991).

The Rhodes model of policy networks (1997, also c.f. Table 5) has been the standard-bearing method in the studies of EU governance as it captures the variety of EU policy-making by describing the EU as an "extraordinary differentiated polity" characterized by discrete distinctive and mostly disconnected form of policy networks that has a complex bureaucratic structure that shape policy options. As a result, the EU policy networks tend to be largely disconnected from each

other with a diverse membership that extends to public and private, political and administrative as well as European and national[10] actors, while lacking clear hierarchies between them.

3.1.3. Isomorphic Strategies at the European Level of Industrial Relations

As an approach to study relations between organizational environment within the institutional theory, organizational isomorphism (e.g. DiMaggio & Powell 1983; Meyer & Rowan 1977) provides an approach to observe institutional pressures and constraints that will lead to homogeneity of organizations operating in the same institutional environment; something that is crucial for their survival and eventual growth, while also helping them to attain legitimacy (Hannan & Freeman 1977; Meyer & Rowan 1977). Normative pressures that affect institutions often originate from regulatory bodies like the state or the European Commission. In case of the European level of industrial relations, the regulatory framework of the EU through European Economic and Social Committee, Societas Europaeas, Social Dialogue and EWC influences the social partners' ability manouvre in the field. Adaptation to these pressures as structural arrangements lead to organizational change and isomorphism. Organizational theories dealing with isomorphism are usually more concerned with homogenization than variation on organizational fields (DiMaggio & Powell 1983). Yet, the main rationale for institutional isomorphism is not efficiency but rather the existence of the diffusion of organizational structures and policy programs that must proceed through other mechanisms for isomorphism to develop. DiMaggio & Powell (Ibid.) proposed three sources of isomorphic change: coercive, mimetic and normative (Table 7).

[10] And in many cases even international or sub-national.

Table 7. Three Types of Organizational Isomorphism

Type of Isomorphism	Attributes
Coercive isomorphism	- Exists when an organization adopts certain norms because of pressures exerted by other organizations and the society - Increased dependence of one organization over another leads to greater similarity
Mimetic isomorphism	- Exists when organizations intentionally imitate one another to increase their legitimacy - Environmental uncertainty increases the likelihood of imitation
Normative isomorphism	- Exists when organizations indirectly adopt the norms and values of other organizations in the environment - Increased similarity may no longer lead to effectiveness because of decreased innovativeness

Coercive isomorphism results from top-down pressure like EU regulations and directives or dependence on key organizations to pursue own goals, whereas mimetic isomorphism reflects the need to cope with uncertainty by learning from organizations that are perceived to be more successful or legitimate. This learning or benchmarking may not assure efficiency but is still extremely effective in generating legitimacy. Normative isomorphism refers to organization's seeking legitimacy through alignment of values, while rules offer a prescriptive, evaluative, and obligatory dimension to the governance of organizational processes such as strategies and objectives (March & Olsen 1989).

Isomorphism in European industrial relations system reflects a tendency for cross-border cooperation and benchmarking as trade unions try to mimic each other when dealing with similar environmental challenges. Cooperation process starts with identifying actors with similar goals and policy preferences. This is followed by drawing a strategy and a policy route map to turn these into action. At the implementation stage a feedback loop is required to measure and evaluate the process and the outcome of collaboration (e.g. Sisson et al. 2003), followed by reconfiguration if needed. Trade unions' use of benchmarking has mostly occurred at the sectoral level in Europe where the EMF was one of the first to explore it when they developed coordinated cross-border collective bargaining initiatives already in the early 1990s (Schulten 1991). Another form of isomorphism within the realms of the EU and European integration has emerged through the OMC and

coordinated bargaining. Whether such processes will take over from the méthode communautaire of legal enactment and collective bargaining inherited from national systems (Marginson & Sisson 2004), and whether the successor to the EMF, IndustriALL Europe, will embrace this too remains unclear. Isomorphic structure draws from the new institutionalist analysis by seeing industrial sectors as organizational fields that deal with similar issues and face joint pressures to adopt similar or common solutions to the problem they are facing.

Isomorphism can be seen as a theoretical feature of Europeanization and likewise Europeanization can be regarded as a tendency towards isomorphism. Applying this line of thought to industrial relations, in order to understand developments at all the levels, not just at the EU or national level, but at the sectoral and maybe most importantly at the company level where MNCs have incorporated their own European and global intra-firm processes and procedures alongside the national regulative framework. Additionally, seeing Europeanization as a tendency offers a more realistic explanation for the likely scenarios, since it may not result in Europeanization as end point, but could co-exist with other possible tendencies like re-nationalization (Marginson & Sisson 2004). Coerciveness reflects formal and informal pressures that affect organizational behavior through regulative interference and this holds es pecially true for EWCs that were created to act as intermediate actors between workers and MNCs (e.g. De Spiegel are & Waddington 2017; Lecher et al. 2002). Mimesis occurs when organizations model their behavior from each other (March 1991). This refers to a particular course of action becoming taken for granted in a field, eventually leading to the field becoming mature. After the field has become mature, actors that join the field later are expected to accept the rules of the field and pledge themselves to follow the guidelines without strategic evaluation of their own. Some of the notable examples in the field of industrial relations have included the process of comparing practices between countries or sectors that have led to benchmarking as has been the case with Pacts for Employment and Competitiveness (PECs) in the automobile sector since the 1990s. These have been negotiated as the company headquarters by reviewing future investments and existing cost structures throughout the sector and them using them as catalyst for change through successful benchmarking (Addison et al. 2015; Zagelmeyer 2000). Similarly, the Eucob@n database where national sectoral trade unions can download their collective bargaining agreements and memos to share with others and therefore help with coordination has encouraged mimesis. Normative isomorphism draws from the assumption that a certain organizational structure is being adopted because of their assumed superiority over other structures. At worst this can lead to innovative thinking and organizational change being undermined and instead passive hierarchies being adopted because of normative pressure

(DiMaggio & Powell 1983) with organizations being rewarded for their similarity instead of encouraging them to find their own competitive and organizational niche which to adopt. In a way this can be seen as a counterargument for introducing shared practices in some sectors in Europe to conduct collective bargaining or harmonizing regulatory framework for social dialogue. It is thus possible that a normative view that advocates similarity leads to inertia and effectively competitive edge for industrial relations systems that are not affected by this.

Normative institutional arrangements contribute to the ability and willingness of trade unions create and maintain cross-border benchmarking solutions like bargaining guidelines or the Eucob@n database that have led to horizontal Europeanization (Pernicka & Glassner 2014). However, with increasing international and European wage competition resulted from Europeanization and globalization cross-border cooperation of trade unions has not always been easy. Some of the most notable trade union initiatives in the early 1970s (the DACH-initiative and formation of the bargaining cartel Nordiska Metal) just like the European bargaining coordination initiatives in some industry sectors since the 1990s could not have been successful without institutional support and pressure to enable the trade unions to take the role of institutional entrepreneurs that are able to manoeuvre in a transnational context. Likewise, European Round Table of Industrialists representing MNC employers has been reluctant to enter in bilateral transnational wage bargaining coordination, rendering coordination mostly to a trade union matter. Though, the strive for isomorphism exists mainly at the employee side as potential isomorphism from the employer side would effectively remove the possibility of wage-dumping and race to the bottom strategies.

3.2 Models of Capitalism and Europeanization of Industrial Relations

European industrial relations systems have traditionally been classified into Anglo-Saxon, Nordic and Continental European ones. Similarly, in welfare state literature the most common categorization has been Cristian-democratic, liberal and social-democratic. More recently, the VoC approach has grouped capitalist systems into several categories such as Liberal Market Economies (LMEs) and Coordinated Market Economies (CMEs).

Developing a systematic typology of industrial relations follows the same path as the VoC with maybe the most famous being the one by Crouch (1993), dividing national systems of industrial relations along two dimensions: (1) power of organized labor and (2) degree of centralization. Resulting in a matrix divided into four categories: (1) neo-corporatism with strong labor (e.g. Nordic countries), (2) neo-corporatism with weak labor (e.g. Germany and the Netherlands), (3)

contested bargaining with strong labor (e.g. the UK and Italy) and (4) pluralistic bargaining with weak labor (e.g. France and Spain). Although this analysis is focused on trade unions' position, the categorization runs parallel with the VoC categories too. A distinction can be made between a liberal model and a European model of industrial relations to elaborate more advanced typologies. Given the parallel existence of these classifications in capitalist political economies, this chapter will discuss different layers of industrial relations in Europe, starting from the historical meso level view of capitalism and continuing through the VoC paradigm to macro level sectoral and regional industrial relations. Only after understanding the role these layers have in the Europeanization process, can an attempt be made to study different aspects of network trade unionism. However, this categorization has met some criticism as the concept of national model implies coherence and homogeneity within countries. Yet, Bechter et al. (2012) found that alongside national variations in industrial relations systems also extensive sectoral variance occurs, putting into question the dominant theory of national models as dominant explanatory ones.

The 1990s brought an increasing interest in understanding the systematic differences and similarities across the Western European economies, highlighted by the decline of neo-corporatism and even more significantly the emphasis on national responses to external pressures facing the EU member states, with the greatest symptom being the deepening of European economic integration and globalization as well as replacement of Keynesian consensus by neoliberal policies. In the political economy literature this shift manifested itself through two distinguished approaches: (1) types and origins of welfare states and (2) complex integration between the sets of institutions and actors (e.g. Ebbinghaus & Manow 2001; Hamann & Kelly 2008). One of the first attempts to approach welfare capitalism was Esping-Andersen's (1990) definition of the process of decommodification of wage earners in welfare regimes and social policies in advanced capitalist nations divided countries into three categories: (1) liberal, (2) conservative and (3) social-democratic. Later, Leibfried & Bonoli (2001) have proposed an addition of Southern welfare regime category to this typology to include the Latin rim countries of the EU (Spain, Portugal and Greece together with Italy) and after their EU accession, many attempts have been made to define the welfare regimes in the CEE (e.g. Kuitto 2016; Polese et al. 2014) and whether there has been convergence towards the Western European patterns defined by Esping-Andersen (1990).

3.2.1 Varieties of Capitalism Paradigm

In the recent times, the analysis of capitalism has centered around the VoC paradigm (e.g. Hall & Soskice 2001; Coates 2000; Amable 2003) that has put together a number of different paradigms of capitalism with their own specific forms. The VoC evolves around the theoretical framework of new institutionalism that tries to illustrate the role institutions play in determining social and political outcomes by emphasizing path-dependence and human constraints (Parsons 2007). While Hall & Taylor (1996) noted that the new institutionalism is not a unified theory, they did agree that there are at least three recognizable lines of thinking that differ from each other by how they perceive the construction of the relationship between institutions and behavior.

Since institutions represent the rules system, comparative political economy has adopted the idea that different modes of production can lead to the same result and hence, undermine the path dependency paradigm. One of the major works in this field has been the VoC approach by Hall & Soskice (2001) that put firms at the center of the analysis of comparative capitalism by focusing on the organization of the private sector. Based on the role of employers' business associations in political economy and firms' ability to coordinate effectively with a wide range of actors, two distinct forms of political economies within modern capitalism can be observed: mostly Anglo-Saxon liberal market economies (LME) and Nordic as well as Central European coordinated market economies (CME). LMEs are characterized by firms' involvement through competitive markets in all areas of economic life, with price setting as well as supply and demand being form the core of their activities. Usually, the LME countries are characterized by high levels of stock market capitalization, low levels of employment protection, high levels of paid employment and high-income inequality. Additionally, trade unions are weak and labor insecure. On the other hand, the CME countries are characterized by low stock market capitalization, high levels of employment protection and relatively low-income inequality. Coordination between firms takes place through non-market relationships, including network-based exchange of information, as well as through collaborative rather than competitive relationships within and between firms. Also, the role of trade unions is stronger and they are usually recognized as social partners and the overall environment more labor friendly.

This dualistic model has been criticized even by scholars that have adopted the VoC framework (e.g. Whitley 1999; Morgan et al. 2005). Some criticism has been on the use of coordination process as the only measure of capitalism, while excluding the role of welfare provisions. Coates (1999) and Amable (2003) applied the VoC approach by extending its scope of analysis to include also product

markets, labor market institutions and wage-labor, the financial intermediation sector and corporate governance, social protection and the welfare state. These typologies share the underlying paradigm of Hall & Soskice's VoC approach as they also emphasize the role of institutional complementarities in the comparative analysis of capitalism, meaning that socio-political compromises are presented through historically-specific conditions, while institutions are not rendered to just being some sort of inputs of production (Amable 2016).

Societies are characterized by their have congruent economic, political and social institutions that hold together the coordinated systems of capitalism. Drawing from this observation, Amable (2003) distinguished five types of capitalism (Table 8) based on five criteria: (1) product markets, (2) labor markets, (3) financial markets, (4) social protection and (5) education. Four of these five types of capitalism are found solely in Europe. The market-based model is equivalent to Hall & Soskice's liberal market economy, whereas the social-democratic model is similar to Coates' labor-led capitalism, with distinguished features of moderate employment security, a high level of social welfare, widespread labor retraining and a coordinated wage-bargaining system. The third system, Continental European, shares the basic features with the social-democratic one, with the biggest difference being a less developed welfare state model, greater role of the financial system in facilitating long-term corporate strategies, coordinated wage bargaining and less emphasis on retention of workforce. The Mediterranean model consists of better employment protection and not as good social provision system as with the Continental European model, because the workforce is generally lower educated with poorer skills due to the education policy, meaning that adoption of higher wages is not possible in the industrial strategy because of lower productivity.

Table 8. Modified Typology of Modern Capitalism within European Context (based on Amable 2003)

Type	Product markets	Labor markets	Financial systems	Social protection
Market-based	Decentralized labor markets making firms' structural changes less costly	Competition-based deregulation of employment	Flexible labor market allowing maintenance financial of short-term profits	Short-term constraints preventing the establishment of high level employment protection
Social-democratic	Centralization of wage bargaining and corporatism favoring coordination among firms	Competitive pressure requiring some labor market flexibility	Patient capital and long-term strategies because of employment protection	Labor flexibility augmenting the demand for social protection
Continental European	Employment protection preventing fast structural changes, but external pressure demanding productivity gains	Moderate internal competitive pressure enabling relatively high employment protection	Moderate competitive pressure allowing establishment of stable financial growth	Employment protection permitting moderately high degree of social protection
Mediterranean	Low competitive pressure and lack of short-term constraints allowing employment stability	Formal employment protection preventing fast structural change	Under-developed financial markets slowing down structural change	Employment stability lowering the demand for social protection

Common for all of these models is their focus on advanced capitalist countries that have high levels of market development and a long history of capitalism. Therefore, a separate category needs to be developed that includes also the post-communist societies in the CEE and SEE. The transformation of these societies after 1989 has been difficult, because although they had advanced form of industrial society in place, lack of marketization and private property meant that they were under state socialism in institutional sense. Instead, the government was the sole coordinator of the economy through extensive public ownership of resources, while government direction was largely responsible for determining levels of employment, wages and division between personal and collective spending, whilst the trade unions were part of the management structure of the enterprise. After the system change the newly freed trade union movement in the CEE and SEE countries has become fragmentized with a formation of several small and weak trade unions that have been unable to find a social partner to negotiate with, leading to the shift towards company-level

bargaining that has led in many places to stagnating standard of living and rising job insecurity as they have been weakened even further.

Because of their history, the similarities between the post-communist countries are still more significant than the slowly emerging similarities between the old EU15 and them (e.g. McMenamin 2004). On the other hand, Bohle & Greskovits (2012) have showed the post-communist countries have been differentiated along the same lines as the old EU15 countries, placing them in different groups based on the political decisions undertaken at the national level. Accordingly, three different variants of capitalism can be found in post-socialist states: neo-liberal, embedded neoliberal and neocorporatist (Ibid.). Whereas the Baltic countries have followed a neo-liberal prescription close to the LME with liberalization of capital movements, open markets and reduced provisions for social welfare, the Visegrád countries (Poland, Hungary, Czech Republic and Slovakia) have tried to attract Foreign Direct Investments (FDI) while also retaining old social welfare regimes and substantial government power over industrial policy. Maybe the most clear-cut case for CME can be made for Slovenia that has mixed successfully competitive industries and neo-corporatist social inclusion.

Bohle & Greskovits (Ibid.) stress the need for sensitivity when applying VoC for the political-economic regimes of post-communist countries because of the fundamental structural differences between capitalism in the EU and other advanced (mainly OECD) countries and capitalism in the post-communist CEE or SEE. Similarly, King (2007), distinguished between two different types of coordination: liberal dependent, which resembles the LME and patrimonial, which bears some similarities with the Mediterranean model, but one in which the state is weak and the new business class dominating. Liberal dependent countries are characterized by the establishment of some patchwork forms of economic control as a result of an alliance between technocrat-led state and a mixture of foreign and domestic firms, with open economic relations and high levels of FDI as has been the case in the Visegrád countries. Meanwhile, patrimonial model is present in countries like Romania, Bulgaria and Serbia that are characterized by weak trade unions and the state being responsible for public goods such as pensions and other forms of social transfers. Likewise, the state is usually inadequate to provide public goods and foreign direct ownership is weak.

3.2.2. Varieties of Capitalism and Europeanization of Industrial Relations

The socio-economic developments that have taken place since the 1970s have challenged both the organized industrial relations and the welfare state. The challenge for industrial relations has mainly come from the intensified competition in internationalized markets, especially after the Maastricht Treaty, with demands for labor to become more flexible, while at the same time trying to curb comparative unit labor costs. In the industrial relations literature, this is known as centrally coordinated or organized decentralization of bargaining (e.g. Ferner & Hyman 1992; Traxler 1995). On the other hand, it has been argued that industrial relations have become more disorganized (e.g. Brandl & Traxler 2005) as the welfare state model is facing increasing pressure due to significant growth in unemployment across the EU member states, but also because of aging population and its consequences on welfare budgets (e.g. Esping-Andersen 1996; Taylor-Gooby 2001). Due to the mutual overlap, industrial relations are also being challenged in the same way as welfare states and to answer this, efforts have been made to implement structural adjustments and re-synchronize policies. Throughout the EU15, during the heyday of European integration at the turn of the century this meant increase in the peak-level tripartite social pacts (Fajertag & Pochet 2000) and hence concentration of policies.

VoC and welfare state centred approaches are important for understanding industrial relations as they are interlinked especially in the tripartite countries with trade unions through issues like unemployment protection (i.e. the Ghent system). While there might not be any significant macro-economic differences between CME and LME models of VoC, the same cannot be said for labor markets (Hall & Soskice 2001, 21-22), where the latter has the likelihood of higher rates of income inequality than the former. Similarly, organized labor is more incorporated in the non-market coordination processes within the CME, while the LME relies more on market coordination between employers (Soskice 1999). Although the VoC thesis has emphasizes retention of workers and regulation of working hours as important features in industrial relations (Hall & Soskice 2001; Hall & Gingerich 2004), there are other more qualitative aspects that should be acknowledged as well. Among these are the various aspects of collective bargaining system (Traxler et al. 2001) and frequency of labor disputes (Hamann & Kelly 2008). Similarly, Amable (2003) also found significant differences in bargaining coordination, union density and frequency of industrial conflicts between the four models of VoC he identified. Furthermore, CMEs rely on industrial relations systems, where trade unions have a key role in coordinated wage bargaining. There are also differences in welfare state regimes across the VoC models and these refer to labor supply and

labor force composition with liberal welfare states usually having a bigger low-wage sector than the Cristian democratic welfare states (Huber & Stephens 2001; Esping-Andersen 1990).

One of the observable implications of the VoC approach is the dual-convergence hypothesis that emphasizes the role of globalization as not only an accentuating force between LME and CME but also as means to follow a trajectory of institutional change. Under this dual-convergence hypothesis, clusters or varieties of national models are at focus. It has been indicated that there might be functionally equivalent modes of capitalist organizations that are capable of delivering similar outcomes in terms of economic performance and bargaining structure regardless of the VoC model they are embedded in (e.g. Moene et al. 1993; Schnabel et al. 2006). However, Traxler (2003) showed how industrial relations systems have been able to accommodate to external changes as institutional adaptation has resulted from the modes of bargaining and procedural state regulation that have directed it. As the renewed compromise between capital and labor has begun to emphasize path dependency rather than convergence as dominant force in the adaptation process, this has led to distinction between countries that have multi-employer bargaining and legal frameworks supporting collective bargaining (typical for CME) and those where single-employer bargaining and less supportive legal frameworks (typical for LME) are the norm.

European integration and its relationship with the VoC evolves around the nature and extent of choice available to policymakers. Usually, convergence is associated with determinism and divergence with choice (Marginson & Sisson 2004, 23), although Traxler et al. (2001) were able to show how there is a strong element of determinism involved in both as the natural selection of market forces eventually leads to the adoption of best practice. Secondly, there is a strong tendency towards path dependency as past decisions have an impact on the direction taken, leading in some cases to resistance for change (e.g. Fetzer 2009). A distinction can be made between path dependency in the national level and convergence in the international level. While in the 1950s and 1960s arguments supporting convergence were based on organizational and technological advancements, more recently the emphasis has been on the effects of globalization (Sisson 2010). With regard to the existing typologies of industrial relations systems, the focus has been on countries and national models. However, inter-sectoral variation is also possible, exemplified by a European typology by the European Commission (2009) that identified five models or clusters of industrial relations with clear geographic concentration. These are (1) organized corporatism in the Nordic countries, (2) social partnership in the Central Western Europe, (3) a state-centered model in

Southern Europe, (4) a liberal model in North-Western Europe and finally (5) a residual, less clearly defined mixed model (also described as a transitional model) in the CEE.

While the VoC approach has been very valuable for industrial relations research (Bechter et al. 2012), it has been criticized for over-emphasizing coherence within the capitalism models, while at the same time underestimating the intra-country differences that Crouch (2004) defined as recombinant governance. Additionally, few countries can actually be placed in the ideal models of capitalism and it can be argued that more mixed, countries have maintained institutions and models that are of predominantly national character. Likewise, no systematic research has been conducted on whether the countries maintain these institutions and models across all sectors.

3.3 Convergence and Divergence

Most of the thereotical literature on convergence and divergence within the institutional entrepreneurship framework has been unable to provide a comprehensive analysis of the dynamics between the two (e.g. Craig & Douglas 1992). Hence, there is a need to examine the trends over time to gain a comprehensive empirical insight into the dynamic processes, unveiling them as temporal phenomena. Additionally, the conceptualization of convergence and divergence needs to draw from comparative research method and its potential methodological dilemmas (e.g. Adler 1984; Von Glinow 2003) that starts from a more adequate and exact definition of these concepts. Mayrhofer et al. (2004) and Mayrhofer & Brewster (2005) suggested using "directional convergence" to describe similarity of trends and "final convergence" for describing increasing similarity that can be applied in practice. Trends may go in different direction because the initial practices from where they ascent are not similar. Instead, they indicate increasing similarity in meaning. For analytical purposes, this theoretical construction offers boundaries for the interpretation by defining with greater accuracy the substance of observed similarities and differences. In regards to theoretical explanation, a more exact definition of convergence also helps to identify institutional sources of influence and their impact.

Theoretical literature on convergence have largely reflected the development (Guest 1990; Dyson 2000; Börzel 1999) in American context that is drawing from empirical evidence. Yet, these economic and regulatory drivers that steer the discussion on convergence in the United States do not directly transfer into Europe, where there is a hierarchy between (national) economies. This has led to the "society-in-dominance" that is being used as a benchmark (Smith & Meiksins 1995). The

competition between dominant regimes such as those between the British, German or Nordic models of capitalism have meant that no single regime model has been able to persists over another.

The debate on institutional theories in Europe has had a strong regulative and normative emphasis, however, even here different variations of institutionalism have come about. The research tradition emphasizing societal effects (e.g. Sorge 1991) argues that the uniqueness of each society derives from the interconnectedness of institutional systems that include the industrial relations models, while social stratification has been able to prevent economic constraints from creating a convergence in organizational practice (Brewster 2006). Similarly, by applying this perspective to the typologies of capitalist models, Hall & Soskice (2001) suggested that nation states are following a trajectory that reflects the differences in both institutional configuration and social agency.

There have been attempts to withdraw from the stark polarization between convergence and divergence and instead to concentrate on more detailed conceptualizations of the factors influencing the convergence and divergence processes and their outcomes (Brewster 2006). For example, the interaction between institutional and societal effects shapes organizational practice within countries (Smith & Meiksins 1995), although the relative impact of these effects varies over time and place. In all, the convergence-divergence debate has been plagued by complexity, thus reducing it to case-by-case empirical investigation because evidence has shown both similarity and differences in institutional settings across national boundaries.

As discussed earlier, the new sociological institutionalism has been one of the most influential theories in recent decades in addressing issues of institutional development. With its focus on the explanation of organizational homogenization based on institutional conditions rather than on developments leading to institutional divergence (Lawrence & Suddaby 2006, 215), the concept of institutional isomorphism has been placed to the center of the theoretical development. DiMaggio & Powell (1983) argued that once organizational models are institutionalized, they become diffused and lead organizational structures to grow more and more alike. However, isomorphic processes have provided an alternative theoretical explanation for isomorphism by arguing that it is not the outcome of a market-driven rationalization process, but rather isomorphism is rooted in the institutional dynamics (Ibid.). Yet, alongside the new sociological institutionalism also other institutional approaches have been developed, taking a very different perspective. For example, in macro-sociological theory the focus has been given to continued and newly emerging institutional divergence, instead of seeing institutional evolution as converging on one model. Comparative

approaches like VoC (Hall & Soskice 2001), historical institutionalism (e.g. Dobbin 1994; Thelen 1999) and the new economic sociology (Granovetter 1985; Fligstein & Mara-Drita 1996; Guillen 2001) are all part of the institutionalist development without proceeding from the assumption of isomorphism. Notwithstanding, new sociological institutionalism has put the emphasis mostly on organizational fields, whereas the above mentioned comparative approaches offer a broader perspective as they include also the coexistence of isomorphic and divergent processes that underline the dual push and pull factors (Beckert 2010a). Use of coercion as the mechanism of institutional change that can be exercised directly or indirectly makes accessibility to desired resources dependent on compliance (Powell & DiMaggio 1991). Whereas institutional organization theory sees both formal and informal coercive pressures as drivers for institutional convergence, one often overlooked aspect has been investigation of the direction in which power influences institutional development.

Research on international institutional convergence has been able to reveal that isomorphic change occurs when existing institutions are being thoroughly undermined (e.g. Beckert 2010a). This leads to powerful external actors that the ability to impose a new institutional design to emerge. When faced with an institutional or organizational crisis, a hegemonic power able to exercise its influence is likely to enforce a new institutional design that will correspond to its choice of institutional model (Beckert 2010a). This power holder perceives its own institutional solutions functionally and morally adequate without the need for experimentation. By adopting this approach, better compatibility between the two institutional systems is ensured, thereby facilitating dominance of the external power. However, while sociological institutionalism regards power as a homogenizing force, there can also be situations where the powerholder has not expressed interest for homogenization despite a unilateral distribution of power.

Apart from convergence, divergence is rooted in institutional logics too. Drawing from comparative political economy, institutional heterogeneity against isomorphic pressures reflects increasing returns that lead institutions to gravitate toward inertia. Also, dismantling a specific institution becomes more difficult the more it is entrenched, because the power resources strengthen continuity, not re-orientation. Consequently, because of path dependence, changing the institutional order might prove to be difficult even if new, powerful interests emerge (Thelen 1999). Successful diffusion of an institutional form relies on the effective distribution of information, gaining legitimacy for alternative models and on social networks that keep the institution together (Campbell 2004; Van Vliet 2010). Hence, continued divergence becomes the result of a lack of

organizing capacity despite power imbalances. Therefore, it can be argued that power as a mechanism of institutional change is much more ambivalent than usually assumed by the new sociological institutionalism. While it can lead to homogenization, there is also a chance that it enhances divergent institutional change since the powerholder does not have any interest in aligning the polito-economic institutions, but instead tries to establish competitive edge through differentiating.

3.3.1. Institutional Theory, Convergence and Divergence in Industrial Relations Research

Institutional approach has been applied frequently in the European industrial relations research, starting from Flanders' (1970) pluralist theory. Drawing from this, Hyman (1975) argued that the focus of industrial relations research has traditionally been almost exclusively on labor market institutions because the research tradition has its roots in the industrialization process. More recently some criticism has been directed at the institutionalist approach to industrial relations, arguing for mobilization and collectivism in an historical context instead (Kelly 1998). Some research on comparative industrial relations institutions has argued that despite some significant changes there remains a relative stability and divergence in industrial relations structures (Black 2005). According to Bray & Wailes (1997) the common for both of these approaches is that institutionalism has not been clearly defined in this context. It can also be argued that both of these approaches have offered a too narrow theoretical and methodological perspective to the institutionalist tradition of industrial relations, while at same time it has also been too descriptive and lacking theoretical roots.

From the comparative industrial relations point of view, the critique of institutionalism has had two straws that can be identified; both of them questioning the analytical noteworthiness of institutions in institutionalist analysis. Because institutional theory concentrates on differences between countries rather than explaining similarities between them, a bias towards divergent tendencies between countries may arise while at the same time existing convergent attributes are being undermined (e.g. Pontusson 1995; Mermet 2002; Deeg & Jackson 2007). On the other hand, new institutionalist theories may be better in explaining policy outcomes through the action of national-level institutions, but they have still difficulties explaining changes within national-level institutions (Gorges 2001). Indeed, institutionalism is embedded in the structural determinism and it is therefore unable to explain the sources of institutional or policy outcomes in political and economic spheres (e.g. Hay & Wincott 1999) or industrial relations (Howell & Kolins Givan 2011). Hence, it remains

doubtful as to whether institutional analysis alone is enough to provide robust explanations of the impact of international economic policy change on multinational level of industrial relations.

Comparative international industrial relations research draws from the convergence-divergence paradigm that sees Europeanization as an economic and political process of adaptation with the goal of establishing a European layer of industrial relations. Convergence of the national industrial relations systems has been debated since the 1960s, initially in the context of internationalization or globalization (e.g. Dunlop 1958; Katzenstein 1985; Clarke et al. 1998), but more recently also in the context of Europeanization as the integration has deepened (e.g. Ferner & Hyman 1998; Traxler et al. 2001; Marginson & Sisson 2002; Fetzer 2009). In the early years of European integration, convergence was seen as something inevitable, but recently the emphasis has been given to the existence of national variations, sometimes even going the opposite way by increasing the focus on divergence and emphasizing national level institutions (Vos 2006). The main problem is that most of the research on Europeanization has been lacking in clear conceptualizations of what is being "Europeanized": wage bargaining, social partnership or sectoral bargaining (Glassner & Pusch 2013; Marginson et al. 2003)? However, even at this level of conceptual analysis, existing research has produced radically different conclusions about potential convergence of industrial relations across the member states (e.g. Skorupińska 2013; Baccaro & Howell 2011; Vos 2006). One of the main reasons for this is that there does not really exist a consensus about whether the EU can be defined as a corporatist or pluralist entity. While Streeck & Schmitter (1991) saw the European model lacking corporatist features, Schmidt (1999) described is as quasi-pluralist and Kohler-Koch (2005, 35-43) saw it as a network, referring to a generic concept that embraces different types of state or interest relations. Contrary to these views, Falkner (2000) placed the focus on member states as units of analysis and the country level as a level of analysis, proposing to change the analytical focus to the meso level of sector-specific patterns of interest intermediation, hence bypassing the convergence-divergence dichotomy and instead concentrating on the impact of the EU as a model. Since most of the empirical, comparative research is concentrated in the national institutional context, dynamics of international contextual changes have not been sufficiently considered. Hence, an integrated approach is needed to emphasize the importance of the interaction between interests and institutions. Drawing from this, Erne (2008) argued that this increasing international competition following the liberalization of markets may therefore reinforce regional convergence.

One of the prime examples of the emergence of institutional convergence is cross-border collective bargaining. As cross-border collective bargaining within MNCs in Europe has become more common, also increasing reliance on international comparisons within domestic bargaining rounds has become more common, leading to the emergence of new patterns of convergence. The shape and relevance of the cross-border dimension has been explained by differences between sectors in exposure to international competition (Hollingsworth et al. 1994; Arrowsmith 2006; Marginson & Meardi 2012) and the strength of the institutional foundation of trade union organizations and their ability to engage in bargaining at company level (Dølvik 2001). There is also empirical evidence of cross-border coordination in regard to local bargaining agendas and outcomes within a company being products of coercive comparisons (e.g. Greer & Hauptmeier 2016; Schömann et al. 2012; Mueller & Purcell 1992). Yet, regulative differences between countries or industrial relations regimes limit the applicability of cross-border comparisons and benchmarking (e.g. Arrowsmith & Sisson 2001). Additionally, Meardi (2012) showed how most of the debates on labor market and industrial relations convergence in the EU have been concerned with convergence between LMEs and CMEs as well as convergence between member states from the CEE and SEE and old EU15, even though convergence has actually mostly taken place between Southern European and Eastern European polito-economic regimes with the emergence of strongly segmented and politicized form of flex-insecurity.

Because of over-emphasis given to the policy making role of national governments, convergence and divergence have usually been analyzed through the scope of national-level institutions, while ignoring the other levels. Yet, focusing on cross-national diversity means ignoring similarities at sectoral and company levels that might show convergent tendencies (e.g. Bechter et al. 2011; Edwards et al. 2013). In their study, Katz & Darbishire (2000) found that convergence is occurring amongst the major companies across different countries in business structure and working practice and how converging processes have extended to inter-firm relations, cross-cutting national boundaries. More recently, Tregaskis et al. (2010) have showed that HRM practices within companies do not necessarily follow the same path although the guidelines might be similar, hence they do not result in identical arrangements between units or countries. Nonetheless, the outcomes are more similar because of convergent pressures, resulting in what Katz & Darbishire (2000) and Traxler et al. (2001) have called converging divergencies especially in the realms of collective bargaining. Drawing from their comparative sectoral studies, Hollingsworth & Streeck (1994) argued that even though some important differences between sectors and countries exist, within broader economic governance regimes the latter clearly dominated the former, making it possible

for Europeanization and re-nationalization to flourish simultaneously. At the same time, this reflects differences between sectors, variations between companies and regional differences between groups of countries within Europe.

3.3.2. Varieties of Capitalism through the Prism of Convergence and Divergence

During the last few years, a new debate on convergence and divergence in European industrial relations has emerged alongside the influential VoC paradigm that emphasizes the role of economic internationalization in the path leading to convergence. While before the outbreak of the global financial crisis in 2008, doubts were raised about the viability of coordinated market economies. Meanwhile, during the crisis the employment performance of Germany became very impressive in relative terms, overtaking the previous coordinated market economy model across Europe. The crisis seems to have validated expectations for divergence from the VoC view, since the liberal market economies UK and Ireland along with coordinated market economy Germany seem to have consolidated their institutional comparative advantages while their dominant practices have been re-legitimized (Meardi 2012). Others (e.g. Menz 2005) have also rejected the assertation of convergence by stressing the continued resilience and divergence of national models. Similarly, industrial relations systems in countries like France, Italy, Spain and Portugal have always stressed the ideological differences between the trade unions in order to distinguish them from each other. Power is preserving divergence instead of enabling convergence.

After the EU enlargement a convergent path by the Western European (EU15) trade unions has emerged, stressing convergence over divergence by trying to engage trade unions from outside of the EU to follow shared guidelines in order to prevent wage-dumping. Yet, there has been very little research on Europeanization of interest intermediation in the CEE, although the impact of the EU on interest groups in that region has been widely studied (e.g. Císař & Navratil 2015; Dimitrova 2010). Even as interest intermediation that is characterized by powerful central authorities has been challenged in the CEE, a great intre-regional cross-country variation can be observed, stressing the extent of marginal changes without the transformation of existing governance mode (Bruszt 2008). In the industrial relation research, influence of the EU on domestic patterns has mostly been covered within the context of social dialogue (e.g. Iankova & Turner 2004; Perez-Solorzano Borragan 2004), highlighting the special dynamics of information ownership and exchange, while Prosser (2016) questioned the existence of a functioning social EU. Furthermore, Iankova (2007) argued how the accession process to the EU has led to infringement of corporatist traditions across the CEE; something that has been challenged by Bohle & Grekovits (2012) who instead referred to

the political economy research on capitalist diversity. These studies share their focus on narrow interest intermediation at the regional level or between capital and the state, while they are also inconclusive about the international convergence-divergence pattern. Even the research on civil society and Europeanization has not been able to help tackle these issues because of the lack of a systematic research on overall trajectories of Europeanization and cooperation with civil society in the CEE. Some notable exceptions to this are Börzel & Buzogany (2010) who emphasized the EU influencing on opportunities for civil society actors from the CEE by requiring their involvement in the implementation of EU acquis communautaire and Pleines (2010) on how civil society actors from the CEE have adapted to new opportunities at the EU level.

3.4 Europeanization of Industrial Relations

Although the first international trade union confederations were founded already in the late 20th century and the first European structures emerged shortly after the creation of the ECSC in the mid-1950s, trade unionism in Europe is still deeply attached to the nation state and draws its power from the mobilization of workers. The early national industrial relations systems have been complemented by a new European layer of industrial relations increasingly ever since, making cooperation between trade unions and promotion of labor interests vis-à-vis the institutions of the EU part of their everyday activities, while also increasing the cooperation between the different layers in order to respond to the pressures from global market competition. Apart from lack of resources and divergent interests, some (e.g. Dølvik 2000) have argued that European coordination might have overstretched the already strained national labor solidarity, while others (e.g. Gajewska 2009) have believed that in a globalized world, transnational trade unionism has a too narrow has focused too narrowly mainly in Europe.

3.4.1. Europeanization Process of Industrial Relations

There is no clear definition for Europeanization of industrial relations. One way is to see it as a process that changes national industrial relations practices and imports the social partnership practice from national to European level (Lecher et al. 2002; Falkner & Lieber 2004). However, Europeanization should not be rendered to the convergence of industrial relations paradigm, although Platzer (2009, 47-69) described it as one of the three possible dimensions of Europeanization by foreseeing a systemic transformation to challenge the current industrial relations systems that would eventually lead to a unitary model of industrial relations. Vertical Europeanization can be understood as social partners' engagement with each other across the borders with the aim of building a regulatory framework at the EU-level to counter cross-national

competition (De Boer et al. 2005; Van Vliet 2010). Finally, as one of the firsts to explain the whole phenomenon of Europeanization of industrial relations, Visser (1998) argued that Europeanization is more than a vertical top-down process where intervention is left to the national or regional level while harmonization is still the responsibility of the higher, European level. Similarly, Europeanization is not about upwards delegation or the creation of a new European-level jurisdiction on top of the national industrial relations' jurisdiction (Van der Maas 2004). Instead, Europeanization should be seen as dual process that integrates both vertical and horizontal aspects of competition and interdependence. On the other hand, Europeanization might be considered to imply to the creation of the new employer and employee institutions at the European level that have taken an increasing role with the blessing from the EU Commission to represent social partners in the European matters. Since there is no formal and legally binding collective bargaining at the EU level, the focus of the Europeanization process of industrial relations should concentrate on the political sphere of Europeanization and industrial relations. Here, the most important factor becomes trade unions' ideological approach to the European integration alongside their efforts to adapt to these and influence them within the EU (e.g. Hyman 2009; Larsson 2015).

One possible way of approaching the trade unions' response to Europeanization is to use the framework by Bulmer & Burch (2000), where the response can take two forms: reception or projection. In the industrial relations setting, reception refers to trade unions' organizational intelligence and fit in the European arena and how they disseminate for them relevant European policies through information gathering, education and by using their ability as well as throughout their organizational structures. Projection, on the other hand, marks the trade unions' ability to accumulate and then advocate these interests. Therefore, it could be argued that Europeanization of industrial relations is not about trying to import European ideologies and practices into national trade unions' values and strategies, but rather to let them cooperate and even collaborate with their European counterparts.

Another solution is to approach Europeanization from the perspective of institutional processes by distinguishing between a strong and a weak Europeanization hypothesis of industrial relations (Vos 2016). The strong hypothesis, as advocated by Hoffmann et al. (2002), refers to the birth of a supranational European industrial relations system. Examples of this institution-building are the additional layers of institutions, like ETUC and the employers' BusinessEurope and the Round Table of Industrialists, and the creation of a new form of multi-level governance that is being regulated at the European level. Meanwhile, others have argued that the extent and impact of

Europeanization is overrated. Hyman (2001a) presented three different perspectives on this. An optimistic perspective emphasizes the institutional and legal accomplishments of the EU as evidence for the birth of a European system of industrial relations. On the other hand, a more pessimistic perspective downgrades the EU to a merely liberal economic regime, excluding social aspects of it (i.e. Social Europe) by referring to negative integration (e.g. Vos 2016; Whyman et al. 2014). Between these two falls the Eurorealist perspective that acknowledges the (modest) achievements in European social regulation, while also emphasizing the room for further progress (e.g. Chouraqui 2003) and advocating of a multi-level system of regulatory autonomy. Institutional and organizational structures of European, sectoral and national trade unions are under pressure because of the trickling down process of Europeanization through which issues and policies are being coordinated between the different levels of industrial relations. This suggests that there is bound to be interaction between different national industrial relations systems that can theoretically accelerate both top-down and bottom-up convergence of national industrial relations systems.

On the other hand, it seems that there is a tendency amongst MNCs to adapt their activities according to the varying characteristics of different national labor market regimes (Marginson 2006). Official data supports this, showing convergence of unit labor costs across the EU15 since the beginning of the 2000s despite very different labor-cost and productivity configurations (Eurostat 2016). Marginson & Sisson (2004) noted that countries like Austria, Germany as well as Benelux and Nordic regions all show relatively high levels of productivity combined with highly qualified and skilled workforces, offsetting higher labor costs when compared with other countries especially in the East and South. However, this tendency has not received as much publicity as the political rhetoric that regime competition and the threat of relocation has offered MNCs a change to introduce changes in the labor market through coercive comparisons of labor costs and performance across units and countries. Comparing labor costs, flexibility and performance have been behind MNCs business decisions with the aim of placing pressure on trade unions and workers, and through which bargaining can be shifted to local level to implement means needed to improve productivity, reduce costs and increase flexibility. Hancke (2000) showed in his study on automotive industry, how strategic interaction can be used to cross-border concession bargaining.

3.4.2. Comparative Approaches to Industrial Relations Research

Industrial relations are usually deemed to be the core responsibility of nation states, meaning that much of the comparative industrial relations analysis has also been concentrated on the diversity approach (Teague 1999), which emphasizes the enduring specific features of different national

industrial relations systems at the expense of their common features. While broadly speaking, it is indeed possible to recognize European distinctiveness of industrial relations and therefore argue for convergence of industrial relations, a closer look shows intra-European, cross-national diversity (Bechter et al. 2012; Ebbinghaus 1999), which is still the most underlying the fact that much of the social legislation is still found at the national level. This is also evident in the light of the VoC discussion. On the other hand, European distinctiveness becomes clearer if compared to other continents and regions (Frege 2005). Despite macro-level convergence that has taken place in Europe in recent times, there is one dimension of convergence that has not occurred: the one between old and new member states. Despite some degree of economic convergence, within the industrial relations systems the gap between East and West has actually widened as collective bargaining institutions and social security systems have not been able to follow the path towards the so-called European social model (Meardi 2012).

Making comparative analyses of industrial relations systems can be done by using the VoC framework that includes Japan and the United States. Comparing industrial relations systems in most of the EU member states to these two, three common features are prominent. First of all, there are many interest groups amongst both employers and workers and ETUFs command more authority over their affiliates (Traxler et al. 2001). Also, the trade union density is significantly higher in most of the EU15 countries, with the exception of France and Spain, compared to the other continents, making the social partners stronger players; something that has been reflected by the institutional role that trade unions and employers' organizations have had in managing to push forward economic and social welfare as well as labor market policies in many EU countries. Second, industrial relations systems in Europe are characterized by the legal protection of the weaker party; something that has helped trade unions to accomplish improving workers' rights in many substantive areas (Marginson & Sisson 2006). An advanced institutional structure of (European) Works Councils has been created for this purpose in order for the employees' to be heard in respect of representation, information and consultation and collective bargaining. Behind this institutional structure is the strong sectoral level of industrial relations that is prominent for Europe. Finally, collective bargaining structures in the EU15 countries are with the exception of the UK inclusive structures of multi-employer bargaining, with high coverage (around 80 %) as a result of statutory extension provisions, meaning that the benefits for negotiations between employer associations and trade unions are extended throughout a sector or across a country, regardless of the union density (Venn 2009). All of these factors have helped the social partners to be engaged in

social dialogue over economic and social welfare as well as labor market policies either with the state or without (known as bi- or tri-partite models).

