National Models of Capitalism, Institutional Change and the Financial Crisis

A quantitative study of national business systems in the fore- and aftermath of the financial crisis

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Abstract

Institutional change have become a key issue in the Comparative Capitalism (CC) literature. The impact of international processes of liberalization, globalization, financialization and regional integration on national models of capitalism is increasingly being studied alongside other forms of incremental change processes. In doing so, the orthodoxy, which assumes stable and virtually unchanging national institutional configurations outside of systemic shocks resulting in critical junctures, is being challenged.

This orthodoxy is particularly dominant in quantitative CC studies, which assume a large degree of institutional stability in their use of data. Employing Whitley's national business system framework, this thesis seeks to add to the CC literature on institutional change by applying cluster analysis to a longitudinal quantitative dataset covering 30 OECD economies, nine institutional indicators, and ranging from 2000-12. In doing so, it is able to study the institutional change impact of both gradual changes flowing from international change processes, and the financial crisis and European sovereign debt crisis as an international critical juncture. The quantitative analysis is complemented by a political analysis of developments since the onset of the financial crisis.

I find four institutional configurations to be stable across the time period, and significant institutional change to trust, state dominance, the financial system score and union strength across the four identified business system types. Additionally, I find evidence of the divergence of state-organized business systems and of a slight degree of convergence between compartmentalized, collaborative, and