Due to the traditionally high degree of unionization in Europe, ever since the 20th century trade unions in Europe have represented many different organizational and ideological orientations that have shaped the concept of trade unions and the purpose of collective bargaining (Dufour 1992). Based on the pluralist view of industrial relations it is possible to divide the European trade unionism into three distinctive categories (Hyman 1995) that remind the VoC categorization. In the Anglo-Saxon model trade unions are been seen as interest organizations with predominantly labor market functions, whereas the second category emphasizes trade unions role as actors trying to level the social injustice in a society. Finally, Hyman (Ibid.) defined trade unions in the third category as being the driving force in an eternal fight between capital and labor. Common feature of all of these categories is that they are historically embedded within the national institutional structures and subject to much of the inertia that comes from tradition. However, they all of them can be placed on the line between state, market and class that has been illustrated by Hyman (2001a) who used a triangular process through which trade unions largely have to choose which two out of the three points (society, market and class) they put their emphasis on. Within this triangular set-up, most national industrial relations systems can be placed between two points. Hyman (Ibid.) distinguished British style of trade unionism that can be placed between market and class, German trade unionism with its more corporatist and consensus-based structure (similar to the Nordic countries) and operates between markets and society, and thirdly the Christian Democratic-influenced Italian trade unionism between class and society. Even though these are generalized models that draw from the VoC literature they all mark the trade unions response to neo-liberalist pressures that has been the dominant feature in the industrial relations literature in the 21st century.

Apart from the Hymanian triangular set-up it is also possible to emphasize the social protection dimension in the European social model that has enabled to distinguish several clusters amongst Western European countries, each with their own variant of social welfare regime (e.g. Esping-Andersen 1990; Scharpf 2000a). In the Nordic countries, trade unions and employers' associations are usually described as "labor market parties", reflecting the symmetric collective level relationship between workers and employers. On the other hand, Central European countries have adopted "social partnership", where there are tri- or multi-partite arrangements involving trade unions, employers' associations and the state. Anglo-Saxon countries have a non-institutionalized and legally binding system of industrial relations where labor market parties are referred to as "two

sides". These differences show that the industrial relations systems can be seen differently depending on the national context and historical traditions that have shaped them.

3.5 Levels of Industrial Relations in Europe

Europeanization of industrial relations as a process can take place at many levels of which the most relevant are centralized and sectoral European (meso) level, decentralized national, sectoral and regional (macro) levels and pluralist company or workplace (micro) level. While these levels are complimentary to each other, they are also overlapping to some degree, leading to multi-level governance. This chapter will look more closely at these levels and how the Europeanization process differs and interacts between them, while trying to acknowledge also the national differences in the industrial relations systems that have been discussed above.

3.5.1. Meso-Level of Industrial Relations in Europe

With the deepening European integration especially since the early 1990s, the European-level of industrial relations has gained ground. Instead of de-nationalization, it has added a new institutional layer on top of the national level with national politics and industrial relations remaining the principal levels of the social regulation of employment in Europe.

Governance at the EU level differs greatly from the governance at the national level, making it therefore highly unlikely that similar patters could emerge there, because the focus of the trade unions at the EU level is mainly to influence the European policies and legislation, making them less social partners than interest lobbies vis-à-vis the EU institutions. European-level institution building (so called positive integration) has been accompanied by political Europeanization of trade unions as they have become embedded in the multilevel institutional governance that includes both the EU and national institutions, giving them several access points as they have been acknowledged formally as social partners and are represented by the ETUC and other ETUFs vis-à-vis the EU institutions (Clauwaert 2011; Welz 2008). The ETUC, which was founded in 1973 to both lobby the European Commission and to gain access to its decision-making structures (Waddington 2005), is the only formally recognized social partner representing workers at European level and its status was formally guaranteed in The Treaty of Maastricht in 1992 together with the employers' organizations. Social dialogue takes place at both cross-sectoral and sectoral levels with the main focus on enhancing employees' opportunity to influence issues, decisions and common concerns related to the Single Market in accordance with the employers' representatives. This has been

narrowed to common positions on labor rights and working conditions, excluding "hard" issues like collective bargaining and industrial action.

With the institutionalization of social dialogue process through binding agreements which are converted into EU directives, the social partnership thus has become a corporatist, semi-legislative structure (Welz, 2008, 244). Alongside, another path of social dialogue was created in 1997 to enable trade unions and employers' organizations the right to negotiate and implement agreements autonomously rather than having to rely on directives (Gold et al. 2007; Welz 2008, 258). During the heyday of European integration in the late-1990s, European Commission pressured the social partners to negotiate European framework agreements. However, in recent years there have been fewer new agreements (Larsson 2015; De Boer et al. 2005), reflecting the decentralization thesis of Europeanization, although social dialogue and collaboration through the ETUC still remain one of the main avenues for trade unions to influence EU policies. Even though the "hard" macro-economic issues are outside the social dialogue, through their inclusion in the European Economic and Social Committee (EESC), the Standing Committee on Employment (SCE) and Macroeconomic Dialogue related to the European Employment Strategy (EES), trade unions are able, albeit in a consultative role, the opportunity to receive information and use their influence indirectly over policy matters (Greenwood 2007, 40; Schroeder & Weinert 2004). With its focus on guidelines, national action plans, benchmarks and evaluation through the OMC, social partners have been given only a reactive role in the EES process and only at the late stage of the process.

The sectoral social dialogue was established in 1998 by the Commission, and since then over 40 sectoral social dialogue committees have been created, covering 145 million workers in sectors such as transport, energy, agriculture, construction, commerce, fisheries, public services, metal, shipyards and education. The initiative for sectoral social dialogues came from the European Commission with the aim of offering social partners new forums to participate in consultation on European policies. The parties were given the task to negotiate European agreements under the Maastricht social policy protocol, which also applied to the sectoral level. Additionally, the Commission wanted to shift the sectoral dialogue from a tripartite to a bipartite modus (Hoffmann et al. 2002). Under this initiative, Sectoral Social Dialogue Committees (SSDCs) representing all the social partners were formed (Keller & Weber 2011). From the workers' side, the ETUFs were given the responsibility to coordinate the SSDCs. There have been two types of joint texts that have emerged from the SSDCs: recommendations to the European Commission as well as reciprocal commitments between the social partners in form of joint declarations, codes of conduct and

framework agreements that affect the workplace directly. Only a few binding framework agreements have been negotiated, with the rest having been agreements addressing social policy matters, ranging from vocational training (which was also EMF's 1st Common Demand), employment measures, working time (2nd Common Demand of the EMF), health and safety, equal opportunities to working environment. Whereas most of the agreements have dealt with "soft" issues that are consensual in nature, the "hard" ones at the core of collective bargaining have been left to the national actors (de Boer et al. 2005; Keller & Weber 2011; Léonard et al. 2011). In some sectors, including metalworking, there have been attempts to introduce these via the ETUFs on voluntary basis in an attempt to coordinate the action in the bargaining rounds in member states. There have been a range of structural problems underlying the implementation of sectoral social dialogue with the biggest being finding a partner from the employer-side. Since most of the employer organizations at the European level are business associations that represent economic interests of their member companies, they have not had a mandate or competence to act as their members' representatives (Marginson & Sisson 2004, 103). Additionally, because the employers' organizations, such as the Confederation of European Business (BusinessEurope), do not have sectoral dimension in their organizational structure, the ETUFs have found it difficult to find a natural negotiating partner for social dialogue. ETUFs position also reflects priorities of their national affiliates and they have lacked a clear mandate to negotiate at the European level on their behalf. Finally, the European Commission has had few incentives to entice ETUFs to engage in the sectoral social dialogue, with the exception of sector-specific legal regulation on employment questions and the potential to exercise influence over common EU policies.

While trade unions and their members are affected in many ways by the EU legislation and policies, social dialogue is only focused on some non-monetary policy areas, excluding wage bargaining and the right to strike (Bieler 2005; Greenwood 2007, 95). Therefore, unofficial and voluntary cross-border bargaining cooperation structures have emerged both through the ETUFs and national sectoral trade unions like the German IG Metall. While the Round Table of Industrialists is probably the most influential actor in the field with regard to lobbying EU institutions and BusinessEurope that represent national industry and employers' organizations in the EU not far behind, trade unions have been less powerful (Dølvik & Ødegård 2012) as their influence on EU policies is limited to dialogue, meaning that they have to collaborate with the European Commission instead of acting against it to influence the European policies (Schroeder & Weinert 2004), making them structurally disadvantaged (Bieler & Goudriaan 2011, 182). Marks & McAdam (1996) argued that shifts in the institutionalized power would inevitably lead to a change in the

ability of trade unions to interact with the political environment of the EU, since inherited institutions and ideologies constrain trade unions' abilities to take advantage of the opportunities at the EU level[11]. ETUC and the ETUFs are therefore likely to be engaged with the European Commission in a symbolic Euro-corporatism, legitimizing its policies rather than being able to influence the content of EU legislation and policies (Bieler & Schulten 2008; Kaeding & Obholzer 2012).

National trade unions are not on an equal ground because of their differences in resources available and the character national industrial relations systems (Gumbrell-McCormick & Hyman 2013) but also due to their position towards the EU: The Anglo-Saxon and Nordic trade unions have traditionally been more Eurosceptic, advocating a weaker mandate for the ETUC and ETUFs than their continental and southern counterparts and being more reluctant to participate in formulation of European wage policies and regulations (e.g. Busemeyer et al. 2008; Furåker & Lovén Seldén 2013; Gumbrell-McCormick & Hyman 2013). Similarly, the more militant approach among trade unions in the southern and even in some continental European countries and the approach emphasizing a social partnership or corporatism in the north and in the northern continental countries distinguishes these two approaches also in relation to European-level of industrial relation (Larsson 2015; Bacon & Blyton 2002; Hyman 2001b). With only a few notable exceptions (e.g. Gajewska 2008; Hyman 2001b), most of the previous research on trade unions in the European arena has focused on either only a few trade unions or a has presented only a general view without specifying how they aim to influence EU policies. Similarly, most of the research has focused on trade unions' influence over specific institutional applications, most notably social dialogue through the ETUC or sectoral social dialogue through the ETUFs mandate (e.g. Clauwaert 2011; Kaeding & Obholzer 2012; Keller & Weber 2011; Léonard et al. 2011; Dølvik 1997; Gold et al. 2007) or ad hoc processes such as opposing the Bolkenstein services directive that threatened the European social model (e.g. Bernaciak 2011; Dølvik & Ødegård 2012) or harsh austerity measures during the crisis (e.g. Varga 2015; Bernaciak et al. 2014b). The main strategic focus of national trade unions at the European level has been lobbying EU legislation and policies (Bieler & Schulten 2008, 239; Dølvik 1997, 127) using their institutional mandate, while the collaborative emphasis has manifested itself more through different networks of trade unions without engaging the non-trade union actors.

[11] Although the focus of Marks & McAdam (1996) was on the internal characteristics of the ETUC, the analytical framework is also applicable to other trade union organization at the national and regional level.

Most of the research on the European-level of industrial relations has evolved around social dialogues, which are the main fora for trade unions to influence EU policies, whereas there has been a lack of research on other institutions – both formal and informal - through which trade unions can influence EU policies without the intermediating role of the ETUC or ETUFs. Conceptually Greenwood (2007, 25), made a distinction between a "national route" and a "Brussels route", with the latter consisting of cooperation with or lobbying vis-a-vis political institutions and actors at the national level to influence EU policies through them. Among the most important issues for the Europeanization of industrial relations has been the need for European policy guidelines to fight social dumping (Bernaciak 2014). Trade unions have been faced with a dilemma where on one hand need to advocate solidarity and European agenda have been emphasized, while on the other hand they have had to defend their members' rights and jobs against management's effort to "whipsaw" trade unions through regime competitions (e.g. Pulignano 2006; Greer & Hauptmeier 2016). Trade unions have had difficulties overcoming the collision of these two logics, since nationally they strive to maintain international competitiveness in light of the risk of capital relocation (Van der Maas 2004). This dilemma reflects the idea of European integration as a driver for economic liberalization by extending the concept of market beyond national borders (Streeck 1998). Both the creation of the Single Market in the early 1990s and the EU enlargement in the 2000s enabled MNCs to bypass transnational and national social regulations, which can potentially over time weaken the social effects of economic growth considerably (Bernaciak et al. 2014a).

3.5.2. Macro-Level of Industrial Relations

Regional level of industrial relations is often overlooked because it is not based on a formal institutional structure but rather on loose networks of neighboring countries and regions. In their attempts to influence public policy, interest groups such as trade unions do not differ too much from the regional governments in their lobbying strategies. In addition to the ETUC and the ETUFs, there have been regional transnational networks, including the Inter-Regional Trade Union Councils (IRTUCs) and the Doorn group through which trade unions have been able to mainly to coordinate national collective bargaining strategies as part of the EUs regional policies and to help avoid regime competition and downward spiral within a homogeneous region (e.g. Pulignano 2006). The most advanced of these has been the Council of Nordic Trade Unions (NFS) which has a formal structure and was tasked with coordinating regional strategies toward EU policies. At the regional sectoral level some bargaining cartels have also emerged, most notably the NordicIN in the metal sector.

While the EWCs, (sectoral) social dialogue (Lecher et al. 2002; Marginson & Sisson 2004) and unilateral trade union bargaining coordination at sectoral level (Gollbach & Schulten 2000; Traxler et al. 2008) have received attention at the European level, whereas the role of IRTUCs[12] since the late 1970s as drivers for bottom-up labor market initiatives in a sub-national setting has been widely forgotten. With the emergence of IRTUC's, a new layer of trade union cooperation was established, exceeding the interregional labor market dynamics and solidarity. As trade unions are part of different industrial relations regimes, also their interests and approaches have varied, requiring adaptation to joint arrangements in order to guarantee unified strategic and organizational responses to protect minimum wages and equal social standards throughout the regions as well as strengthening their position through capacity building and improved organizing efforts. Additionally, IRTUCs have provided a more natural platform for trade unions as they represent economic and social issues at a geographical scale that is closer to the member trade unions cross-border interests on social dialogue and bargaining coordination. Bargaining coordination is subordinate to regional cross-border cooperation that is aimed at securing labor standards and terms of employment, while establishing an agenda to introduce minimum wages and curb downward spiral that might occur due to the discrepancies in the socio-economic status between countries. Similarly, trade unions have strategic and organizational capacities to be involved in the cross-border cooperation on "soft" social issues, since these are not directly related to competitiveness and profit-making.

Bargaining coordination initiatives can take place at two distinct levels beyond the national one: cross-border or EU level. The former can either be transnational that includes neighboring countries or transregional that involves neighboring regions. Regardless of the bargaining level, coordination fosters a bottom-up Europeanization of industrial relations, as the actors are trade unions that already exist at national level. By emphasizing the regional level of industrial relations through IRTUC's, the scope is set on bottom-up form of cooperation with the aim to secure economic and social minimum standards in regional labor markets that often form a single cross-border economic area especially within the Eurozone countries. The institutionalization process of IRTUC's since the Maastricht Treaty and differentiation of their strategies reflect their embeddedness in inter-regional political economy that has challenged the traditional cross-border forms of cooperation by emphasizing formal structures.

[12] There are currently 45 IRTUC's (ETUC 2017)

Perhaps the best-known example of IRTUC's is the aforementioned Doorn Group involving trade unions from Belgium, the Netherlands, Germany and Luxembourg that aims to coordinate collective bargaining policies in order to prevent possible "race to the bottom" within a regional economic area that might lead to a downward spiral on wages and working conditions. The concept of coordinating collective bargaining emerged during the early part of the 1990s with the launching of European Monetary Union in 1993 as part of the Maastricht Treaty. The short-term goal of Doorn Group was to fight wage-dumping, while at the same time building up robust coordination structures between trade unions from the region to negotiate European collective agreements in the long term (Dufresne 2015b, 93). The impetus for Doorn Group was a 1996 national law on competitiveness in Belgium that required systematic comparison of Belgian wage levels with pay trends in the neighboring countries France, the Netherlands and Germany. As Schulten (2002) noted, the coordination was based on mutual exchange of information during national (sectoral) collective bargaining rounds. This included cross-border participation in bargaining committees, observation of the bargaining rounds and on some occasions in involvement in industrial action to show solidarity. These were the first steps in a Europeanization process that eventually helped to lay ground for the Eucob@n network, which stresses frequent information exchange on collective bargaining issues and common seminars on collective bargaining policies. The EMF adopted a European coordination rule in 1998, initiated by the Doorn Group the previous year with the aim of prescribing pay targets of inflation and productivity growth. For this purpose, an informal bargaining network Eucob@n was established. Even though the Eucob@n has evolved into a European database network, at the time of its launching it was meant to enable trade unions from neighboring countries to monitor bargaining rounds in their neighboring countries and use that as benchmarks in their own bargaining.

Whereas Schulten (2004) and Gollbach (2004, 304) saw this voluntaristic approach problematic as there is considerable variation between countries in enthusiasm for coordination at the European level and the ETUFs do not have means to sanction "free-riders", others (e.g. Busemeyer et al. 2008, 443) have noted that especially in the Nordic countries with strong national collective bargaining institutions, trade unions have feared that the EU-level of bargaining would undermine their ability to engage in national bargaining. At the same time, trade unions from Southern Europe have traditionally supported stronger European coordination institutions to improve their situation in the national setting (Erne 2008, 83). With the European-level bargaining coordination gaining

ground after the introduction of single currency, Erne (2008, 103) has seen this as a sign of trade unions' willingness to form networks to coordinate their policies within a European framework in a non-hierarchical manner. Despite these obstacles, Traxler et al. (2008) found evidence of cross-border pattern bargaining in the German and Austrian metal industries. Even though the Nordic trade unions have been reluctant to engage in binding coordination, Traxler & Brandl (2009) found that they were also participating in regional coordination within the institutional framework of a IG Metal Küste initiated bargaining IRTUC that included metal trade unions from Germany, Denmark and Sweden, focusing on issues like minimum standards for social and ecological development, joint policy goals around the free movement of workers and the cross-border European Employment Services (EURES), employment policy and the structural funds as well as social dialogue. It is therefore no coincidence that the two most renowned cases of posted workers and employment rights in the ECJ have taken place here: the Laval case and the Viking case (Davies 2008; Eurofound 2008; Eurofound 2010). On the other hand, this IRTUC has managed to form good cooperation dialogue with the trade unions from Poland and the Baltic countries, initially helping them in their capacity building and organizing efforts before their countries joined the EU in 2004 and later as mutual partners.

It might seem natural to assume that IRTUCs are likely to have a better chance in succeeding than other forms of coordination networks, since they form more homogenous or cohesive groups than broader European networks could ever do. However, Hammer (2010) highlighted three key parameters contributing to the success of a network with regard to particular institutional and strategic arrangements in a cross-border regional setting. First of all, wage disparities and, hence, labor market pressures are only likely to become a problem when national industrial relations systems and welfare systems differ within the region. This is mostly the case in cross-border regions that include countries both from the EU15 as well as the member states from the CEE, because of greater labor market pressures due to big differences in labor standards and social security systems in the host and home countries (Donaghey & Teague 2006). This can lead to an increased trade union interest in interregional convergence with workers moving freely from the low-wage countries to the high-wage countries within the region. As it stands, short-term interests of trade unions on engaging in convergent practices draw usually from the fear of wage-dumping (Hammer 2010). Finally, given the institutional position of IRTUCs in the national industrial relations systems, economic and social features of cross-border cooperation need to be implemented first, before eventually the cooperation can be extended to collective bargaining (Traxler & Mermet 2003), since these require greater convergence to succeed than the social improvements will.

The advantage of regional layer is contingent on several factors. Foremost, optimal interest group structure is dependent on the size of the economic area and geographical concentration where it operates as well as on the model of governance, especially when it is decentralized (Coleman & Grant 1985) with strong regional autonomy and the interest groups see cross-border regional cooperation as a good fit. However, organizational structure may also influence short-term strategies of interest groups (e.g. Schmitter & Lanzalaco 1989) that seek to gain advantage over other interest groups within the same region instead of trying to form cooperative relationships. Yet, the relationship between regional and national actors becomes important as they can be either independent of each other the national actor can be subordinate unit of a regional actor. Depending on their institutional setting and competitive environment, IRTUCs can fall to either category. The examples presented in this chapter have concentrated on the strong IRTUCs where national trade unions are functionally and institutionally subordinate to the IRTUCs but structurally and legally independent of them, emphasizing the voluntary basis on which they operate and try to legitimize their existence.

In the first decade of the 21st century, attention was given to the apparent divergence between sectors with much of the research being comparative with the focus on sectoral analysis (e.g. Katz & Darbishire 2000; Marginson & Sisson 2004). The first international sectoral comparisons can be traced to the corporatist school in the 1970s and 1980s (c.f. Hollingsworth & Lindberg 1985; Cawson 1985) and to the attempt by Hollingsworth et al. (1994) to divide sectors and countries based on the effects of globalization on sectoral governance, while at the same time undermining the role of national level. Still, most of the sectoral-level research has been either two-sector comparisons or with the emphasis on single-sector studies (e.g. Dølvik 2001; Nergaard et al. 2009). Yet, both the single-sectoral and cross-sectoral analysis of industrial relations have concentrated on national differences and barriers for convergence (Hollingsworth & Streeck 1994). Katz & Darbishire (2000) conceptualized this by referring to "converging divergences" that implies internationalization of industrial relations systems where converge has taken place within sectors, while divergence is found between them, leading into sectoral regime clusters within industrial relations. Since countries have different sectoral profiles and have specialized in different industries, especially collective bargaining structures may be divergent although there are converging tendencies within the sectors (Bechter et al. 2012). A more general framework can be found in the VoC literature, which argues that there is more variation between the environment companies find themselves in, whereas national institutional arrangements provide supporting

institutional frames for sectors they deem valuable. In a situation like this, globalization is being seen as a fostering element of institutional arbitrage that enhances specialization in sectors with an existing comparative institutional advantage (Bechter et al. 2011). Therefore, a national sectoral analysis becomes important as traditional typologies of industrial relations models have overestimated national similarities and coherence while underestimating cross-border influences and divergence (Meardi 2004).

The effects of Europeanization can also be felt at the national level of industrial relations, where the focus is particularly on the existing institutional typologies of industrial relations that have been developed over the years due to their embeddedness within the national institutional and cultural arrangements. The first traces of distinct national industrial relations systems can be located to the 19th century and even earlier (e.g. Crouch 1993; Hyman 2001a). On the other hand, Traxler et al. (2001) looked at the bargaining coordination by dividing it into voluntary, direct and indirect modes to test the relevance of national path dependencies through the "converging divergencies" thesis presented earlier.

Research on Europeanization of national industrial relations systems is usually embedded within the convergence-divergence framework. Even as the comparatist convergence-divergence paradigm has gained popularity (e.g. Turner 1998; Marginson & Sisson 2002; Da Costa 2005), the role of trade unions has increased as the EUs economic and political framework has altered the institutional field (Lecher et al. 1998; Platzer 2002). As European societies have become more "European" because of the presence of national actors and institutions at the European level (Streeck 1999), horizontal Europeanization in which the perception of Europe and tasks that remain in the realms of national actors' influence has gradually extended beyond national framework and brought along opportunities to engage in coordination of collective bargaining. Divergent and convergent forces on industrial relations exist at several different levels: plant / workplace, company, sectoral, national, regional, European and global, and are regulated by legal and institutional frameworks and public policies, forming together a very broad array of actors, processes, policies and practices that evolve into a social dialogue in the field of industrial relations. Marginson & Sisson (2004) found four dimensions of convergence: (1) input convergence that indicates the pressures and constraints faced by a particular economy, (2) policy convergence that refers to the convergence of policies, (3) output convergence that draws from the convergence of consequences, outcomes and effects and finally (4) process convergence that focuses on the processes of sustaining developmental trajectories. Applied into industrial relations, input convergence in the macroeconomic sphere under

the EMU has had an impact on industrial relations through negotiated wage increases as well as through introduction of bargaining coordination (Marginson & Sisson 2004). Hence, convergence is possible to achieve even in the absence of significant progress in the European integration. Likewise, similar developments are possible in processes with little change in formal organizations and institutions.

Contrary to convergence, divergence as a form of societal contingency has its roots in the concern over the determinism of the convergence approach (Teague 1999). The origins of this approach can be traced to Maurice et al. (1986), who argued that national differences are result of the structural interdependencies that differ from country to country, reflecting interaction between production and the industrial relations system in place. Similarly, the approach emphasizing national business systems as divergent forces (Lane 2007; Whitley 1999) that reflect distinctive national development paths has gained popularity. Both of these approaches treat institutions as interactions of social actors at critical historical junctures and, thus, creating path dependency towards (Fetzer 2009).

Sectoral level is still the most common for national social dialogue in most EU countries and whereas some countries have more unitary industrial relations regimes throughout industry sectors, there might also be regime divergence from sector to sector within a country and sectoral convergence between countries. According to Bechter et al. (2011), apart from the Nordic countries that in general display low variation, sectoral variation does not appear to be dependent on the model of national industrial relations system. Instead, there is more sectoral variation of industrial relations systems, reflecting the differences across sectors within countries rather than differences between countries. Similarly, convergence is more eminent in sectors that are exposed to international competition or dependent on EU regulations, leading to sectoral similarities in industrial relations regimes across countries. Application of sectoral variation to disclose similarity of industrial relations systems suggests that they do not follow the VoC approach to the same degree as national classifications do when distinguishing between LMEs and CMEs. Whereas in LMEs workers and employers are often less organized and bargaining takes place at the company level, it is not as straightforward at the sectoral level because of the factors mentioned above like the exposure to internationalization. Similarly, CMEs generally have a higher unionization rate and employers' organizations have a stronger mandate to bargaining over wages, leading to bargaining taking place at the industry, sectoral or national level. However, industrial relations systems vary between sectors that are exposed to international competition and can display convergence across the EU28 and sectors that have remained unexposed (Bechter et al. 2011), suggesting that

convergence is a product of Europeanization, although there might be several different convergent tendencies taking place simultaneously. By contrast, in sectors protected from international competition national features of industrial relations are more prominent.

In order to understand the effect Europeanization has on industrial relations at the national sectoral level the focus should be given to the extent of Europeanization is dependent on the influence trade unions are able to wield at the European level and their internal constraints that might hinder this as they try reconcile both effectiveness of their action and legitimacy in the eyes of their members (Traxler & Schmitter 1995; Dølvik 1997). Hence, it can be argued that trade unions do not only base their action on economic interests but also on ideological preferences of their membership. In one of the most famous cases of ideological resistance to Europeanization, the communist French trade union CGT was unable to support the single market even though their members were likely to benefit from the deepening economic integration. As this shows, trade unions with strong ideological background are likelier to find it harder to defend their position when it does not correspond with their members' preferences than their more pragmatic counterparts that base their niche on the divisions of labor and professions (Hyman 2001a). In the end the CGT only changed their position towards European integration after disengagement proved to be a recipe for impotence (Ibid.). At the other end of the scale, are the Nordic trade unions, which according to Knudsen (2008), have developed a pragmatic and cooperative approach towards the Europeanization of industrial relations in general and towards the EWCs in particular. Because of strong national systems of industrial relations, the Nordic trade unions can rely on the national institutional safety nets and are therefore less interested in seeking leverage from the European level. Nordic trade unions have traditionally been reluctant to give the EWCs greater power (Da Costa et al. 2012) and have instead wanted to contain their activities to include only "soft" issues as their mandate to bargain would infringe the autonomy of national trade unions and would not work because of the great national differences (Knudsen 2005). While strategic choices might be made, responses are usually the outcome of internal discussion and conflict between two fractions of the trade union, meaning that the internal dynamics of trade unions provide another potential variable influencing their policy responses. On the other hand, trade union responses to Europeanization also depend on institutional factors and ideological struggles within trade unions that reflect their decision-making processes.

Whereas sectoral social dialogue has generally been a success in the EU15, the same cannot be said of the CEE and SEE countries that joined the EU between 2004 and 2013. As the negotiations for

legal and institutional framework for collective bargaining commenced and the acquis communitaire was being transposed into the legal systems of the CEE countries in the early 1990s, social dialogue became a part of the social acquis. During the early stages of the membership negotiation rounds the CEE countries were offered pre-accession assistance with social dialogue and trade unions from those countries were invited to join the ETUC and the ETUFs as members to ease the process. Since the EU required bottom-up institution-building efforts from the social partners in the accession countries in the CEE and SEE, the social acquis was introduced using the maximalist interpretation (Perez-Solorzano Borragan & Smismens 2012) that was not required from any of the old member states. Generally speaking the main obstacles for sectoral social dialogue in the CEE have been strong divisions within the trade union movement, which has manifested itself with internal competition and divided resources. However, without employer associations to engage in social with or in some cases because of their refusal to engage in collective bargaining outside workplace level has made it difficult to establish social partnerships. As a result, people's trust in trade unions in countries like the Czech Republic or Hungary has remained low, since they are fragmented and do not have a strong and clear mandate to get involved in bargaining. This has led to sinking membership and difficulties in organizing. On the other hand, the definition of social partnership varies from country to country[13]making universal comparisons of the CEE difficult. The economic crisis gave hope that trade unions could regain a more prominent role as political and societal actors in the CEE (e.g. Kahancova 2015; Bernaciak et al. 2014). However, more recent research has shown this not to be true as there are signs that the crisis has not strengthened national and sectoral level social dialogue, but rather has resulted in further decentralization of collective bargaining (Magda 2017) with austerity measures being imposed by international institutions and the EU taking effect.

3.5.3. Micro-Level Industrial Relations in Europe

Especially since the start of the 21st century, European company-level industrial relations has gained ground as MNCs have become more prominent, while at the same time growing international competition has resulted in trend towards more decentralized bargaining arrangements. This has given the management greater leeway to introduce company-specific practices instead of relying on national benchmarks (Sisson et al. 2003). Additionally, the Single Market and later the EU

[13] There are countries where it is not clear who the social partners are (Baltic countries); there are countries where the government is also a social partner (Poland); and there are countries with a well-functioning institution of social dialogue (Hungary and Slovenia).

enlargement have intensified competition for FDI within Europe, leading to extensive restructuring. Whereas the pressure for decentralization at the company level has been reinforced, the collective bargaining agenda has become increasingly oriented towards competitiveness and employment to safeguard the jobs (Marginson et al. 2003), leading to national multi-employer bargaining arrangements that are enhancing competition between companies, prompting trade unions to coordinate the bargaining agenda and outcomes.

Industrial relations at the company level take place mostly within MNCs and their internal collective bargaining as well as through their EWCs. This has also helped undermine trade unions' role as the emergence of company-level industrial relations has in many cases forced trade unions to fight the MNCs over their quest to question the legitimacy of the bargaining process itself. While trade unions in the many EU15 countries have gone through mergers, leading to concentration of power as the mega unions have emerged, trade union movement in the CEE and SEE has become more fragmented and decentralized parallel with the shift to company-level industrial relations (e.g. Varga 2013; Glassner 2013; Vanhuysse 2007). Even after the EU enlargement of 2004-2013, capturing the industrial relations in the CEE and SEE has proven to be difficult both analytically and theoretically. Whereas following the post-2008 financial crises sweeping Europe, a hypothesis about peripheral convergence between the Southern and Eastern Europe has been raised, implying that industrial relations in the Mediterranean are becoming increasingly similar to those in the CEE (Meardi 2012) as the collective bargaining institutions have deteriorated, leading to a socially embedded but strongly segmented and politicized form of flex-insecurity. Prior to the crisis, most of the research on labor market and industrial relations convergence in the EU was concerned with either the one between liberal and coordinated market economies or between the CEE and EU15.

There are several sources of imbalance contribute to this heterogeneousness in the CEE. Foremost, the state continues have a central role by determining the frames for remuneration systems through setting minimum wage levels as well as by regulating legislation on working conditions, working time etc. (Kohl & Platzer 2007; Kohl 2008). Likewise, sectoral-level industrial relations structure is mostly either completely non-existent or seriously underdeveloped, with company agreements being predominant in parallel with a limited willingness and ability to take industrial action due to sometimes extremely restrictive strike legislation while collective agreements are often not binding (e.g. Ost 2009; Drahokoupil & Myant 2015). On one hand the increase of small and medium-sized enterprises (SMEs) has weakened the position of trade unions at work places since many of them are non-unionized (Kohl 2008). On the other hand, in many MNCs their own works councils have

taken the role of trade unions despite the resistance (Tholen et al. 2012). Because of the emphasis on company-level bargaining, trade unions' central organizations have remained rather weak in many CEE countries, with the executive office of many sectoral trade unions and smaller confederations often consisting of only a few officers. This has been further hastened the distribution of membership fees, with 60-90 % of them remaining at the company level and only 10-30 % going to the central organization (Kohl 2008). Still, other studies have indicated re-emergence of corporatist institutions, including sectoral social dialogue as well as institutionalization of local industrial relations at some MNCs that have led to new trade union practices creating some potential for union revitalization (e.g. Mrozowicki 2011; Trif 2016).

3.6 Redefining Europeanization after the EU Enlargement

Different scenarios have been presented to analyze, how Europeanization and regime competition might lead to labor market regulation (e.g. Marginson 2006; Visser 1998). Europeanization by definition refers to convergence towards common outcomes achieved by common processes (Marginson & Sisson 2004), while at the same time, regime competition indicates the disparity between economic and social integration (Streeck 1992). Since the Maastricht Treaty and the subsequent Single Market in Europe, increasing regime competition in the labor market between individual member states has emerged. The single currency and the EU enlargement have further accelerated this as differences in unit labor costs and wage income disparities, combined with the shift towards flexible labor market regimes in many countries have intensified regime competition within the EU and raised fears of widespread social dumping (Keune 2008). Europeanization and regime competition can also be seen as competing tendencies that co-exist and interact with each other (Marginson 2006) as the Single Market has enabled countries and MNCs to engage in regime competition, leading to undercutting of labor standards, wages and working conditions while trying to find means to gain competitive advantage.

3.6.1. Transformation and Europeanization of Former Socialist Countries

Trade unionism during the communist era state socialism differed greatly from the what was happening in the West as their task was to implement party goals at the workplace and mobilize workers in order to achieve these goals, hence lacking the confrontational aspect of putting workers against the management. With the collapse of the old regime, most of the old trade unions have disappeared and the new independent trade unions that were formed have had to face the harsh economic and political reality as large state-owned companies were privatized and the management was replaced by a new regime that was generally more hostile towards organized labor. At the same

time, in their quest to modernize the societies, new political parties have in many cases been eager to attract FDI by liberalizing labor laws to correspond with the new market economy. The first restructuring stage of the 1990s saw increased competition and privatization of formed state enterprises along with new start-up companies being founded and new business opportunities being developed. For trade unions, this transition meant engaging in social dialogue with governments and employers over collective bargaining and working conditions. In addition, as part of their EU membership negotiations, the CEE countries had to adopt the acquis communautaire even before their membership, integrating them to the rules structure of the European community. For many trade unions in the CEE, reinvention of the whole industrial relations structure has forced them to reconfigure themselves in response in a very short period of time.

Trade union membership and coverage of collective agreements have been in decline in the CEE since the early 1990s (Visser 2016; Carley 2009; Kohl 2008; Carley 2004), while the minimum standards have remained very low in comparison to the EU15 countries. In recent years in-house trade unions backed and run by the companies have (re)surfaced, providing workers de jure with trade union representation at the work place but excluding them from participating in wider social and economic discussions that usually also fall under collective bargaining and tri-partite negotiations (e.g. Varga 2013; Bernaciak 2015). Similarly, lack of employer associations in many countries has made it difficult to establish collective bargaining at the sectoral level.

However, Magda (2015) has argued that low unionization rate and decentralized trade union presence do not necessarily corroborate with their influence over wage-bargaining institutions. In the run up to their EU membership in 2004 and 2007 some preceding institutional adjustment were made with the aim of strengthening the institutional framework on wage determination, meaning that trade unions' bargaining power was actually enhanced; although mostly at the company and industry levels. Yet, this led to an increased wage premium after the EU accession. These agreements were negotiated by trade unions on behalf of their own rank-and-file members, meaning that they could bargain more effectively.

Kohl (2008) made a distinction between politized pluralism in Poland, cooperation-based pluralism in Hungary and innovative pluralism in Slovenia that helps to understand the situation in the CEE. In some CEE countries old regime trade unions managed to survive the transition but have become severely weakened. In Poland, the trade union movement has been divided into two different camps represented by self-governing, trade union Solidarność and All Poland Trade Union Alliance

(OPZZ) on the opposite sides of the political spectrum, with the former representing free trade union movement and the latter having its roots in the ex-communist regime (Krzywdziński 2010). The founding of neutral non-partisan trade union Forum of Trade Unions (FZZ) in 2001[14] as well as the creation of an autonomous and non-affiliated sectoral and company trade unions have made the field of industrial relations even further fragmented. Yet, in recent years the three big ones have joined forces in many issues, including demanding for better workers' rights (Mrozowicki et al. 2010). Whereas the field of industrial relations in Hungary is the most fragmented of all the CEE countries with six major confederations, they have managed to agree on enough common issues and are tightly connected through the national Tripartite Council for Interest Reconciliation to become the driving force behind the process of restructuring especially within industrial sectors. Yet, this has not halted the persistent decline in trade union membership. The third model of industrial relations in the CEE is the Slovenian innovative pluralism with cooperation between seven national confederations. With its roots in the socialist market economy of the former Yugoslavia, strong trade union presence was successfully maintained after the regime shift and independence by shifting the emphasis to the workplace; something that was reinforced by the introduction of works councils in 1993. The Slovenian industrial relations system can be described as pluralist with sectoral wage determination combined with the complete coverage of all workers by collective agreements (Kohl 2008). By enhancing tripartite structures at the national level and including social policy pacts, a stronger social partnership similar to the ones in the CEE countries has emerged. Conversely, inter-union pluralism has not gained ground in Czech Republic and Slovakia largely because of a sectoral monopoly of trade unions and a thorough organizational re-orientation after the fall of communism (Myant 2010; Kohl 2008) that saw the emergence of free trade unions. In the Czech Republic, the politically independent Czech-Moravian Confederation of Trade Unions (ČMKOS) with its metal sector branch OS KOVO are the main workers' representatives in the corporatist tripartite negotiations in the metal sector, although there has been pressure from other trade unions also to be included (Valterova 2007; Myant 2010). In Slovakia, the industrial relations system is similar to the one in the Czech Republic, with the politically independent KOZ SR and its

[14] FZZ is not part of this network, but still worth mentioning in this context as it is a relevant actor nationally, affecting at least indirectly to the resources of the other two Polish trade unions that are part of the network.

metal sector trade union OZ KOVO, that represent the majority of the organized labor in their respective fields. Since the turn of the 21st century Slovakia has seen decentralization of collective bargaining and further decline in coverage of sector-level collective agreements, which although still play an important role, have become more specific in their scope, formulating more general provisions, conclusion of agreements for shorter time periods, and granting more role to governance via company-level collective agreements (Brngalova & Kahancova 2013).

In general, during the transformation period in the early 1990s specific new forms of trade union structures developed in each of the CEE countries with newly-established confederations and re-foundations having emerged everywhere once the previously monolithic and state corporatist industrial relations systems were disbanded (Kohl 2008). Still, there are big differences in how trade unions have restructured their organizations and agendas. Because of freedom of association, industrial relations systems have become very fragmented in many countries. There have also been countries that managed to start from the scratch having shed their ideology and changed their leadership, like in the aforementioned Czech Republic and Slovakia where the formerly state-controlled labor organization became the drivers of transformation at the so-called reformation "round-tables". This led to the formation of a very pluralist industrial relations field and has turned out to be a formidable challenge that put a strain on internal trade union relations nationally.

3.6.2. Regime Competition

In the early years after the EU enlargement, cooperation between trade unions from CEE and EU15 was deemed to be impossible in the short term, because of the race to the bottom strategies by the management (e.g. Marginson 2006; Vaughan-Whitehead 2003). However, others (e.g. Meardi 2004) emphasized the aspect of mutual gains especially at the company level as the sectoral level was still underdeveloped in most of the CEE countries (e.g. Kahancova 2009). Regardless, Bernaciak (2013) has argued that even in a competition-driven setting reciprocal exchange can take place by letting the trade unions to focus on improving working conditions together with their counterparts from the EU15. Yet, this is more difficult to foresee at the sectoral level due to the weakness of sectoral collective bargaining structures and limited resources of sectoral trade unions in CEE.

Before the EU enlargement there were widespread fears of erosion in the relationship between the trade unions from old and new member states (e.g. Dølvik & Visser 2001). There were fears that EU enlargement would undermine the efforts of trade unions from EU15 to pursue a common

strategy vis-à-vis the employers as new member states would bring with them intensive regime competition. Similarly, differences in labor costs between old and new EU member states were expected to lead to coercive comparisons, allowing MNCs to introduce cost-cutting measures at different units and thus intensify regime competition and European-wide underbidding in terms of wages and working conditions (Marginson 2006; Vaughan-Whitehead 2003) as exemplified by Nokia's closure of a plant in Bochum to transfer it to Romania amid protests in Germany and the support by the EMF. Apart from management's strategies, also workers' divergent interests may help jeopardize the East-West cooperation as many industries in the CEE profited from FDI and relocations (Telljohann 2005). According to Myant & Drahokoupil (2012), a distinction can be made between the countries that have been integrated into the European and global economy and production chains through FDI in manufacturing and countries that rely on foreign financial support to local investment projects. As Kotthoff (2005) has showed, differences in industrial relations regimes and the lack of broad solidarity makes communication and mutual understanding between trade unions in the enlarged EU even more difficult. Until the enlargement there had not been real competition for investments between the West and East; instead trade unions from the EU15 had tried to help trade unions from the CEE in capacity building. One of the stated goals of the EU enlargement was to widen the convergence towards European industrial relations to include also the CEE. From the beginning, policy reforms in candidate countries were geared towards macroeconomic stabilization, the degree and methods of privatization, refining the business cycles of the economy and development of labor markets, with the goal of increasing productivity growth and converging to a sustainable enhanced welfare level.

Most trade unions in the EU15 supported the Eastern enlargement in general. However, especially free movement of labor was seen as potentially threating the labor markets in particular in countries like Germany and Austria that were neighboring the accession countries, leading to demands of temporary restrictions as the trade unions expressed concerns that a new wave of economic migration would have negative consequences for wages and create a low-wage sector as the workers from the new member states would be able to underbid the local workforce[15]. In other parts of Europe, trade unions argued that free movement of capital should be accompanied with the free movement of labor and that employment standards would be best protected by promoting workers' rights instead of restricting them. The ETUC eventually agreed to support free movement of labor,

[15] Most notable here was the issue on posted workers and the fear of wage dumping.

if it was based on the principle of equal wages and working conditions for equal work in the same territory (ETUC 2005). However, German and Austrian trade unions remained opposed to opening their labor markets for workers from the new member states and instead advocated a transitional period so that their labor markets would have time to prepare for an unregulated movement of labor and adjust to the significant wage gaps between the neighboring countries (Gajewska 2009). In preparation for the EU enlargement in 2004 the German and Austrian trade unions got engaged with their counterparts from the CEE by establishing IRTUCs that were designed to facilitate cross-border labor mobility to soften the effects of wage level disparities and employment rights (Noack 2000). Similarly, already in the 1990's the Confederation of German Trade Unions Deutsche Gewerkschaftsbund **(**DGB) initiated "Migrationsdialog Ost-West" to facilitate discussion among trade unions from the EU15 and the future member states on issues like the free movement of labor in preparation for the enlargement (DGB 1999).

MNCs hold the keys in the regime competition processes, especially in sectors characterized by internationally integrated operations. Regime competition has many facets ranging from skills of the workforce to productivity and available technology. Similarly, quantitative and qualitative forms of labor flexibility as well as both direct and indirect labor regulation and labor costs are important. Labor issues are naturally not the only factors MNCs consider when making decisions on business locations but are one of the most important along with the primary market location. These two variables differ from each other in the sense that market location for internationally integrated producers is more stable, making workers in different locations to bargain downward against each other in order to improve their possibility to keep or create jobs (Meardi 2006). In these calculations labor quality (projected unit labor costs) as well as labor regulation and are often central (Traxler & Woitech 2000). However, overall there is little evidence that European integration or even the enlargement has unleashed widespread social dumping (e.g. Bernaciak 2012; Marginson & Sisson 2004). This has been verified by Bohle's (2009) study on Germany, showing that the extent of job losses due to relocation was relatively low, although some industry sectors suffered from this more than others and a few cases of relocation attracted public attention, contributed to rising anxiety.

Considering the transformation associated with the EUs Eastern enlargement, liberalization of global trade and investment flows as well as international restructuring, there is a clear need for national trade unions to shift their strategic orientation from national to European level too. As European integration and globalization have made the distinction between national and international sphere more vague and with the free movement of capital, goods and labor in Europe making

national boundaries in Europe less relevant, more proactive transnational trade union strategies have been advocated as the solution for organized labor to maintain its role in protecting its members and preventing regime competition.

3.7 Europeanization of Industrial Relations in the Metal Sector in Europe

Before going into the specific empirical case in subsequent chapters, this chapter presents the institutional framework of the industrial relations in the European metal sector by starting with a historical description of the development of European trade union organizations going parallel with the historical process of European integration. Following this is the presentation of the EMF and a description of the key stages in its history from a loose meeting point to a well-established coordinator and an active organization that was geared towards multinationals and the EU Commission. The historical narrative in the following chapter is based on the books "40 Years 1971-2011 – Creating a Counterweight and Innovatory Force for European Workers" (Henning & Clairmont 2011), "Milestones – On the Long and Hard Road towards an EMF Coordinated Collective Bargaining Strategy" (EMF 2006), and the article "History of the EMF – The Key Concerns Continuity and Change" (Münch 1994) when not otherwise specified.

The political development of the European integration has always been closely tied to the economic and industrial integration. A general description of these parallel processes is given in the Table 9, from where it is easy to see, how European level developments have affected the developments in the metal sector through adaptation to the new rules and by taking advantage of the situation. Whereas the 1950s can be seen as institution building on both fronts, especially the time period from 1960s to 1980s has been characterized by a phenomenon described as Eurosclerosis, when the European integration was in a stage of stagnation. Following the creation of the Single Market in the early 1990s, European integration started to deepen also in the metal sector through the establishment of sectoral social dialogues and coordination of collective bargaining at the European level. The EU enlargement changed the landscape also for the European trade union confederations, although some national trade unions from the new member states had been affiliated to the EMF already since the early 1990s in anticipation of the EU enlargement that was to happen about a decade later.

Table 9. Parallel Timeline of the Europeanization Process (Nordin 2013)

European Level Developments	**Industrial Relations Developments in Metal Sector**
1952 European Coal and Steel Community (ECSC)	1957 Contact Office of the Miners' and Metalworkers' Free Trade Unions in the European Communities
1957 European Economic Community (EEC)	1958 Economic and Social Committee of the EEC
	1963 European Metal Committee
	1971 European Metalworkers' Federation (EMF)
1985 European Social Dialogue	2003 Social Dialogue Committee of EMF and CEEMET
1992 Maastricht Treaty	1993 1st EMF Collective Bargaining Conference
2005-7 EU Enlargement	1993 First trade unions from the CEE admitted to EMF 2003 Founding of EMF South East European Forum

3.7.1. Early Years of Institutionalization of Industrial Relations in the Metal Sector

Traditionally European trade unions have participated in two domains, (1) as lobbyists vis-à-vis the state and politics as well as (2) as social partners engaging in collective bargaining within the labor market institutions. Their relative importance regarding economic and political activities has differed throughout history depending on the labor markets and industrial relations systems. This has meant that there have been different approaches to coordination between these two domains (Streeck & Hassel 2003). Because trade unions' mobilization power at workplace-level in Europe has traditionally been weak, their strategy has mostly involved politics-based exchange power to help enhance their position in policy processes at the European level. From the early stages of the European integration trade unions have frequently used this power to influence the process by forming close connections to the European Commission (Pasture 2005), leading to the Commission recognizing them as official negotiation partners. As a consequence of this, the activities of the international trade union movement have extended from their traditional narrow core function of collective bargaining towards European-level cooperation on many different social and economic issues.

Institutionalization process of European metal sector industrial relations has historically gone hand-in-hand with the political and economic processes of European integration, starting with the foundation of the European Coal and Steel Community in 1952 that was strongly supported by the

West German trade union confederation DGB. This led to the creation of the Inter Trade Union Committee (Contact Office of the Miners' and Metalworkers' Free Trade Unions in the European Communities) in 1957. The creation of the European Economic Community (EEC) in 1957 following the Treaty of Rome that gradually increased European and world-wide integration of the economy meant that trade unions also began to consider engaging in European-wide coordination and cooperation. Behind this process was the growing internationalization of the economy and rise of MNCs that also required European trade union confederations to take a bigger role at the European level and enhancing cooperation between different nation trade unions. Encompassing the pro-European orientation of the trade unions, some negative experiences of economic nationalism also surfaced (Pasture 2002), originating from the fear that business interests would capture the European integration process, leaving social partners aside. Most Benelux, German and Italian trade unions believed that a common market was prerequisite for economic growth and the creation of welfare states and this was their leitmotiv for increasing collaboration at the European level. From the beginning, the political and economic integration of Western Europe was seen by the trade unions as the foundation of the EEC and that made it necessary to set up European trade union confederations in order to better counterweight companies operating beyond national borders while also representing the interests of workers vis-à-vis European Commission. Political and economic integration of Western Europe impacted also trade unions as they became more European-oriented by also engaging outside of their national context.

Until the early 1960s, cross-national trade union activities at the European level were virtually non-existent, with the focal point being workers' representation within the EESC of the EEC that consisted of representatives for workers, employers and consumers and was given a consultative role in drawing the European Community legislation. The foundation of EESC also brought the representatives of national trade unions from the original six member states of the EEC together in what was to become the first steps in introducing European representation of the workers. This eventually led to founding of industry committees with the aim of bringing trade unions from specific industries together.

In 1963 seven metalworkers' unions from the six Member States of the EEC set up the European Metal Committee, with the aim of coordinating European-wide cooperation between trade unions (Table 10 summarizes when national trade unions have joined the Metal Committee / EMF). In the

beginning, the Metal Committee was just a loose association of trade unions without any proper rules or working program[16], consisting of just the secretary and one administrative staff member. Setting up the Metal Committee was the first step towards institutionalization of industrial relations at the European level with its own statutes, voting procedures and a method of financing the organization; something that was difficult because of the great differences in size of the affiliated trade unions. In order to avoid this problem, EMF statutes were later changed so that all decisions required a 2/3 majority of the total votes cast. The founding seven were joined by French FGMM-CFDT (FRA3) in 1968 as the second French trade union after FO Metaux (FRA1). In the beginning the Metal Committee provided the affiliated trade unions a forum to exchange information on the working and living conditions of workers employed in the metal industry; something that had been lacking previously despite the industry being international in its nature. Three years later in 1971 a constitutional assembly was held to form the European Metalworkers' Federation in the European Community (EMF) that represented through its national affiliates 3,1 million workers (80 % of all organized workers in metalworking industry at the time). The formation of EMF also meant a shift from a loose discussion forum to a well-established coordination center and an active organization representing workers vis-a-vis multinationals and the European Commission.

[16] This was illustrated well by the then-Secretary of the Metal Committee Günter Köpke in 1968: "We have minimum staff, vague tasks, no proper structure, a very small budget and no influence on the Commission." (Henning & Clairmont 2011).

Table 10. Development of the EMF Membership (2009 members only, founding members of the Metal Committee in *italics,* old names in parenthesis)

Affiliate (Original name)	**Affiliate since**	Affiliate (Original Name)	**Affiliate since**
PRO-GE (GMTN)	1991	LCGB	1974
ABVV-Metaal (CMB)	*1971*	GWU	N/A
ACV/CSC Metea (CCMB)	1974	SIER	*
MWB-FGTB (CMB)	*1971*	MTUM	*
LBC-NVK	1992	*FNV-Bondgenoten (NVV)*	*1971*
SETCa/BBTK	1993	De Unie	N/A
Sindikat Metalaca	*	CNV Vakmensen	1974
Metalicy	N/A	VHP2 (Metalelektro)	N/A
NFTINI Metallurgy CL	N/A	Fellesforbundet	1973
TUFOEMI / NFTINI	N/A	Handel og Kontor	1991
SMH-IS	N/A	NITO	N/A
OVIEK-SEK	1992	Tekna	N/A
OS KOVO	1992	NSZZ Solidarnosc	1992
CO Industri	1973	OPZZ Metalowcy	N/A
IDA (DIF & IF)	1992	SIMA	1983
Metalliliitto	1991	Fiequimetal	N/A
PRO (TL & STL)	1992	FNS Solidaritatea Metal	N/A
UIL	1994	FSS Metarom	N/A
TEK	N/A	FSLI Metal	N/A
Sähköliitto	N/A	GSM Nezavisnost	N/A
FO Metaux	*1971*	SKEI	N/A
FO Defense	1984	OZ KOVO	1992
FGMM-CFDT	1971	MCA-UGT	1983
CFDT-FEAE	1984	FM/CC.OO	1983
FTM-CGT	N/A	ELA Metala	1983
FNTE/CGT	N/A	USO	*
FM-CFTC	1991	Sveriges Ingenjörer	1982
IG Metall	*1971*	IF Metall (Svensk Metall)	1973
POEM	1981	Unionen (HTF & SIF)	N/A
Vasas	1991	UNIA (SMUV)	1990
Samidn (VN)	N/A	Syna (CMV)	1990
SIPTU	1973	Birlesik Metal-IS Sendekasi	1994
FIOM-CGIL	1971	Unite – Amicus (AUEW)	1973
FIM-CISL	*1971*	Community	N/A
UILM	*1971*	GMB	N/A
SPMK	*	TGU	1973
OGB-L (LAV)	*1971*		

*= associate member as of 2009

Since the start of the European integration process, collective bargaining has played a significant role in the development of industrial relations at the European level and especially in the metal sector, where the EMF established a collective bargaining committee right from the start in 1971

with the aim of providing a forum for national trade unions to exchange information on their own collective bargaining rounds and on the general socio-economic landscape in the member states. The metal sector was a frontrunner in this and in fact most of the other sectors did not set up their own collective bargaining committee until the latter half of the 1990s. The reason for the early development of the metal sector can be found in the emergence of the European institutions of which the first stage was the ratification of the European Coal and Steel Treaty in 1951 that was not only the first tangible sign of European integration, but also enabled trade unions to engage in dialogue at the European level with employers' representatives to establish a framework to organize and streamline steel production in Europe.

Because of the international nature of the metal industry that depends on a wider market, whether it be regional, European or global meant that also trade unions needed to discuss their strategies and policies together vis-à-vis the employers. This led to the creation of the EMF and setting up of a collective bargaining committee. Hence, with Germany taking the leading role, as it had the largest metal sector in Europe, first forms of coordination and benchmarking were established, with other countries not only monitoring the economic and social developments in Germany but also taking note of the results in collective bargaining rounds there and using the German agreements as benchmarks for their own collective bargaining rounds. Against this background the seven founding affiliates of the EMF, including the German IG Metall (GER1), saw it vital to find a common agenda on which they all agreed on, since there was a general understanding that competing on wages would not be beneficiary to the industry in light of the serious economic problems of the 1970s amid the oil crisis because the European labor movement could prosper only if there was co-operation between the different national trade unions.

3.7.2. The Emergence of a European Dimension: Finding a Common Ground

The first real test for the European labor movement was the campaign for the European-wide 35-hour working week in 1974. Although in many countries the struggle for shortening the working week from the 100-year old praxis of 3 x 8 hours towards a 40-hour week had already been accomplished, the mid-1970s were perfect timing for negotiating on reducing the weekly working hours even further with the employers because of the prevailing mass unemployment. Similarly, this gave the opportunity to further improve the working conditions. During the following years trade unions throughout Europe took to up the struggle with mixed results, but by the end of the 1980s it had led to a wide-range of national initiatives alongside the 35-hour working week like career-based reduction of working time and a gradual increase of paid holiday leave.

Creation of the European Social Dialogue in the latter part of the 1980s was the outcome of an initiative by the Delors Commission that the Single Market would need European Social Area alongside it with social dialogue as its center piece. An agreement was reached to engage in furthering the European social dialogue together with employers' associations UNICE and CEEP and workers' confederation ETUC in January 1985. Curiously, it was the European Commission and not the ETUC that convinced the European employers' associations to sign European social dialogue agreements (Falkner 2003), which could be seen as a reward for the trade unions by the Commission for their support of the European integration process.

After some boom years in the 1980s, which coincided with the relative stagnation also at the European-level industrial relations, the beginning of the 1990s brought again rising unemployment and national austerity policies that were defended by the need to comply with the Maastricht criteria before the EMU. Also, as part of the Maastricht Treaty, the free movement of labor brought insecurity for the trade unions and forced them to agree on several zero or low wage rise agreements and solidarity pacts amid the mass unemployment at the time. The goal was to make work organizations more flexible and hence ease job creation. Whereas employers and their interest organizations had a long history of comparing wages, working time and productivity, the creation of the single market meant that these comparisons could be used openly during bargaining rounds to justify low wage rises. Many MNCs' European and global market strategies were based on attempts to play the trade unions off against each other by referring to competition gaps between the different regions and countries, meaning that almost all over Europe trade unions were confronted with difficult bargaining rounds as the employers emphasized competition and flexibility. As a result, the EMF Collective Bargaining Committee concluded that a more coordinated, overall approach to collective bargaining in the quest to fight potential wage dumping was needed. This led to the 1st EMF Collective Bargaining Conference being held in Luxembourg in 1993. Although according to the statues, the conference did not have any formal role in the EMF decision-making procedures it provided an opportunity for the members of the Collective Bargaining Committee and all other main negotiators, the General Secretaries and Presidents of the affiliated trade unions to come together to have a broad debate on the situation and its implications on the future for the metal industry in Europe. The Luxembourg conference can be seen as the first step towards the new European approach of collective bargaining and the participants were unanimous that more cross-border coordination and information exchange on collective bargaining rounds was needed and that the results in one country should be taken into consideration during the bargaining rounds in other

countries, because relying solely on national solutions for European and global problems would only result in continuous downward spiral of competition on wages and working conditions. At the Luxembourg conference it was agreed that in order to make coordination more effective, data-gathering on national collective bargaining rounds should be improved and that framework conditions as well as harmonization of processes was vital to achieving this. To enhance the cooperation, it was agreed that trade unions could send observers to monitor collective bargaining rounds in other countries and hence in this way make the cooperation more visible to the employers. These principles were approved in the next EMF Executive Committee meeting, becoming therefore, official policy of the EMF all the affiliates were supposed to follow.

During the Luxembourg conference, the members also decided to establish a working party under the Collective Bargaining Committee tasked with preparing and coordinating the committee meetings as well as formulating the EMF policy initiatives. It was decided that the working party (later to be called Select Working Party or SWP) would be organized on a voluntary basis with all the costs falling to the participating trade unions to cover and with English as the only working language. The SWP began its work immediately and started to prepare concrete initiatives that could be taken up by the EMF. The aim of the SWP was to think over national boundaries and come up with European solutions instead by working towards compromises between the different countries and regions while also still taking into consideration national situations. The biggest challenge was that although the members of the SWP were able to find compromises in the SWP meetings, they still remained representatives of their own national trade unions in the official meetings of the Collective Bargaining Committee, making it often times a balancing act between self-interests and broader consensus.

The first task for the SWP was to re-think the structure and working methods of the Collective Bargaining Committee. Previously the committee's work had consisted of a roundtable debate where all the participants reported about the situation in their country, leaving little time for general debate about European-wide tendencies, policies and strategies that should be developed. The SWP suggested streamlining this process to allow only those trade unions that were in the midst of starting a collective bargaining round or had just concluded one to report on these to the committee. Also, in order to gather data a questionnaire was drafted enabling the trade unions to report on their collective bargaining rounds as well as general information about wages, productivity and working conditions. This was the starting point for the information gathering network of the EMF that would

later grow into the Eucob@n network (the European collective bargaining data gathering network) shared by other industry sectors as well.

The 2nd EMF Collective Bargaining Conference was held in Brussels in 1996 with the aim of providing clear proposals for the strategic and operational action based on the experiences from the first conference. In preparation of the Brussels Conference, the SWP decided to broaden the scope by looking into the current situation in every European country, not just the EU member states, as well as conducting an in-depth analysis of the structure and practices of the collective bargaining in different countries, providing for the first time an overview of collective bargaining systems in different countries.

At the Brussels conference, basic guidelines for the future activity on collective bargaining were agreed on. These included the first EMF guideline that would subsequently become the wage coordination rule, dictating that wage increases agreed during national and sectoral bargaining rounds should at least compensate for the inflation rate so that at the minimum real increase in purchasing power would be achieved. Although implementation of this rule was voluntary, the long-term goal was to eventually be able to introduce a coordinated approach to collective bargaining at the European level. Since the European framework agreements had not materialized because of opposition from the employers' side, there was no natural counterpart at the European level for the trade unions and they were forced to coordinate the collective bargaining between themselves, while at the same time bargaining with the employers who were not enthusiastic about organizing at the European company or sectoral levels. In order to enhance their position, the EMF decided that the European guidelines would be integrated into the national collective agreements, giving a clear signal towards the employers that the trade unions were in unison in working towards this goal (Dufresne & Mermet 2002). One tangible way of bringing forward the coordination initiative was to encourage trade unions from other countries to participate in collective bargaining rounds as observers. The goal was not just do it for learning purposes, but also to show the employer representatives in different countries that trade unions were serious in their efforts to work together in a coordinated manner.

3.7.3. Introduction of European Level Guidelines

Immediately after the Brussels Conference, the SWP started to plan further European minimum standards and guidelines, starting with working time following the lead from the German metal industry that had just introduced a 35-hour week and the lively debates in Italy and France about the

possibility to do the same[17]. There was a division between trade unions that wanted to take slow steps towards the 35-hour week and those that thought the minimum standard should be put in place immediately rather than something that might be obtainable in the future. The decision to introduce annual capping of 1750 working hours made comparing countries easier. Alongside standardized working hours, overtime standards were agreed on, meaning that if overtime was not compensated in time off, it could neutralize the lower working hours or even increase the existing weekly working hours. Hence, it became logical to include also a limit on overtime in the minimum standard on working time, even if monitoring that was very difficult due to lack of reliable statistics about the overtime hours in many countries. Additionally, issues like banning Sunday work and capping the daily working hours proved difficult to accept unilaterally, but in the end the Collective Bargaining Committee adopted a principle stating that flexibility is only acceptable after negotiations and it should be written down in the collective agreement. In some countries, this had already been common practice, while others still had the more traditional shift systems in place. Eventually, based on these principles the EMF Working Time Charter was adopted just before the EMF Collective Bargaining Conference in Luxembourg in 1998.

The main issue at the Luxembourg Collective Bargaining Conference in 1998 was the forthcoming introduction of the single currency that would have a significant effect on collective bargaining as it would enable direct comparison of prices and wage levels. As Schulten (2002) noted, on the surface there were similarities with the European Social Dialogue, also when it dealt mainly with less conflictual soft issues relating to social policy or minimum labor standards, whereas the hard issues covering pay and working time were still under national collective bargaining. Hence, fundamental legal prerequisites for a European collective bargaining system were lacking. However, transparent wage policies made implicit comparison was possible for the first time.

[17] In the case of Italy this did not come about, but in France the law on the 35-hour week was subsequently passed.

The EMF Collective Bargaining Committee had decided to draw guidelines on how to respond to the employers' strategy of using wage and productivity comparisons during collective bargaining rounds, while also with responding to the governments and employers' organizations arguments that wage increases would automatically increase inflation rate. Signifying this, the EMF Conference resolution stated that:

> *"The EMF considers EMU to be a significant and necessary step towards the strengthening of economic and political unity in Europe. With the introduction of the single currency, euro, and the transition to a common monetary policy, Europe will acquire greater independence and sovereignty vis-à-vis the international financial markets, speculators and distortions in exchange rates. The single currency and monetary policy can become the cornerstone of an active European economic policy geared to combating unemployment and to fostering the social and ecological development of the economy and society in Europe as a whole."*

Based on this, the next EMF guideline was an annex to the coordination rule to show the employers' representatives and national governments that trade unions from different countries would not engage in race-to-the-bottom by undercutting each other to compete for workplaces. In preparation of the annex, it was discussed whether it should be used towards enabling redistribution of incomes or rather to strive for redistribution and inflation neutral policy. In the end a compromise was reached on the latter, leading to a statement that:

> *"The key point of reference and criterion for trade union wage policy in all countries must be to offset the rate of inflation and to ensure that workers' incomes retain a balanced participation in productivity gains. The commitment to safeguard purchasing power and to reach a balanced participation in productivity gains is the new European coordination rule for coordinated collective bargaining in the metal sector all over Europe".*

This resolution would subsequently become the core focal point of the EMF collective bargaining policy and was eventually adopted by other ETUFs as well. In order to follow up the resolution, a collective data-gathering network Eucob@n was reinforced with help of IG Metall to improve the diffusion of information within the Collective Bargaining Committee. Initially, most countries stayed within the limits of the coordination rule and most trade unions submitted their data to the Eucob@n. Even though this seemed like a success, only in a few cases had the wage coordination rule been referred to during bargaining rounds. Likewise, the rule was not commonly used as a political instrument to show the employers' representatives during collective bargaining rounds that trade unions' demands were in line throughout Europe, as had been the intention. This led to a debate on the future use of the wage coordination rule, stressing the use of the coordination rule more as a political instrument then as an analytical tool it was originally meant for. This debate

signaled the beginning of the new jointly agreed strategy to give more emphasis to European policies before the start of national bargaining rounds. A turning point in developing a new European dimension of trade union cooperation came in 2002, when a strike in the German metal industry led to EMF and its affiliates taking a more active approach by organizing a press conference to demonstrate their solidarity and confirming their strong commitment to the wage coordination rule. Following this, developments were made to the Eucob@n network by including social surveys that would function as practical instruments for organizing solidarity and the information flow related to strikes.

During the preparations for the Collective Bargaining Conference held in Oslo in 2001 the emerging sectoral social dialogue procedures were put to the fore. The aim of coming up with a European framework that would not mimic existing national models, but one that would respect and leave in place the existing national systems along with the European one was not easy an easy task. Key aspects that needed to be resolved were the hierarchy of agreement levels, interconnection between European and national agreements, founding of a European Labour Court and finally European level mediation and the right to strike in support of trade unions in other countries. Eventually the parties could agree on these. The principles for social dialogue were clarified in December 2001, as the European social partners agreed on the conceptual differences between tripartite concertation, consultation and social dialogue, making it possible to put the social dialogue into action.

Additionally, several other issues[18] that were later used as the basis for the EMF Social Charter were included in the Eucob@n database. The use of Eucob@n to monitor developments in different countries made it easier to spot developing trends including the rise of flexible pay solutions and especially newer financial participation schemes for pensions. The introduction of Eucob@n took place at the same time as the Commission initiated new forms of workers' participation. While many trade unions were hesitant towards any kind of financial participation for pensions, they understood that it needed to be addressed to resolve the issues about voluntary pension systems that had no repercussions on existing wage systems. In the meantime, the whole debate on workers' financial participation in pension savings and in particular the offer to discuss a possible

[18] These issues included monitoring developments in pensions, legal and extra-legal pension systems, early retirement, as well as sickness and health systems.

introduction of such a system under the Societas Europaea Regulation[19] had raised the prospect of giving the EMF a mandate to negotiate at the European company level.

Preceding this, between 2000 and 2005 negotiations had already taken place at several major European-based MNCs, carried out mostly due to major cross-border restructurings that were negotiated under the European Framework Agreements (EFAs)[20]. Since these processes required urgent response from the trade unions, coordination procedures had to be set up and this eventually led to the EMF coordination strategy, stating that "no negotiation at national level or within one company will be concluded before having informed and consulted with the colleagues concerned at European level" (EMF 2005). As a consequence, this led to de facto an institutionalized European-level of collective bargaining on issues other than wages. Furthermore, any strategy agreed and any decision taken at the European level was to be binding and implemented at national level. By giving the mandate to negotiate EFAs, the EMF was able to widen the scope for cross-border coordination of collective bargaining in the metal sector in the absence of a legal framework for transnational collective bargaining in Europe (Pulignano 2010). In order to succeed in this, the conditions and rules under which national trade unions gave their mandate to negotiate at this level needed to be agreed on, since this was in essence the platform for binding framework for transnational collective bargaining in Europe, in which the national trade unions would play a pivotal role. In general, both the national trade unions and the employers were comfortable with the EMF being the main negotiator and signatory on employees' behalf, since the European level was perceived as a supplementary to the national-level of industrial relations (Da Costa & Rehfeldt 2011, 143-163), highlighting the importance of acting in joint coordination with the trade unions concerned.

This protocol was put to test in 2005 as the EMF was approached by Arcelor to engage in negotiations on a European agreement on Financial Participation based on the recently adopted EMF Policy Guideline on this matter. Several issues were raised by the EMF affiliates regarding the legality of giving the EMF a mandate to negotiate such agreements on behalf of them with European-based MNCs and whether the EMF could be allowed to sign an agreement that only affects some of its affiliates. Hence, it was important to make sure that shifting part of the bargaining process partly towards European level would not undermine the national trade unions'

[19] The Council Regulation on the Statute for a European Company 2157/2001
[20] Unlike the International Framework Agreements (IFAs), where fundamental social rights have a central role, the EFAs concentrate on issues like restructuring, social dialogue, health and safety and human resources management.

role in it; something that until then had been considered to have been their sole domain. A new working group consisting of the Collective Bargaining Policy Committee SWP and the Company Policy SWP was tasked with coming up with procedural guidelines for negotiations with MNCs. This procedure was added to the EMF Statutes at the Lisbon Congress in 2007 to safeguard the trade unions' role in the bargaining process.

The next EMF Congress took place in Prague in 2003 and was meant to provide the first possibility to evaluate the effects of the coordination rule. While there was unanimity that the current wage coordination rule should be deployed, demands were made to develop it further, since the national collective bargaining systems in many countries were under pressure from the employers' new strategy to start conducting company-level bargaining rounds in order to undermine the national agreements in different countries. This was proved to be true in the Netherlands where the cross-sectoral collective bargaining round centered on the employers' representatives' demand for wage moderation and during the collective bargaining round in Germany with employers' representatives pushing towards working time extension. With the threat of downward spiral, the importance of trade union coordination efforts grew significantly. In the end, the employers did not reach their goal in either of the cases and instead decided to make a strategic shift towards company-level bargaining, where they felt it would be easier to break the trade unions' coordination efforts. The process started at a Siemens plant, where trade unions were faced with accepting a temporary extension of working time within the framework of the existing collective agreement to obtain job security in return. This led to a domino effect at first at other MNCs, but later also industry sector-wide throughout Europe.

The scope of Eucob@n was first extended to gather information on collective bargaining and issues workers were facing in major MNCs. Later additional aspects were added to include information exchange with other industry sectors in Europe in order to gain a sense of developments elsewhere and finding suitable cases to benchmark. At the 2005 Collective Bargaining Conference in Rome the affiliates renewed their pledge to defend the wage coordination rule as the only possible European standard for coordination of collective bargaining, while at the same time also recognizing the current difficult situation in most countries. It was decided that there was a need for correct, simultaneous and up-to-date information from major collective bargaining rounds at MNCs and about the agreements that were being signed. By combining this information with information from other major industry and service sectors that could be used as benchmarking references for the

metal sector, efforts were made to streamline the deployment and monitoring of the coordination rule.

Already two years earlier at the EMF Congress in Prague, steps had been taken to coordinate on-going collective bargaining rounds in different countries and move away from the guideline-driven collective bargaining strategy towards a more pro-active strategy with the aim of launching in effect European collective bargaining by using same demands everywhere. This was further enhanced at the Rome Conference where the trade unions pledged to defend the sectoral level of collective bargaining and reaffirmed their intention to agree on EFAs with the aim of protecting the European Social Model and the welfare state from the neo-liberal pressure that was gaining ground. In the aftermath of the introduction of Single Currency it became increasingly clear that the employers were aiming for improving competitiveness in the labor market. With the support of the EU Commission and national governments at the time, they wanted to have more de-regulation in the labor market alongside wage restraints and increased working time. A resolution was adopted unanimously at the Rome Conference, advocating that the EMF should promote "decent jobs with full security" and "reject any kind of flexibility that would lead to precariousness".

Another significant issue that had been on the agenda for a long time was vocational training that had already been included in the collective bargaining rounds in most countries in the early 2000s and it had been discussed with the European employers' organization CEEMET over the years as part of the EU's Lisbon Strategy. Therefore, it was chosen by the EMF Executive Committee as the First Common Demand[21] to be included in all of the upcoming national sectoral- and company-level collective bargaining rounds. To monitor this, a questionnaire was initiated to all EMF affiliates to submit information to the Eucob@n on how they would address the first Common Demand during their upcoming collective bargaining rounds and how this would be disseminated with their own members, the employers' representatives and even the general public. The aim was to form an overview of the situation in different countries as it had become a key issue during the collective bargaining rounds in different countries.

The financial crisis that began to take its toll in 2008 was the focal point in the preparation for the Collective Bargaining Conference to be held in 2009 in Madrid. For this Conference, a report on

[21] "Common Demand for the individual right to training, guaranteed by collective agreements."

developments in collective bargaining throughout Europe was prepared. Also, encouraged by the success of the First Common Demand, there was a growing interest to launch a follow up to tackle the issue of precarious employment. The EMF had already launched a global campaign a year earlier jointly with the International Metalworkers' Federation (IMF) to fight against precarious employment and based on that the aforementioned SWP of the EMF's Collective Bargaining Policy Committee together with the newly-established ad hoc White-Collars Group drew a list of potential action points to be as a basis for the Second Common Demand that was launched at the Collective Bargaining Conference in Madrid, stating five goals:

1) to use collective bargaining as an instrument by which decent work can be promoted and precariousness reduced;
2) to formulate new policies aimed at creating decent work, with greater job security;
3) to promote EMF policies in areas such as temporary agency work and social policy in order to improve the living and working conditions of workers;
4) to monitor changes in the labour market and types of employment contracts;
5) to ensure equal treatment for precarious workers through collective agreements.

The final EMF Congress took place in Duisburg in 2011 as a vote was taken in favor of the creation of a new ETUF, following a merger of the EMF, the European Mine, Chemical and Energy Workers' Federation (EMCEF), and the European Trade Union Federation - Textiles, Clothing and Leather (ETUF-TCL). The three ETUFs had already been cooperating in various ways and the creation of IndustriAll was seen as a logical final step in this process in hope of effective deployment of resources and even greater representativeness vis-à-vis European Commission and the employers. At the Duisburg Conference the main resolutions dealt with promoting social and labor rights as part of the new global economic order, social and economic governance and a sustainable industrial policy with the aim of targeting full employment.

3.7.4. EU Enlargement and New Challenges

The new EU member states can be divided into three groups based on their industrial relations systems (Kohl & Platzer 2004) that reflect the three basic variants of capitalist political economy found among these countries (Bohle & Greskovits 2012). The first group includes the Baltic countries that underwent a radical reorientation towards market-oriented industrial relations and especially in the case of Estonia LME form of capitalism (e.g. Hancké 2010; Norkus 2008) characterized by low controls on capital, open markets and reduced provisions for social welfare. Many new SMEs were founded and industrial relations became decentralized to accommodate this.

The second group consists of the Visegrád countries that have a long tradition of industrialization and where the governments play a key role in enforcing industrial policy while at the same time they have managed to retain their social welfare regimes. These countries have had trade links with especially central European countries throughout their history and have used FDI to stimulate their export industries. Slovenia forms the third group with its unique characteristics of successfully mixing competitive industries and neocorporatist social inclusion. Being initially a socialist market economy as part of the former Yugoslavia with self-managed enterprises and a pluralist state structure it managed to make a complete shift and adopt the CME form of capitalism.

The change trade unions from the CEE have endured has been enormous due to the almost complete change from being corporations of state-owned enterprises that focused on social matters to being tasked with collective bargaining vis-a-vis profit-oriented management and employers' representatives without any previous experience. Market economy with its by-products such as competition, privatization, threats of job cuts and emergence of start-ups characterized the early part of the 1990s, leading the trade unions to need to establish social dialogue with national governments and employers' organizations in order to renegotiate wages and improve working conditions. Trade unions from the CEE can roughly be divided into the old established state-sponsored trade unions with a socialist legacy and big membership, but limited interest to engage at the European level and the new free trade unions founded after the fall of socialism that are more pro-Europe but lacking in resources to represent their interests at the European arena (Kohl & Platzer 2004; Pleines 2008). Adding to this the internal competition between trade unions in many countries instead of a willingness to cooperate has thus weakened the labor movement as a whole.

Prior to the EU enlargement in 2004 there were fears of mass migration of both posted and permanent workers to the EU15 because of inequalities in living standards and disparities in unemployment to that would threaten to undermine wage growth with the creation of low-wage sector. On the other hand, there was fear that lower labor costs could lead to widespread wage-dumping in form of relocation. These prognoses were deemed unlikely at the time (e.g. Marginson 2006), since it was thought that lower productivity would offset these differences. However, Boeri & Brücker 2001 showed that compared with the wage gap, real unit-labor costs were marginal. Instead others (e.g. Vaughan-Whitehead 2003) were seeing labor-hostile management strategies and potentially divergent workers' interests as a greater threat that could jeopardize the solidarity between trade unions from the EU15 and the CEE. The potential lack of solidarity was a real threat

for organized labor according to Telljohann (2005), because (organized) workers in many industrial sectors in the CEE were to profit directly from relocations and FDI. Hence, they had an incentive to accept lower wages and inferior working conditions, while at the same time workers in many industries in the EU15 were at risk of losing their jobs as a result of this. The first studies conducted after the enlargement showed however that the relocation of production i.e. so called "Drang nach Osten" was relatively rare (Galgóczi et al. 2006), but that the mere threat of wage-dumping and shift of FDI from the EU15 to the CEE in the light of some major cases and the public attention they attracted were enough for the trade unions from the EU15 to be concerned (Bohle 2009). One of the cases that received wide attention was Nokia closing its plant in Bochum in Germany and moving the operations to Cluj in Romania without informing and consulting its employees in line with the EU Directive on European Works Councils and German law (Hüsson 2008).

Already in 1991, before there were serious negotiations on the EU enlargement, the first trade unions from the CEE were given an observer status at the EMF in order to show solidarity towards them and to integrate them to the European level of industrial relations along with the Western trade unions. Despite the measures from the EMF to promote trust, there was deep-lying suspicion and mistrust throughout the 1990s between trade unions from the EU15 and the CEE on issues like relocation and greenfield FDI, which manifested itself in the form of trade unions from EU15 refusing to pass over information to the trade unions in the new CEE plants. Furthermore, many EWCs of Western companies declined to accept representatives from plants in the new member states, adding to the mistrust at the company level (Tholen 2012). Eventually, it became clear to the EMF that the only solution was to introduce centrally coordinated procedures between trade unions from the EU15 and CEE, not only to help with the information transfer but also with institution-building. One of the key instruments to support trade unions from the CEE was to provide their officers and workers' representatives at the plant level training opportunities through bilateral or transnational projects. The goal has been to promote and develop bilateral co-operation and partnerships between trade unions from the CEE and the EU15[22]. At the beginning, one major obstacle was the fragmented field of industrial relations in many of the CEE countries, making it very hard for the trade unions from the EU15 to find the right partners with whom to establish

[22] Later this has been developed to include even trade unions from the the Baltic Countries and South East Europe.

bilateral contacts[23]. This had its roots partially in trade unions' the lack of human and financial resources as well as experience to participate in European level work.

For a long time, trade unions' collaboration at the European level was a Western project moving parallel with the deepening European integration (Lado & Vaughan-Whitehead 2003; Langewiesche 2002), witnessed by the fact that solidarity among Eastern and Western trade unions was non-existent before the EU enlargement (Meardi 1996). Out of the trade unions in the CEE the Polish NSZZ Solidarność (POL2) was prior to EU enlargement in a favorable position because of its pioneering role in the free trade union movement that had begun to take over Poland in early 1980s and the international contacts it had established even before the breakdown of the Communist regime (Krzywdziński 2010; Einbock & Lis 2007; Dimitrova & Petkov 2005). Even before the EMF Congress in Prague in 2003 there was a will to start searching for solutions to decrease this mistrust and to give a clear signal to the trade unions from the CEE by welcoming them to the EMF and inviting them to enjoy closer cooperation with their compatriots. One tangible measure to integrate the affiliates from the CEE into the main EMF policy areas was by supporting and subsidizing their participation in the different organs of the EMF, like the Policy Committees and Sectoral Committees and their SWPs, where the preparatory work was being done. Another one was to start hiring new officers from with deeper knowledge of the CEE to the EMF secretariat so that their perspectives could be understood better.

3.7.5. After the Enlargement: Outside Looking in?

Just like the EMF had done with the trade unions from the CEE in the early 1990s to broaden its membership, metalworkers' trade unions from SEE were also given the opportunity to join as observers 2003-2007, even as their countries still had an EU candidate status. This was done to encourage the trade unions from the candidate countries (then Bulgaria, Croatia, Macedonia, Romania and Turkey) to modernize their trade union structure and encouraging them to introduce negotiations on the European social model (Wannöffel et al. 2007). In 2006, together with the DGB the EMF launched a one-year project to strengthen the Social Dialogue in SEE[24]. Supported by the European Commission it was primarily aimed at trade unions and workers' representatives from the acceding and candidate countries, with the goal of providing better knowledge of the metal industry

[23] A prime example of this was the constant balancing out between the Polish OPZZ and NSZZ Solidarność, obstructing the building of formal contacts with the German IG Metall.
[24] Strengthening of the Social Dialogue in South-Eastern Europe through Corporate Social Responsibility instruments.

in the region, particularly as regards to structure and recent developments in FDI flows, but also in regards to industrial relations and working conditions in MNCs. The aim was to raise awareness among trade unions concerning the European Social Dialogue and, hence, improve cooperation between European and national social partners through assistance with capacity building. Likewise, strengthening industrial relations institutions at the national level was deemed important in the quest to establish well-functioning and autonomous national collective bargaining structures in countries where these had not existed before. While the EU enlargement increased the number of actors participating in the Eucob@n system to include trade unions from the CEE, Bulgaria, Romania, Turkey and countries from ex-Yugoslavia stayed outside the scope of the EMF's reporting system since social partners at the sector level were still too weak and collective bargaining was mainly conducted at the company level.

Before it was possible to include the SEE countries in the Eucob@n, an effort was made to intensify regional cooperation and establish bilateral projects, with the aim of these leading to regional collective bargaining networks. With regards to the company policy and EWC coordination, the aim was to extent the existing EWCs to include even representatives from the SEE; something that had been tried already a decade earlier with the CEE countries with indifferent results (EMF 2007). Since the sectoral level of industrial relations was still under-developed in the SEE countries, the EMF decided to increase its involvement at the company level[25]. Already in the early stages it was understood that in order to engage the affiliates from the SEE in the European level, encouraging and facilitating their participation in the EMF meetings on a regular basis would be needed. Also concentrating on the special social dialogue committees within certain sub-sectors like shipbuilding and steel was deemed a necessity.

Therefore, the EMF launched in 2003 a South East European Forum (SEEF) with the aim of easing the future EU enlargement in this region by accompanying measures for the forthcoming waves of enlargement and the consequences of this processes for the metal workers. The biggest obstacle was that in some countries in the Balkans trade unions either did not have a social partner on the employer side to negotiate with or there were employers who did not respect basic labor rights by recognizing the trade unions as social partners. Additionally, governments in some of the countries were trying to use the implementation of the acquis communautaire as an excuse to withdraw from

[25] Cases of US Steel in Serbia (Industri Sindikat Srbije 2006) or resolution of shipyard conflicts in Croatia are among the tangible results from the EMF activities within the SEE region.

the labor rights agreements, while some foreign MNCs declined to incorporate good practice and failed to negotiate in good faith with trade unions. Therefore, a strategy was drawn within the SEEF to help the trade unions at home by strengthening their capacity to participate in social dialogue and collective bargaining foremost through cross-border cooperation between trade unions in the SEE region with the aim of helping them to get engaged at the European level too. One key aspect in this was to contribute to the EMF Company Policy and Industrial Policy Committees work of trying to help companies to bring in FDI into the region by providing them with analysis of economic developments in the metal industry in the region.

As the situation has become slighty better in the CEE, trade unions in the SEE are still faced with a problem of not having a natural counterpart on the employer side to engage in social partnership with. Because many of the biggest MNCs in the metal sector in SEE are foreign, with American and Chinese steel companies taking over the former state-owned ones at the turn of the millennium. Similarly, there has been a significant and continuous worsening both of industrial relations structure that is reflecting both the inherited over-employment that has meant lower productivity as well as almost uncontrolled de-industrialization and employers' strategies to weaken the trade unions that has opened the way for employers not to respect the basic labor rights. Some MNCs as a consequence of the chosen transition strategy have not paid enough attention to fostering employment and optimizing the speed of restructuring. However, there are also examples of some MNCs and employers' organizations having demonstrated responsible behavior and even willingness to implement good practice.

4 SOCIAL NETWORK ANALYSIS

Social network analysis concentrates on the process of social structures by connecting nodes (individuals, organizations, themes etc.) through ties (relationships, interactions, cognition etc.). With its roots in sociological structuralism that emphasizes the social actors' behavior, opinions and attitudes, social network analysis provides tools for analyzing social cohesion, brokerage and exchange. Among the advantages of networks are the competitive and cooperative relations that enable efficient implementation of planned organizational change (Tenkasi & Chesmore 2003) and mobilization for collective action by social movements (Diani 2003). Networks can be used to identify shared interests and identities by channeling information and resources to particular structural location. Shared mechanisms through which social relations affect social entities are needed to identify contingent conditions within particular empirical contexts.

The groundwork for social network analysis was laid down in the 1930s by the Austrian psychologist Jacob Moreno, who started to analyze how social relations and group dynamics affected individual behavior (Moreno 1932). About two decades later in the 1950s organization studies adopted the network analysis (e.g. Bavelas 1950, Leavitt 1951) while soon later also political scientist became interested in it when studying power relations in cities and local communities (Hunter 1953; Dahl 1961). However, it was not until the 1970s, when several network analyses of local power structures were published (e.g. Laumann & Pappi 1976; Galaskiewicz 1979).

There are two perspectives to social network analysis: the socio-centered and ego-centered. The former deals with overall network structure by looking for patterns of ties that indicate cohesive social groups, central actors that may be paramount to the integration of the social network and asymmetries that may reflect social prestige or social stratification. Some of the most recent advances socio-centered analysis have come in form of blockmodeling. Ego-centered perspective focuses on the composition of local network structure by investigating, how actors influence each other through their network ties (social influence model) and whether they adjust their ties to the characteristics of their peers and to their ties with them (social selection model).

Recent trends in network analysis include spatial social network analysis (e.g. Wineman et al. 2009), aiming to generate spatial boundaries that create relations of accessibility and visibility by integrating or segregating behaviors, activities, and people. Alongside spatial dimension to network analysis, also temporal dimension has gained ground through the use of longitudinal network

datasets, enabling conceptualizing and investigating network change processes (Faust & Skvorenz 2002; Snijders et al. 2007). Related to this, dynamic network analysis enables the inclusion of larger, multi-mode and multi-plex networks as well as temporal social networks. By using snapshots of the same network from different intervals, evolution of the network can be observed and analyzed (e.g. Carley et al. 2007). With the help of statistical tools data from multiple networks can be used concurrently, enabling agent-based simulation and simulation through latent space models (Carley et al. 2009). The main feature of dynamic networks is connecting actors with activities and locations (Ibid.) and hence forming a meta-network. Through simulations it is possible to explore how networks evolve and what impact interventions have on them. Distinguishing dynamic networks from traditional social networks, the links in the network represent the probability that there is a link instead of using binary values.

4.1 Archeology of Networks: Relations, Attributes and Structure

This chapter will present the fundamental concepts and methods of social network analysis that will be used in the empirical analysis later. At the core of social networks are two indispensable elements: actors and relations. Relations are defined as directed or undirected contacts between actors. When they are direct, one actor initiates the contact whereas an undirected relation is based on the reciprocal communication between the two actors. As can be seen from this definition, a relation is a joint dyadic property that exists only as long as both actors maintain it, meaning that individual actors are constrained by their relations to others, but at the same time their relations can work as resources that can be used to advance their goals (Burt 1992). However, focusing on relations between actors does not have to mean that the individual properties of actors are not important or that they should be left aside in the analysis.

Network attributes describe the properties of network elements that control their ability to manouvre within the network. The most obvious network attribute is its size i.e. the number of actors in a network. There is usually a positive relationship between network size and function, meaning that the more actors there are, the more possibilities there are for them to form ties with one another. However, actors may find it difficult to engage in deliberative interaction in large networks, since they are faced with many possibilities and uncertainty over each other's preferences. Some case studies (e.g. Craps 2003) have implied through empirical experiments that a group of 8-15 actors is ideal for deliberation. However, Everett & Borgatti (1999) indicated that deliberation can also take place in medium-sized groups within a larger network if they form cohesive subgroups. Still, for sustaining a network size matters since larger networks are likely to

have stronger resilience because of their ability to sustain their functionality despite some members leaving, although they too might find it difficult to replace actors with similar ones. Apart from network size, attitudes, opinions and actors' behavior vis-à-vis other actors, organizations or groups are the most common attributes of social networks. The best way to treat attribute data is through variable analysis, where attributes are measured as values of particular variables.

Much of the research in social sciences concentrates on measuring and analyzing actors' attributes, whether this is done through surveys or experimental data collection. On the other hand, the key to understanding theoretical and methodological background of social network analysis is to identify, measure and test selected hypotheses about the structural forms and relational contents within the network. This distinctive structural-relational emphasis sets network analysis apart from the individualistic, variable-centric traditions of social science. Although attributes and relations are conceptually distinct approaches, they are not mutually exclusive options, since utility-maximizing rational calculations or reductional motivation based on causality usually consider only the individual actors' attributes, while at the same time omitting the broader interaction context within which social actors are embedded in. Meanwhile, the strength of network analysis is that it draws from the assumption that actors participate in social systems, where they are connected to each other and where their relations influence the behavior of other actors.

As discussed above, the emphasis of network perspective is on structural relations and regularities within the patterns of relations among entities (White et al. 1976). These entities may be individuals, small groups, organizations or even institutions which interact through regular patterns of relations within social contexts that influence their perceptions, beliefs, decisions and actions. Hence, the purpose of social network analysis is to measure these structural relations by explaining their occurrence and the consequences they have.

Social network analysis relies on three underlying assumptions about patterned relations (Knoke & Yang 2008). First, analyzing structural relations is often applied to understand observed behavior instead of analyzing the structure itself as many of the attributes remain constant across all the social contexts that actors find themselves in. In contrast, particular structural relations only exist within specific tempo-spatial dimensions and either disappear or get morphed into others when the dimensional attributes change. This means that the structural-relational approach to social network analysis is in sharp contrast with the premises of rational choice analysis or social identity (Emirbayer 1997).

Secondly, perceptions, beliefs and actions are affected by networks through structural mechanisms that can manifest themselves either through direct contacts and more intensive interactions in order to wield influence over others or be subject to it themselves. Alternatively, intermediaries can also be used to form indirect relations and to help reveal new opportunities and access to useful resources. Therefore, relational structures enable complex pathways for assisting or hindering information flows while at the same time being crucial for sustaining cohesion and solidarity within a group (Knoke & Yang 2008). However, they may also reinforce prejudice and conflicts with outsiders leading to unwanted results and loss of network effectiveness.

Finally, network analysis emphasizes structural relations as dynamic processes, meaning that networks are not static structures, but instead continually changing through interactions between the entities. By using their knowledge about the network, these entities can alter relational structures of the network intentionally and unintentionally. Kenis & Knoke (2002) demonstrated how communication structures affect subsequent choices of strategic alliances by altering the information flows, which creates further opportunities or constraints for future interorganizational alliances. These dynamics relate to the more general micro-to-macro problem in the theory of social action (Coleman 1986) by looking at the large-scale systemic transformation that emerges out of the actors' combined preferences and actions. Network analysis can deal simultaneously with both the structures and the entities that make of them, providing conceptual and methodological tools to enable linking together structural alterations at the macro level with choices at the micro-level[26].

[26] Yet, cross level dynamic processes are still more a desired goal than a prevalent practice in contemporary empirical network analysis (Emirbayer 1997)

4.2 Network Properties and Levels of Network Analysis

Network analysis can be divided into three different levels: actor level, subgroup level and network level, with different measurements used for each of these. Before these levels of analysis are tested in the empirical chapters of this study, a short overview of network properties is required (Table 11). The properties that going to be applied in the empirical part of this study will be discussed more thoroughly below.

Table 11. Network Properties

Property	Explanation
Transactional content	**Four types of exchange:** 1) Expression or affect 2) Influence attempt 3) Exchange of information 4) Exchange of goods or services
Nature of the links 1) Intensity 2) Flexiprocity 3) Clarity of explanations 4) Multiplexity	 1) Strength of relations between actors 2) Degree of symmetrical relation 3) Degree of clearly defined expectations about actors' behavior in the relation 4) Degree to which pairs of actors are linked by multiple relations
Structural Characteristics: 1) Size 2) Density 3) Cohesion 4) Clustering 5) Closure 6) Structural hole 7) Centrality 8) Liaison 9) Isolate	 1) Number of network members 2) Number of actual links in relation to possible links in a network 3) Minimal number of actors in a network need to be removed to disconnect the group 4) Number of dense regions in a network 5) Dense clusters that are highly integrated either directly or indirectly 6) A gap between two actors with complementary resources or information 7) Degree of relations guided by formal hierarchy 8) Actor, which is not a member of a cluster, but links two or more clusters 9) Actor not connected with other actors in a network

Maybe the most often used network-level measurement is density, defined as the number of existing ties between actors in a network divided by the maximum possible number of ties. Usually network density also reflects the size of the network with larger networks being more likely to be less dense than smaller ones since quadratically growing number of possible relations makes it difficult for the network members to maintain so many ties to other network members (Scott 2000). Density indicates also, how easily information can be transmitted in a network. A number of studies have showed that in a less dense network, information can become skewed when the information chains get longer (e.g. Abrahamson & Rosenkopf 1997; Valente 2005). Similarly, deliberation is likelier to occur in a dense network although also counter arguments have been presented, starting from Granovetter's (1973) strength of weak ties theorem that allows different opinions to emerge. Gargiulo & Benassi (2000) showed, how the absence of structural holes in a network is perquisite for deliberation, disapproving with Burt (1992). On the other hand, dense and strongly cohesive networks are likely to have a weaker ability to adapt to fundamental restructuring of the network (Argyris 1976; Gargiulo & Benassi 2000) because they are likely to be introvert. Burt (1993) noted that high density is negatively related to performance, whereas high degree showed a positive relation. This implies a tension between the benefits of strong ties among a group of organizations that stimulate trust and strive for interdependence, leading to restrictions on organizational capacity to adaptation.

Drawing from the concept of connectedness, network cohesion is commonly referred to as a network-level property, indicating the extent to which actors are densely connected in a network to provide stability by reducing the transaction costs of communication while also fostering trust and norms as well as facilitating cooperation. A cohesive network improves the internal decision-making process and fosters effective conflict resolution mechanisms (e.g. Sandström & Carlsson 2008), while collaboration and resource exchange are more likely in a higher cohesive network than in a lower one. Higher cohesion is advantageous to generating higher performance of governance, however, a too cohesive network can also be disadvantageous because it obstructs formation of connection from outside the network and leads to homogenization of information and knowledge, preventing efficient use of resources (Bodin & Crona 2009). Cohesion can also be seen as a dyadic or relational property, referring to closeness of pairs of nodes with different levels of cohesiveness from close to distant or uninvolved (Moody & Coleman 2015).

While density measures the degree of network cohesion, centrality is one of the most common ways of deriving actor level results to describe actor's position in the network by using one of the

centrality measurements (degree centrality, closeness centrality, Bonacich's eigenvector centrality etc). Centrality discloses actors' involvement in network relations while also revealing the network structure (horizontal or vertical), hence, constituting an indicator of the distribution of power among the actors. The idea of centrality is to observe, whether the network has a clear central point or if it is more decentralized. In organizational networks, all the information can go through the network administrator or lead-organization, making it either a centralized network or freely among the all participants and hierarchical levels of the organization, making it decentralized (Scott 2000; Provan & Kenis 2008). Centrality measures potential importance, influence and prominence of an actor in a network, indicating the number and strength of ties. For instance, degree centrality is defined as the number of actors directly connected with each other in a network, whereas closeness centrality measures the shortest distances in the network graph. Bonacich's eigenvector centrality on the other hand looks also at the centralities of the other nodes to which a node is tied to in order to form a better view of the centrality. At the network level, often the most efficient organizational networks are the ones where the members share values and goals, combined with the central actors' strong opinion leadership, making it de facto a lead organization network. However, too centralized network structure can also be vulnerable to internal stratification because of its strong reliance on only a few actors with many connections (e.g. Knoke & Yang 2008), meaning that these networks can dismantle if an actor that is a strong opinion leader with a centralized position leaves the network (e.g. Nicolini & Ocenasek 1998). Information diffusion is typically easier in centralized networks (Crona & Bodin 2006), since a more centralized network allows information to flow more straightforward from a peripheral actor through centrally located actors to other more peripheral actors. On the other hand, decentralized networks are more dependent on bridging as there are not as many alternative ways to transmit the information (Knoke & Yang 2008). However, deliberation typically requires more decentralized networks, because conditions for deliberation are affected by high imbalance of power and hence big differences in actor centrality.

The third level of analysis falls between the actor level and the network level, concentrating on subgroups by analyzing inter- or intra-group or block characteristics of the network. Grouping of the actors into a subgroup or block can be performed a priori, based on background variables or hypotheses that constitute as important for this group. Alternatively, an a posteriori approach can be applied, where the network data itself is used in looking for empirical patterns in a relational dataset. By definition, a blockmodel is the partition of a sociomatrix, which is divided into two or more discrete subgroups i.e. blocks. Locating subgroups can be done using blockmodeling, where a matrix algebraic method is used for arranging network actors into jointly occupied, structurally

equivalent subgroups. Blocks are defined as being a square submatrix of structurally equivalent actors that possess similar or even identical relations or attributes with actors from the same blocks. Hence, data reduction technique to systematically search for relational patterns in network data by regrouping actors are called blockmodeling. The output consists of permuted density and image matrices by displaying the pattern of ties within and between the blocks (e.g. Knoke & Yang 2008).

The concept of social capital ties the three levels of network analysis through the concepts of closure and structural holes. Network closure deals with structures that are highly integrated either through direct connections within network members or indirectly through network coordinators (Burt 2000). A closed network structure promotes collaboration and helps to facilitate the creation of shared priorities and goals by establishing, upholding and maintaining the rules of the game (Sandström & Rova 2010). Network closure also affects access to information (Coleman 1990) as the actors are better informed about important developments, hence, stabilizing the network (e.g. Barker 1984), while also helping to maintain and building trust, whereas structural holes are useful for generating new ideas and approaches (Burt 2005). There are two different forms of network closure (Burt 2000): (1) cohesive networks or subgroups in which a most of the actors are directly connected to one another and (2) centralized networks in which most of the actors are indirectly connected to another through a central actor (network administrator or lead organization). Contrary to the network closure, structural holes emphasize the importance of members that have positioned themselves as bridges between otherwise unconnected members or subgroups by emphasizing the mobilization of diversified resources as a driver for improving performance (Burt 2000; Granovetter 1973). Related to structural holes, network heterogeneity is an empirical concept, referring to the connection between different subgroups such as organizations or sectors (Reagans & Zuckerman 2001) involved in extensive cross-border collaboration.

The concept of network heterogeneity connects social network analysis with institutional analysis as it sees networks as institutional entities by indicating the existence of “prescriptions” (Ostrom 2005) or “network administrators” (Provan & Kenis 2008) that are responsible for repetitive and structured interactions between the stakeholders. Furthermore, institutional structures enable the existence of more stable connections, rendering bridging ties essentially weaker (Granovetter 1973). Literature on social capital concentrates mostly on resources and tangible as well as intangible value they bring to producing common good. However, it can also be applied to inter-organizational network relations. According to Nahapiet (2008), in the study of inter-organizational relationships the key challenge is to explain why and how organizations connect effectively, work cooperatively

and coordinate their activities to achieve collaborative network competitiveness. In this sense, social capital helps to enhance collective capacity through collaborative practices by making possible the achievement of goals that would be unattainable without its existence.

4.3 Social Network Data

Normal quantitative social science data takes a rectangular form with the rows representing the cases and the columns representing of quantitative or qualitative values. Social network data on the other hand represents relations instead of values (although these relations can also be valued or dichotomized) with both the rows and columns being the cases and each cell describing a relationship between the actors. While there are some similarities between conventional data and network data, the latter focuses on structures that are made of connections with the actors being defined by their relations instead of their attributes (Hanneman & Riddle 2005). Hence, the biggest difference between conventional and network data is that the former deals with actors and attributes whereas the latter focuses on actors and relations.

This chapter will discuss different methods of gathering social network data, reliability and validity of the data and some of the problems that may arise when analyzing the data from defining network boundaries to different forms of bias and non-respondence.

4.3.1. Gathering Social Network Data

There are three different approaches to gather network data from network members: census survey, random sample and snowball sample (Doreain & Woodard 1992; Marshden 1990). These approaches are fundamentally different and cannot be used as surrogates for each other.

If the network has clear boundaries and is a closed one, a census survey approach can be used to ask representatives from each of the organizations in the network to identify their connections[27]. This approach has been used in most of the studies where the networks are large (e.g. Galaskiewicz 1979; Laumann & Knoke 1987; Pappi et al. 1995; Wasserman & Faust 1994). The problem with this approach is that the respondents may either knowingly or unknowingly exaggerate or underestimate the strength and amount of their network ties. This problem can be overcome at least a partially by a precise formulation of questions and if the respondents are deemed to know about

[27] This can be done using either a closed questionnaire, where the researcher has determined, which organiations belong to the network or an open one, where the data is gathered using the snowball method.

their organization's formal and informal connections. Yet, informant bias is probably impossible to negate completely, since that would require that all respondents answer in the same way. Still, the resulting network data matrix is likely to be more accurate than with any other approach. Data bias can be reduced further by controlling the respondents' answers utilizing answers from both members of the network tie and calculating the average of their answers (valued data) or by only including ties that both parties have confirmed (binary data).

If a network is constantly evolving and changing with actors joining and leaving, snowball approach can be applied as it enables identifying many of the actors that would otherwise be left unnoticed. Starting point for the snowball approach is identifying a focal actor or set of actors, which are then asked to identify their ties with other actors. During the next stage, the same procedure is being performed with the actors that have been identified and were not part of the focal actors. The process continues until no new actors or only few new actors are identified anymore. The advantages of snowball approach concern tracking down numerically small subsets of populations. Network boundaries are often relatively easy to identify, because of tendency for ties to be reciprocated. Limitations of snowball approach concern locating isolates and not missing any subsets of population that are not connected to the rest of the network. Therefore, the key for successful snowball approach is identifying the focal actors. In many cases, a starting point can be identified by a priori estimation of the formal structure of the network[28].

Random sample approach can be applied when the network is homogeneous or dense, although only undirected network can be studied this way. Conventional random sampling procedures can be used to gather egocentric network data and generalize results about the networks surrounding units to a large population (Robins 2015, 133-134). The use of such data to address questions at other levels of analysis is more involved. However, in many cases, random approach is not applicable because of representativeness problems.

[28] In community power studies (e.g. Smith 1980) and elite networks (e.g. Ruostetsaari 2006), the focal actors can be thought to be the chief executives of large organizations or political leaders of big parties with the network evolving around them. While such an approach will not be able to detect most of the community (including those who are "isolated" from the network core), the approach is very likely to capture the network quite well as it focuses on those actors that are deemed central for the network.

Apart from these three approaches, well-informed and impartial informants (usually network administrators) who are able assess the total structure of the network can be used to get an overall view of the network without being affected by informant bias (e.g. Torenvlied & van Schuur 1994; Marsden 2005). If the network is larger, it is also possible to use several informants and combine their responses together to produce a more reliable network data matrix. Although this approach eliminates informant bias, the informants may find it difficult to fully grasp the network relations in a large network comprising dozens of organizations, since this approach relies on limited cognitive capabilities of the respondents.

Table 12. Collection of Network Data

Method	Definition	Type of Network
Census	Inclusion of all actors matching research criteria	Closed
Random sample	Random sample of actors matching research needs	Closed or open
Snowball sample	Self-identification of network members about their ties with any other actors up to K waves	Open
Impartial informant	Use of well-informed and impartial informants (usually network administrators) who are able assess the total structure of the network	Usually closed

4.3.2. Reliability and Validity

Reliability refers to consistency of findings when the test is repeated. There are several ways to measure reliability, including inter-observer reliability, test-retest reliability and internal consistency reliability, which includes split-half reliability and Cronbach's Alpha (α) reliability (Neuman 2000). In social network research the most commonly used measurement is test-retest reliability, in which the informants are asked to nominate the network members they interact with. Then the same procedure (i.e. retest) is done at a later time with the same respondents, and hence by comparing the level of similarities between these two test rounds, it is possible to assess each respondent's reliability. It is worthwhile to acknowledge the time gap between the original test and the re-test, since in many cases the networks are fluent, meaning changing relationships over time. To tackle this problem, intervals can be shortened (Brewer 2000) to diminish the likelihood of genuine changes in the respondents' networks to make it less likely that the changes are confounded

with the reliability measure. Whereas there might be some problems with test-retest reliability since social phenomena cannot be assumed to remain constant over time, applying inter-rater reliability by using alternative ways to gather data might be able to tackle this problem better.

Traditional internal consistency measures cannot be used to estimate reliability, as shown by Calloway et al. (1993) who analyzed the reliability of complete self-reported interorganizational networks. In the study, reliability was estimated by using the percentage of mutually confirmed ties between respondents with the presumption that the relationships are strongly symmetrical. Similarly, the assumption of the presence of systematic error associated with the strength of relations was confirmed, since strong relations were more likely to be confirmed, but to a smaller extent than in interpersonal networks.

Validity refers to the degree of which a test measures what it is intended to measure within a given context and whether a particular operationalization adequately represents what is intended by including empirical and theoretical support for the interpretation. The notion of validity and accuracy of the measurement of social networks has shown that (Bernard et al. 1984) nearly half of the data obtained from respondents about ties is erroneous or incomplete. To tackle this problem, Freeman et al. (1987) suggested focusing on long-standing ties that are often reported with greater accuracy, thereby minimizing the consequences of inaccurately reporting more sporadic ties. Depending on whether the emphasis is placed on the stability of numerical measures, the content of ties or the symbolic dimension of relations, different measurements of validity from test validity to experimental validity can be used.

4.3.3. Inadequate Social Network Data and Different Forms of Bias

There can be many different reasons for inadequate social network data, varying from boundary specification problem (Laumann et al. 1983) to respondent bias (Bernard et al. 1984) and non-response in network surveys when some actors or links are missing from the dataset (Rumsey 1993). Reliability at the level of egocentric network density was examined by Marsden (1993), who showed, how unique alters are nested within an individual respondent when given only one measurement. Apart from these data-driven problems, also inadvertently introduced research design can cause problems for applying the data.

If data is being gathered on complete open networks or egocentric networks, a boundary or threshold defining the nodes and ties that are to be included and excluded needs to be applied.

Establishing network boundaries is vital because the number of possible ties increases exponentially as the number of nodes increases as the network becomes easily too large to handle. In a complete network, the boundary is usually specified by barriers of time, space or some form of strength, whereas in an egocentric network the boundaries are defined by how far the snowball sampling proceeds.

Laumann et al. (1983) demonstrated, how a boundary specification problem can occur, when numerous ties leading outside a network are being ignored, since they are deemed irrelevant to the research. It is possible to avoid this problem to a certain extent if the network is isolated or closed, although often a network closure is an artifact of research design based on an arbitrary definition of network boundaries (Kossinets 2006). Therefore, a non-probability sample that does not give all the individuals in the potential network population equal chances of being selected should be adopted help define inclusion rules (Laumann et al. 1983), although this might lead to dynamic changes in the network that only adds to the problem since estimating the error in the network data is almost impossible task strictly through research design (Kossinets 2006).

In general, using substantive or methodological scope, several patterns can be observed from a dataset and these patterns can be acknowledged by increasing substantive understanding of informants' reporting patterns by indicating their tendencies to observe their social environments. One way of measuring this is by applying cognitive social structures (CSS) slices to compare respondents perceived networks with true networks (Kumbasar et al. 1994; Krackhardt 1987). Hence, in effect CSS data deals with evaluation of each dyadic relationship in a network from an ego's perspective. Krackhardt (Ibid.) defined three different versions or slices: (1) single observer's slice of judgement, (2) locally aggregated structure of judgements by the two actors form a dyad and (3) consensus structure based on all judgements about a given dyad. Constructing individual CSS slices, Kumbasar et al. (1994) found that informants occupy more central locations in their slices than in the consensus structure, with more than half placing themselves first or second in degree centrality between the network members. This observed ego bias was replicated by Johnson & Orbach (2002) in their study on policy networks, showing that the bias was strongest among peripheral informants. Additionally, Kumbasar et al. (1994) also examined differences in reported relationships among adjacent alters and on ties involving actors not directly linked to the informants, noticing that adjacent alters had higher density, reciprocity and transitivity. Drawing from Freeman (1992a), this was explained by informants' cognitive pressure to report balanced local environments and their tendency to simplify observations of interaction by selectively creating

or neglecting relationships among alters. this indicates that informants have difficulties in recalling relationships in unbalanced structures.

Informant bias has received much attention especially since the 1980s (Bernard et al. 1984; Marsden 1990; Kumaar et al. 1993; Hughes & Preski 1997). It refers to a potential error that occurs when actors' subjective perspective gets mixed up with objective reality. As a consequence, network data may actually reflect only a cognitive network rather than actual interaction patterns (Kossinets 2006)[29]. Furthermore, Bernard et al. (1984) noticed that when asked to evaluate the scope of communication, the reliability of respondents' answers was even worse.

> "*People do not know, with any acceptable accuracy, to whom they talk over any given period of time…We are now convinced that cognitive data about communication cannot be used as proxy for the equivalent behavior"* (Bernard et al. 1984).

Still, later studies have shown that informants report stable patterns of relations that occur frequently over a longer time very accurately (Freeman et al. 1987). Yet, the level of analysis reflects the reliability of the data. There may be more unreliability on the actor level than on the subgroup or network level since the latter two are concerned about the structure of a network or sub-group more than about individual positions, thus decreasing the need to rely on the individual responses. In re-analyzing the datasets by Bernard et al. (1984), Romney & Weller (1984) came to conclusion that an individual informant's reliability, measured as the correlation between their recall at the group level, was positively associated with their own validity, measured as the extent to which their recall corresponds to the aggregated data. In addition, the informants with high reliability tend to have higher correlation with their self-reports than do informants with low reliability.

Expansiveness and attractiveness of an ego refer to over- or underestimation of informants' ties (Feld & Carter 2002), contributing directly to the variation in their measured in- or outdegree both quantitively and qualitatively as informants can exaggerate their ties with "attractive" or "influential" actors in the network, while downgrading their ties with "unattractive" or "uninfluential" actors to give a better picture of themselves. Ths means that the variation in measured indegree is going to be greater than the variation in actual degree of interaction.

[29] However, sometimes the cognitive network might also be what the research is looking for (e.g. in studying presumptions and assumptions on the network)

The accuracy of descriptive statistics depends on the nature of the network properties that are being described, as well as on the nature of the errors and bias in the data. Expansiveness and attractiveness bias can be approached by systematically investigating sources of bias that might exist between in- and outdegrees. It is often very difficult to observe these biases directly, since that would require objective accurate information about the actual network connections, something which is often unavailable. Therefore, it can be assumed that the ties that signal actual interactions and are therefore by necessity symmetric, have been confirmed by both parties. However, it is also possible to assume that the reported ties are obtained separately from each actor and do not necessarily have to be symmetric. As shown above, Bernard et al. (1984) noted that informants often give inaccurate information about their own interactions. Nonetheless, Marsden (1990) argued that using each informant's degree of interaction tends to be more accurate than the measuring just the individual ties, because the total number of ties are like indexes, composed of multiple measures.

There are two basic ways to measure the degree of interactions for an informant, both providing possibly different information. First, it is possible to measure indegree by calculating informants' self-reported interactions. Outdegree, on the other hand, tries to verify these by looking at the interactions reported by other informants. Both of these methods can be used when studying perceptions of ties, which are often asymmetric. When studying actual interactions (which are by nature symmetric) both degrees are indicators of the same phenomenon and should hence give a perfect correlation between the in- and outdegrees, indicating errorless data. Still, in practice, the correlation is usually considerably less than perfect, indicating errors in one or both degrees.

5 PRESENTATION OF THE EMPIRICAL DATA

In this chapter, methodological choices of the study will be discussed. These include the motivation for applying social network approach, explaining the underlying research design, describing the strategy for data collection and the clarification of how the data was analyzed to support the relevant literature. This study complements the dominant research on EU industrial relations that has focused especially on policies (e.g. Gollbach & Schulten 2000), wage-coordination (e.g. Marginson (2015), trade unions' roles in societies (e.g. Erne 2008) or Europeanization of industrial relations systems (e.g. Dølvik 1999) by looking at how actors interact with each other (Scharpf 2000a) within specific industry fields. The aim of this study is to investigate the relationships of actors involved in the policy formulation at the European sectoral-level by revealing the network structure of the field and actors' role in policy formulation with the help of it. By focusing on actors' connections in response to the policy formulation, this study highlights how actors engaged with, interpreted and appropriated the network dynamics in the European context.

Social network approach is applied in this study because of its ability to produce knowledge about little-explored structure of the institutional setting and the field, while also allowing in-depth description of procedures and actors' roles in a network. The aim of this study goes beyond contributing to academic knowledge by providing empirically-based insights on the trade union networks in the metal sector in Europe, with a greater goal being to understand the ruptures and tensions that are predominant in the field and the consequences of these for the larger institutional setting. The levels of analysis in this study are network, group and actor that together help highlight the microcosm of interaction between trade unions involved in the field.

5.1 Description of the Data and Scope of the Empirical Study

The selection of the organizations included in this study was made by choosing the trade unions that were affiliated to the EMF at the time of data collection in 2008-2009. Because the scope of this study was internal relations within a closed system (i.e. the EMF), a decision to use the census method was made i.e. to conduct a survey with respondents from each of the 72 organizations in 34 countries (Table 13)[30].

[30] For more on survey method in gathering network data, see e.g. Marsden (2011).

Table 13. EMF Affiliations by Country 2009

Country	No. of affiliates	Country	No. of affiliates	Country	No. of Affiliates
AUT	1	**HUN**	1	**POR**	2
BEL	5	**ICE**	1	**ROM**	3
BIH	1	**IRL**	1	**SER**	1
BUL	3	**ITA**	3	**SLO**	1
CRO	1	**KOS**	1	**SPA**	3
CYP	1	**LUX***	1 (2)	**SVK**	1
CZE	1	**MAL**	1	**SWE**	3
DEN	2	**MKD**	1	**SWI**	2
FIN	5	**MNE**	1	**TUR**	1
FRA	7	**NED**	4	**UK**	4
GER	1	**NOR**	4		
GRE	1	**POL**	2		

* The two Luxembourgese trade unions LCGB and OGB-L have a joint European secretariat, and are thus treated as one in this study, hence n = 71.

From each trade union, the person responsible for international (in particular European) matters was asked to fill out the questionnaire (Appendix 1). In most cases this was either the head of international affairs or the president of the trade union. Because the scope of the analysis consists of interorganizational contacts and sub-networks, every trade union was given only one copy of questionnaire to answer. Alongside the questionnaire, also official and unofficial documents from the EMF were used to get background information on the policies, processes and opinion exchanges behind the decisions. Finally, some informal expert interviews were conducted with the EMF secretariat staff and some selected trade union representatives (Appendix 2).

In order to increase the response rate and make sure that the respondents would be able to understand the questions correctly, the original English language questionnaire was translated into six other languages[31] and for most of the rest of the respondents a covering letter in their own language was included along the English questionnaire. Many of the questions included in the questionnaire were reproduced from somewhat similar research designs (e.g. Laumann & Knoke 1987; Pappi et al. 1995) to tackle among other issues concerning stable international relationships and communication between trade unions. It was decided that only international contacts would be included since the focus of the study was on a European network and the issues dealt with were predominantly European. If national contacts had been included, there would have been a risk of

[31] The five languages apart from English were Bulgarian, French, Polish, Romanian and Slovak.

mixing international matters with national ones that fall outside the scope of this network and thus the analysis would have had a wrong focus.

The social network data collected for the purpose of this study was processed and analyzed using UCINET (Borgatti et al. 2002) and NetMiner (Cyram 2015) with some additional statistical analysis being performed with R (R Development Core Team 2008). The data were imported into UCINET6 creating DL files. The data set consisted of a matrix of asymmetric data (i.e. the ties are directed and are not necessarily reciprocal), with each relationship given the value of 0 or 1, indicating the existence of absence of a relationship. The visualizations of the networks were carried out with Netdraw (Borgatti et al. 2002).

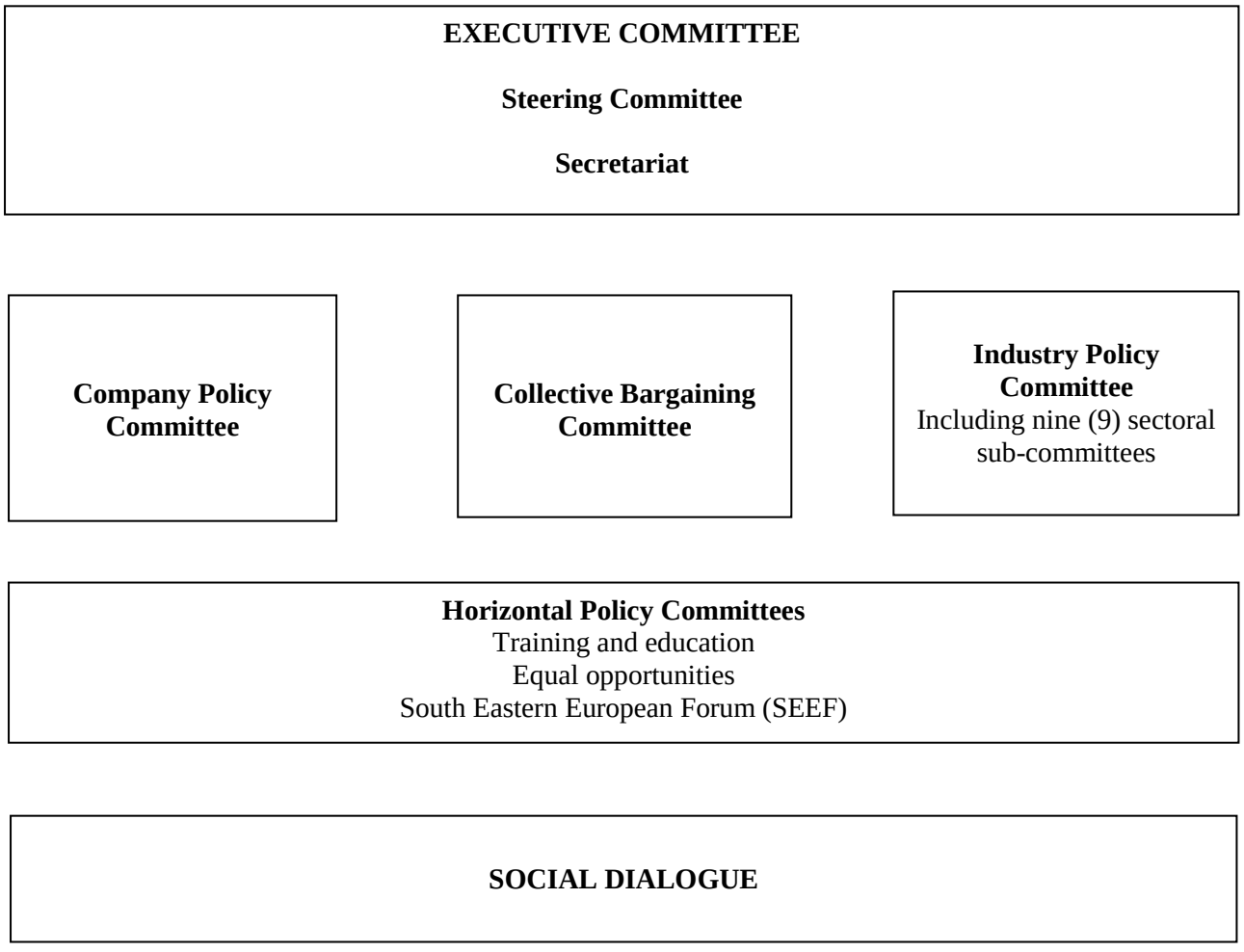
There is a possible ethical problem with gathering network data, which has been discussed by Borgatti & Molina (2005). They argued that the interviewee can give personal consent to data processing, but not necessarily on behalf of the whole organization. Also, obviously, this consent cannot be given on behalf of the other organizations the interviewee has named. Therefore, the representatives of trade unions were promised personal anonymity with the understanding that an informed reader will undoubtedly have no problem identifying some of the specific trade unions. Hence, a certain degree of anonymity is retained and no list of the interviewees or the organizations they represent is included.

Although the national trade unions are autonomous as far as their own internal trade union activities and role in the national political system is concerned, through their affiliation to an ETUF they pledge themselves to support and comply with the decisions and principles made at the ETUF decision-making bodies in certain matters; both domestic and international. In case of the EMF, the affiliates were expected to report on issues such as current collective bargaining processes and restructuring processes in their home countries to the EMF through the Eucob@n system in line with the aforementioned coordination principle. Trade unions were also encouraged to examine more advanced forms of cooperation within the framework of the EMF, making them part of a network, where everyone was at least in theory connected to each other through the institutionalized channels of the EMF.

In the EMF organizational chart (Figure 3) the highest statutory body was the Congress, where all the affiliates had representation. The Congress was responsible for deciding on elections, affiliations, financial issues, the Statutes, the basic policy guidelines and the Work Programme of

the EMF. Between the Congresses the Executive Committee, consisting of members from all affiliates was in charge of decision making. In 1999 a Steering Committee consisting of the EMF president and vice-president as well as representatives from the eight EMF regions was established to advice and support the secretariat in preparing and implementing the decisions taken by the Executive Committee. The three policy committees together with their SWPs were in charge of preparing and formulating the policy issues and coordinating the policy guidelines, political guidelines and company guidelines. The SWPs were tasked with preparing the Policy Committee meetings and formulating concrete proposals for joint positions at the instruction of the Policy Committees. Even though, every trade union affiliate had the right to participate in a SWPs, during the time of this study only 19 were involved (EMF website 2010). These were the most active affiliates with human and finaicial resources to participate. During the first decade of the 21st century the SWPs evolved into the most influential policy institutions of the EMF with their wide contact networks and regular meetings with all of the important EMF policy documents being first drafted and discussed between their members, thus, essentially creating a two-tier organizational model. Overlapping all of the EMF policies were the three Horizontal Policy Committees and Social Dialogue.

Figure 3. EMF Structure 2009



However, while the organizational structure of the EMF offered the affiliate trade unions a framework within which to engage in collaborative or coordinative action, also other forms of joint-action falling outside the sphere of the general EMF framework can be detected. These informal structures can be either imaginary or potential (similar or shared goals unknown to each other) or tangible (regional, bilateral, trilateral etc. collaboration or coordination). Especially detecting the former might be difficult, because the actors may not necessarily be aware of each other's primary policy preferences and strategic emphasis.

One way of solving this is to apply community detection method to 2-mode actor-issue networks. Communities or clusters are groups of actors that have a higher probability of being connected with each other than with members of other communities. Detecting these imaginary policy communities does not mean that they will ever materialize. This depends not only on the actors' knowledge of each other but also on the nuances of these policy preferences and the setting where the action takes place. The latter refers mostly to regional networks that began to take shape in the 1990s both through EMF and IG Metall initiatives on coordination of collective bargaining and were self-governed, although some minor coordination took place between some of these coordination networks. Additionally, after the EU enlargement, a temporary forum for the trade unions from Balkans, the SEEF, was formed with the help of the EMF to better integrate the affiliates from the Balkans in the "European trade union community".

5.2 How to Deal with Missing Data?

Compared to other forms of quantitative research, social network analysis is less forgiving of missing data as in order to fully detect especially the peripheral structures of the network near complete data is required. The main obstacles with analyzing a dataset with missing data is that already small changes in network structure through deletion or addition of ties can have a significant effect on the whole network (Krebs 2002). The scale of this bias is dependent on the network structure itself and the methods of data collection as well as analysis (Holland & Leinhard 1973), making unbiased evaluation of the data difficult. This can be best understood by looking at a census survey of an affiliation network (c.f. Kossinets 2006), where informants are asked to identify groups or cliques within the network to which they belong, and where no other sources of information are available. In this case, already one non-respondent means that all of its potential ties are being lost, affecting the overall observed network structure, hence, affecting the indices such as centrality (Borgatti et al. 2006). Likewise, including only unconfirmed ties (Galaskiewicz 1979; Laumann & Knoke 1987) or ties that have been confirmed by both parties (Pappi et al. 1995; Knoke

et al. 1996) in the analysis may lead to misleading empirical results and interpretation of the network derived from this.

Two different forms of missing data can be observed, (1) node level and (2) tie level. In the former, an informant does not provide information at all, becoming effectively a non-respondent, whereas tie-level missing data refers to an informant not reporting a particular tie. Tie-level missing data can be handled by standard imputation approaches (e.g. Ward et al. 2003), however, this is not applicable to node-level missing data. Therefore, the solutions are either to ignore the node entirely, thus, shrinking the data matrix or to impute the missing data by guessing based on the network structure what ties might exist. There are several ways to do this, including by modeling the dataset by applying an exponential random graph model (ERGM) before filling in the missing observations with maximum likelihood estimates based on the ERGM parameters (Wasserman & Robins 2004; Wang et al. 2009).

Normally, the method of reciprocal nominations (Stork & Richards 1992), where the informants are asked to name all the informants they interact with and where both parties need to confirm the tie, should be applied. However, when there is data missing, a better way is to apply the reconstruction method (e.g. Stork & Richards (1992), where a tie exists if a respondent nominates a non-respondent. However, this method is not universally applicable as it does not enable directing the ties, meaning that the research questions need to be taken into consideration. The biggest downside of the reconstruction method is that the ties between non-respondents remain undetected. This may not be a problem if the ties are missing randomly and there not too many of them, since imputation approach can be used. However, if all of the ties for a potential central member of the network are missing, evaluation becomes very difficult.

There have been attempts to examine the robustness of centrality measures when the data is incomplete or inaccurate (e.g. Marsden 1993; Costenbader & Valente 2003). Although, a 100 % response rate should always be targeted, already a 70-80 % response rate is usually considered acceptable when using samples and around 50 % when targeting the whole population (Wasserman & Faust 1994; Kossinets 2006). The data used in this study covered 71 trade unions from 34 countries. If all 71 trade unions had returned their questionnaires, the data matrix would have

contained 4970 (71 x 70) descriptions of 2485 (71 x 70 / 2) possible ties[32] since every potential tie requires confirmation from both parties. Of the 71 trade unions, 41 completed their questionnaires giving a response rate of 57,7 %. This means that there are 820 descriptions (41 x 40 / 2) of possible ties. There are also 1230 (41 x 30) possible ties between respondents and non-respondents and no information on 435 (30 x 29 / 2) possible ties between pairs of non-respondents. Therefore, with 57,7 % response rate, there is perfect data for only 33,0 % of the possible ties in the network, partial data (one respondent confirmed) for 49,5 % of the possible ties and no data 17,5 % of the possible ties.

In the case of missing data, the most important question is whether the data missing at random or if it shows structural holes, meaning whether the data is missing only from certain regions/subgroups etc? As can be seen from Table 14, most of the missing responses apart from Spain were from the small trade unions and trade unions from small countries, mostly in the SEE. While this will impact the analysis of the overall network structure and make it difficult to observe some regional clusters, most of the biggest trade unions from the biggest countries were among the respondents, meaning that an a priori assumption can be made that they also form the core of the overall network. Even though all ties were treated in a binary fashion, node attributes mean that some are more essential for the network analysis than others. Also, since the scope of this study is international trade union networks and, hence, only international ties were included in the analysis, a decision was made to include possible ties that have been confirmed by one or both parties. Relaxing the reciprocal rule means that even the ties of Spanish trade unions can be detected to some degree.

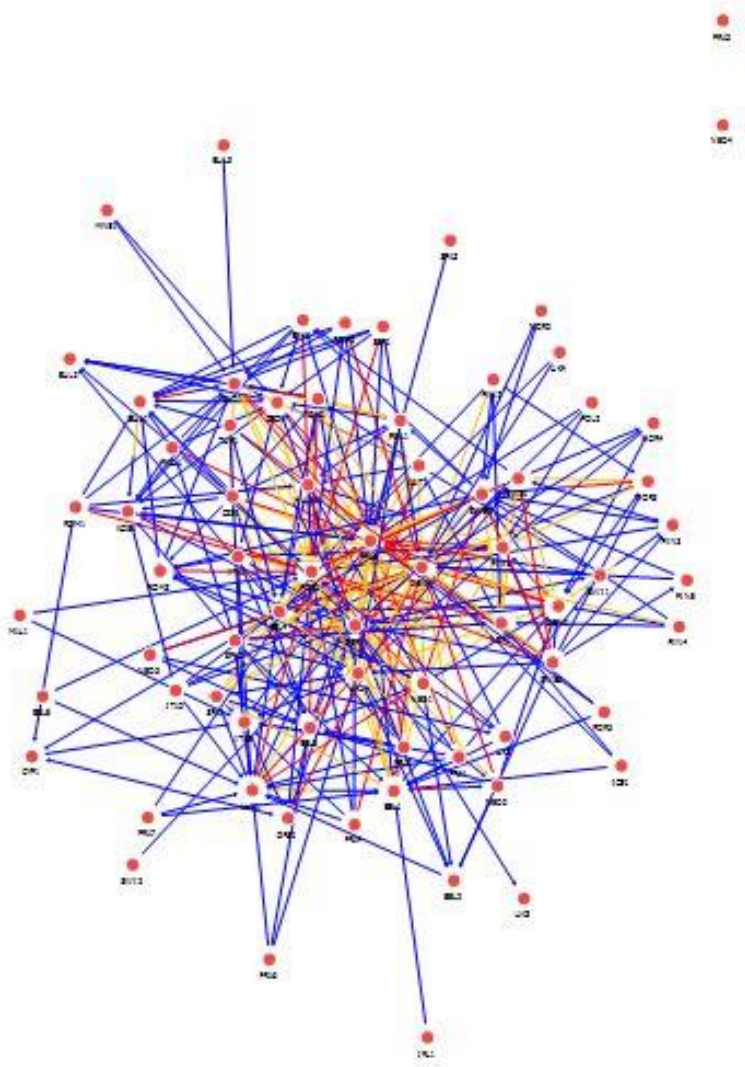
[32] Possible tie refers here to existance or non-existance of a tie that has been confirmed.

Table 14. Responses per Country

Country	No. of affiliates (respondents)	Country	No. of affiliates (respondents)	Country	No. of Affiliates (respondents)
AUT	1 (0)	**HUN**	1 (1)	**POR**	2 (1)
BEL	5 (4)	**ICE**	1 (0)	**ROM**	3 (1)
BIH	1 (0)	**IRL**	1 (0)	**SER**	1 (0)
BUL	3 (2)	**ITA**	3 (1)	**SLO**	1 (1)
CRO	1 (1)	**KOS**	1 (1)	**SPA**	3 (0)
CYP	1 (1)	**LUX**	2 (2)	**SVK**	1 (1)
CZE	1 (1)	**MAL**	1 (0)	**SWE**	3 (2)
DEN	2 (2)	**MKD**	1 (0)	**SWI**	2 (1)
FIN	5 (5)	**MNE**	1 (0)	**TUR**	1 (0)
FRA	7 (3)	**NED**	4 (1)	**UK**	4 (3)
GER	1 (1)	**NOR**	4 (3)		
GRE	1 (1)	**POL**	2 (1)		

It is also possible to perform statistical modelling based on the network structure to estimate the existence of missing ties. If the missing data is not excessive, it can be dealt with at the tie level by standard imputation approaches (Ward et al. 2003). However, the missing node-level data is more problematic. There are two different strategies that can be used, (1) either to omit the node from the analysis, meaning that the original data matrix will shrink or (2) to impute the missing data that can be done in several different ways. These include modeling the dataset by fitting an ERGM, or as it is also known, p* models (e.g. Frank & Strauss 1986; Pattison & Wasserman 1999; Robins et al. 2004). The advantages of ERGM include its capability of approximating a maximum likelihood (ML) estimator for an ERGM given a network dataset. By simulating new network datasets from a fitted ERGM using Markov chain Monte Carlo (MCMC) it is possible to assess, how good a fitted ERGM is at capturing characteristics of a particular network dataset. Performing an ERGM (P*), Figure 4 and Table 15 show the estimates of ties and non-ties.

Figure 4. ERGM (P*) Spring Map



BLUE = Successful estimate
YELLOW = Faulty guess
RED = Missing edge

Table 15. Observed and Predicted Ties

	Predicted (0)	**Predicted (1)**	**TOTAL**
Observed (0)	4540	56	4596
Observed (1)	236	138	374
TOTAL	4776	194	4970

Another estimation method is the pseudo-likelihood (PL) that can be applied through standard logistic regression procedures (c.f. Strauss & Ikeda 1990) with each pair representing a case and the relation between them being predicted by applying statistics associated with each parameter. Therefore, each statistic describes the number of configurations that are being pertained to the parameter that treats the relation as if it would be observed. While all logistic regression outputs produce standard errors and deviance statistic when measuring a fit, standard errors in PL estimation have shown to be unreliable and too small, resulting in false significance (e.g. Van Duijn et al. 2009; Snijders 2002). Yet, they still offer a rough indicator of the scale. Instead, standard logistic regression models for independent observations preferably use the χ^2 deviance.

Based on Robins et al. (2004), in non-distributional heuristic that is based on the PL deviance as a measure of fit, parameters that are not significant do not affect model interpretation if they are being removed. Thus, a parameter can be removed from the model if it results in the change of deviance that is below -2N log (1 – δ), with N being the number of cases (or pairs in a binary network) and δ being the acceptable level of proportionality reflecting predicted probabilities (δ1 = 0,001 or δ2 = 0,005). Applying this approach enables simplifying models by removing parameters or simply to indicate, which parameters are not important for predictive modeling.

Of the two δ's tested, the smaller (δ1 = 9,94) offers a more rigorous criterion and is therefore used here. Table 16 shows that the strongest effect is for two-paths across the network (τ13 estimate), indicating that those paths are closed into transitivity triads (τ15). Transitivity of a relation means that there is a tie from *i* to *j*, *j* to *k* and from *k* to *i*, thus forming a full triad. Transitivity can be measured using the global transitivity index (i.e. clustering index), which gets a value between 0 and 1. For random graphs the expected value of the index is close to the density of the graph, while for actual social networks values between 0,3 and 0,6 are usual (Snijders 2008). The transitivity index is defined as a ratio: $\text{transitivity index} = \frac{\#\text{ transitivity dyads}}{\#\text{ potential transitivity dyads}}$, where # means the number of elements in the set. The model also shows a slightly positive τ12 estimate, suggesting variation in expansiveness. This means that there are likely to be members in the network with a relatively high outdegree.

Table 16. Model PL Estimates for EMF Network (10 iterations)

Parameter	Estimates	Std. err.	PLWald	p(df=1.0)	Exp(b)	Counts
τ 1 : i -> j	-4.732	0.205	532.538	0	0.009	370.000
τ 2 : i <-> j	3.434	0.479	51.333	0	30.985	110.000
τ 3 : j <- i -> k	0.112	0.023	23.039	0	1.119	2800.000
τ 4 : j -> i <- k	0.117	0.010	142.971	0	1.124	6400.000
τ 5 : j -> i -> k	-0.031	0.018	2.920	0.087	0.970	5474.000
τ 6 : i -> j -> k <- i	0.205	0.051	16.318	0	1.227	2967.000
τ 7 : i -> j -> k -> i	-7.971	9.772	0.665	0.415	0.000	447.000
τ 8 : i <- j <-> k	-0.035	0.051	0.494	0.482	0.965	2664.000
τ 9 : i -> j <-> k	-0.065	0.030	4.671	0.031	0.937	4776.000
τ 10: i <-> j <-> k	-0.001	0.066	0.000	0.993	0.999	1920.000
τ 11: i <- j <-> k -> i	-0.035	0.083	0.178	0.673	0.966	1432.000
τ 12: i -> j <-> k <- i	0.097	0.057	2.930	0.087	1.102	2400.000
τ 13: i <- j <-> k <- i	7.913	9.772	0.656	0.418	2732.939	1260.000
τ 14: i <- j <-> k <-> i	-8.274	9.775	0.716	0.397	0.000	1090.0000
τ 15: i <-> j <-> k <-> i	3.009	3.260	0.852	0.356	20.276	936.000

PL Deviance (n = 71):

δ1 = 9.94; δ2 = 49.82
2 Log (PL): 1604.676
Goodness of fit: 3337.513
Model χ^2 (-2 Log (PL) of 0-model) – (-2 Log(PL) of the given model): 5285.207
PL deviance is a measure of fit. MAR = Mean absolute residual.

As could be seen above, there are many techniques for measuring network properties, nodes and subsets of nodes with the most common being density, centrality and blockmodeling. Yet, these cannot distinguish similar network structures from another because they may be the outcome of different processes (Robins et al. 2004) and it is therefore not always easy to define, whether network patterns have emerged from self-organizing network-level structural effects or through independent node-level effects. Structural characteristics shape the form of the model and reciprocity process helps to define it so that the parameter of the model is the index of the level of reciprocity (Ibid.). A statistical model assigns a probability to all possible networks, meaning that a a model that is a good fit to the data will have a positive reciprocity parameter if the observed network includes many reciprocated ties. Following this, if the model provides a good fit, then the modeled structural effects can be used to explain the emergence of the network (Ibid.).

Distinguishing ties between respondents and between respondents and non-respondents differ significantly due to the quality of the local network information that is needed for modeling. A dyadic local neighborhood is per definition complete when only looking at ties between respondents, while it is likely that there is non-missing and missing data in triadic neighborhood configurations. On the other hand, in case of ties between respondents and non-respondents even the dyadic neighborhoods involve missing data, meaning that there are also more triadic neighborhoods with missing data. This also means that modeling ties between respondents and on-respondents is likely to be less successful than modeling respondent-to-respondent ties. Nonetheless, useful information about local neighborhoods of a tie that link two respondents can also be drawn from ties involving non-respondents, like in the case where two respondents share a tie to a non-respondent, making a tie between the two respondents also more likely.

The methods of modeling the network because of missing data presented in this chapter have given an alternative picture on how to approach networks. However, because the data was not missing at random, estimation is also likely to give biased results, rendering inference invalid. Therefore, using laxed definition of ties to include also those confirmed only by one party is likely to give a more accurate picture of the network than the estimations of ties. Although, this eliminates the possibility to apply directed network approach or analyze senders and feeders of information, this is deemed a better solution to the problem. Therefore, the network analyses in the next chapter are being conducted using the original network data.

6 RESULTS OF THE EMPIRICAL NETWORKS ANALYSES

In this chapter, different aspects of trade union networks will be presented with the emphasis on different forms of cooperation, alliance-building and formation of sub-groups between trade unions and what consequences they have on the agenda that is being shaped as the result of it. Also, power and influence that the actors wield are significant for these trade union networks. These are based on trade unions' background variables that help to better understand the reasons behind network structure and the ties between the actors. Trade unions' interests towards specific network connections arise from many different sources, depending on their objectives and institutional status. Finally, network governance as a means of institutionalization process of the network will be discussed connecting it to the emergence of networks and strategic perspective on interorganizational networks. The general goal of this study is to demonstrate how Europeanization has affected trade unions in many different ways and that social network analysis can be applied to describe the Europeanization of industrial relations. Some of the results and analyses presented here can also be found in different conference papers (e.g. Nordin 2009; 2011; 2012). Many of the empirical insights originate from the interviewees, but their origin is not quoted in order to preserve anonymity.

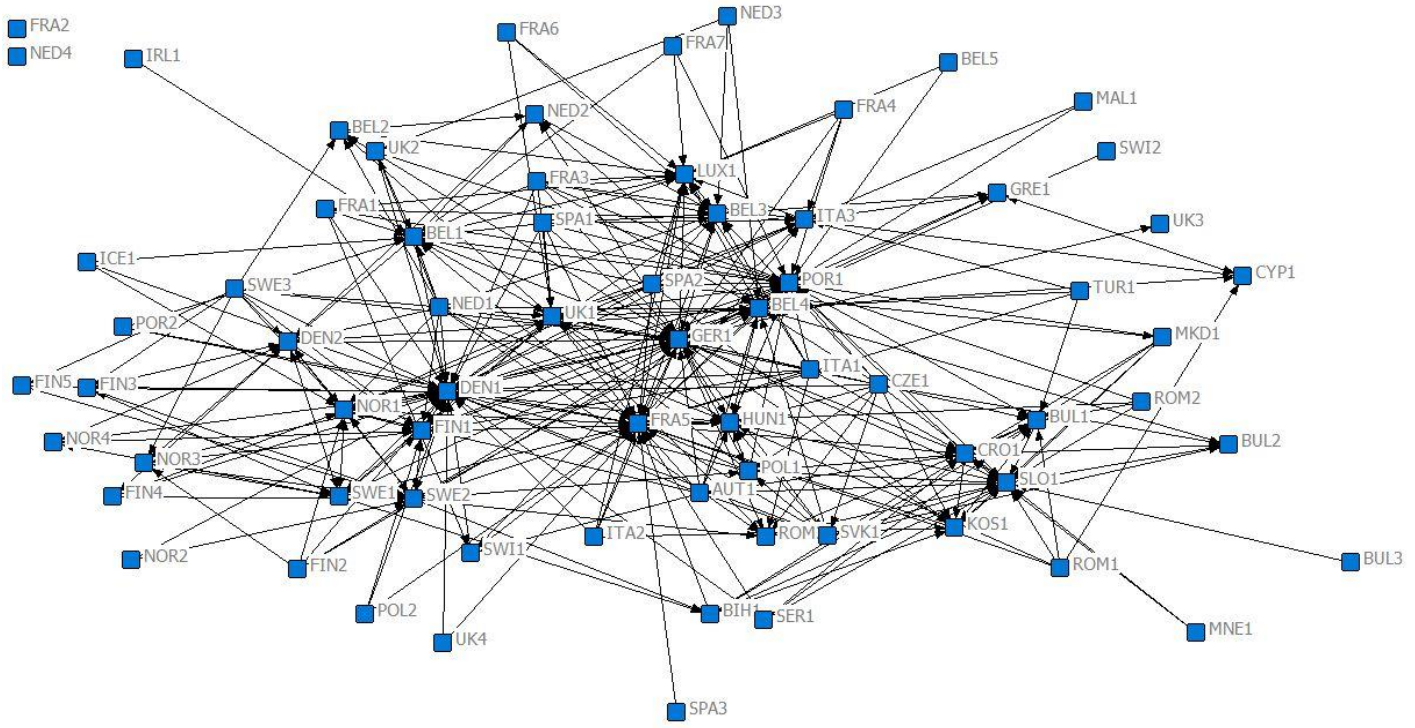
6.1 Overall Trade Union Network in the Metal Sector in Europe

Traditionally the analytical forms of network emphasize the role of actors as a part of the network structure through density and centrality. Therefore, this view is also commonly used to analyze power, which is indicated through positioning of actors in a network. Figure 5 shows an overall picture of the trade union network in the European metal sector in 2008-2009, based on self-reported contacts. This shows how the EMF affiliates were connected to each other when bilateral information-sharing was measured. Multidimensional Scaling (MDS) procedure tries to find a graphical solution to the complex interaction pattern by putting actors with many connections to other actors at the center of the graph and by delegating those with few connections to the outskirts of the graphical image (Coxon 1982). Further, spring embedding algorithm was applied to position unconnected nodes far from each other and connected nodes close to one another by aiming to minimize the number of overlapping ties (Fruchterman & Reingold 1991).

The most common measurement of an overall network is its density. It describes the network as a whole and is useful when analyzing the extent of the strength of interrelations in a network, since it gives an indication of the degree of institutionalization. When a network has many members, strong connections among them ensure reliable information flows. Therefore, a high density implies

mature institutional structures within the network, whereas reasons for a low density can be harder to interpret. Density is calculated by counting the ties in a network and comparing them to the maximum number of possible ties. Usually, the bigger the network, the lower the overall density.

Figure 5. Overall Network (international and national contacts)



For the trade union network presented above in Figure 5, density was 0,143. Applying the "goldilocks principle" (Valente et al. 2015) to interpret density and degree centralization, scores below 0,30 are deemed as low, those between 0,30 and 0,50 moderate and above 0,50 levels high. Since network size and type reflect the network density with partnership networks having usually lower scores than the coordination networks, the density of 0,143 is adequate to call the network an institutionalized one; something that will be reflected better in further analysis. With a network size of n=71 there are bound to be local clusters and sub-groups with a higher density that are more relevant for the analysis. The trade unions included in the analysis were all embedded in the network through membership to the EMF, which had, as was noticed in the previous chapter, a highly-institutionalized structure.

There are four primary benefits for trade unions to seek environmental interdependence through networks: (1) it enables them to gain information about the activities of other trade unions and, hence, enables them to customize their own strategies and action, (2) it enables information to be spread through reciprocal flows, (3) trade unions are able to obtain support from other trade unions of the network and similarly they get exposed to the views of the other trade unions and finally (4) these interorganizational ties give legitimacy for the focal organizations, since network ties help to reduce uncertainty while also stabilizing network members' exchanges. By looking at different ways in which linkages can be interpreted, it is possible to gain valuable information of how a network functions through bilateral exchanges, and how they together form a larger network entity.

6.2 Network Governance

Most of the contemporary network research has focused on ego or cluster perspectives, whereas the governance of complete organizational networks and the structure of collective action (Powell et al. 2005) has not gained ground to the same degree. As collaborative arrangements of organizations, interorganizational networks rely on governance structures, thus, implying hierarchy instead of autonomy. At the same time, networks as self-organized structures comprise of independent and autonomous organizations that makes them essentially cooperative formations. Still, organizational networks need to be goal-driven with some form of governance structure that will ensure collective participation through supported action (Kilduff & Tsai 2003). This is possible only when network resources are acquired and utilized efficiently.

Literature on organizational networks differentiates network analytical approach from the network governance approach (e.g. Provan & Kenis 2008; Al-Hujran et al. 2011). Network analytical approach draws from the sociological perspective of egocentrism and focuses on descriptive and explanatory research design by applying analytical concepts such as density, centrality and structural holes (Burt 1992; Wasserman & Faust 1994) to explain certain network outcomes. However, it concentrates on the nodes and relations that comprise the network instead of the whole network itself (e.g. Graddy & Chen 2006; O'Toole & Meier 2006). With a few exceptions (e.g. Provan & Milward 1995; Powell et al. 2005; van Raaij 2006), the unit of analysis is usually a single node, dyadic or triadic relations or clusters instead of complete network, and therefore are not able to grasp network functions as they do not involve network-level of analysis.

The network governance approach draws from sociology and organizational studies, using the network organization as the unit of analysis and focusing on the structure of collective action

(Powell et al. 2005, 1113). The focus is on explaining network outcomes by governance arrangements i.e. coordination mechanisms, processes and practices developed by network members at different levels of interaction (Moretti 2017, 12). The idea of network governance and its effectiveness has its origins in the comparative study of interorganizational networks by Provan & Milward (1995). As discussed in general theoretical terms in previous chapters, there are three basic forms of network governance: shared governance, lead organization governance and administrative organization governance (Provan & Kenis 2008). The most common form of network governance is shared governance. These networks are governed by their members themselves and they are often highly decentralized, involving most or all of the network members, with their success depending on the involvement and commitment of their members as all the network-level decisions are made collectively and members are responsible for managing internal and external relations and operations of the network. This means that the power structure of this form of network is more or less symmetrical, even though the size and resources of network members may vary. Shared governance can be accomplished either formally through regular meetings and information-sharing or more informally through un-coordinated efforts by actors with a stake in the success of the network. Whereas shared governance often indicates decentralized network structures, lead organization governance aims to centralize the network functions. Lead organization governance is characterized by an asymmetrical power dimension, since the lead organization usually possesses a power position and influence over the network. Even though the lead organization is tasked with the coordination of network activities and making key decisions on behalf of the whole network, all network members share at least some common ideas and goals. Alongside network-level goals, all members try to maintain their own individual goals and the role of the lead organization is to facilitate the members' activities as they try to pursue shared goals. Network administrative organization model relies on an independent and separate administrative entity with the responsibility to administer and coordinate network activities on behalf of the network members. Unlike in the lead organization model, the administrative organization is not a member of the network, but instead an external governing unit and the network administration is established either through a mandate or by the network members themselves with the sole purpose of network governance.

In their analysis of network interactions, Drazin & Van de Ven (1985) identified critical contingencies explaining the likelihood for a successful adoption of a particular form of network governance. They argued that the most common motivations for these choices are mimicry, past experience, personal preference and power politics (Ibid.), hence, choosing the network governance

form is based at least in part on the preferences of key actors in the network. Others have argued that decisions about adoption of a particular form of network governance are made by actors with either a formal power-based or informal influence-based role in the network (Provan & Kenis 2008). Successful adoption of a particular form of network governance is dependent on four key structural and relational contingencies: (1) adequate number of network members to engage in network-level activities, (2) mutual trust among the members to strive for network-level goals, (3) goal-consensus among the members and finally, (4) trying to add value beyond members' individual capacities (Goldsmith 2012, 143).

Successful network governance is dependent on accommodation and coordination of member organizations' needs and preferences. Shared governance is often the best solution for network members, since they can retain full control over the direction of the network while at the same time share individual responsibility between them to ease the burden (Provan & Kenis 2008). However, shared governance works best for small networks as it requires active participation to succeed. As the network grows in size, governance becomes extremely complex, making shared governance highly inefficient (Faerman et al. 2001). Complexity also increases the more network members are spread out geographically and culturally (including language barriers), interaction between all participants difficult or impossible. By concentrating network governance around a broker organization that can be either a lead organization or a network administrator, it is possible to evade his problem. Even though centralization removes direct involvement of all network members, it also helps them to concentrate their resources on the content instead of network administration and governance, while still being able to interact directly with the network administrator or the lead organization instead of each other to coordinate network-level activities. There are no universal rules for deciding on a specific form of network governance, although literature on small groups (Burn 2004; Forsyth 1999) indicates maximum six to eight network members for shared governance. In general, however, the network administrator model is likely to be the most effective when a network has a large number of members because the separate administrative structure is able to handle it better.

These structural and relational contingencies help to describe how the process works, when increasing size of the network leads to trust becoming less dense and thus the network goal consensus is bound to decline. This means that network-level competencies become more important and therefore brokered forms of network governance, like lead organization and network

administration, are likely to offer more efficiency than networks that rely on shared governance (Provan & Kenis 2008).

6.2.1. Network Governance of Trade Union Networks in the Metal Sector in Europe

In the European integration literature, the notion of network governance is based on the insight that the decision-making structure of the EU relies on bargaining practices between plural actors and institutions seeking consensus and compromise in a non-hierarchical institutional setting (Benz 2002), where communication is needed for securing legitimacy of the system. Therefore, the emphasis has been given to horizontal networks and participatory design (Eising & Kohler-Koch 1999, 3-12). With the deepening of the European dimension of industrial relations, multilateral coordination has gained ground at the cost of national goalsetting by individual organizations and network coordination has become a central form of organizing since they enable tackling problems that require collective action without hierarchical ineffectiveness. In terms of content and context, network governance discussed in this study has taken many forms from European Social Model to the European economic governance. In this chapter the network governance of the trade union network in the European metal sector will be analyzed. First, the existence of the three forms of network governance will be discussed, followed by the application of embeddedness to study network governance.

The broader institutional domain of the European industrial relations has evolved around three central agents: the ETUFs including the EMF representing national (sectoral) trade unions and above them the ETUC, lobby groups representing employers (BusinessEurope and European Roundtable of Industrialists) and the EU Commission. Between these three is the consultative EESC that brings together representatives from both the national trade unions and employers' organizations

EMF was the first ETUF to launch coordination of collective bargaining in the mid-1990s in light of changes in the European legal-institutional framework, enforced by the enactment of the Belgian law on protecting competitiveness in 1996 stipulating that wage-increases should remain below those in the neighboring countries Germany, the Netherlands and France (Marginson & Sisson 2006). This was followed by the German IG Metall initiated European cross-border collective bargaining regions in 1999. Similarly, the oldest such arrangement, a bargaining cartel Nordiska Metal involving Nordic trade unions was established to increase their leverage on industrial policy at the European level. These institutions, although, able to manoeuvre independently, pledged

themselves to the European-level decision-making procedures by having tight cooperation with the EMF.

Together with the foundation of EWCs, bargaining coordination formed a common template for trade unions to resist the tendency towards competition-driven policies by the employers and the threat of downward spiral in wages and working conditions as the result of the free movement of capital, and, hence, growing international competition. The EMF counter-strategy called for affiliates to agree on coordination of collective bargaining through regional network, cross-European coordination of national collective bargaining policies and a collective bargaining information exchange network (Eucob@n) with the aim of facilitating rapid information exchange economic and social issues alongside direct bargaining-related issues. The Eucob@n is prime example of shared network governance, as it encourages the affiliates to share information on their collective bargaining rounds for mutual gains.

Network administrator form is a common governance model for most of the international organizations, where the everyday tasks have been given to an organization that is not part of the network, while the central actors still have the overall strategic power over the network that they can use. At the EMF, the secretariat as a neutral agent was given the coordination responsibility over the network, performing the everyday administration and policy implementation on behalf of the affiliated national trade unions and representing the trade unions vis-à-vis the Commission. Alongside the secretariat, the EMF had a board structure in form of Steering Committee and Policy Committees where representatives of affiliates were responsible for formulation of network-level strategies and specific industry, company and collective bargaining policies that would be adopted by the EMF and its affiliates. This also helps to keep the (smaller) affiliates satisfied, since no trade union is able to possess formal power over the network, even though there might be informal power structures within the network that have different mechanisms than the formal ones. This was a trait of the metal sector in Europe, where alongside official institutional structures of the EMF also semi-attached solutions like the SEEF were established to help trade unions from the SEE region to strengthen their capacity to participate in social dialogue and European cooperation, while also enhancing cross-border cooperation between unions in the region (EMF 2010).

A lead organization can emerge from within the network if it gains the trust and legitimacy of its peers or it can be appointed by an external actor the networks members trust. In the field of industrial relations, lead organization governance is often observed when the network consists of a

single powerful (often large) member and several weaker and (often smaller) members that are ready to accept the large member organization as a lead organization for the good of the network, indicating vertical relationship within the network. A lead organization can also emerge in horizontal multilateral networks when one organization has sufficient resources and legitimacy through a central position in the network to endorse a leading role. The German IG Metall has traditionally had this role in the European metal sector and it further fastened its position in the 1990s, when parallel to the EMF collective bargaining networks that included all the affiliates, it launched European cross-border collective bargaining regions to help coordinate the bargaining processes between Germany and its neighboring countries (e.g. Gollbach & Schulten 2000) in anticipation of the Single Currency and the Eurozone. The most active branch of IG Metall has traditionally been the Nord-Rhine Westphalia, which was the first to include regular monitoring of agreements in neighboring countries and embrace the EMF bargaining coordination rule by endorsing observer exchange during the bargaining rounds and lodging claims to establish common standards. Although IG Metall took a leading role in initiating the network-based approach of collective bargaining coordination, the Dutch and Belgian trade unions were also actively involved with FNV Bondgenoten (NED1) and CNV Bedrijvenbond (NED3) as well as the Belgian CCMB (BEL2) and MWB-FGTB (BEL3) among the first to exchange bargaining experts during negotiation rounds in the three countries. Likewise, a coordination partnership between initiated by the IG Metall Bavaria that included Austria, Czech Republic, Slovakia, Slovenia and Hungary was established in 1999 to form a Vienna Memorandum Group.

When the financial crisis hit Europe in 2008, resulting in decline in labor productivity, increasing unemployment and increased imbalance in external trade balance the Eurozone countries, bargaining coordination was revised in 2011 to let the trade unions to focus on securing national institutional arrangements such as collective bargaining and wage-subsidies from public unemployment funds.

It could be argued that the trade union network structure at the metal sector in Europe is a hybrid between the network administrative model and the lead organization model. While the lead organization steers the network de facto, a network administrator acts as a central filter, providing the same information to every network member (Heclo 1978). In terms of network governance, networks aim to provide coherence to an organizational field through decentralized but coordinated action and self-regulation prescribing interorganizational collaborations within a formal structure. Hence, network governance takes place through structural coordination and shared understandings

of goals and actions. Still, this does not exclude possible formation of quasi-informal network structures like the IG Metall collective bargaining regions alongside the formal structure.

6.2.2. Embeddedness and Network Governance

The notion of embeddedness is widely applied in social network analysis from strategic management and organizational theory to organizational economics as the premises underlying network theory include the three elements of network coordination: structural, relational and junctional, indicating quality and configuration of relations. Network governance enhances coordination while reducing uncertainty at the same time (Jones et al. 1997), making structural embeddedness the foundation for effective network governance. Whereas relational embeddedness refers to the strength of a single dyadic tie (Granovetter 1973), the focus of structural embeddedness goes beyond these, focusing instead on dyads' mutual contacts that are connected to one another (Granovetter 1992) and, therefore expand the clusters and structures within a network. Finally, junctional embeddedness indicates the quality information depending on actors' network position for example when serving as a bridge between two important clusters of a network. Therefore, effective network governance involves not only strong dyadic relationships, but also formation of network structures through network closure. The presence of reciprocation in network exchanges indicates propensities for relational embeddedness, while the presence of triangulated exchanges refers to propensities for structural embeddedness. Additionally, triangulated patterns of network connections (e.g. Snijders et al. 2006) ensure dissemination of information while also enabling the establishment of norms of coordination and collaboration by invoking trust and minimizing uncertainty.

Especially in relational embeddedness where many strong ties and only a few weak ties exist, a risk of over-embeddedness can occur (Uzzi 1996), leading to a formation of relatively isolated cliques that are not at least strongly integrated to the rest of the network (Granovetter 1973). Therefore, an intermediate level of embeddedness might be optimal for creation of information flow within the network, with actors being neither too tightly connected to fragment sub-structures instead of the whole network nor too loosely connected to be unaware of other actors' positions in the network. However, there is no universal optimal level of structural embeddedness; rather it should be determined by network size.

Junctional embeddedness can be explored through betweenness centrality that identifies the shortest path between two nodes. Actors with high betweenness may have considerable influence and power

over the network because they control information flows. An actor with a high betweenness centrality functions effectively as a bridge-like connector between two structural parts of the network, meaning that the network will suffer from disrupt communications when it is removed from the network or when its position changes.

Table 17. Betweenness Centrality

	Betweenness	**nBetweenness**		**Betweenness**	**nBetweenness**
GER1	678.712	14.052	**BUL1**	15.516	0.321
DEN1	427.356	8.848	**ITA3**	10.356	0.214
FRA5	251.733	5.212	**BIH1**	9.823	0.203
POR1	198.943	4.119	**SVK1**	8.045	0.167
SLO1	183.843	3.806	**KOS1**	7.972	0.165
DEN2	183.353	3.796	**POL1**	6.664	0.138
BEL1	170.870	3.538	**NOR3**	5.374	0.111
SWE2	128.787	2.666	**UK2**	5.209	0.108
BEL4	125.371	2.596	**ROM3**	5.063	0.105
SWE1	102.612	2.124	**CYP1**	2.467	0.051
BEL3	87.530	1.812	**BEL2**	2.341	0.048
UK1	76.995	1.594	**SWI1**	1.983	0.041
LUX1	61.827	1.280	**MKD1**	1.452	0.030
GRE1	59.824	1.239	**FIN3**	0.789	0.016
HUN1	54.440	1.127	**FIN5**	0.220	0.005
NOR1	48.828	1.011	**NOR4**	0.159	0.003
FIN1	44.009	0.911	**FIN4**	0.159	0.003
NED2	36.791	0.762	**THE REST (n=36)**	0.000	0.000
CRO1	32.583	0.675			

Network Centralization Index = 13.35%

The results show a lot of variation in actor betweenness (from 0.000 to 678.721), and that there is quite a bit of variation measured by standard deviation (105.289) relative to a mean betweenness (42.789). The network centralization index tells how central the most central actor in a network is in comparison to every other actor. The low network centralization index (13,35 %) indicates that there is not much opportunity for brokering of information in this network. Another measure that can be applied is the average distance between two actors in the network, referred to as geodesic distance that describes the shortest possible path between two actorsr in the network. In the network, the average of an actor's geodesic distance was 2,3 (Std Dev 0,8), meaning that on average every actor in the network is 2,3 paths away from each other.

Table 18. Descriptive Statistics for Each Measure

	Betweenness	**nBetweenness**
Mean	42.789	0.886
Std Dev	105.289	2.180
Sum	3038.000	62.889
Variance	11085.832	4.752
SSQ	917086.250	393.112
MCSSQ	787094.063	337.390
Euc Norm	957.646	19.827
Min	0.000	0.000
Max	678.712	14.052
No of Obs	71	71

Un-normalized centralization: 45150.55

Since networks are evolutionary products of ties between network members, they are driven not only by dynamic processes that involve exogenous dependencies prompting these members to seek cooperation to the extent that potential new members offer synergies or added value to the network, but also by endogenous embeddedness dynamic (Gulati & Gargiulo 1999), where the emerging network progressively steers the choice of network members as the formation of new ties is influenced by the current ties network members have. Therefore, network members' choices are constrained by the number of ties they already have, meaning that the networks exhibit a path-dependent nature (Gulati 1999). Still, the initial cooperative forms are not irrelevant as they transform the context for future partnerships once the network grows with the new ties reflecting demarcation among network members based on their specific direct and indirect relations as well as their structural positions in the emerging network (Gulati 1998). Although structural demarcation is said to enable the growth of the number of ties in a network (e.g. Weng & Daim 2012; Gulati 1998) it is actually the distribution of those new ties, not merely their number, that forms the distinctiveness for the networks that help organizations to distinguish themselves from the others Laumann & Pappi 1976, 5-11). The degree of structural differentiation also manifests itself through the network actors' profiles and extended information about potential partners is required for actors to mitigate the uncertainty associated with partnerships through embeddedness to decrease the growing differentiation of the emerging network. As information flows increase, actors eventually become less reliant on exogenous factors and instead start to rely on embedding their ties to the network. When the dependence in exogenous factors decreases, network embeddedness mechanisms become more influential, helping to increase the structural differentiation of the actors in the network further.

6.3 Power and Reputation in Networks

Power plays an integral part in networks, since it defines the structure and hierarchy of a network. There are two possible approaches to conceptualize power in a context of social network analysis. The first one deals with the measure of power, describing the content of the relations linking the actors in the network. This can be measured using the power reputation approach, where all network members are asked to name the most powerful or influential members in the network. Another common, but reverse, interpretation of the first approach is resource dependency, which draws from the power-dependency theory (Pappi et al. 1993), linking power to the resources network members possess. In the latter approach, conceptualization of power is seen as a latent dimension of networks with asymmetric or directed relations, giving less emphasis to the content of the relations. Instead the focus is on certain formal properties that indicate actor's control over another actors' behavior (Knoke 1990). It can hence be argued that the volume of incoming ties is not simply a result of popularity, but rather of actors' power due to the possession of scarce resources, making power, not approval, the fundamental variable in determining the position of the members in a network.

Although network centrality is generally considered to produce an adequate measurement of power (e.g. Mizruchi 1996; Gulati 1995b; Mintz & Schwartz 1985), advanced research (e.g. Markovsky et al. 1988) has showed that this does not hold true for exchange networks, where the actors' possibilities to extract valued resources with others are contingent on network structures. Therefore, the concept of centrality that reflects the relationship between power and position is inadequate, because power does not equal centrality in exchange networks as the most central actors are not necessarily the most successful in exercising bargaining power (Cook et al. 1983).

The distinction between power- and policy-oriented networks (Stokman & Zeggelink 1996) is one of the most common ways to apprehend network structures. In the former the actors aim to access power by trying to connect with the most powerful actors in the network. However, identifying other actors' power positions can be very difficult, thus, the actors usually rely on bounded rationality strategy by trying to optimize their own control over their position. This means trying to access those actors that are perceived to be powerful in the network and is naturally easier to do in a small and dense network, where the actors are familiar with each other's attributes and resources they possess. Referring to the status difference theory (e.g. Schneider 2006b), actors with low status within the network aim to form ties with the more powerful ones, whereas powerful actors are

likely to accept information from the less powerful ones. There are two reasons for this: (1), powerful actors see it as advantageous for themselves to be open for influence from different directions to be able to justify their own attempts to influence the network more easily and (2), more powerful actors usually have more resources and a better competence to maintain many incoming relations, hence, enabling them to increase their power base even more.

Regarding the use of centrality as a measure of power, Bonacich & Roy (1986) argued that contrary to the prevailing theory that assumes a positive relationship between structural centrality of an organization and its relational power, organizational power within a group of organizations is actually a structural variable that is more closely related to interorganizational power than overall centrality. Moreover, changes in power positions within a group and changes in interorganizational power are cross-sectional and temporary, meaning that while network centrality may be related to interorganizational power within a hierarchical network structure, there is a much weaker relationship between centrality and interorganizational power in highly clustered networks, leading to a theoretical implication that the relationship between a structural variable like centrality and a power relation variable like interorganizational power is contingent rather than a determinant one.

Aside the development of adequate organizational structures and policy instruments, trade unions' international capacity for mobilizing their power resources also factors in when trying to understand the development of industrial relations at the European level. One of the most distinctive features of the ETUFs' structures has been their lack of influence and their limited ability to act as (European) social partners. Their grassroots legitimacy has been weak since their members are national trade unions, making mobilization efforts difficult. This has also meant that they have not had secure political influence through institutionalized representation, hence, making political lobbying vis-à-vis the Commission and occasionally national legislative assemblies their primary modus operandi as they have not had a natural partner on the employer side to engage with. Alongside employers' persistent reluctance to become counterparts or social partners at the European level, this has had an effect on the interest representation through the ETUFs that have delegated the mobilization of membership regarding also the European matters to their national trade union affiliates. In the same vein with most of the international institutions, the European trade union movement has embraced an intergovernmentalist mode of decision-making, where consensus-seeking and finding the lowest common denominator has usually been the predominant attribute (Hyman 1999). Table 19 highlights different power resources of international and national trade unionism and they are being applied.

Table 19. Power Resources for National and International Trade Union Movements

Power Resources	National	European	Implemented by
Institutional & Legal	yes	yes	EU Commission
Political	yes	yes	ETUC & EU Commission
Organizational	yes	yes	National trade unions together with international trade union confederations
Collective Bargaining	yes	to some degree	Framework agreements & EWC's
Industrial Action	yes	yes	Through joint solidarity action, training of trade union officers to social dialogue etc.
Identity & Solidarity	eroding	emerging	Through individual cases: e.g. Laval, Service Directive etc.
Membership	yes	indirect	National trade unions
Structure	bottom-up	top-down	National trade unions together with sectoral international trade union confederations

Regardless of whether the prime drivers of globalization and Europeanization draw from internal or external pressure, there are strong signs that the dynamics of global change reinforce the impact of domestic change. Evans & Coats (2011) argued that the global financial crisis called into question many of the assumptions on which economic and industrial policy had been based since the late 1970s. With the exception of some partial success stories, ETUFs have continued to suffer from transnationalization deficits, in particular in regards their lack of resources and inconsistencies between European declarations and national applications (Platzer 2011). From this perspective, it can also be argued that the national trade unions have not fared too well over the last few decades, having lost much of their direct and formal power in many countries because of significant decentralization of industrial relations structures. Nationally and internationally imposed austerity measures to combat the recession meant high unemployment, restructuring and eventually weakening unionization. However, trade union membership is not the only indicator of trade union strength as the cases of Spain and France among others show, as they are good at mobilizing workers in mass strikes and demonstrations and have a strong presence in the many workplaces despite low trade union density, although this has not manifested itself in the European arena to the same degree.

6.3.1. Power Positions

Power position refers to an actors' centrality in a network, defining a position through which it has access to multiple sources of resources, making it possible to potentially exercise influence and

power over other actors. Power can therefore be understood as a reflection of the actor's position relative to others. Centrality refers to the number of ties an actor has in the network and is calculated by an adjacency matrix A, where the centrality of actor i (denoted c_i) is given by $c_i = SAij(a+bcj)$ where a and b are the parameters. Therefore, the centrality of each actor is determined by the centrality of the actors it has ties with.

This simplistic analysis, however, does not take into consideration power positions in networks, since it includes only information about the quantity of ties, but not their quality. Therefore, it might be better to use the eigenvector centrality, originally developed by Bonacich (1972), which draws from the idea of having the eigenvector of the largest eigenvalues as an adjacency matrix[33]. Unlike degree centrality, which weights every tie equally, eigenvector centrality is a weighted sum of not only direct ties but also indirect ties of every length, taking thus into account the entire pattern in the network. Therefore, there is an underlying assumption that it is useful to form ties with central (i.e. powerful) actors, since this makes having access to power easier.

Cook et al. (1983) offered another perspective by looking at networks where relations are defined as intension to compete, bargain and negotiate. In these cases, ties with powerful actors become constraining and disadvantageous, since reduce the actor's bargaining power. This leads to the Bonacich (1987) argument that especially in bargaining situations it is advantageous to form ties with actors that have few ties, since actors' power increases when it is connected with actors who are powerless. This beta-centrality measure was developed to tackle the conflicting evidence from previous research by Cook et al. (1983) that sometimes put the most powerful actor in the network in the semi-periphery. This was largely because of the nature of the relational context where positive relations such as communication[34] and negative relations such as rivalry or competition were combined. Whereas the former gives an accurate picture of the network, in the latter case the centrality measures often fail. Additionally, beta-centrality recognizes that centrality measures differ in the extent to which they consider the entire network structure in calculating centrality score for the focal actor (i.e. ego network). The question thus becomes, whether an actor derives more power from the immediate contacts or from the wider network structure, which Bonacich had already dealt with the creation of eigenvector centrality.

[33] Later, many other studies have used eigenvector centrality and it continues to be refined and developed (e.g. Brandes & Cornelsen 2003; Estrada & Hatana 2009; Ruhnau 2000).
[34] In communication networks a positive value of β is appropriate because the amount of information available to a unit in the network is positively related to the amount of information available to those with which it has contact

The equation for beta-centrality is$C_\beta(i) = \sum_{j=i}^{n} \quad A_{i,j}(\alpha + \beta C_\beta(j))$, where α is a scaling parameter normalizing the score, β is the value selected to reflect the amount of dependence of actor i's centrality on the centralities of the alters with whom actor i is directly tied to. β must also be smaller than the reciprocal of the largest eigenvalue. $A_{i,j}$ is the adjacency matrix which can be binary or valued and finally x_j is the centrality of the actor i's partners, i.e. actors j. The parameter β reflects the extent to which the power is linked to the centrality of others. By assigning small values for β in the equation, the analysis is weighted towards the local structure surrounding the ego, whereas larger β values weight the equation towards wider network structure. Additionally, when β gets a positive value, it indicates that it is good for the ego to be connected with highly central actors. On the other hand, in the case of negative β values each actor's status is reduced by the higher status of those to which it is connected. Positive and negative ties are suggestive of the nature of action; positive β values correspond to situations where power reputation matters, while also capturing the notion of gaining from having contacts with well-connected, influential actors. A negative β in contrast, seems to fit a more competitive environment (e.g. Burt 1992; White 1992), where competition dominates and being linked to powerful actors is constraining. In communication networks, exchanged information is usually received from others, and so the system is positive. However, when exchanging a commodity with only one actor precludes exchange with another, the relation is negative. These would be modeled with positive and negative values of β, respectively. The assumption that power is reduced rather than increased through a connection to powerful others first appeared in both Caplow's (1968) and Gamson's (1961) theories of coalition formation. Because actors usually aim to gain a dominant position in their network, they tend to avoid known powerful actors as their partners.

6.3.2. Core-Periphery Network Structure

Network structure refers to three different levels of network analysis: (1) network level, (2) subgroup level and (3) actor level. In order to fully understand network structure, all three levels need to be included in the analysis. Networks have by definition a core-periphery structure that reflects the intercross of these three levels of analysis (Beck et al. 2003; Cummings & Cross 2003), adding a power dimension to it. The concept of network core and periphery emerged in social network analysis in the 1970s (e.g. Laumann & Pappi 1976; Alba & Moore 1978), yet it was not formally conceptualized until Borgatti & Everett (1999), who defined it as a dense network entity that "cannot be subdivided into exclusive cohesive groups or factions". Hence, core-periphery

network structure consists a dense core and a sparsely connected, usually non-central set of peripheral nodes, which are linked to the core. Network cores can consist of an interconnected set of network hubs, nested networks (Ibid.) or so called onion network structures that refer to members with high degrees forming a core with spirally decreasing degrees together with an over-representation of ties within the same spiral layer (Wu & Holme 2011). Core and periphery can be located by applying the comparison of the adjacency matrix of the network. Methods to identify cores include cliques, k-clans, k-clubs, k-cliques, k-clique-communities, k-components, k-plexes, strong LS-sets, LS-sets, lambda sets, weak LS-sets or k-cores. Whereas the node-removal technique used in k-cores is a powerful method to identify sets of progressively embedded cores of directed networks (Azimi-Tafreshi et al. 2012), the other methods to identify dense subgraphs are only suitable for identifying network communities (Fortunato 2010; Radicchi et al. 2004), but not the network periphery. Additionally, networks can have multiple communities, while they usually only have one core.

The core-periphery dichotomy is closely related with the idea of network centrality. Even though some actors may be better connected in the network than others, there might be groups or networks that cannot be divided into exclusive cohesive subgroups (Wasserman & Faust 1994), since the network consists of just one group to which all actors belong to (Pattison 1993). Therefore, it becomes valuable to use the core (- semi-periphery) - periphery structure that views the network as a singular unit with its own internal and cohesive structure. Alternatively, network structure can be approached by using the notion of a two-class partition of nodes (to core and periphery) based on blockmodeling, where the core is seen as a 1-block, and the periphery as a 0-block (Breiger 1981). This concept draws from the notion by Pattison (1993) presented above, with the only difference being its focus on the character of ties within the core and periphery. Additionally, the core-periphery structure can also indicate a physical center and periphery of a cloud of points in Euclidean space that can be observed by applying multidimensional scaling. This perspective reminds of the partition approach by Breiger (1981).

For the governance of network evolution, the core-periphery approach has been shown to be the key for understanding the underlying network structure (Gulati & Gargiulo 1999) with core referring to the topography at the center of a network and periphery to the outskirts of such a network. While the definitions of core and periphery are commonly accepted, there are some differences on how to define the distinction between periphery and semi-periphery. On the surface, it would seem obvious to define periphery as sets of all actors that not part of the core, but are still adjacent to the core

through at least one actor. Restricting the periphery to include only "hangers-on" is appropriate if the periphery is seen consisting of actors that clearly associate themselves with the core (and/or are trying to move into the core). However, a better way might be to also include as part of the periphery the actors that are not directly connected to the core, meaning that periphery consists of all outsiders. Semi-periphery adds another layer to the network structure. It is defined as a bumper belt between the core and periphery and actors in the semi-periphery can have three different status: (1) actors that try to enhance their position and eventually become members of the core, (2) actors without the resources to move into the core that try to wield indirect power instead and (3) actors that are just emerging from the periphery.

6.3.3. Core-Periphery Structure of the European Metal Sector

The choice of using the Bonacich eigenvector centrality is consistent with similar empirical network studies (e.g. Podolny 1993; Page & Podolny 1996; Lock Lee 2009). Additionally, it is interesting to compare these results with the traditional degree centrality. Based on the affiliates normalized degree centrality, Table 20 shows how the trade unions in the European metal sector are divided into a core and peripheries. The threshold values chosen a posteriori were >14,29 (core) and >5,71 (semi-periphery), because clear divisions were visible in the network. The affiliates in red are considered peripheral here and have a degree centrality of <4,29. When comparing these with the Bonacich eigenvector centralities, the figures look a bit different. On the other hand, Table 20 reveals the Bonacich eigenvector centralities that differ from these. In the case of Bonacich eigenvector centralities, the threshold values chosen were >9,551 (core), >4,201 (semi-periphery) and <3,803 (periphery).

Table 20. Power, Centrality and Positions of Trade Unions (Self-Reported Contacts)

	Bonacich eigenvector centrality	Bonacich Position	Normalized Degree centrality	Position		Bonacich eigenvector centrality	Bonacich Position	Normalized Degree centrality	Position
GER1	25,440	Core	51,429	Core	**ROM1**	5,782	Semi-periphery	7,143	Periphery
NED1	16,189	Core	20,000	Core	**SER1**	5,782	Semi-periphery	7,143	Periphery
BEL4	15,032	Core	32,857	Core	**SLO1**	5,782	Semi-periphery	27,143	Core
BEL1	13,876	Core	31,429	Core	**BEL5**	4,625	Periphery	8,571	Periphery
SWE3	13,876	Core	17,143	Semi-periphery	**BUL1**	4,625	Periphery	20,000	Core
UK1	13,876	Core	31,429	Core	**FIN5**	4,625	Periphery	10,000	Semi-periphery
CZE1	12,720	Core	15,714	Semi-periphery	**GRE1**	4,625	Periphery	7,143	Periphery
DEN1	12,720	Core	57,143	Core	**NED2**	4,625	Periphery	12,857	Semi-periphery
FIN1	12,720	Core	27,143	Core	**NED3**	4,625	Periphery	5,714	Periphery
FRA3	12,720	Core	15,714	Semi-periphery	**ROM2**	4,625	Periphery	5,714	Periphery
SWE1	12,720	Core	17,143	Semi-periphery	**TUR1**	4,625	Periphery	5,714	Periphery
AUT1	11,563	Core	14,286	Semi-periphery	**BUL3**	3,469	Periphery	4,286	Periphery
DEN2	11,563	Core	21,429	Core	**FRA6**	3,469	Periphery	11,429	Semi-periphery
FRA5	11,563	Core	48,571	Core	**FRA7**	3,469	Periphery	4,286	Periphery
ITA1	11,563	Core	14,286	Semi-periphery	**ICE1**	3,469	Periphery	4,286	Periphery
NOR1	11,563	Core	24,286	Core	**LUX1**	3,469	Periphery	4,286	Periphery
SPA2	11,563	Core	14,286	Semi-periphery	**MNE1**	3,469	Periphery	4,286	Periphery
SWE2	11,563	Core	24,286	Core	**POL2**	3,469	Periphery	4,286	Periphery
BEL3	10,407	Core	25,714	Core	**POR2**	3,469	Periphery	4,286	Periphery
FIN2	10,407	Core	12,857	Semi-periphery	**UK2**	3,469	Periphery	11,429	Semi-periphery
SPA1	10,407	Core	12,857	Semi-periphery	**UK4**	3,469	Periphery	4,286	Periphery
FIN3	9,251	Semi-periphery	12,857	Semi-periphery	**CYP1**	2,313	Periphery	5,714	Periphery
FIN4	9,251	Semi-periphery	11,429	Semi-periphery	**KOS1**	2,313	Periphery	24,286	Core
FRA1	9,251	Semi-periphery	11,429	Semi-periphery	**MAL1**	2,313	Periphery	2,857	Periphery
POL1	9,251	Semi-periphery	15,714	Semi-periphery	**NOR2**	2,313	Periphery	2,857	Periphery
SVK1	9,251	Semi-periphery	11,429	Semi-periphery	**ROM3**	2,313	Periphery	10,000	Semi-periphery
NOR3	8,094	Semi-periphery	12,857	Semi-periphery	**SWI1**	2,313	Periphery	7,143	Periphery
CRO1	6,938	Semi-periphery	20,000	Core	**BUL2**	1,156	Periphery	10,000	Semi-periphery
HUN1	6,938	Semi-periphery	20,000	Core	**FRA2**	1,156	Periphery	2,857	Periphery
BEL2	5,782	Semi-periphery	14,286	Periphery	**IRL1**	1,156	Periphery	1,429	Periphery
BIH1	5,782	Semi-periphery	7,143	Periphery	**ITA3**	1,156	Periphery	22,857	Core
FRA4	5,782	Semi-periphery	8,571	Periphery	**NED4**	1,156	Periphery	1,429	Periphery
ITA2	5,782	Semi-periphery	7,143	Periphery	**SPA3**	1,156	Periphery	1,429	Periphery
MDK1	5,782	Semi-periphery	7,143	Periphery	**SWI2**	1,156	Periphery	1,429	Periphery
NOR4	5,782	Semi-periphery	8,571	Periphery	**UK3**	1,156	Periphery	1,429	Periphery
POR1	5,782	Semi-periphery	40,000	Core					

Bonacich core n= 21, Semi-periphery n= 18, periphery n= 32
Degree core n= 19, Semi-periphery n= 23, periphery n= 29

Bonacich's Alpha = 0.133

A general interpretation of the metal sector trade union network shows that in general the common features for the trade unions in the core are two-folded. First, it consists of big trade unions with long traditions from big European countries. Using the VoC paradigm, there are two bigger blocks within the core, namely social-democratic block (n=7) consisting of Danish, Finnish and Swedish trade unions and Continental block (n=7) consisting of Austrian, Belgian, French and German trade unions. In addition, market-based block (n=2) and Mediterranean block (n=3) are represented in the core[35].

[35] It could be argued that the Norwegian trade union should be included in the social-democratic block, but here the Norwegian model has been defined as being between social-democrat and continental model (Norkus 2011).

The strong Nordic presence can be explained with the role played by strong institutionalized structures within the Nordic countries. The formation of Nordic IN as bargaining cartel with similar institutional structure as the EMF made the coordination and cooperation within the Nordic countries easier by emphasizing mutual commitment to the common agenda and reciprocal information exchange. Nevertheless, the Nordic trade unions in the metal sector have faced a number of dilemmas as they have recognized a need to engage more actively in European policy processes especially through coordination of bargaining that might undermine their own coordination (Andersen 2006). At the same time, a fear of European regulation undermining national bargaining autonomy was especially strong in the Nordic countries, because the floor on European industrial relations protection and regulation has been much lower than the national ones in the Nordic countries. This is why the Nordic trade unions especially in the metal sector have been at crossroads: Whether to focus on the established and institutionalized cooperation within the Nordic context or rather to widen the perspective to include common European policy initiatives through the institutionalized European platform. This dilemma materialized in the case of Posted-Workers Directive (96/71/EC), when the Swedish trade unions wanted to open the whole directive, while the Finnish trade unions were happy just to add some amendments to it (Rönnmar 2008).

It has been argued that the main power axis of European metal sector lies between Germany and the Nordic countries (Traxler & Brandl 2009). This is evident as convergence in pay rates through the pattern-setting role of the German bargaining rounds resulting in both economic developments and coordination of transnational bargaining has characterized these countries industrial policies. The influence of European integration extends beyond European coordination of collective bargaining to other fields of collaboration like social dialogue as convergence has been applied to reduce competition between countries and regions. The emergence of the Continental block is closely connected to the intra-regional bargaining coordination networks (Table 21) initiated by the German IG Metall in 1997 (Gollbach & Schulten 2000) as well as to its geographical position at the heart of (industrial) Europe.

Table 21. IG Metall Initiated Intra-Regional Network

Berlin / Brandenburg-Saxony District of IG Metall NSZZ Solidarnósc (POL1), OS KOVO (CZE1)
Bavaria District of IG Metall PRO-GE (AUT1), OS KOVO (CZE1), Vasas (HUN1), SKEI (SLO1), OZ KOVO (SVK1)
Coastal District of IG Metall CO-Industri (DEN1), IF Metall (SWE2)
Baden-Würtenburg District of IG Metall FIOM-CGIL (ITA1), Unia (SWI1)
North Rhine-Westphalia District of IG Metall FNV Bondgenoten (NED1), CNV Bedrijvenbond (NED3), CCMB (BEL), MWB-FGTB (BEL3)
Frankfurt District of IG Metall FO Metaux (FRA1), FGMM-CFDT (FRA3), FTM-CGT (FRA5), FNTE/CGT (FRA6)
Lower Saxony / Saxony-Anhalt District of IG Metall Amicus (UK1)

These networks were based on the historical ties IG Metall Districts had had with its neighbors and where close and traditional similar regional socio-economic conditions were already a reality. The North Rhine-Westphalia network that began in 1997 was the first one and in a quest to maximize its influence it placed observers with speaking rights in different national collective bargaining rounds in the region. These observers had already been attending the preparatory meetings as well as plenary sessions with the employers before the 1997 collective bargaining rounds in Belgium and Germany in order to familiarize themselves with the field and to oversee that the coordination was done properly[36]. In 1998, the network expanded into an initiative by the trade unions from the

[36] A case in point of this is the 1997 bargaining rounds in Belgium where the German observer noticed a contradiction in the figures presenting macro-economic situation in Germany presented by the Belgian employers' representatives, who were aiming to use them as reference point in the negotiations (Gollbach & Schulten 2000).

Benelux countries and Germany that lead to a formation of "Doorn Group" (Gollbach & Schulten 2000; Gollbach 2004; Kreimer-de Fries 1999) with the aim of trade unions pledging themselves to a close cooperation on bargaining policies to hinder downward spiral on bargaining goals by evaluating the last bargaining rounds and to discuss future common guidelines for bargaining policy annually together. The aim of these intra-regional networks has been not only to provide a forum for information exchange on collective bargaining, but also to offer solidarity to other trade unions.

The other intra-regional networks have been more embryonic in character and have evolved mostly around information exchange initiatives with the exception of the Lower Saxony / Saxony-Anhalt District and Amicus (UK1) network, where the reciprocal visits, joint-seminars and development of bilateral information exchange was at the forefront and the Nordic region with long history of transnational collective bargaining coordination approach. Yet, it was only after the founding of IG Metall initiated bargaining network that Danish and Swedish trade unions extended their coordination approach to a more extensive European dimension to function parallel with the older and already established Nordic coordination approaches. Initiatives between the IG Metall Coastal district and the Danish CO-Industri (DEN1) have even included the employers' associations in projects with cross-border focus, aiming to strengthen employment in the region (Pernicka & Glassner 2014). Collective bargaining coordination in the Nordic countries has its roots in the 1970s when the predecessor to Nordic IN[37], Nordiska Metall was founded as a forum to exchange information between trade unions from Denmark, Finland, Iceland, Norway and Sweden. As Sweden and Finland joined the EU in 1995, Nordiska Metall / Nordic IN also transformed itself to become the first regional bargaining cartel with responsibility to coordinate European policies within the EMF (Ibid.). With its mandate to formulate annual action programs for collective bargaining in the Nordic countries as well as through its discussion forum (SWP) to exchange information more informally, Nordic IN exhibits a highly institutionalized structure.

The regional network consisting of the Bavarian District of IG and trade unions from Austria, Czech Republic, Hungary, Slovenia and Slovakia offers another example of active coordination partnership that established a Vienna Memorandum to coordinate collective bargaining in 1999 with the focus on special seminars and conferences as well as the formation of a collective bargaining

[37] Nordic IN was formed after the merger of Nordiska Metall and Nordiska Industriarbetare Federationen (NIF) in January 2006.

working groups to coordinate bargaining policies in line with the EMF coordination rule for wage-bargaining. Although there was wide-spread enthusiasm as the collective bargaining networks started to take shape, not all of the cooperatives that were initially set up have managed to continue on a regular basis, with some of them becoming more or less informal and ad hoc because of the notable differences in participants situations and resources or lack of natural cultural and economic fit.

Apart from the lead organization form of network governance, even the EMF as network administrator had a role in coordination across the regional networks by arranging meetings of "big groups", consisting of 50-60 trade union officers to discuss broader issues such as flexicurity or working time charter. Likewise, the EMF steering group was tasked with more broad aspects of collective bargaining coordination, including relocations and transnational mobility of workers that were expected to increase after the EU enlargement a few years later. Both of these groups helped enhance the visibility of collective bargaining activities among the EMF affiliates by helping them to communicate the European issues to their membership and thus gain legitimacy for their European sphere of policy-making.

While the focus in network structure has mostly been on core-periphery relations and density of the core, ties among peripheral nodes has received much less attention. Cohesive subgraphs can be used to define a core since there are normally more ties among the members of the core compared to the ties that are found between the members of the core and periphery, leading to a higher density. However, periphery-to-periphery interaction can also be high as it can reveal hidden cores among the peripheral actors. To tackle this Everett & Borgatti (1999a) presented a peripheral degree index P_D, where

$$P_D(\mathrm{v}) = \frac{\text{number of periperal actors connected to v}}{\text{total number of peripheral actors}}$$

In a theoretical network, all peripheral actors get $P_D(\mathrm{v}) = 0$, with higher values suggesting more interest in periphery than core. Lower values on the other hand could indicate highly hierarchical network structure in which actors in the periphery only seeks to have contacts with the core. Another possibility for high values is that the node belongs to a different core. Therefore, these need to be removed from the model because they are not consistent with the notion of status-based core-periphery structure.

The network periphery has a density of 0,079, which is about half of the density of the overall network (0.143). This implicates that trade unions in the periphery seek to form ties with the trade unions in the core or semi-periphery; something that indicates a "status-based" network structure as members of the core and periphery try to connect with the members of the core. This results in an especially low density for the internal ties within the periphery because peripheral trade unions do not have enough resources to to engage with all trade unions in the network, hence preferring to concentrate on the ones in the core.

Trade unions in the periphery are mostly either from small countries, new EU member states or countries outside the EU, small trade unions from bigger countries or trade unions whose core membership does not consist of metal sector. Some of these trade unions are more prominent actors nationally than internationally, connecting with the trade unions in the core through national institutions and regional structures. In between these two groups are the trade unions in semi-periphery that are either white-collar trade unions (the Nordic ones), on the borderline of whether they would be included in the core (e.g. Slovakian or French trade unions), from countries with a single dominating sub-sector (like shipbuilding in Croatia), from countries that are de facto in the core of their own regional clusters (countries from the SEE) or from countries with several competing trade unions (e.g. Poland, France or Hungary). Common nominator for all trade unions in the network is their reliance on resources to become active members. Due to the limitation of trade unions' internal resources, becoming an active network member becomes difficult, hence, following the resource dependency theory (Pfeffer & Salancik 1978) some trade unions may be dependent on external resources to participate in the network activities.

As can be seen from the Table 20, in most cases the trade unions from the CEE and SEE had weaker power positions measured by Bonacich eigenvector centrality, despite relatively high normal degree centralities in some cases. The CEE trade unions (n=12) have a Bonacich average of 5,782, the SEE trade unions (n=7) 4,956 and the EU15 et al.[38] trade unions (n=52) the average is 7,516, whereas in the normal degree centrality scale the difference between CEE and EU15 et al. is greater (12,619 Vs. 15,028) and the difference to SEE (10,816) remains the same. Following Bonacich's thesis, this confirms that due to their lack of resources and policy preferences, trade

[38] EU15 + EEA + Switzerland + Cyprus + Malta

unions from CEE formed ties mostly with each other, hence, undermining their chances of having influence over the entire network. One of the main reasons for the weak power positions of the trade unions from CEE and in particular SEE was the fact that they were omitted from the above presented intra-regional networks, which concentrated only on Germany and its neighbors. About half of the CEE countries were outside this structure, and since there was no EMF regional network for them either, a viable option for them was to form their own networks that were much more loose and informal. Bonacich eigenvector centrality under-values these trade unions, since they are not institutionally directly connected to the trade unions in the core. Another reason behind this is the fragmentation and pluralism of trade unionism in most of the CEE and SEE countries, discussed more thoroughly in earlier. The strong position of Czech trade union can be explained by the centralization of power and resources thesis, as OS KOVO (CZE1) is the only national actor in the field competing for the resources. Therefore, unsurprisingly OS KOVO has the highest Bonacich eigenvector centrality among the trade unions from the CEE[39].

Whereas trade unions from the CEE have slowly been able to build their capacities, the trade unions from SEE were still at the time of this study developing new strategies and strengthening their organizational structures amid small resources and general lack of institutional and legal framework in which they operated. In a survey of trade unions from SEE (EMF 2009), the respondents mentioned establishing new structures, training of the officers and shop stewards as well as consolidation among trade union confederations at the national level as their main challenges. Since the field of industrial relations is also very fragmented in most of the CEE countries and plagued by external rivalry, there has never been the chance to develop a united trade union movement. In many of the CEE countries, especially in the metal sector, the main level of industrial relations has been at the company level because of the strong influence and role of the MNCs with their own internal bargaining policies. Furthermore, according to the EMF report, on average a trade union in SEE had only three people working at the national level headquarters (Ibid.), meaning because of their lack of human resources the trade unions were able to participate actively at the European level, as also indicated by the Bonacich eigenvector centralities of the trade unions from the SEE.

[39] It should be noted here that even though the industrial relations systems at the national level might be fragmented, in most of the countries the trade unions agree on the European policies. Also, in many countries not all of the national trade union confederations are affiliated with their European sectoral confederations like the EMF.

There have been efforts to strengthen cooperation with trade unions in the new member states. However, there have been tensions arising, especially in regards to the posted workers and alleged wage-dumping. One of the most significant cases in post-enlargement EU is the case of Laval[40] that was briefly discussed earlier. Although it took place in another industry sector, it has had huge ramifications for industrial relations in Europe in regards to a clash between trade unions' right to industrial action and the European right to provide cross-border services in the EU. The case is one in a series of similar cases that the ECJ took up, mirroring its findings in the Viking and Rüffert cases (Warneck 2010).

In the case of Laval, a subsidiary company of the Latvian construction company Laval un Partneri Ltd planned to use posted workers from Latvia on a construction site in Sweden, paying them less the minimum wage stipulated in the sectoral collective agreement in Sweden at the time (c.f. e.g. Davesne 2009; De Schutter 2012, 359-373). Laval would not sign the Swedish collective agreement, since it is voluntary in Sweden, instead referring to the Latvian collective agreement it had already agreed to with its Latvian workers. Several Swedish trade unions tried to force Laval to sign the Swedish collective agreement and when this did not happen, they started a blockade, where none of the Latvian workers participated in, however. Laval took matters before the Swedish Labour Court, arguing that the blockade was a violation of its right under EC law to provide cross border services from Latvia to Sweden. The application was dismissed, but the Labour Court made a reference to the ECJ for a preliminary ruling on the interpretation of Community law, referring to the Article 49 on the EC Treaty, securing the freedom to provide cross-border services in the EU and the Directive 96/71/EC on the posting of workers in the framework of the provision of services. This reflected the ECJ's ruling in the Viking case about an employer's right to freedom of association, yet also ruling that protection of workers from social dumping can amount to an overriding reason or public interest. However, it also stipulated that the level of protection guaranteed by the Posted Workers Directive when there are no clearly defined national law requirements cannot be justified since trade unions in host countries cannot demand more than the legal minimum wage rate from a company coming from a different EU member state (Gennard 2008) as it would be discriminating against the employers. Regarding trade unions, Gajewska (2009, 68-70) argued that the Swedish trade union should have done more to seek a common position and relying on mutual trust with its Latvian counterpart to agree to treat the protection of

[40] Case C-341/05, Laval un Partneri Ltd. v. Svenska Byggnadsarbetareförbundet, 2007 E.C.R. I-11767

workers in any EU Member State as equivalent to its own treatment instead of fighting it straight away.

Whereas trade unions in EU15 feared the risk of social dumping, their counterparts in the CEE were satisfied with unrestricted access to European labor markets. In relation to the free movement of workers, trade unions from CEE countries were on the same page with trade unions from EU15 in that the workers from new member states should be offered same wages as local workers. Around the time of their EU accession, they joined the EU-level movement against the draft of Bolkenstein Services directive even though its original version would have given them short-term advantage over EU15 workers as self-employed workers from CEE would have been able to offer their services in EU15 at a lower price. The rationale behind this was that lowering labor standards in the EU15 would reduce the possibility for the upward convergence of working conditions in CEE (e.g. Bernaciak 2007; Dølvik & Ødegaard 2012).

6.4 Cohesive Subgroups and Community Detection – Cliques, Multiple Cores and Peripheries

Apart from the above presented robust method of dividing the network into a core-semi-periphery-periphery -model by using eigenvector and degree centrality, it is also possible to apply the cohesive subgroup approach (Frank 1995), which draws from the embeddedness literature (Polanyi 1944; Granovetter 1973; Beckert 2007; Bögenhold 2013). Within a network there are often groups of actors interacting with each other to a higher degree or more frequently and intensively than with other actors, indicating that there might be a separate entity within the overall network, while the actors still remain part of the network. In the organizational network literature, these cohesive subgroups are often treated as single units (Everett 2005; Frank 1995) and sometimes referred to as virtual organizations (Coyle & Schnarr 1995). It has been argued that large networks are essentially composed of non-overlapping cohesive subgroups containing dense interactions (Blau 1977; Simmel 1955; Simon 1965) where the actors foremost communicate with each other directly within their subgroups before integrating into larger organizations or networks through interactions outside the subgroup boundaries (Granovetter 1973; Simmel 1955) that are not necessarily formally designated. The idea of cohesive subgroups can be traced back all the way to Moreno's sociometric studies (1934), theoretical analyses on group structures (Homans 1950) and later to primary group analysis (Freeman 1992b) that all have provided a crucial link between individuals and organizations.

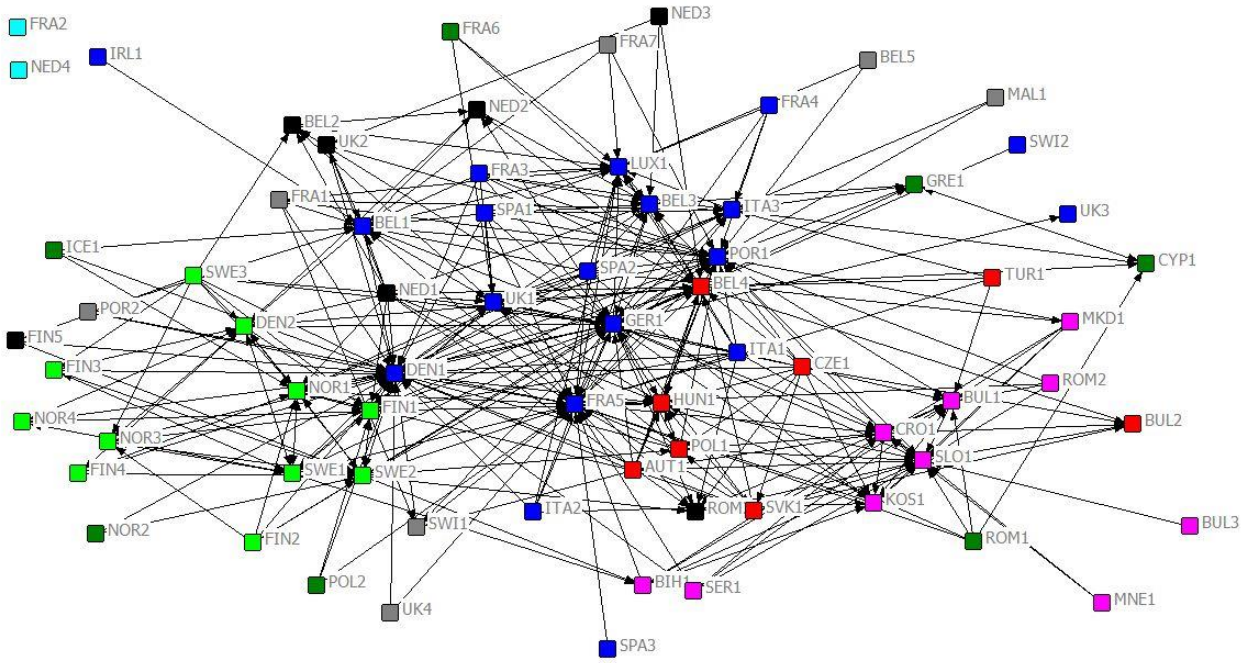
Using the graph-theoretical approach, it is possible to analyze cohesive subgroups as cliques (Wasserman & Faust 1994), where all subgroup members are interacting with each other, despite the restrictive definition of clique. Therefore, the requirement of a clique needs to be relaxed. One suggested solution is to require each actor in a subgroup to be within reach of each other through a minimum number of ties so that the connecting paths are still within the subgroup (Alba 1973). However, this definition fails to recognize the influence transmission through interactions, leading Burt (1988) to suggest that cohesive subgroups should be defined in terms of direct interactions rather than overall path lengths. Additionally, narrowing the method to using path lengths as the only measurement emphasizes the nature of the ties between each pair of actors within a subgroup, whereas the relationships between all the actors in the subgroup should be of concern. Seidman & Foster (1978) suggested a minimum-maximum method where a minimum number of ties each actor must share with others in its subgroup or alternatively the maximum number of missing ties between an actor and the other subgroup members is applied. There are also methodological problems with this approach, as defining minimum and maximum is often contingent and dependent on the characteristics of the actors in the subgroup. Furthermore, this approach ignores non-overlapping subgroup boundaries, which form the base of networks.

6.4.1. Cohesive Subgroups

On the surface, it may appear easy to observe cohesive subgroups in a network by visualization, since they are defined as a group of actors with dense interactions between each other. However, whereas some cohesive subgroups are open and easily identifiable, others have a weak incentive to be identified or the actors are not aware of belonging to a subgroup. Therefore, the position of actors in the network and the preponderance of ties make the task of identifying cohesive subgroups almost impossible to do by hand. By definition, networks can be divided into several subnetworks and cohesive subgroups are a group of actors within a core of a highly-localized region of that network. Drawing from the Simmelian (1955) theory about the distinction between dyads and triads, groups that are able to withstand the loss of members are cohesive in their structure (Moody & White 2003). Alongside structural cohesiveness, the concept of social embeddedness (Granovetter 1985; Uzzi 1997) that reflects a multi-dimensional network construct by emphasizing the importance of networks for actors can be applied to social networks. Social embeddedness means that actors with ties to many networks have access to different sets of resources and are faced with different constraints than those that only have access to the resources of one network and

hence lack diverse relations. Uzzi (1997) argued that the embeddedness paradox[41] leads social networks to evolve in a non-linear manner.

Figure 6. Factions



One way of finding cohesive subgroups is by using the factions -method to identify nodes that are more tightly connected to one another than they are with members of other factions by maximizing connection within and minimize connection between these factions. As can be seen from Figure 6, using seven factions to correspondent with the number of EMF regional groups (Table 22), there is quite significant overlap between these two with especially the Nordic faction, Eastern faction and the South East faction corresponding well with the regional groups. It seems however, that there is a better correspondence with the core-periphery analysis preformed above.

[41] Embeddedness paradox refers to a situation, where gains from an increased embeddedness are positive until a certain threshold is reached. After that returns an actor can expect diminish.

Table 22. EMF Regional Groups

EMF Regional Groups
Nordic: Sweden, Norway, Finland, Denmark, Iceland
Benelux: Belgium, the Netherlands, Luxembourg
British: United Kingdom, Ireland
Central: Germany, Austria, Switzerland
Southern: Spain, Portugal, Italy, Greece, Cyprus, Turkey, Malta
Eastern: Hungary, Poland, Czech Republic, Slovakia, Slovenia
South East: Romania, Bulgaria, Croatia, Bosnia & Herzegovina, Montenegro, Serbia, Macedonia, Kosovo

It is natural to think of the trade union network in the metal sector as one homogeneous unit of analysis with a single core consisting of the affiliates at the EMF SWPs being mostly from the big countries of the EU15. This view, however, omits to take into consideration the regional level of action. The eight EMF regional groups overlapped partially with the IG Metall collective bargaining groups but included more countries. They were open for all affiliates but were mostly forums for sharing information and lacked real power to formulate common European policies. Instead this task was given to the SWPs of these Policy Committees, where only a few trade union affiliates were represented (Nordin 2009). However, any cohesive subgroup can be defined as the core of highly localized region of the network, meaning that any actor can be a member of a local core, a member of the periphery of that core or unrelated to either one.

Following the two rounds of EU enlargement in 2004 and 2007, only the countries from SEE remained outside[42]. Trade unions in Western and Eastern Balkans are faced with a very difficult situation since the employers' organizations as counterparts in social dialogue and collective bargaining are either very weak or they do not exist at all. The first initiative to integrate trade

[42] Not counting countries like Norway and Switzerland that have voluntarily chosen to stay outside the EU.

unions Western Balkans to the "European family" was made by ETUC already in 1999 through a Balkans Forum. EMF followed up by establishing SEEF in 2003 with the goal of helping trade unions from SEE to strengthen their capacities to participate in social dialogue domestically and eventually ease their transformation ahead of the EU enlargement. To succeed in this, the aim of SEEF was to create possibilities for cross-border cooperation between trade unions in the SEE, although there were some problems with this:

> *"It is very difficult to cooperate with regional group, as they are not providing us with data which we agree. Besides this number of Trade Unions from different countries are member of EMF, and they are presenting only one activity. They are not showing interest for unite. Instead of one stronger, we do have a few, but without influence."* (Trade union officer from SEE)

6.4.2. Peripheries or "Cores" Outside of Cores? Two Interpretations of Cliques

Although there have been many studies on cohesive subgroups, little consideration has been given to the network members that are not part of these subgroups, but yet are connected to the subgroup to a degree that they can be considered its peripheral members. Using this definition, any actor can be regarded as a member of a local core or periphery of that core or as unrelated to either of them. There are two possible approaches to identify a core and its periphery within a network. Whereas Everett & Borgatti (1999a) identified in one paper subgraphs that serves as cores for a given network, in another paper (Everett & Borgatti 1999b) they started their analysis from the subgraph-level by identifying a network core and seeking to find the network region (i.e. periphery) for which it served as a core.

Much of the early literature on social networks (e.g. Pool-de Sola & Kochen 1978; White et al. 1976) and later Emirbayer (1997) have suggested an extension to clique constrains to define cliques and their overlaps as the archetypes of structural cohesion. From a sociological perspective, Balasundaram et al. 2011 identified three different properties that are desirable in a cohesive subgroup: (1) familiarity among members, although not necessarily homogeneity, (2) reachability and (3) robustness to avoid the subgroups being dismantled when they lose members. Graph theoretical concepts like actors' degrees, connectivity and pairwise distances can be applied to model cohesive subgroups. The concept of clique allows a perfect model for cohesive subgroups because of the subgraphs, where each actor has the maximum possible degree with any pair of members with a shortest possible distance between them and where connectivity is at maximum.

Cohesion in networks comes in two different forms: distance and density of ties. From n-cliques (Luce 1950; Alba 1973) that are based on relaxing the distances within the group to k-plexes (Seidman & Foster 1978) that rely on relaxing the density of ties to detect cohesive subgroups, there are many relaxation rules of the clique concept. Relaxing the strict clique requirements offers a more practical approach. According to Balasundaram et al. (2011), parameterizing cohesive subgroup models with k leads to relaxation of different structural aspects of a clique (when $k > 1$) or in some special cases (when $k = 1$) provides a systematic sequence of relaxations for each case (where $k > 0$) with a structural characterization of the resulting cluster. Maybe the biggest methodological problem with multiple core -analysis when studying cohesion are the overlaps among cliques (e.g. Freeman 1996). Whereas just a small overlap where only one actor is part of both cliques indicates a weak cohesion, a more serious problem arises when each actor is a connected to each other either directly or indirectly through another actor. As a solution, it is possible to exclude these from clique- and clique-overlap analyses in the same way as structures of four actors that are connected in a circle as neither of them constitute a clique.

The common nominator for all of these methods is that they enable identifing network cores and also peripheries that are defined as a set of all actors not in the core but adjacent to at least one member of the core. The concept of periphery can also be broadened to include actors that are not directly connected to the core (Everett & Borgatti 1999a). The most basic method to measure density is to treat all actors that are not part of the core as peripheral, even though some of them can be more closely connected to the core than others. When a network has peripheral members seeking to move into the core, a measure of CP(v) as a coreness of actor v can be used to define peripheries in terms of density instead of geodesic distance (Ibid.). Assuming that $CP(v) = r/q$ where q is the minimum number of ties incident with v that are needed to make *v* part of C, and r is the number of those ties that are already incident with v, it indicates that $v \in V$, if $v \in C$ meaning $CP(v) = 1$, with CP varying from 0 to l. This means that all actors in the core have a value of 1 and all actors in the periphery have a non-0 value for cores defined by any of the standard cohesive subgraph models (Ibid.).

The thought of multiple cores in the European metal sector stems from the fact that the institutionalized core consisting of Germany's neighboring countries through the IG Metall regional groups presented in Table 21 omitted some other countries. About half of the CEE countries are not part of this structure, yet they could rely on the EMF regional network. Normally, these networks would not be treated as cores in core-periphery analysis, since they are situated far away from the

core or traditional power structures. However, a question arises, whether these can be called cores? From a purely theoretical network perspective this argument could be made. However, using empirical knowledge about the field, this issue becomes much more multi-dimensional, open to interpretation about the character of a core.

One solution for this dilemma is to apply the theory of structural cohesion by Moody & White (2003) that refers to the minimum number of actors needed to remove for a group to disconnect. The idea is based on the concept of network connectivity that refers to the operationalization of the dimensions of social embeddedness that lead to highly cohesive groups being embedded within less cohesive groups and hence making the network hierarchically nested by creating a core-periphery structure of network. According to Moody & White (2003) collectivity has five features. It can be defined (1) as a property describing the unity of a collection of actors that together form a group, (2) as a property of the group, where the members are embedded within a cohesive group to a certain degree, (3) as a continuous conception, because the cohesiveness of groups might differ. Collectivity can also refer to (4) structural cohesion that is dependent on observable social relations among the members of the group, while (5) the size of the network is irrelevant for its cohesion or members' collectivity. While the first four features seem reasonable in the context of this study, it can be argued that the size of the trade union network is relevant as it indicates the variations in capitalist labor market regimes and geographical scope of the network.

6.4.3. Interaction Between the Groups

The theory of multiple cores also brings about the notion of interaction between them. Even though there is much literature on cohesive subgroups, there are only a few techniques that take them as a starting point for a further analysis. One notable exception is the E-I[43] index (Krackhardt & Stern 1988) that draws from the notion of Simmelian ties and is based on a combination of clique analysis and brokerage roles in the network.

In his research on brokers, Merton (1968) distinguished two different groups of actors: locals and cosmopolitans that differ in their orientation, their positions in the network as well as their exchange relationships. Whereas the locals are engaged in frequent exchange of relations to others that possess similar characteristics and share similar resources, the cosmopolitans are connected to more remote actors that differ from themselves. Regarding the EMF regional networks or the IG Metall

[43] Here, E refers to the number of ties between groups (External) and I to the number of ties within a group (Internal)

bargaining networks, trade unions with ties solely with the other members of the same group are locals whereas trade unions also connected to trade unions in other groups (or even outide the structure in cases of the IG Metall networks) are cosmopolitans. The concept of Simmelian tie builds upon Granovetter's idea of strong ties (1973) and was first proposed by Krackhardt (1998). By extending the focus from Granovetter's dyads to triads in the same sense as Simmel used them in his analysis of differences between dyads and triads, Krackhardt (Ibid.) observed that triads allow actors to take roles that are not possible in dyadic interactions. For Simmel (1955), the difference between triads and dyads was the reduced individuality of the former that reduces individual power and instead moderates tendency to end up in a conflict. Similarly, Krackhardt (1998) noted that by increasing the number of actors to over three (i.e. broadening the concept of triad) the formal features of the structure will not hange anymore, meaning that the key to understanding the quality of a tie between two actors relies on whether it is being part of a strong triad or not.

Simmelian ties are defined as reciprocal ties between actors of whom at least one is outside the cohesive subgroup. Contrary to strong ties, Krackhardt (1998) demonstrated that Simmelian ties are likely to last longer than normal strong ties and occur with greater frequency, indicating a strong intern structure of the relations. It can be said that they reflect the normative power of the groups as they provide better stability than bridges or isolated dyads (Krackhardt 1999). Burt's (1992) concept of structural holes reminds of Simmelian ties, although by Krachhardt's definition (1999) bridges between cohesive subgroups differ from Simmelian ties in that they reveal triadic embeddedness described by Simmel (above mentioned reduced individuality, reduced individual power and moderated conflict) since they are being constrained by the sets of rules of every group they belong to. Therefore, the more there are subgroups, the more constrained the actors are by these forces.

Relative density and ratio of internal and external connections within a social group can be measured by E-I index, defined as $\frac{E-I}{E+I}$ (Krackhardt & Stern 1988). Its roots are in the partition-based degree centrality and it allows to explore, which actors have mediating roles between cohesive subgroups by providing a measurement of the relative number of relationships within a cohesive subgroup (i.e. bridging) and between cohesive subgroups (i.e. bonding). With outward looking groups the index is positive and with inward looking groups it is negative. However, the index can also be negative when relations between actors are close, even though most of the possible partners would be outside of the actor's cohesive subgroup. Additionally, the E-I index offers a rather simplistic perspective as it does not allow analyzing roles of the actors in this

process, nor does it take into account structural holes. This dilemma can be solved by applying brokerage roles (Gould & Fernandez 1989, Merton 1968) to non-overlapping cliques as they both have similar traits. Whereas cliques can be defined as being transitive triples, brokered exchange involves three actors of which two are part of the transaction with the third being the intermediary representing an intransitive triple.

Table 23. E-I Index of the Whole Network

	Percentage	**Density**
Internal	0,598	0,105
External	0,402	0.319
E-I index	-0,197	-0,639

+1.0 = All ties are directed outside the cohesive subgroup
0 = Ties are divided equally between external and internal ones
-1.0 = All ties are within the cohesive subgroup

Following the interpretation of the E-I index, the network, divided into cliques in a manner presented in Table 23 as a whole, is inward looking. There were only 14 trade unions with a positive E-I Index, meaning that these trade unions have more ties with trade unions from outside their EMF regional group than internal ties (Table 24). This could be partially explained with the data that included only international ties, hence, trade unions with representation of only a couple of countries in their regional group have potential for less internal international relationships than external ones. Naturally, also the number of relationships effects the analysis as those trade unions that reported more relationships are also likely to have a more negative E-I Index.

Table 24. E-I Indices of Trade Unions

	E-I Index		E-I Index		E-I Index		E-I Index
SPA3	1,000	**CZE1**	-0,091	**FRA1**	-0,500	**KOS1**	-0,647
SWI2	1,000	**POL1**	-0,091	**NED3**	-0,500	**SWE3**	-0,667
DEN1	0,700	**SPA1**	-0,111	**SWE1**	-0,500	**NOR4**	-0,667
GER1	0,667	**AUT1**	-0,200	**UK2**	-0,500	**BUL1**	-0,714
FRA5	0,647	**GRE1**	-0,200	**NOR1**	-0,529	**BUL2**	-0,714
SWI1	0,600	**ITA1**	-0,200	**SWE2**	-0,529	**FIN5**	-0,714
POR1	0,571	**ROM1**	-0,200	**BEL1**	-0,545	**ROM3**	-0,714
BEL4	0,478	**SER1**	-0,200	**BEL3**	-0,556	**FIN4**	-0,750
POL2	0,333	**FRA3**	-0,273	**FIN2**	-0,556	**FRA6**	-0,750
POR2	0,333	**NED1**	-0,286	**LUX1**	-0,556	**FIN3**	-0,778
UK4	0,333	**BEL5**	-0,333	**NED2**	-0,556	**NO3**	-0,778
SVK1	0,250	**FRA4**	-0,333	**SLO1**	-0,579	**BUL3**	-1,000
ITA2	0,200	**FRA7**	-0,333	**FIN1**	-0,579	**FRA2**	-1,000
HUN1	0,167	**ICE1**	-0,333	**BEL2**	-0,600	**IRL1**	-1,000
MAL1	0,000	**SPA2**	-0,400	**BIH1**	-0,600	**MNE1**	-1,000
NOR2	0,000	**CRO1**	-0,429	**DEN2**	-0,600	**NED4**	-1,000
ROM2	0,000	**UK1**	-0,455	**MDK1**	-0,600	**UK3**	-1,000
TUR1	0,000	**CYP1**	-0,500	**ITA3**	-0,625		

6.5 Cluster Analysis

Aside from cohesive subgroups, a network can also be divided into clusters. In cluster analysis, data is divided into clusters based on the information found in the data itself that describes the nodes and their relationships. Clustering is done to group similar or related nodes with each other and to differentiate unrelated nodes from each other (Kumar 2005). The nature of the data and the purpose for which clustering is being used dictates which similarity measures are best suitable for the analysis. The nodes are divided into classes, where the chosen similarity measure controls how the clusters are being formed.

6.5.1. Crisp and Fuzzy Clustering of Networks

Clustering methods can be divided into exclusive crisp, overlapping crisp and fuzzy clustering as well as to hierarchically nested and partitionally unnested clusters (e.g. Van Mechelen et al. 2004; Malhotra et al. 2014). Exclusive crisp clustering method applies binary valued logic to either include or exclude a node from a cluster and partitions the data into mutually exclusive subsets. One of the most basic exclusive crisp clustering methods is k-means (MacQueen 1967) that divides the data into a certain number of k-clusters that are determined a priori by taking the input parameter k and partitioning a set of n objects into k clusters. This results in an average observation referred to

as a k-centroid of each cluster and they are then put as far away from each other as possible to make it easier to associate each actor with a single centroid that is nearest to it. This way the method shows the resulting intra-cluster similarity being high and the inter-cluster similarity being lower. In Table 25 the network was divided into four clusters a priori based on the and each trade union (respondents only) was then assigned to a cluster where it has the highest degree. The normalized partition coefficient of the data was 0,25.

Table 25. Respondents' (n = 39) Closest Crisp Clustering

BEL1	1	**FIN3**	4	**NOR3**	4
BEL2	1	**FIN4**	4	**NOR4**	4
BEL3	1	**FIN5**	4	**POL1**	2
BEL4	2	**FRA5**	1	**POR1**	2
BIH1	3	**GER1**	2	**ROM3**	3
BUL1	3	**GRE1**	1	**SLO1**	3
BUL2	2	**HUN1**	2	**SVK1**	2
CRO1	3	**ITA3**	1	**SWE1**	4
CYP1	2	**KOS1**	3	**SWE2**	4
CZE1	2	**LUX1**	1	**SWI1**	1
DEN1	2	**MKD1**	3	**UK1**	2
DEN2	4	**NED2**	2	**UK2**	2
FIN1	4	**NOR1**	4	**UK3**	2

Whereas exclusive crisp clustering gives a general idea of how the actors are being divided into clusters, a more sophisticated version of crisp clustering where the actors can belong to more than one cluster can also be applied. Referred to as overlapping clustering, in this model an actor belongs simultaneously to two or more non-exclusive groups or is between two or more clusters and instead of arbitrary assigning it into one cluster, it can be placed into all of the a priori defined clusters (Cleuziou 2007) that meet the definition.

Fuzzy c-means (Dunn 1973; Bezdek 1981) algorithm offers a generalization of the k-means algorithm. Oftentimes, fuzzy clustering offers more accurate results than exclusive or overlapping crisp clustering as each actor is given a weighted (between 0 and 1) membership ratio in a cluster, indicating their partial membership in a cluster. Similarly, probabilistic clustering can be applied to count the probability for each actor belonging to each cluster. There are situations where a fuzzy or probabilistic clustering cannot be applied. These include the situation where an actor belongs to multiple groups, meaning that in these cases fuzzy and probabilistic clustering need to be converted to an exclusive clustering by assigning each actor to the cluster with the highest membership weight or probability.

Another application of clustering is a division of partitional or hierarchical clustering. In hierarchical clustering the actors are organized into a tree format and then divided into subclusters with the bottom of the tree containing all the actors in the cluster. Partitional clustering on the other hand has each actor being part of exactly one non-overlapping cluster. As can be seen, hierarchical clustering reflects the sequence of partitional clusterings, while partitional clustering can be obtained by dividing the hierarchical tree at a certain level. Fuzzy partition that is based on fuzzy clustering can be used to conduct hierarchical clustering. As for exclusive partitioning, the clustering is used to partition the data set Z into c clusters with exclusive partition of Z being defined as a family of subsets $\{A_i | 1 \leq i \leq c\} \subset P(Z)$[1] (Bezdek 1981).

For the analysis of metal sector trade union networks, the data was divided into four clusters by using the FANNY method (Tables 26 & 27) that applies fuzziness principle to group population clusters. As a fuzzy clustering algorithm, in FANNY all actors is associated with a membership coefficient, indicating a degree of membership in every cluster for each actor. Compared to k-means and hierarchical clustering, fuzzy clustering with FANNY calculates probabilities of membership for each observation in each cluster as it does not make exclusive decisions to determine clustering of objects by assigning degree of membership to all clusters. Rather, does not force every actor into a specific cluster when these clusters are highly intersected or even embedded with each other. Instead, each actor is spread over various clusters and the degree of belonging to different clusters is quantified by means of membership coefficients that can range from 0 to 1.

Table 26. Fuzzy Clustering object of class FANNY

m.ship.expon.	2
objective	3,559109
tolerance	1e-15
iterations	131
converged	1
maxit	500
n	39

Table 27. Respondents' (n=39) Membership Coefficients (in %, rounded) by using FANNY

	1	2	3	4		1	2	3	4
BEL1	*43*	29	12	16	**ITA3**	*57*	19	12	12
BEL2	*32*	26	21	21	**KOS1**	5	5	*86*	4
BEL3	*54*	20	13	13	**LUX1**	*78*	11	5	5
BEL4	15	*77*	4	4	**MKD1**	23	26	*30*	20
BIH1	6	4	*86*	4	**NED2**	25	*39*	18	18
BUL1	11	12	*68*	9	**NOR1**	9	13	7	*71*
BUL2	24	*34*	21	21	**NOR3**	13	15	12	*61*
CRO1	16	13	*61*	10	**NOR4**	24	25	22	*29*
CYP1	27	*34*	20	20	**POL1**	22	*34*	26	18
CZE1	24	*39*	22	15	**POR1**	21	*47*	21	11
DEN1	17	*44*	9	30	**ROM3**	24	27	*29*	20
DEN2	0	0	0	*100*	**SLO1**	0	0	*100*	0
FIN1	5	7	5	*83*	**SVK1**	11	*56*	26	7
FIN3	20	21	18	*41*	**SWE1**	14	19	13	*54*
FIN4	19	20	17	*45*	**SWE2**	2	3	2	*93*
FIN5	24	26	22	*28*	**SWI1**	*35*	26	19	19
FRA5	*84*	8	5	3	**UK1**	15	*59*	11	14
GER1	45	*55*	0	0	**UK2**	26	*27*	23	23
GRE1	*32*	31	19	18	**UK3**	27	*30*	22	22
HUN1	16	*49*	19	16					

The Highest Membership in *italics*

Dunn fuzziness coefficient: 0,437
Normalized: 0,249

In looking at the partition that is closest to fuzzy clustering, especially in cases where the output contains many membership coefficients, closest exclusive clustering can be used by assigning each actor to the cluster in which it has the largest share of its membership. As can be seen from Table 27, in the case of European metal trade unions, 19/39 of the respondents could be placed in one cluster (threshold >50 %)[44], others could be divided more evenly between more than cluster. The fuzzy clustering does not seem to support the idea of power in networks as was described previously. Every other indicator used so far in this study has had the German IG Metall as the most central and most powerful actor in this network. However, the fuzzy clustering has it wielding power only in two of the four clusters. What makes these results especially interesting is that it has no influence over the fourth cluster, where the Nordic trade unions dominate or the third cluster which consists mostly of trade unions from the SEE and to some degree also from the CEE. While

[44] BEL3, BEL4, BIH1, BUL1, CRO1, DEN2, FIN1, FRA5, GER1, ITA3, KOS1, LUX1, NOR1, NOR3, SLO1, SVK1, SWE2, UK1

closest crisp clustering offers a simplified analysis, it also gives a better and more accurate picture of the network than normal clustering. This implies the existence of regional cores and subnetworks that are formed around institutional bases (IG Metall leading the collective bargaining network with its neighboring countries, Nordic trade unions with their bargaining cartel and SEE trade unions that are outside the EU).

6.5.2. Cliques and Relational Power in Networks

Normal cluster analysis does not consider a priori features of the nodes. Therefore, it cannot be applied to investigating the relational power a trade union wields either. Using the a priori approach to the clusters presented in Tables 25 and 27, the sum of all the trade unions' Bonacich degree centrality as well as average in each cluster was calculated both by using the exclusive and fuzzy method is presented in Table 28.

Table 28. Exclusive and Fuzzy Clusters

	Exclusive		**Weighted**	
Cluster	**Sum**	**Average**	**Sum**	**Average**
1	53,191	6,649	69,196	1,977
2	101,758	8,480	80,797	2,451
3	33,535	4,791	49,597	1,378
4	97,132	9,713	85,836	2,452

Using the exclusive clustering method, the average Bonacich eigenvector value measuring members' centrality is highest in clusters 2 and 4 that are the IG Metall lead cluster and the Nordic cluster. Similarly, using the weighted fuzzy clustering method, the same two cluster get the highest average Bonacich eigenvector score. These findings support the interpretation presented in regards to Table 25.

Looking at the diagonal of the overlap matrix, it can be noticed that Danish CO-Industri (DEN1) and Norwegian Fellesforbundet (NOR1) are members in six cliques, while Swedish Sveriges ingenjörer (SWE1) is member in four. Following this interpretation, CO-Industri and Fellesforbundet are high in "clique centrality", as they both are in five out of six cliques (Sveriges ingenjörer is in all of the four cliques with both of them), indicating that they form the core of a larger group. Overall most of the actors in these cliques are from the Nordic countries, giving another aspect to their strong institutional foundations that has led to strong power position. From the hierarchical clustering two groups can be identified. The Nordic one consisting of Danish, Finnish, Norwegian and Swedish as well as the Central European trade unions from Belgium,

Germany and the UK. The Danish CO-Industri and IDA (DEN2) as well as Fellesforbundet are divided hierarchically into the two larger cliques, most likely because of their prevalent ties with the other actors in those two cliques.

Using the interpretation from Table 20, where the Bonacich core was given a threshold value of 9,551, eight out of these nine cliques in Table 29 make the cut and are being defined as cores. However, because the seventh clique consists only of trade unions from Finland, it will not be included either. As is the case for many networks, the subgroup structure is complex, because the network is not neatly partitioned into subgroups, with each node belonging only to one of them. As could be seen from Table 29, there are numerous structurally cohesive configurations of ties, particular nodes are situated in some number of these configurations, and pairs of nodes vary in the number of configurations in which they are jointly situated (i.e. the number of their co-memberships). The ties do not indicate interorganizational contact, but rather co-memberships in structurally cohesive network configurations, hence, a pair of actors that is not in contact but is jointly situated in numerous cohesive configurations is likely to have a stronger interorganizational affinity than a pair of actors that is in contact but is jointly situated in only a few cohesive configurations of contacts.

Table 29. Cliques of Trade Unions

Clique	Clique members' Bonacich degree avg.
1. DEN1, FIN1, NOR1, NOR3, SWE1	11,563
2. DEN1, FIN1, NOR1, SWE1, SWE2	12,257
3. DEN1, DEN2, NOR1, NOR3, SWE1	11,332
4. DEN1, DEN2, NOR1, SWE1, SWE2	12,026
5. DEN1, GER1, NOR1, UK1	15,900
6. BEL1, BEL4, GER1, UK1	17,056
7. FIN1, FIN2, FIN3, FIN4	10,407
8. DEN2, NOR1, NOR3, NOR4	9,251
9. BEL1, DEN1, GER1, UK1	16,478

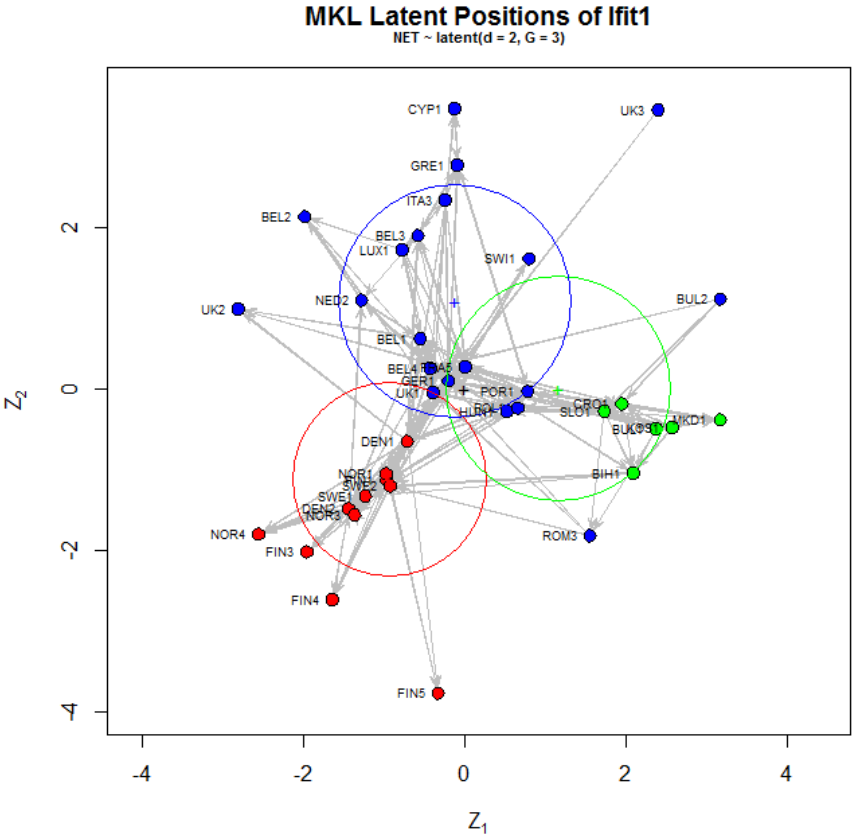
6.5.3. Latent Cluster Models

In addition to the core-periphery analysis of a network, a quantitative methodology for identifying relevant actors can be applied. Since social networks dynamic is driven by social interaction, modeling graphs, nodes and ties becomes difficult. One solution is to apply latent cluster model that provides a more advanced form of clustering by identifying the existence of unobserved blocks. In this method, the probability of a tie between two actors serves as a function of distance between the latent space positions of these actors (Hoff et al. 2002). This model can be extended to group actors

among spherical Gaussian clusters in the latent space by applying non-binary data (Handcock et al. 2007). Bayesian inference can also be applied for the models based on an MCMC algorithm to compute ML estimates for the latent position model and use a 2-stage ML method for the latent position cluster model. The advantage of using latent position cluster models is their ability to use a Bayesian method of assessing how many groups there are in the network. Similarly, the model enables investigating whether the network is clustered. To estimate which clusters each actor belongs to, latent position clustering computes different types of point estimates for the coefficients and positions by applying the probability of each actor belonging to each cluster. Some of the most common methods include ML estimate, posterior mean and posterior mode (c.f. Krivitsky & Handcock 2008). In order to fit latent cluster and latent position random network models, ERGMM can be used to return either a Bayesian model fit or the 2-stage MLE (Hoff et al. 2002; Handcock 2005).

Principal Component Analysis (PCA) draws from multivariate data analysis, offering a technique to project high-dimensional data to a much lower dimension and, hence, enables capturing greater variation. It transforms a number of possibly correlated variables into a smaller number of uncorrelated variables also knows as principal components by finding a lower dimensional subspace in which the projected variance of the data is being maximized. The primary principal component accounts for maximum variability in the data, followed by each succeeding component that account for maximum of the remaining variability. When seeking 2-dimensional subspace projections, it may be necessary to include more latent dimensions in the analysis to capture the variability that helps to reveal the network structure in the data. PCA can also be used for a latent variable model representation (e.g. Tipping & Bishop 1999) which is strongly related to factor analysis with the biggest difference being that factor analysis offers a richer noise model than the PCA (Honkela & Valpola 2005). Below, PCA was applied to ERGMM by selecting and combining user attributes with characteristics that are purposeful for the analysis. This was done by reducing the complexity of the data to suit social network analysis better. In Figure 7 two principal components Z1 and Z2 on the network matrix are used and in the background are three latent groups (blue, red and green) and positioning them graphically by using the Minimum Kullback-Leibler Latent (MKL) positions. Adding a fourth latent group did not bring anything new to the analysis and was hence dismissed. This method is usable when the number of clusters is known a priori. However, while the Bayesian method is able to estimate the number of groups correctly, it is also able to yields tighter estimates of the latent positions because uses the clustering information when estimating these.

Figure 7. Principal Component Analysis of the Network by using the Minimum Kullback-Leibler Latent Positions



As can be seen from the Figure 7, the big trade unions like IG Metall, Belgian LBC-NVK (BEL4), Amicus and the French FTM-CGT (FRA5) are part or near the intersection of the three clusters in the middle of network. Also, strong regional clusters can be found especially between the Nordic trade unions and to some degree also between the trade unions from the SEE, although none of the trade unions here are close to the center of the network and some are even outside the clusters. This analysis supports the results from the core-periphery analysis presented above. Additionally, there seems to be more interaction between the green cluster and the blue one than between the red and blue clusters.

6.5.4. Policy Network Approach to Cohesive Subgroups: Blockmodels and Issue Networks

Policy network analysis draws from social network analysis by adding a public policy dimension to it. It assumes that policy-making and implementation are influenced by a variety of non-governmental actors from interest groups from international organizations to scientific organizations (e.g. Adam & Kriesi 2007; van Waarden 1992) and these actors maintain different type of relations from resource exchange and influence attribution to more formal common group membership with public policy actors. Policy network analysis aims to explain policy outcomes as a function of these relations. Policy network analysis links formal concepts and statistical measures from the general methodological social network analysis toolkit by implementing them to policy processes or sequences (Brandes et al. 1999) in a 2-mode network together with actors. By emphasizing structured interaction within the set of actors in order to explain a certain policy development, policy network analysis aims to delineate the set of relevant actors engaged through boundary specification and then identify the relations among the significant actors that are responsible for the policy outcome through coalition building. Policy networks offer theim members many possibilities from information exchange to signaling interest in certain policy positions for coalition building and the mutual support. Structuring reflects an emergent effect that is both restricting and enabling interaction between two policy actors. Some of the most common structural methods include dealing with a detailed description of actors' connections in a network directly or indirectly via communication, support or other flows of policy resources (connectedness perspective) and. similarity or dissimilarity of the profiles of relations (profile perspective), referring to structural equivalence of actors' network positions (e.g. Lorrain & White 1971; Burt 1988).

Blockmodeling draws from regular equivalence that refers to actors having same type of ties with equivalent actors, not necessarily same actors as is the case with structural equivalence (Lorrain & White 1971). Individual nodes can be blocked together by using aggregate relationship data to reduce the number of relations derivable from the data as actors that share the same role in the network can be partitioned into a blockmodel, representing the social position of each block member. These blocks are interpreted as positions and the relationships between members of two different positions indicate the roles played by the actors occupying that position. There are two different criteria for a fit in determining whether a blockmodel can be applied in situations where structural equivalence is not applicable because a set of data includes a weaker condition. First one

of these, called the lean-fit criteria[45] as opposed to fat-fit (Breiger et al. 1975) means that at least one actor in a block has formed a relationship to every other actor in another block, while α–blockmodel fit only considers the number of total relations multiplied by α (called criterion) in forming a block (Arabie et al. 1978). One of the main characteristics of blockmodeling is that the actors' positions and networks structures are not defined a priori, but rather emerge from the data, meaning that the actors forming a block could be unaware of their position (Martino & Spoto 2006).

Structural portioning of networks into subgroups gives an emphasis to both the connectedness and the profile perspective as they are both based on the identification of subsets[46]. The aim is hence to find a set of actors that is clustered together more cohesively than with other actors and see, whether the network is integrated or segregated into two or more subgroups where the actors have more intensive internal relations than external. The analysis concentrates on finding, how many such subsets exist and how closely the actors are connected to each other within each subset, while formation of subgroups relies on profile similarity. A block refers to a group of actors with shared interests or attributes within an overall network and can be identified through blockmodeling and cluster procedures. The difference between blocks and subgroups is that in the former actors try to find common patterns of interaction throughout the network, instead of doing it directly as is the case with subgroups (Wasserman & Faust 1994).

Using the idea of blockmodeling and combining it with 2-mode network approach to form policy events or blocks a blockmodeling analysis of issue networks (Table 30) can be performed, presenting coalitions of trade unions based on their policy issue preferences and the means how to tackle these. Adding power dimension to the analysis, the blocks that have the highest Bonacich's average and the highest within density (i.e. cohesiveness) indicate according to White & Harary (2001) the block members' central position in the whole network as well as the existance of prior ties between the block members. From this perspective, blocks with members deeming lobbying for European growth and employment strategies and coordination of collective bargaining are the strongest ones. In general, comparing issues preferences per se gives an idea of the direction EMF trade unions preferred. Alternatively, it is possible to move within the issues and look at the procedures and strategies that trade unions feel should be adopted, concentrating solely on the

[45] Breiger et al. (1975) call blockmodels where α is close to 0, "lean fit" blockmodels and those where β is close to 1, "fat fit" blockmodels.

[46] By definition, a subset is a set that only contains elements from a larger set, whereas a subgroup refers to a subset of a group that also has group structure (e.g. associativity, closure, identity) and inherits the binary operation from the group.

columns. Only on the issue of European growth and employment strategies, coordination of collective bargaining and to some degree supervising the EWCs were there competing blocks, i.e. trade unions were divided in how to proceed and which strategies should be applied. Additionally, in reference to the collective bargaining coordination initiatives of the EMF, coordination of training initiatives as part of sectoral social dialogue is also worth attention; especially since this block includes several trade unions from Nordic countries, which gives the block a relatively high Bonacich eigenvector centrality average (9,085).

Historically, national trade unions have engaged first and foremost in bargaining for better pay and as a side product of this they have taken on the agenda many other issues such as working time or working conditions and safety. At the European level, however, their role has been different with the focus on representation through ETUFs on consultation and negotiation procedures of European social dialogue, which specifically leaves the question of pay outside its scope. The empirical network data for this study was gathered during the height of the deepest and most wide-spread global financial and sovereign debt crisis since the 1930s, reflecting how the EU, its member states and even the trade unions were under pressure from the financial markets to introduce or accept regulations, procedures and new institutions to create a new European economic governance (e.g. Degryse 2012). The aim was to ensure the effective implementation of austerity policies by increasingly shifting decision-making powers from national to European level. Since 2010 European economic governance has affected coordination of collective bargaining, but also subsequently power and legitimacy of the national trade unions as they manoeuvre in Europe (Dufresne 2015a; Levesque & Murray 2010). At the same time ETUFs have been trying to relaunch their European initiatives in favor of a European coordination of national collective bargaining.

Regarding the role of the 2-mode actor-event blocks that give the framework for coalition-building, these seem only to have been playing a role in some of the cases. In general, coalitions seem less stable and solid than research on EU decision-making and collaboration-building might suggest (e.g. Hooghe & Marks 1999) or in the field of social and employment policy (Mailand & Arnholtz 2015) and industrial relations (Leiren & Parks 2014; Gajewska 2009; Erne 2008; Frege et al. 2004). While there are blocks that have formed along the regional or VoC framework, more interestingly the contours of blocks to advocate coordination and binding decisions (i.e. regulation) show how several trade unions took positions as could be expected when applying the Bonacich's eigenvector centralities to identify their positions in the network, with those belonging to the Bonacich core mostly in favor of coordination and benchmarking and those in the semi-periphery or periphery

seeing binding decisions as the best approach. This draws from the theory of status difference discussed earlier (Schneider 2006b) because actors with low status among network members seek to form ties with the more powerful ones and they are even ready to modify their own policy preferences in order to have access to power. On the other hand, powerful actors might want to be open for new ideas and gain legitimacy for their own action and are therefore willing to be in contact with the less powerful ones.

Table 30. Blockmodeling: Issues and Strategies

	Through lobbying	Through coordination & benchmarking	Through formally binding decisions
1. European-wide Growth and Employment Strategies	BEL4; CZE1; DEN1; DEN2; FIN2; FIN3; FIN4; FRA4; FRA5; LUX1; NED2; NOR3; NOR4; SWE1; UK3 Bonacich's avg. 8,942 Within density 0,305	BUL1; BUL2; FIN1; POR1; SWI1 Bonacich's avg. 5,319 Within density 0,300	BEL2; BEL3; CRO1; CYP1; FRA2; GRE1; HUN1; SLO1; UK2 Bonacich's avg. 5,268 Within density 0,111
2. Coordination of collective bargaining	n= 0	BEL2; BEL4; CRO1; CYP1; CZE1; DEN1; FIN1; FIN2; FIN3; FIN4; FIN5; FRA2; FRA5; GER1; HUN1; NOR1; ROM3; UK1; UK3 Bonacich's avg. 9,251 Within density 0,316	FRA6; ITA3; NED2; POR1; SLO1; SVK1; SWE2 Bonacich's avg. 5,947 Within density 0,095
3. Attracting Foreign Direct Investments	FIN2	KOS1	n= 0
4. Supervising and supporting EWCs	n= 0	BEL4; FRA5; GER1; LUX1; UK1; UK3 Bonacich's avg. 11,756 Within density 0,467	BEL1; BEL2; DEN1; FIN3; FIN5; FRA6; ITA3; NED2; POL1; SLO1; SVK1; SWE2 Bonacich's avg. 7,613 Within density 0,242
5. Sustainable development and environmental issues	n= 0	CZE1; UK2 Bonacich's avg. 8,095 Within density 0,000	GRE1; NOR1; NOR3; NOR4; SWI1 Bonacich's avg. 6,475 Within density 0,300
6. Working conditions (working time, safery etc.)	BUL2; DEN2; FRA4; NOR4 Bonacich's avg. 6,071 Within density 0,167	BEL1; BEL3; BUL1; CYP1; FIN1; FIN5; FRA2; FRA6; GRE1; HUN1; ITA3; KOS1; LUX1; SVK1; SWI1 Bonacich's avg. 5,550 Within density 0,143	POL1; ROM3 Bonacich's avg. 5,782 Within density
7. Engaging with employers on Corporate Social Responsibility	n= 0	FIN4	POL1; UK2 Bonacich's avg. 6,360 Within density 0,000
8. Training issues as part of sectoral social dialogue	n= 0	BEL3; BUL1; DEN2; FRA4; NOR1; NOR3; SWE2 Bonacich's avg. 9,085 Within density 0,286	BUL2; KOS1; POR1; ROM3 Bonacich's avg. 2,891 Within density 0,000
9. Controlling private equity	n= 0	n= 0	BEL1; CRO1 Bonacich's avg. 10,407 Within density 0,000
10. EU level industrial policies	n= 0	SWE1	n= 0
11. Research & Development (R & D)	n= 0	SWE1	n= 0
12. Strengthening trade unions	n= 0	GER1; UK1 Bonacich's avg. 19,658 Within density 1,000	n= 0

Trade unions in the Bonacich core in **blue**, semi-periphery in **green** and periphery in **red**

In organizational sociology, the focus has been on exogenous factors as drivers for network formation, where organizations form ties to satisfy their resource needs and survive in an uncertain environment (Pfeffer & Salancik 1978; Burt 1983). However, this does not explain how the organizations can obtain information about the competencies, needs and reliability of other organizations when trying to choose with whom to form relationships with. The importance of resource exchange and co-development of policies become important, resulting in some form of commitment between the organizations within the blocks. Gulati & Gargiulo (1999) called these blocks "strategic alliances" that aim to control environmental uncertainty. Therefore, the organizations need to have information about their potential partners' goals and intentions or they will risk exposure to opportunistic behavior (Gulati 1995a). Since this is difficult to do before formation of blocks, organizations try to identify other indicators that could indirectly help them to manage this uncertainty or alternatively they will turn to organizations or networks they are familiar with, leaving some potential ties from forming as they are not aware or familiar with these organizations. Even though relying on exogenous factors can help organizations to determine, whether to enter an alliance, these factors can be used as drivers to form interorganizational ties. Granovetter (1985) argued that the emergence of (social) action is embedded in networks of relationships.

Drawing from this Gulati & Gargiulo (1999) noted that the basic theoretical propositions of the embeddedness perspective could also be invoked to explain the emergence of interorganizational networks. Networks function as an efficient source of information on potential partners that can be considered[47] in two different ways: Either through relational embeddedness of that emphasizes the role of direct and indirect ties in gaining information about potential partners or through structural embeddedness that emphasizes the value of the potential partners' structural position in the network.

6.6 Governance and Power in Policy Networks

Based on an analysis by Provan & Kenis (2008), organizational network governance has two dimensions of brokerage. Networks can either be decentralized and self-governed, meaning that every organization interacts with each other directly or indirectly via a gatekeeper by sharing the

[47] This information is likely to have been gained in a previous relationship with the other organizations, through references from trusted third parties or alternatively based on the network reputation resulting from the position of the organization in a pre-existing network.

governance responsibility of the network. Alternatively, the networks might be highly brokered with few direct ties between the actors, with governance responsibility given to a single lead organization that takes the role of a network broker or liaison to take charge of the issues that are critical for the overall preservation and survival of the network. There are variations of these two extremes, where a single organization might be given the responsibility to perform some governing tasks while leaving the rest to other network members, while members of the network can also share governance responsibilities, leaving network governance moderately centralized with some brokerage activities taking place within individual organizations or small clusters. Apart from self-regulation of network governance, networks can also be externally governed, meaning that a unique network administrative organization takes responsibility of network governance and acts as a mediator in resolving network members' possible disputes while also representing the network outside with the mandate given to it.

Unlike in social network analysis, in policy networks actors interact with each other with the aim of producing policy outcomes from their preferable policy positions and maximizing the utility for them (c.f. Carlsson & Sandström 2008; Stokman & Oosten 1994). The purpose of policy networks is hence to identify coalitions or blocks where different actors' policy preferences align because no actor can unilaterally produce a policy outcome within a policy network. Therefore, the literature on policy networks has emphasized the importance of a certain degree of interdependence (e.g. Börzel 1998; Kenis & Knoke 2002; Mayntz 1997, 239-262; Scharpf 1994), since coordination or collaboration[48] is needed if the actors want to realize at least part of their policy preferences. As in any coordination or collaboration process, at least some actors have to bent on their initial policy position in order to realize a common policy outcome at the network level. This does not normally happen spontaneously, but rather through convincing and bargaining. Power of an individual actor over others is hence indicative of its ability to employ the attributes needed to steer other actors in the network or the whole network towards a certain policy position (Ostrom 1990).

[48] This does not apply to cooperation because it does not indicate action towards a common goal but rather joint action as such

6.6.1. Access to Power in a Policy Network

Governance approach to coordination between trade unions at the European level concentrates on investigating the whole policy process, from policy formulation to policy outcomes trough policy positions by pointing to the importance of variation by policy sector and therefore enabling policy comparisons. When investigating the role of the trade unions in policy-making, applying the governance approach indicates the existence of a segmented group of actors, implicating asymmetrical interdependence due to their different responses to the pressures of Europeanization. However, broad participation does not necessarily indicate diffusion of power within the network, but rather that plurality of interest intermediation can also be overlapping.

The governance approach draws on the notion of differentiated polity model, referring to constraints on executive power by arguing that policy processes are characterized by fragmentation, contestation and the exchange of resources (Rhodes 1997). Actors like the ETUFs or big national trade unions retain a pivotal position through their relatively greater coordinating control over the European matters because of their institutionalized position and greater resources relative to smaller domestic trade unions. In general terms, the relationship between these two groups of actors is characterized by asymmetric interdependence that is not constant but fluctuates across policy domains over time. Although the traditional model of differentiated polity concentrates on government action, it has general features that can also be implemented to other spectres of policy networks due to the role that is given to power dependence. Since organizations within networks are considered interdependent of each other through resources[49] and the extent to which they control and can mobilize these resources that determines their ability to wield power in given situations, these resource dependencies become key variables in shaping policy outcomes (Besussi 2006).

In policy networks, ties between actors indicate mutual dependency in trying to reach a certain policy outcome from a policy position, whereas tie strength indicates the degree of similarity in policy position between these actors. Conversely, actors with dissimilar policy positions are connected by a weak tie. Hence, the stronger the tie, the more dependent actors are of each other upon targeting their policy outcomes. Actors can adjust their policy positions by exchanging attributes in order to change the structure of the policy network. This means that the structural context shapes actors' interaction and helps to explain the outcome of these interactions. This

[49] In this case mainly financial, organizational or communication systems

highlights the importance of institutional landscape through which the policy process evolves and includes both the formal institutional environment resulting in this case from the political will of the EMF as well as the interaction shaped by exchange processes and informal routines that support institutionally prescribed linkages. Trade union networks described in this study served a dual purpose by offering the members both access to information and making them commit to the coordination rule. There are two ways a trade union can be member of a network. Membership can refer to institutionalized form of organizing, where the members are actively participating in the network action, sharing information and taking part in decision-making. However, membership can also refer to similarities between trade unions in their policy preferences that are not always known by the actors. Therefore, it is possible that through this latter form of membership there will be a huge potential for the actors to be able to identify these invisible networks and make them visible, thus eventually turning them into institutionalized networks.

Access to power is a central feature of a network and it can be measured in many different ways. In order to derive the power structure solely from network data, an argument can be made that there is unlikely to be formal network governance structures in institutional settings like policy networks, where powerful actors need to have access to reach their objectives in decision-making. As discussed earlier, power reputation can be used as 1-dimensional power structure in measuring how many others in the network perceive an actor powerful. The power reputation networks are purely perceptual networks in analyzing which actors are seen by others as powerful and whether those actors are indeed playing a central role in the centrality matrix presented above. With confirmed information transfer and power reputation it is possible to identify a clustering of actors who are perceived by all network members as especially influential and who form the core of this information exchange network. Kriesi et al. (2007) described two dimensions of power in a network: (1) the distribution of power in policy networks; and (2) the dominant type of interaction between actors and coalitions. Since power in a network can be either concentrated or fragmented, they also reflect the interactions that are, hence, predominantly cooperative or conflictual. In between these two falls a combination of cooperation and contention, which Kriesi et al. (2007) labelled as “bargaining”; something that is important for the long-term maintenance and survival of a network, as it reflects the capacity to influence decision-making regarding a specific policy problem (Biermann et al. 2010) and the actors’ abilities to achieve desired (shared) outcomes.

Decision-making and coalition-seeking seems to have been difficult due to the national interest constellations among members not necessarily corresponding with the regional structure of the EMF, as oftentimes trade union interests were dependent on the economic situation in the sector in their own country. On theother hand, a good economic situation makes adoption of solidaristic and cross-border oriented bargaining strategies more likely as it gives the trade unions more leeway in their strategic orientation. Trade unions' interests differ also according to the main level of collective bargaining in their native country with sectoral level cooperation being easier than company level coordination because of the top-down coordination and control mechanisms that can only be applied to a very limited extent. Solidarity in bargaining can also be more difficult to accomplish at the company level where wider bargaining goals tend to be secondary to securing local level improvements. However, the biggest threat to trade union cooperation and mutual gains decision-making has been the increasing of company-level bargaining that has undermined coordinated cross-border approach to collective bargaining.

6.6.2. Access to Formal Power – Committee Memberships

Embeddedness in social networks has received considerable focus, as there have been attempts to explain, why organizations behave the way they do (e.g. Granovetter 1985, 1992; Powell & Smith-Doerr 1994). Yet, most of the research on the origins of these networks has been limited to interlocking directorates (e.g. Mizruchi 1996; Haunschild & Beckman 1998; Johanson 2006) or historical development of interorganizational networks (e.g. Stern 1979) and using committee memberships as the measurement of power and influence. Granovetter (1985) described relational embeddedness as the capacity of cohesive social relations to spread information and promote trust, referring to the influence proximate ties have on an actor.

Network structure, power relations, coherence, closeness and density mirror the overall social structure and relations between the actors in the network. Actors aim to act rationally in their quest to define the problems they are facing and in choosing cooperation, coordination or collaboration as a strategy for their endeavour, yet, they are still limited in their choices and constrained by the amout of information available to them. Against this background, there is a need for trustworthiness of new relations as they try to find partners who share same goals and policy preferences. Although the trade unions were autonomous in regards to their own internal activities by being affiliated to the EMF, they also pledged themselves to comply with the decisions and principles of the EMF. The affiliates were expected to report on their internal issues such as current collective bargaining processes and restructuring in their industry to the EMF as was mandated in the coordination

principle. Additionally, the trade unions were encouraged to examine possibilities for more advanced forms of cooperation with the other trade unions. This made them part of a larger network, where at least in theory each of them could form ties with any of them through the institutionalized channels of the EMF. The main channels were the three Policy Committees (Industrial Policy, Collective Bargaining, and Company Policy) with their SWPs, Congress and Executive Committee, which drew, shaped and decided on work programs and guidelines. The SWPs of the policy committees were given a mandate to prepare committee meetings and at the instruction of the committees, develop and formulate explicit proposals for joint positions. Since their inauguration, the role and importance of the SWPs increased and as the members were mostly from the most active trade unions, their influence also increased, creating a two-tier model. Out of the trade unions that were part of the SWPs, only the Czech OS KOVO came from the CEE. Table 31 supports this observation, since normalized degree centralities of the trade unions that were part of the SWPs are significantly higher compared to the normalized degree centralities of those trade unions that were only participating in the Policy Committees' work, let alone the trade unions that were not participating in any form in the EMF institutional structures, as was the case for all the trade unions from SEE apart from the Croatian Sindicat Metalaca (CRO1).

Table 31. Bonacich's Eigenvector Centralities for Different Groups of Trade Unions within the EMF Organizational Framework

Select Working Parties (n=19)	11,222
Policy Committees (n=53)	7,910
Non-Policy Committees (n=18)	2,293
ALL	6,486

Against this background, there was an incentive for trade unions to engage actively in the work of the EMF Policy Committees and their SWPs if they wished to have their own opinions heard and be part of the policy formulation process. Three major reasons for enhanced collaboration stand out: (1) With the increasing international competition and, thereby, a strict focus on costs dominating all aspects of especially company-level industrial relations and the threat of relocation of production, trade unions need to find a common ground to prevent wage-dumping also in cases where there are trade unions from countries that would benefit from this involved. (2) As a consequence of cross-

border mergers and acquisitions and increased role of the MNCs especially in traditional manufacturing industries, decisions are more often taken outside the sphere of national industrial relations systems, making it more difficult for national trade unions to establish a dialogue with the employers. (3) Since many smaller companies in the manufacturing industries are subcontractors and therefore part of cross-national production chains for larger companies that are often MNCs, it become important for trade unions to establish well-developed, cross-national contacts too; something that Table 20 also demonstrates. These changes gave the EMF more leeway to increase its role from purely mediator or network administrator (Provan & Kenis 2008) with the focus on bringing the trade unions together to exchange information on national collective bargaining rounds to a policy-making and lobbying organization vis-à-vis especially the European Commission. Likewise, the "new" EMF that emerged in the 1990s facilitated not only the exchange of information, but also policy learning as a means to deal with European trends and eventually try to formulate mutually binding policies. Benchmarking and peer pressure formed an important part of such dynamics of the EMF (Gollbach & Schulten 2000).

As an answer to the complex tendencies of globalization and Europeanization, a new regional dimension was established within the EMF with the aim of bringing together trade unions from neighboring countries and formulate strategies that would benefit the whole region instead of encouraging competition.

> *"In our regional group there are many countries with different interests, making it very hard to cooperate."*
> (Trade union officer from SEE)

> *"As members of the former Visegrád countries, we have traditionally close connections with each other. The members of the regional group (excluding Poland) work together in the so-called Wiener Memorandum group with the trade unions from Austria and Germany. We inform each other on the situation of collective bargaining in each country, like about results of the negotiations situation on the labor market etc."*
> (Trade union officer from CEE)

> *"In many cases we deal with issues like how to implement a law, but there is too little unity in incorporating our demands. So, for example, as long as we among ourselves have disagreements regarding issues like minimum wage, we will witness transfer of capital, discrimination in employment etc."*
> (Trade union officer from South West Europe)

> *"There are numerous forms of bilateral cooperation, which are exceptionally good for different reasons, but which are not used enough. Here I am primarily referring to help offered by foreign trade unions to countries in transition. There are companies from those countries, which often do not comply with international conventions."*
> (Trade union officer from Central Europe)

By dividing Europe into regions, the aim was to raise the trade unions' level of commitment to the common cause, albeit a regional one; something that had not always been the case with the Policy Committees as some trade unions from the CEE and SEE saw them being too focused on issues relevant for EU15 and hence neglecting the issues that mattered for them.

> *"We have decided not to participate in the Policy Committee Work because we do not benefit from it. The issues discussed there are in many cases against our own interests and often overlook our concerns."*
> (Trade union officer from CEE)

Table 32 measures the success as defined by high within density as well as between density for each of the EMF regional groups. This method bears similarity to the E-I Index (Krachhardt & Stern 1988) presented earlier by comparing the numbers of ties within groups and between groups with the difference being that instead of resulting in an index, this analysis gives the percentages of the existing ties out of all the ties and does not compare external and internal ties.

Table 32. Densities of EMF Regional Groups (A Priori)

Group	**n / η_{max}**	**Density (within)**	**Density (between)**	**$\frac{\mathbf{b-w}}{\mathbf{b+w}}$**
Central *(AUT, GER, SWI)*	2/4	0.667	0.164	0.833
Benelux *(BEL, LUX, NED)*	7/10	0.622	0.114	0.417
South East *(BIH, BUL, CRO, KOS, MKD, MNE, ROM, SER)*	5/12	0.303	0.073	0.444
Eastern *(CZE, HUN, POL, SVK, SLO)*	5/6	0.600	0.133	0.705
Southern *(CYP, GRE, ITA, MAL, TUR)*	3/7	0.238	0.071	0.730
Nordic *(DEN, FIN, ICE, NOR, SWE)*	12/15	0.552	0.138	0.547
South West *(FRA, POR, SPA)*	5/12	0.273	0.141	0.695
British *(IRL, UK)*	3/5	0.150	0.091	0.818

Within density = density within the group members
Between density = density between the members of the other groups

Since these groups are institutionalized, and in most cases have a formal structure, it makes sense that the within densities are higher than the between densities. This also reveals, how functioning

formal structures are and how this affects the densities. Between and within densities support the expert interviews with the EMF policy officers (EMF 2008) about the functioning of the regional networks. The Nordic region has traditionally been a core area of transnational collective bargaining coordination, relying on highly advanced institutional structures within Nordic IN, a bargaining cartel of trade unions, which structures are equivalent to the EMFs. This made the coordination and cooperation easier, as it meant mutual commitment to the common agenda. Other active groups were the Central and Benelux, although according the EMF (2008), the networks lead by IG Metall districts of North Rhine-Westphalia and Bavaria, which overlapped these, gained more ground.

Three different types of Regional Groups can be found. Of the eight EMF regional groups presented in the Table 32, four were functioning regularly with meetings held at least four times a year. In these regional groups the information exchange between the affiliates was formal, meaning joint-statements, training of trade union representatives etc. In two regions, the group was working informally, with a meeting only once a year. Two regions reported no regular action, instead holding discussions only when some important issues arose.

Nordic countries had a formal regional structure, where a joint-organization Nordic IN with same structure as the EMF had been formed to function as a coordinating organ to increase the overall influence of these countries. These initiatives included arrangements to intensify information exchange and thereby facilitating cross-national coordination of measures taken by individual trade unions while also restricting opportunities for regime competition. This was made easier with the long-running cultural tradition of cooperation between these countries. Other regional groups did not seem to function as well as the Nordic one, as evidenced by the comments made by the trade unions, reflecting the problem of balancing the demands of many trade unions.

> *"At the moment our regional group does not convene because the costs are too high for the countries to attend. Also, the language barrier and lack of translation has hindered this."*
> (Trade Union officer from South West Europe)

As can be seen from the Table 32, there seems to be quite clear signs of strong communication and cooperation inside the regional groups, thus supporting the hypothesis of regional groups as being the most important framework for the affiliates. Especially this is seen with the Nordic trade unions with an umbrella organization Nordic IN that had similar organizational structure to the EMF committees. Also, the density of Benelux region is apparent. On the other hand, the one of the least

active regional groups, the Southwest, come visible too through this network figure. The second one, the Southeast region, therefore does not show as clear signs of passivity.

In the Nordic countries cross-border activities have not concentrated only on issues related to coordination of collective bargaining, but also included wider issues of social and economic policy. Apart from issues related to Nordic or European matters, the Nordic trade unions have extended their sphere to the Baltic countries especially after the EU enlargement to exchange information and helping to capacitate trade union officers there to undertake social dialogue in furtherance of the rights to freedom of association and collective bargaining through the Baltic Sea co-operation. Since none of the trade unions from Estonia, Latvia or Lithuania were affiliated to the EMF at the time empirical data was gathered, these ties were left outside the scope of this study.

6.6.3. Access to Informal Power – Creation of New Issue Networks

Alongside official institutionalized networks within the EMF or other organizational structures also unofficial non-institutionalized networks may exist. The best way to identify these networks is by applying the theory of issue networks. These are best described as being fluid coalitions where participants coalesce around a particular policy issue on an ad hoc basis. Issue networks offer a temporary form of organizing that enables flexibility and increases the actors' motivation as they can try to shape specific policies they deem to be the most important. In many ways, issue networks reflect the basic pluralist premises of power (e.g. Rhodes & Marsh 1992; Jordan 1981). Membership in issue networks is characterized by intensive knowledge exchange as trade unions compete with each other for a leading role in the network. As there might be several overlapping issue networks, the possibility for changing coalitions as an issue develops increases (Berry & Wilcox 1989), especially if the trade unions are not satisfied with the policy that has been jointy formed in the network.

Through strategic interaction between actors, shared ideas and preferences can lead to the convergence of strategies and cooperative outcomes. Drawing from Bache & Jordan's (2006) description of the process of Europeanization as a "hard path of internal implementation", trade unions' interests are shaped both by the institutional framework that restrict the alternatives that are available as well as by the value structure through which they can realize their interests. There is no universally acknowledged method of studying issue networks as they are by definition ad hoc networks without a clear strategic goal and do not have a centralized structure as they rely on mutual consent and coordination to achieve their goals. On the other hand, they have a potential of

developing into collaboration networks as they become more mature and the members can agree on the methods and goals. However, as they are still at the early stages of establishing institutional ground rules, lack of coordination between the possible members is a significant barrier for the development of these networks. They are also characterized by a high degree of overlapping mechanisms and processes, since they are contingent on the potential members' awareness of each other's issue policy preferences, hence making them less effective in pursuing their policy goals.

A 2-mode issue-actor network was applied here, consisting of two sets of units: trade unions and policy issues that they deemed important for them. Together these two sets form a network that evolves around policy issues with ties connecting trade unions to the policy issues instead of connecting them to other trade unions. A 2-mode issue-actor data or affiliation data involves two levels of analysis as it describes the actors' affiliations with certain macro structures in the network (Howell 2002). Just like was seen with the blockanalysis (Table 30), applying a 2-mode analysis not only reveals trade unions' policy issue preferences but also if they are aware of other trade unions having similar preferences. At the same time this analysis shows underlying issue-cliques among trade unions, which would be otherwise difficult to observe.

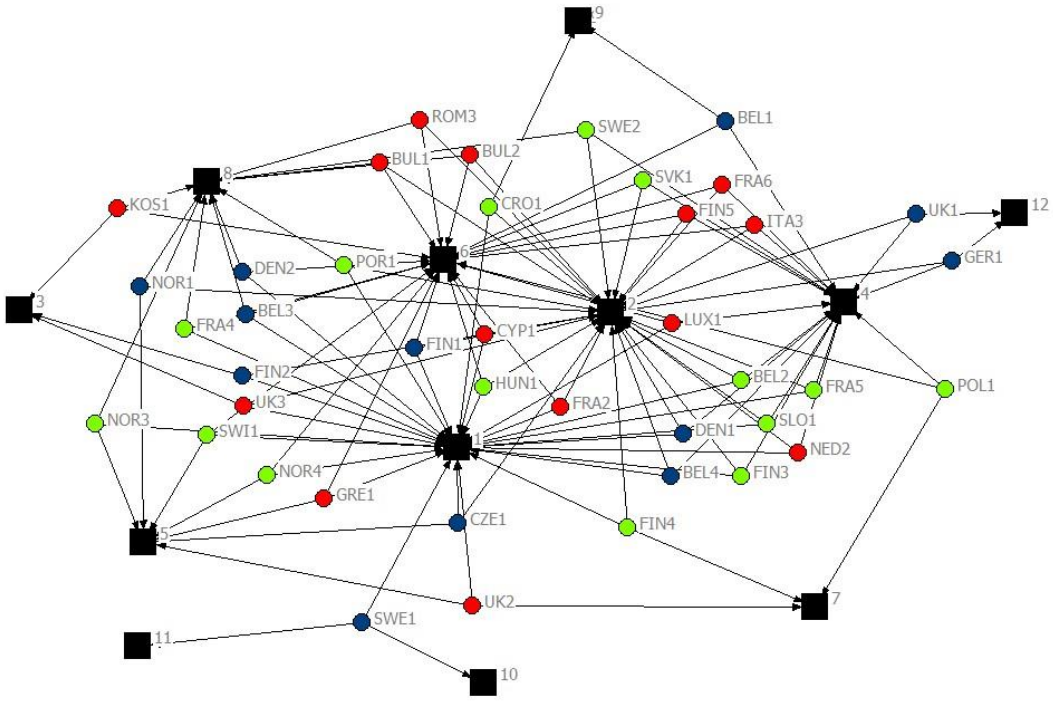
Figure 8 shows, the issue networks among respondents (n=40). The issues 1 (growth and employment strategies) and 2 (coordination of cllective bargaining) were most often mentioned as being among the three most important issues for the trade unions. These two policy issues are not mutually exclusive. As was stated in the EMF coordination charter (2001), the affiliates need to find a common political position on appropriate minimum standards to apply throughout Europe with the aim of combining politically appropriate short-term minimum standards with more long-term goals to ensure competitiveness also in the EU15 in light of the EU enlargement and the threat of wage-dumping. Among introduced practices was the Eucob@n that mandated national trade unions to report regularly on the recently concluded and on-going bargaining rounds. European-wide growth and employment strategies[50] present a macro-economic political perspective with strategies over which the national trade unions have little direct influence.

A Second type of issue-alliance mentioned in the literature (e.g. Galgóczi et al. 2006; Gradev 2001) based on production-chain between contractors and subcontractors could not be verified in this

[50] At the time of this study this meant the European Employment Strategy (EES) and the Lisbon Agenda.

study. There is evidence of competition for investments and sites for relocating operations also between the CEE and to some degree SEE countries, even though the overall social- and economic situation in these countries at the time of this study would have suggested them having mutual interests. Instead, alliance-lines in certain policy issues could be found between CEE countries and EU15 countries with the automobile sector as a prime example of this as the manufacturers have been relocating production sites or parts of production lines from EU15 countries to CEE countries. By making CEE countries compete against each other for FDIs, they have not managed to form mutual-gains alliances and instead have engaged in regime competition with the exception of the "Wiener Memorandum" group founded by the Bavarian District of IG Metall in 1999 together with trade unions from the Visegrád countries and Austria with the aim of sharing information on collective bargaining and addressing general labor market concerns in each country that might have cross-border implications. Similarly, bilateral cooperation between German and Polish trade unions has increased and much more generally, some of the IRTUCs have aimed to bridge trade unions in the CEE countries and EU15, especially on issues like regulation of cross-border movement of workers and improvement of working conditions.

Figure 8. 2-Mode Actor-Issue Network



Trade unions in the Bonacich core in **blue**, semi-periphery in **green** and periphery in **red**

Issues
1 = European-wide growth and employment strategies
2 = Coordination of Collective Bargaining
3 = Attracting Foreign Direct Investments (FDIs)
4 = Supervising and supporting European Works Councils
5 = Sustainable development and environmental issues
6 = Working conditions (working time, safety etc)
7 = Engaging with employers in CSR
8 = Training issues as part of the sectoral social dialogue
9 = Controlling private equity
10 = EU-level industrial policies
11 = Research & Development (R & D)
12 = Strengthening trade unions

As discussed previously, the power dimension of a network does not tell, whether the powerful actors form a unified ruling caucus and agree on policies or whether they form two or more subgroups based on their policy preferences. When operationalizing the concept of power as the ability to achieve one's targets in collective decision-making, it should be considered that some actors only have power due to the fact that they share their policy preferences with the powerful actors. When the same policy preference has been taken at the beginning of the policy formation process under an uncertainty of the others' preferences, allying with the powerful actors in order to

succeed with free riding is not possible. Instead the less powerful actors can protect themselves from utility losses by forming coalitions with other less powerful actors that share their policy preferences.

Implications from Stokman & Zeggelink (1996) and Stokman & Beverling (1998) suggest that policy-oriented policy networks are more effective than power-oriented policy networks because the structure of a policy network is dependent on the policy preferences its members have. As discussed earlier, in policy-oriented networks actors need to persuade other actors to share their policy goals while targeting especially those that might oppose their views. This follows the argument by Stokman & Zeggelink (1996) that in mature policy networks new ties occur mostly between actors with opposing policy preferences. It is not possible to test the validity of this argument with the dataset used in this study, since the models used by Stokman & Zeggelink (Ibid.) were based on dynamic preferences of actors and hence, they change their positions depending on current network relations, making the whole policy networking more like a strategy game. Dynamic effects can only be appropriated through time series data, whereas the data used in this study offers only a cross-sectional snapshot of the policy network structure. Even though Stokman's & Zeggelink's argument might hold true also in the context of this study, an alternative paradigm first presented by Milbrath (1963) is also worth noting. The main observation on his classic study of Washington lobbyists (Ibid.) noted that:

> *"most lobbyists do not bother to communicate with those they know are opposed."*

This means that at least in the context of Milbrath's study, most of the network members seek to form ties with actors with similar preferences and views. More recently studies by Hojnacki & Kimball (1998) and König & Bräuniger (1998)[51] have come to the same conclusion, namely that network connections are mostly concentrated between actors and interest groups that are already on the same side and that their goal is to expand and strengthen the existing blocks of like-minded actors rather than trying to persuade the actors that do not share their views and policy goals. Similarly, in power-oriented policy networks actors seek to form relations with other actors they feel wield power in the network regardless of their policy goals. This means that instead of policy goals of the powerful actors, the relations are formed foremost based on the presumed power position of powerful actors in an attempt to influence them and their policy choices. Whether the

[51] König & Bräuniger (1998) included both similarity and dissimilarity in their model. It could, however, be argued that they are just opposite ends of one dimension, making it unnecessary to include both in the analysis.

Stokman & Zeggelink (1996) or Milbrath (1963) paradigm is more suitable for this study is up to debate. However, it could be argued that in a network where the functionality is based on consensus it would be better to include everyone. Since policy consensus is a built-in attribute of the EMF network, the focus should be on the power-side of the network structure, making the network self-fulfilling and leaving the non-powerful actors outside the core where all the main policies are being formulated. This also reflects the weak position of the trade unions especially from the SEE.

7 CONCLUSIONS AND PROSPECTS FOR THE FUTURE

This thesis addressed the still largely unexplored network dynamics within the metal sector in Europe from trade unions' perspective. By drawing from the network structure, the aim was to reveal the network structure of the field and look at individual trade unions' roles and positions within it. Different network analytical methods were applied to study the field from different perspectives with the emphasis on the whole network, not just the core, and how clusters or cohesive subgroups have emerged and what significance they have for individual trade unions and the whole network.

Institutional framework of the thesis consisted of the Europeanization of industrial relations with the focus on the metal sector. Effects of Europeanization on industrial relations and trade union networks are eminent throughout chapters, highlighting the network relations of trade unions within the institutional framework of the EMF. Each chapter offers a different perspective within this institutional context by investigating the field from a macro, meso and micro perspective. Combining macro and micro levels of analysis, this thesis stressed network governance as a means of developing European level of industrial relations in the metal sector. With the focus on network perspective, trade unions become the focus of the study instead of policymakers of the EU or even ETUFs that mainly serve as enablers and administrators of the network. The aim was to portray how national trade unions can manoeuvre at the European level and both sustain and prompt shifts in the policies vis-à-vis the EU and the employers with the help of (network) structures provided by the EMF. By highlighting the micro (actor) level of analysis, which has not been a standard repertoire in Europeanization research, this thesis aimed to emphasize the overall importance of a dynamic research agenda on European integration and how it has brought about changing nature of industrial relations research.

The developments in Europe since the early 1950s with the founding of the European Coal and Steel Community have had a big impact on trade union cooperation, because it helped open the door for cross-border cooperation as the economic integration deepened. A big step forward was taken in 1992 through the Maastricht Treaty and the creation of the European Single Market, which forced the trade unions to start coordinating their collective bargaining rounds more in order to keep the balance of power between the employers intact. There are two different approaches to cross-border trade union networks and more broadly trade unionism that can be observed in Europe: (1) cooperative and (2) comparative. The former focuses on the relations between national- and sectoral level trade unions, whereas the latter can be found in the interaction of company level trade unions

(Kahancova 2009). The modus operandi of international or cross-border trade unionism can range from the loose cooperation with protests, manifestos and non-binding declarations of international solidarity to more formal coordination of collective bargaining (Bernaciak 2008). Cooperation reflects the interaction between trade unions with uniform preferences, driven by or leading to shared value norms. Despite different institutional frameworks in which the trade unions operate nationally, especially since the early 1990s and the creation of the Single Market, their cooperation has deepened with the aim of trying build a real European platform on which to manouvre. According to Lecher et al. (2002), cooperation that leads to coordinated strategies and geocentric trade unionism is the best way to expand the network as it helps to invite influential actors that were not already members into the network. Cooperation can unfold around informal forms of networking through information-sharing but also around normal regular contacts with trade unions from other countries without a clear coordination strategy. Alongside cooperation, competition as a form of interaction entails rivalry between different trade unions or countries facing international competition for investments and threats of relocation, with MNCs playing countries against each other and using the threat of downgrading working standards and levels of pay because of increasing global competition. Competition can take many forms, from open rivalry to negligence and a lack of initiatives (Kahancova 2009). When trade unions are faced with competition that threatens their own interests, they will not commit to compromise their policy interests in face of trade unions from other countries regardless of the situation. Instead this only leads to decreasing trust and weaker commitment to the network level goals as everyone is trying to pursue their own interests.

The empirical conclusions concentrate on field of industrial relations in the metal sector in Europe from the trade union perspective by focusing on network form of organizing and governance. Most of the conclusions from this study are presented after each empirical chapter and here those results are only summarized on a more general level. The research problems presented in the first chapter were divided into two groups: theoretical and empirical. First, there are theoretical conclusions concerning the institutionalization (or more specifically Europeanization) of the field of industrial relations in Europe and how network analytical methods can be applied to study it. The empirical conclusions are about the policy processes within the field and concentrating not just on the main actors but also giving focus to trade unions especially from the CEE and Nordic countries, their resources, interests and policy preferences, and how these actors have been able to use networks to advance their goals. The background for the empirical analysis was in the EUs enlargement and how that has shaped industrial relations at the European level.

By using network methods, this study has tried to show how network power, positioning, resources and structure have shaped trade unionism at the European level. Different forms of cooperation on different grounds that are possible to identify by using cluster- and block analyses are able to show the real power structure of the trade unionism at the European level. On a side note, the focus has been on the whole network, not just on the core, because also peripherical actors should be studied in order to detect institutional developments. Social network analysis as a method offers an effective tool for studying cooperation, power and participation, since it the analysis of structure, position and connections. Actors' relational positions indicate their influence and power positions, and their ability to achieve their policy goals to a considerable extent.

In the network literature equivalence can take three forms: (1) structural equivalence, (2) automorphic equivalence or (3) regular equivalence. In this study, only structural equivalence and regular equivalence was being applied. Structural equivalence is the strongest form of similarity and is defined as two actors of a network sharing many or all of their ties. It is very rare to find exact equivalence between actors' ties and therefore the criteria for structural equivalence is often eased. Structurally equivalent actors typically have a competitive, rather than a cohesive relation, since they compete for the same resources. They are by definition completely substitutable for one another, meaning that the original network structure remains unchanged if they leave the network. Perfect or almost substitutability can lead to fierce competition between actors to obtain favorable responses from other network participants as they do not have a competitive edge over one another. Institutional equivalence (Strang & Meyer 1993) brings together structural eloquence and institutional analysis. It refers to two actors being equivalent if they manouvre in the similar set of institutional fields regardless of the similarity of their network positions. In the field of industrial relations and trade unionism in particular, institutional equivalence can be used to describe the Europeanization of the field as trade unions seek to identify actors with similar preferences in other countries. This can also be understood in terms of policy networks that bring together the decision-making sphere with the focus on interest groups like trade unions or ETUFs in policy processes by emphasizing adoption of coherent policies and integration of policies. This mutual commitment to certain policies relates to the role of interest groups within governance as interest groups rely on the political sphere to secure their own policy preferences and eventually also maintain these decisions.

Most ETUFs have taken an active role in stressing their policy priorities and by attempting to create vertical coordination for their affiliates. Further, ETUFs are engaged within the EU informally

through OMC processes by trying to integrate national and supra-national policy initiatives across sectoral boundaries (De la Porte & Pochet 2002) into a multi-level governance. Alongside ETUFs national sectoral trade unions play an important role by both helping to shape policy targets in unison and by implementing them nationally. This exemplifies the emergence of multi-level policy networks through overlapping competencies among actors and the interaction of policy actors across these levels (Marks et al. 1996, 41-42) that reflect a multi-actor polycentric polity structure (Mayntz 1994; Ostrom 2010). Policy network approach investigates policy domains that are by nature resource-dependent and where the actors are depending on each other for resources while also trying to identify coalitions or clusters within the network in order to achieve their policy targets.

7.1. Summary and Discussion on the Findings

More specific findings from this study were presented in the empirical chapters and here those findings are only summarized on more general terms, framing them into the existing literature and previous discussions.

Regarding the de-institutionalization and re-formation of the field of industrial relations in the metal sector, drawing from the de-institutionalization framework presented by Greenwood et al. (2002) in the chapter 2.3.3. precipitating jolts were both the EU enlargement and deepening European integration before that, meaning that new actors especially from CEE emerged in the field while the ETUFs took a bigger role due to their direct role vis-à-vis the Commission. At the same time coordination of trade union bargaining practices was made possible with the introduction of Eucob@n platform, although not everyone was actively participating in it by sharing their own information on collective bargaining rounds. Despite this, there has not been any significant concern about its legitimacy, but rather willingness to find solutions to improve the European coordination system, drawing from understanding different goals and needs of different national trade unions, leading to the discussion of multi-level governance within the field of industrial relations (e.g. Keune & Marginson 2013; Marginson & Sisson 2004).

The empirical network and interview data used in this study was gathered 2008-2009 at the peak of the global financial crisis, therefore reflecting the Zeitgeist of industrial relations during that time. Findings from the empirical analysis indicated that although the transnational coordination of collective bargaining different policies is perceived as an important goal among trade union actors at both the national and the European level, reflecting the official policies of the EMF. Yet,

coordination activities apart from collective bargaining have remained rather limited because of a number of reasons. This reflects the limited resources, whether they be financial or personnel that affect the organizational efforts. Hence, trade unions are often faced with a trade-off between two fundamental goals: Either to increase organizational resources and gain knowledge on the strategic orientations of other trade unions in the field or remain a passive member of the institutional network and rely on others. In order to ease this problem, institutionalized communication channels like the Eucob@n network became very valuable tools for helping everyone to participate in coordination of collective bargaining.

A debate about the European integration and what effect it has had on trade union movement has been ongoing particularly since the 1990s, stressing the differences between countries and industrial relations systems while giving impetus to the convergence-divergence -debate especially after the EU enlargement when fears about the competition pressure hindering the development of European industrial relations emerged. In many cases, conflicting interests between trade unions from EU15 and CEE have been at the forefront as competitive relations due to outsourcing, contracting and subcontracting were seen threatening the labor standards in the EU15 (e.g. Martin & Ross 1999) also when research (e.g. Bernaciak et al. 2014a; Bernaciak 2007; Gajewska 2009) has mostly shown otherwise.

Many studies have pointed to the different interests of workers as hindering organized labor's interest representation at the European level (Streeck & Schmitter 1991; Visser & Ebbinghaus 1994; Marks & McAdam 1996; Turner 1996); something that was only supposed to deepen after the EU enlargement (Meardi 2002) as the enlarged Single Market was thought to pose insurmountable challenges for the trade unions (Kvist 2004; Marginson & Traxler 2005; Lado & Vaughan-Whitehead 2003; Visser & Ebbinghaus 1994). Network methods, and in particular core-periphery analysis, enabled to verify these assumptions. By showing how, despite deepening integration trade unions from the EU15 and in particular from the SEE but also to some degree from CEE, are mostly intertangled within their own reference group. Hence, it becomes obvious that no single European trade union network exists, but instead one divided into cliques, cohesive subgroups and blocks of actors based not just on region and industrial relations regimes but also on policy goals.

As this study demonstrated, while members recognized some degree of mutual interest through their affiliation to the EMF and shared an interest in promoting transnational issues, relatively little or no coordinated action outside of the institutional setting of the EMF existed. Alternative approaches

have been derived both from theories on market liberalization as well as empirical examples. In most cases, approaches focusing on the prospects and practice of European integration from industrial relations' perspective, institutional differences and political-economic factors hindering cooperation have been stressed. The convergence-divergence debate of European industrial relations emphasized the historically divergent role of national industrial relations systems (e.g. Armingeon 1998, 72-81) through path-dependency to convert the national practices and orientations to correspond with the legislative and structural context of the EU. However, this can lead trade unions towards competitive action (Streeck 1999) or mutual gains strategies (Burgoon & Jacoby 2004). Furthermore, European level cooperation has been plagued by a vertical divide within trade unions, as the levels of trade union organizations have been less internationally oriented than the top leadership and the European trade union confederations.

Already long before the current state of European integration Ulman (1975) argued that market processes such as integration, increased capital mobility and the competitive pressure imposed on labor were impelling trade unions to bargain across a broader geographical scope, something which has been verified later by Ebbinghaus & Visser (1996). Consistent with this theme, it is also possible to see cooperation as a reaction to market integration. Contrary to the usual assumptions on trade unions, they are sometimes ready to cooperate and mobilize across the national borders despite their differences. Therefore, it is worthwhile to explore this in order to find out what the basis of cooperation in the transnational context and competition are. As solidarity might not necessarily be derived from the interests based on the institutional and economic factors according to political economy and institutional approaches (Streeck 1999; Visser & Ebbinghaus 1994), there is clearly a need to perform an analysis of the interests and motivations in cases where trade unions actually decide to cooperate alongside the potential for cooperation. In order to do this, the conditions under which trade unions formulate their interests in non-national terms are important. Different interests of national trade unions have been seen as an obstacle in the convergence process. Keller & Jacobi (1997) showed how in the early 1990s trade unions had remained oriented towards national economic interests while acting at the supra-national level without trying to identify common European interests around which to find gather.

With the introduction of Single Currency, trade unions from Eurozone countries had to put forth the common demand on coordination of collective bargaining to avoid competitive bargaining strategies and eventual race-to-the-bottom. Countries with stronger trade unions were predicted to lose out on competitiveness with the fear that this would lead them to accept labor cost reductions

(Vaughan-Whitehead 2003; Martin & Ross 1999). Not only employers' hostile strategies towards trade unions, but also potentially divergent interests of the workers were expected to increase the East-West rivalry. Especially the trade unions from the CEE, but also to some degree even those from the SEE have managed to transform into independent actors within the field of industrial relations in their own countries and have helped to introduce the new institutional framework of industrial relations. Some of them got a head start already in the early 1990s as they were accepted into international organizations like the EMF, although they did not gain full membership until after their countries became EU members. This helped them to earn invaluable experience and improve their expertise. Although they might not share same policy goals as their EU15 counterparts, they were able to form their own sub-networks or cliques within the institutional framework of the EMF and form ties also with trade unions from the EU15. The problem with contradicting interests seemed to be even more acute in the context of EU enlargement, since trade unions from the EU15 were afraid of the consequences free movement of labor and capital would have on labor markets in their own countries. Meardi (2002) even saw a potential conflict between trade unions from EU15 and CEE countries regarding their policy goals, predicting that an alliance between Eastern labor and Western employers would be possible in the short term. Although during the first years after the enlargement there were some signs of this, it does not seem to have fully materialized.

It has been argued that different institutional industrial relations regimes make cooperation between trade unions from EU15 and CEE countries difficult as the interests and institutional-cultural differences not only determine the trade unions' economic interests but also generate a framework for their strategy, resources and mobilization (Ebbinghaus & Visser 1994; Lillie & Greer 2007; Leisink et al. 2007). Institutional embeddedness in the national context seems to be an obstacle to engagement in international affairs, since trade unions with lesser resources tend to prefer national or regional solutions. It has been argued that the trade unions with sufficient resources for international engagement, such as those from Germany or Sweden, would be less interested in cooperation because of their reliance on their domestic opportunities for influence. Trade unions from countries with weaker industrial relations systems might be more interested in engaging in international cooperation networks, but their resources are limited (Ebbinghaus & Visser 1994). Empirical studies on the trade unions' attitudes towards European cooperation have been abel to confirm this (Bieler 2006; Nordin 2009). However, the network analyses performed in this study do not support this explanation fully as the big and highly institutionalized German and Swedish trade unions alongside some others from the EU15 were actually at the centerally positioned in the network regardless of the method and perspective.

Cooperation problems can be expected arise when trade unions differ in their orientation towards Europeanization of industrial relations. Competitive pressure does not usually become an obstacle for successful cross-border coordination (Glassner et al. 2011), as is seen by the degree in which trade unions from CEE have managed to integrated themselves with the EMF coordination approach and with some even becoming active members in the EMF policy committees. However, there are differences in issues considered important for transnational coordination. In particular trade unions from northern Europe tend to emphasize training and flexicurity as well as social and economic policy issues, whereas trade unions from the CEE and SEE are usually more interested in forms of FDI and safety issues. On a side note, this study has showed that trade unions from the EU15 tend to be satisfied with benchmarking and voluntary coordination, whereas trade unions from the CEE and SEE are more likely to strive for binding rules and decisions, partly because of the less mature institutional and legal ramifications of their national industrial relations systems.

Although trade unions obtain legitimacy from their ability to mobilize workers and represent their interests, institutional characteristics of the national and sectoral industrial relations systems dominate most trade unions' strategic approach towards Europe. There are factors that are interrelated and interlinked in a multilayered system of mutual relationships of influence, making it challenging to identify causal relationships between them (e.g. Traxler et al. 2001). Therefore, this study has been able to fill this research void by looking at different types of factors: policies, institutional and actor specific networks that were analyzed with regard to the emergence of a certain pattern of Europeanization of industrial relations in the metal sector.

This study was framed in the institutional entrepreneurship framework by concentrating on emerging institutional fields. In the institutional entrepreneurship literature field periphery has been seen as a fertile breeding ground for institutional change as the actor there are not yet embedded in the institutional structure of the network and are therefore motivated to take entrepreneurial action. Yet, they find themselves in a disadvantaged position because of the restricting nature of the existing rules system and, hence, need to find other actors with similar policy preferences to enable the change.

Whereas the core members of the trade union network presented in the chapter 6 from different angles represent the central organizational networks, some of these can also be seen as institutional

entrepreneurs when looking at the network structure a posteriori, meaning that some of the a priori deemed peripheral trade unions are indeed more central than anticipated. Identifying institutional entrepreneurs among all the trade unions in the field can be a difficult task, as they can be both creators of institutions and play a role in institutional change by helping to destruct the old institution and the establish a new one instead, making them strategic actors. Therefore, it is better to separate institutional entrepreneurship as a theory from institutional entrepreneurs as actors in the field. The former was described especially in the chapter 3.7.

When it comes to the network structure, conclusions can be drawn that although the network is dense mainly due to the institutional structures of the EMF that enabled the trade unions to seek not only broader but also deeper cross-border cooperation, there still existed a clear core - semi-periphery - periphery structure. However, unlike most of the previous literature has shown, instead of one single core there were at least two almost equally potent ones. Whereas one of these cores gets its "coreness" from the traditional power aspect, where the biggest trade unions from the biggest and most central countries dominate, the other core owns up to institutional arrangements at the regional level for its strong position, making it more than the sum of its parts. The tight interlinkages (cohesiveness) between trade unions have meant that belonging to at least one subgroup is the key in getting a say in the strategic orientation of industrial relations at the European level.

When examining network structure through the concepts of cohesive subgroups and 2-mode policy networks (consisting of actors and events), a complex network of relationships among trade unions arises. Aside from the formal network structure that existed in form of regional groups and other institutional settings provided by the EMF or the most central actor in the field, the German IG Metall, also unofficial policy communities and subgroups could be detected around shared policy preferences and policy targets but also through reciprocal information exchange outside the formal structure. In the EU studies, a closely interlinked core of member states described as actors having the most influence on the EU politics has been detected, involving Germany, France, the UK, Italy, Spain, Poland, the Netherlands and Sweden (e.g. Zunneberg & Janning 2017; Mattila 2008, 23-35). Similarly, through modelling, other informal coalitions have been observed through statistical and spatial modelling (Häge 2013), showing that the coalition geometry varies depending on the policy field and instead of one coalition, there are several overlapping ones that are being formed through initiatives and mutual interests. Similarly, Mailand & Arnholtz (2015) investigated coalition building within the context of European work and employment regulation in the early part of the

2000s by applying the advocacy coalition approach (Sabatier & Jenkins-Smith 1993), where coalitions rely on a common belief system and causal assumptions about how to realize them in order to succeed.

Network methods enable revealing of hidden structures in the field, making visible shared agendas, contacts between trade unions. This not only helps the outsiders to gain knowledge of the field, but also the actors in the field as large as the one studied here, since the actors are not always aware of each other's policy preferences. Policy network analysis is tightly integrated to other theoretical accounts on European multi-level politics or policy-making by concentrating on the shared policies that help to identify the relevant policies and explain the policy output. Combined with the effectiveness of the transnational coordination with regard to maintaining and promoting policies, encompassing arrangements in which elements of both a centralized and a decentralized approach complement each other are regarded as functionally superior to a purely decentralized coordination approach driven by autonomous cross-border union cooperation.

One of the most important determinants of network position is resource-based view of trade unions. Especially in the CEE and SEE trade unions have been faced with a situation where they have scarce resources and hence need to compromise on their activity at the European level by instead concentrating on the national (mostly company) level interest intermediation with MNCs instead of acting strategically and long-term. This draws from Olson (1965), who noted that non-excludable benefits create weak direct incentives for self-interested members to act in the group's collective best interest, even in cases where they might share a common objective and gain from group action. In this case not only excluding of benefits but also subtracting them has significance for influencing an actor's behavior.

In response to external changes in social and economic landscape as well as problems with decreasing membership, trade unions across EU15 have gone through numerous mergers. The phenomenon of new, bigger trade unions, borne out of mergers between trade unions from several industry sectors has emerged in several countries (Ebbinghaus 2003), most notably in Sweden, Finland, the United Kingdom and to some degree in Germany. At the same time, amalgamations of medium-sized trade unions or the overtaking of smaller trade unions by larger ones has occurred in nearly every country. This phenomenon is not new, as evidenced by Elias (1973), who described mergers as opportunistic with larger trade unions having better economies of scale. Similarly, Visser & Waddington (1996) and Visser (1994) have described the rise of conglomerate trade

unions. In its report “Industrial Relations in Europe 2004” the European Commission (European Commission 2005) noted how the trend towards mergers has been less pronounced in the CEE with the exemption of countries like Croatia. The opposite holds true especially for Hungary with its six national confederations; the most in the EU apart from France. This goes back to the initial post-communist transition period, when trade unions were sharply divided between the successors to the former socialist unions and new independent trade unions. However, only one of these, Vasas, was affiliated to the EMF unlike in France where all five were members through their sectoral affiliates. Regarding organizational attributes of trade unions, two distinctive patterns can be identified throughout Europe. Centralized trade unionism applies to countries where only a few trade unions exist within each industry sectors, as is the case in countries like Austria and Germany and to a lesser degree the Nordic countries. In contrast, trade unionism in countries like Belgium, France or Spain also has some traces of vertical centralization with confederations having an institutionalized role over their local branches but at the same time these countries are characterized by a system with multiple trade unions competing sometimes fiercely within industry boundaries.

Although there has been consolidation between the trade unions in CEE and SEE, the main internal obstacle still seems to be lack of resources at the central level. On average, metal trade unions in SEE countries employ around 3 officers, thus making international cooperation a lesser priority due to their scarce resources (EMF 2009). Despite significant achievements over the past decade, trade unions throughout the region continue to be under pressure in their fight to restore real incomes and employment levels in an environment of rapidly changing social policies and reforms, getting their voices heard vis-à-vis both the state and the employers with their role as partners in social dialogue being acknowledged. This has been made more difficult with the employers’ reluctance to organize themselves especially at the sectoral level.

The aim of this study was to apply institutional entrepreneurship framework to the creation of trade union networks in Europe through the Europeanization discourse. By applying social network analysis to investigate both individual trade unions’ roles in the network and more specifically participation and cooperation at the European level during the crisis of 2008-2009 a case could be made for the Europeanization process of industrial relations having had a considerable effect on the formation and functioning of trade union networks within the context of the European integration. A special focus was given to the trade unions from the CEE post EU enlargement and how they had managed to become involved in the network. However, questions remain on how to assess the results. More precisely, which benchmark should be used to compare the results with and has the

elaboration of trade unions' success and performance presented here been accurate since it relied on the network perspective. On the other hand, by looking at the network from different levels (whole network, clusters, actor), the analysis is more precise and includes also actors that are not in the traditional core. Yet, e.g. Bernaciak (2010) has demonstrated that not every incidence of trade union cooperation should be regarded as being significant neither for the parties themselves nor for the whole European network. This leads the distinction between both the scope (network, cluster or actor level) and scale (coordination, cooperation or collaboration) of action. Using a top-down approach, Europeanization of trade unionism and cooperation between trade unions seems strong and established with mature institutional structures in place, yet, from the bottom-up perspective workers' first priority when joining a trade union is not European solidarity or even European cooperation but rather workplace issues and personal interests that may sometimes be the opposite of what the trade union is promoting at the European level. One of the biggest challenges for trade unions is to find a balance between these two to maintain its legitimacy both in the eyes of its own members and in the European field amongst other trade unions.

7.2. Prospects for the Future

The future of the European system of industrial relations looked murky at the time of this study. On one hand, the uncertain future of the Eurozone was expected to affect the role of industrial relations, since the coordination rule of collective bargaining (EMF 1999), which since the late 1990's has served as the most institutionalized implementation of trade union networks, was closely tied to the monetary union and single currency. Incidentally, the EMF and the ETUC adopted wage bargaining coordination benchmarks for their national affiliates in order to avoid the adoption of disruptive competing wage policies within a single market (Erne 2012). As a predecessor for this was the Doorn declaration in 1997 between trade unions from Germany and the Benelux countries, which was meant to help avoid wage-competition by ensuring wage increases in line with price and productivity developments. Yet, these bargaining guidelines failed to achieve their goals during the crisis, in part because of their non-binding and technocratic character (Erne 2008); something that the Eucob@n database has tried to solve, by making the coordination more flexible. Only in recent years have national bargaining rounds started to result in significant wage increases in countries like Germany, while the new EU member states have also started to gain ground on their EU15 counterparts on wages, easing the threat of wage-dumping within Europe as trade unions have began to see long-term benefit of it. Also, the 1990s saw a renaissance of European social dialogue, and especially sectoral social dialogue, which helped to raise the importance of the sectoral level of industrial relations. This coincident with the increased globalization of production lines through

green- and brownfield FDI, which required development of cooperative response from the trade unions.

In more broad terms, there are some signs that the economic crisis brought towards re-nationalization of trade union strategies to weaken cross-border initiatives of unions. Although the need for wage bargaining coordination to counter wage restraint and macro-economic imbalances has increased, limited resources have been directed to national levels, which is also evident from the limited use of coordination guidelines (Glassner et al. 2011). On the other hand, the new framework for EU Economic governance might increase the need to coordinated wage setting across borders to ensure stable, balanced and socially equitable growth. However, this has been made difficult by the divide between EU15 where sectoral-level collective bargaining is predominating and the New Member States where collective bargaining is usually more decentralized and takes place mainly at company or even workplace level.

Recent mergers of ETUFs will pose a potential threat to the national trade unions' possibilities to influence the decision-making process and agenda-setting in Europe. This prospect can be seen as a response to the recent developments in Europe and its institutional responses to the crisis. The response to increase federalism for the EU will also require concentration of resources and power at the industrial relations system towards European solutions despite the lack of political will from the Barroso Commission to promote improved European labor standards. However, at the same time the Commission's current liberalization agenda has undermined the social consensus that was at the heart of the European integration process (Turnbull 2012). Social dialogue remains a significant feature of industrial relations in many European countries but the global financial turmoil in 2008 and the subsequent European debt crisis undeniably further accentuated the political drive for unilateral market-based solutions. Organizational fragmentation and competitive behavior are often the main obstacles for attaining a better position in an institutional structure. Therefore, mergers are sometimes seen as a solution to gain power.

However, mergers can also mean pluralization of interest representation, hence leading to fragmentations within the new organization. Constantelos (2007) has showed that organizing interest groups varies along two key dimensions: (1) the degree of sectoral differentiation, meaning that interest groups may represent a single or several economic sectors and (2) the relationship between regional and national or national and supranational organizations. As Schmitter & Lanzalaco (1989) and van Waarden (1989) have showed, a regional or national organization can be

entirely independent or completely subordinate unit of a supranational organization. From a network perspective, fragmentation of interests along sectoral lines would most likely bring about a less dense overall network with more cohesive subgroups functioning separately within the network. Although connections between interest group networks and interest group strategies have never been approached systematically, some tentative hypotheses can be made in regard to the European-level of industrial relations. A ETUF representing a single industry sector is likely to be able to have a more coherent policy and political strategy it applies on behalf of its affiliates vis-à-vis the European Commission and employers' organizations compared with a ETUF representing several industry sectors that all need to be taken into consideration with their own special circumstances, increasing the risk of ineffectual or infrequent sectoral interest representation with the emphasis given to macro-level representation. Therefore, the members are likely to gain less directly from their membership than they would in the more coherent single-industry ETUFs. Yet, policies and strategies in both of these ETUFs always signal the results of bargaining and compromise.

Trade union-led initiatives for the transnational cooperation on diverse policy issues are the main preconditions for the birth of non-institutionalized (policy) networks. These networks are usually based on similar policy preferences, and by establishing them it is possible to formulate commonly applicable orientation criteria and strategy towards shared goals. Alongside these networks are the institutionalized ones, steered by the ETUF's along with their Policy Committees and SWP's. These structures can be considered as being central to the effective transnational coordination of collective bargaining policies, which after all, is the main policy area of European industrial relations, although it has not yet lead to bargaining at the European-level. Hence, it remains to be seen whether European and national trade unions as the principal actors of the Europeanization process are up to these challenges and will succeed in effectively and substantially influencing and promoting the Europeanization of industrial relations or whether regional level will become the main level.

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Appendix 1. The Questionnaire

General Questions

1. What national trade union do you represent?

2. Is your trade union attached to any political party in your home country?

No…….. ☐

Yes

- Socialist party …….....☐
- Communist party…….....☐
- Social Democratic party……..☐
- Liberal party…..…….....☐
- Conservative party……..☐
- Other, what?.....……...☐

3. At which EMF Committee(s) does your trade union participate currently / previously (Multiple answers possible)?

	Currently	**Previously**
Industrial Policy		
Company Policy		
Collective Bargaining		
Aerospace		
Automotive		
ICT		
Lift		
Mechanical Engineering		
Non-Ferrous Metal		
Shipbuilding		
Steel		
White Goods		

Questions on EMF Committee Work and Decision-Making

4. *Please mark the box on each question that best represents your view*

A) *How do you regard your chances of affecting the decision-making at the EMF Committee(s)?*

Poor	Fair	Neutral	Good	Excellent

B) *How do you feel the distribution of work between the EMF Policy Committees (Industrial Policy, Company Policy and Collective Bargaining) is functioning?*

Poorly	Fairly	Neutral	Well	Greatly

C) *How do you feel about the job description (issues being discussed) of the EMF Committees you are sitting at?*

Poor	Fair	Neutral	Good	Excellent

D) *Do you feel that every country's / region's views and stand points are treated equally?*

No	Little	Neutral	Some	Greatly

Questions only for those who do not participate in the EMF Committees

5. *There are many EMF affiliates who do not participate in the committee work. What do are the biggest reason behind this in your case?*

- Lack of resources (financial, personnel etc) …….☐
- Lack of tradition (new or recently merged trade union etc.)…….☐
- Issues and policies discussed are not of interest to us…….....☐
- Lack of representativeness (too few workers as members) ……..……☐
- Other, what? …….....☐

6. *What, if anything, should be done to help your trade union to participate in the EMF committee work?*

7. *Do you have other forums outside EMF to cooperate with national trade unions from other countries? What are these and how is this being organized?*

No……..☐ Yes, which ones?…….☐

Questions on the Regional Dimension of EMF

The trade unions from EMF member countries are grouped into regions as follows:

1) *Nordic Region:* Sweden, Norway, Finland, Denmark, Iceland

2) *Benelux Region:* Belgium, the Netherlands, Luxembourg

3) *British Region:* United Kingdom, Ireland

4) *Central Region:* Germany, Austria, Switzerland

5) *Southern Region:* Spain, Portugal, Italy, Greece, Cyprus, Turkey, Malta

6) *Eastern Region:* Hungary, Poland, Czech Republic, Slovakia, Slovenia

7) *South East Region:* Romania, Bulgaria, Croatia, Bosnia & Herzegovina, Montenegro, Serbia, Macedonia, Kosovo

8. *Does your trade union actively participate in your regional group?*

No…… ☐ Yes…… ☐

9. *How does your regional group work?*

A) Formal information/opinion exchange (meetings, joint-campaigns etc)

B) Informal information/opinion exchange (through e-mail etc)

C) It is not working

D) In other way, how?

10. *If your regional group is working, how frequently?*

A) 3-4 times a year or more…….……..... ☐

B) Before the EMF Committee meetings…… ☐

C) Once a year or less often…….. ☐

D) When an issue arises to discuss (ad hoc)…….…… ☐

E) Other, how often?..... ☐

11. *How should the regional activities be organized? Pick an alternative that is most suitable.*

A) Under the EMF structures……...☐

B) Under separate regional organizations.....☐

C) Under the biggest / most influential trade unions in the region……..☐

D) Self-organizing…….....☐

E) Other, how?..... ☐

Questions on Decision-Making at the Regional Groups

12. *Please mark the box on each question that best represents your view*

A) *How do you consider your regional group to function?(1 = poorly, 5 = very well)*

1	2	3	4	5

B) *How do you feel about the job description (issues being discussed) of your regional group?*

1	2	3	4	5

C) *How do you feel your regional group is succeeding in raising important issues to discuss at the EMF committees?*

1	2	3	4	5

D) *Do you feel the countries represented in your regional group are able to cooperate on different issues to form a joint stand?*

1	2	3	4	5

E) *Do you feel there is competition between countries in your regional group on issues which affects the work of your regional group?*

1	2	3	4	5

Questions on Issues of European-Level Trade Union Cooperation

13. Please mark the box on each question that best represents your view (Multiple answers possible for every question)

Q1. With which other national trade unions do you exchange information, documents, and other resources?

Q2. With which other national trade unions do you seek inputs and try to create alliances before making a key decision?

Q3. With which other national trade unions do you have formal or informal joint-structures (e.g. joint-committees apart from the EMF committees)?

Q4. Which EMF affiliates do you consider to be the most powerful overall (5 answers)?

Q5. Which EMF affiliates do you consider to be the most powerful in regards to their size / size of their country (5 answers)?

Q6. Which EMF affiliates do you consider to be the least powerful in regards to their size / size of their country (5 answers)?

	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**
GMTN *(Austria)*						
ABVV-Metaal *(Belgium)*						
LBC-NVK *(Belgium)*						
MWB-FTGB *(Belgium)*						
ACV-Metaal / CSC Metal *(Belgium)*						
CGSLB-ACLVB *(Belgium)*						
CNE *(Belgium)*						
Sindikat Metalaca *(Bosnia Herzegovina)*						
Metalicy *(Bulgaria)*						
NFTINI CL *(Bulgaria)*						
TUFOEMI *(Bulgaria)*						

Sindikat Metalaca *(Croatia)*						
OVIEK-SEK *(Cyprus)*						
Odborovy SVAZ KOVO *(Czech Rep.)*						
CO-Industri *(Denmark)*						
IDA *(Denmark)*						
Metalliliitto *(Finland)*						
TU ry *(Finland)*						
UIL ry *(Finland)*						
TEK *(Finland)*						
Sähköliitto *(Finland)*						
FO Metaux *(France)*						
FO Defense *(France)*						
FGMM-CFDT *(France)*						
CFDT-FEAE *(France)*						
FTM-CGT *(France)*						
FNTE/CGT *(France)*						
FM-CFTC *(France)*						
IG Metall *(Germany)*						
POEM *(Greece)*						
Vasas *(Hungary)*						
Samidn *(Iceland)*						
SIPTU *(Ireland)*						
FIOM-CGIL *(Italy)*						
FIM-CISL *(Italy)*						
UILM *(Italy)*						
SPMK *(Kosovo)*						
LCGB *(Luxemburg)*						
OGB-L *(Luxemburg)*						
SIER *(Macedonia)*						
GWU *(Malta)*						
MTUM *(Montenegro)*						
FNV-Bondgenoten *(Netherlands)*						
De Unie *(Netherlands)*						
CNV Bedrijvenbond *(Netherlands)*						
VHP Metalelektro *(Netherlands)*						
Fellesforbundet *(Norway)*						
Handel og Kontor *(Norway)*						
NITO *(Norway)*						
Tekna *(Norway)*						
NSZZ Solidarnosc *(Poland)*						
OPZZ Metalowcy *(Poland)*						
SIMA *(Portugal)*						
Fiequimetal *(Portugal)*						
FNS Solidaritatea Metal *(Romania)*						
FSS Metarom *(Romania)*						
FSLI Metal *(Romania)*						
GSN Nezavisnost *(Serbia)*						
OZ KOVO *(Slovakia)*						
SKEI *(Slovenia)*						
MCA-UGT *(Spain)*						
FM/CC.OO *(Spain)*						
ELA Metala *(Spain)*						
Sveriges ingenjörer *(Sweden)*						
IF Metall *(Sweden)*						
Unionen *(Sweden)*						

UNIA *(Swizerland)*						
Syna *(Swizerland)*						
Birlesik Metal *(Turkey)*						
Amicus *(United Kingdom)*						
Community *(United Kingdom)*						
GMB *(United Kingdom)*						
TGU *(United Kingdom)*						
Other, who?						

14. How do you choose the other national trade unions, you collaborate with mostly with?

A) Depending on the issue (ad hoc) .....……☐

B) With other trade unions from my country / region (as in EMF regional groups).……☐

C) With other trade unions representing the same sub-sector (for example ICT) .....☐

D) Trade unions representing the same political ideology / trade unions that are attached to similar political parties in their own countries.....☐

E) Other, how? .....☐

15. On what issues do you feel the European-level trade union cooperation should concentrate on (place in order of importance from 1-9 with 1 being the most important)?

A) European-wide growth and employment strategies…….....☐

B) Coordination of collective bargaining…….……..... ☐

C) Attracting Foreign Direct Investments (FDIs) …….....☐

D) Supervising and supporting European Works Councils…….…...…….....☐

E) Sustainable development and environmental issues…….…….....☐

F) Working conditions (working time, safety etc) …….…….....☐

G) Engaging with employers in Corporate Social Responsibility (CSR) …….....☐

H) Training issues as part of the sectoral social dialogue…….....☐

I) Equal opportunities…….…….....☐

J) Other, what?.....…….....☐

16. How this would be achieved best? Choose the best alternative for each issue.

	Through lobbying	Through voluntary coordination and best practice	Through formally binding decisions at the EMF	Through the EWCs
European-wide growth andemployment strategies	☐	☐	☐	☐
Coordination of collective bargaining	☐	☐	☐	☐
Attracting FDI	☐	☐	☐	☐
Supervising and supporting EWCs	☐	☐	☐	☐
Sustainable development and environmental issues	☐	☐	☐	☐
Working conditions (working time, safety etc)	☐	☐	☐	☐
Engaging with employers in CSR	☐	☐	☐	☐
Training issues as part of the sectoral social dialogue	☐	☐	☐	☐
Equal opportunities	☐	☐	☐	☐
Other, what?	☐	☐	☐	☐

Appendix 2. Informal expert interviews conducted

8.4.2008 Trade Union officer from SEE at the EMF Industrial Policy Committee meeting in Luxembourg

8.4.2008 Trade union officer from Central Europe at the EMF Industrial Policy Committee meeting in Luxembourg

8.4.2008 Trade union officer from Nordic countries at the EMF Industrial Policy Committee meeting in Luxembourg

23.10.2008 Trade union officer from South West Europe at the EMF Industrial Policy Committee meeting in Bratislava

23.10.2008 Trade union officer from CEE at the EMF Industrial Policy Committee meeting in Bratislava

2.11.2009 Three EMF officers (separately) at the EMF office in Brussels

3.1.2010 Trade union officer from Nordic countries at the office of the aforementioned trade union

Appendix 3. Codes for trade unions in the network

AUT1 = PRO-GE
BEL1 = ABVV-Metaal
BEL2 = CCMB
BEL3 = MWB-FGTB
BEL4 = LBC-NVK
BEL5 = SETCa/BBTK
BEL6 = CGSLB-ACLVB
BOS1 = Sindikat Metalaca
BUL1 = Metalicy
BUL2 = NFTINI CL
BUL3 = TUFOEMI
CRO1 = Sindikat Metalaca
CYP1 = OVIEK-SEK
CZE1 = OS KOVO
DEN1 = CO-Industri
DEN2 = IDA
FIN1 = Metalliliitto
FIN2 = TU ry
FIN3 = UIL ry
FIN4 = TEK
FIN5 = Sähköliitto
FRA1 = FO Metaux
FRA2 = FO Defense
FRA3 = FGMM-CFDT
FRA4 = CFDT-FEAE
FRA5 = FTM-CGT
FRA6 = FNTE/CGT
FRA7 = FM-CFTC
GER1 = IG Metall
GRE1 = POEM
HUN1 = Vasas
ICE1 = Samidn
IRL1 = SIPTU
ITA1 = FIOM-CGIL
ITA2 = FIM-CISL
ITA3 = UILM
KOS1 = SPMK
LUX1 = OGB-L / LCGB
MDK1 = SIER
MAL1 = GWU
MNE1 = MTUM
NED1 = FNV-Bondgenoten
NED2 = De Unie
NED3=CNV Bedrijvenbond
NED4 = VHP Metalelektro
NOR1 = Fellesforbundet
NOR2 = Handel og Kontor
NOR3 = NITO
NOR4 = Tekna
POL1 = NSZZ Solidarnosc
POL2 = OPZZ Metalowcy
POR1 = SIMA
POR2 = Fiequimetal
ROM1 = FNS Solidaritatea
ROM2 = FSS Metarom
ROM3 = FSLI Metal
SER1 = GSN Nezavisnost
SVK1 = OZ KOVO
SLO1 = SKEI
SPA1 = MCA-UGT
SPA2 = FM/CC.OO
SPA3 = ELA Metala
SWE1 = Sveriges ingenjörer
SWE2 = IF Metall
SWE3 = Unionen
SWI1= UNIA
SWI2 = Syna
TUR1 = Birlesik Metal
UK1 = Amicus
UK2 = Community
UK3 = GMB
UK4 = TGU

Appendix 4. Abbreviations used in the study

CEE = Central Eastern Europe
CEEMET = Council of European Employers of the Metal, Engineering and Technology-Based Industries
CME = Coordinated Market Economies
CSR = Corporate Social Responsibility
CSS = Cognitive Social Structures
DGB = German Trade Union Confederation (Deutsche Gewerkschaftsbund)
ECJ = European Court of Justice
ECSC = European Coal and Steel Community
EEA = European Economic Area
EEC = European Economic Community
EES = European Employment Strategy
EESC = European Economic and Social Committee
EFA = European Framework Agreement
EMCEF = European Mine, Chemical and Energy Workers' Federation
EMF = European Metalworkers' Federation
EMU = Economic and Monetary Union
ERGM = Exponential Random Graph Models
ERGMM = Exponential Random Graph Mixed Models
ETUC = European Trade Union Confederation
ETUF = European Trade Union Federation
ETUF-TCL = European Trade Union Federation – Textiles, Clothing and Leather
EU = European Union
Eucob@n = European Collective Bargaining Data Gathering Network
EU15 = Member States of the European Union before the enlargement of 2004
EWC = European Works Council
FDI = Foreign Direct Investment
IRTUC = Inter-Regional Trade Union Council
ITS = International Trade Secretariat
KL = Kullback-Leibler divergence
LME = Liberal Market Economies
MCMC = Markov chain Monte Carlo
MDS = Multidimensional scaling
MKL = Minimum Kullback-Leibler Latent position
ML = Maximum likelihood
MLE = Maximum likelihood estimator
MNC = Multinational Company
NFS = Council of Nordic Trade Unions **(**Nordens Fackliga Samorganisation**)**
OMC = Open Method of Coordination
PCA = Principal component analysis
PEC = Pacts for Employment and Competitiveness
PL = Pseudo-likelihood
SCE = Standing Committee on Employment
SEE = South East Europe
SEEF = South East European Forum of the EMF affiliates
SME = Small and Medium Sized Enterprises
SSDC = Sectoral Social Dialogue Committee
SWP = Select Working Party
UNICE = Union of Industrial and Employers' Confederations of Europe
VoC = Varieties of Capitalism
WTO = World Trade Organization

Appendix 5. List of Tables and Figures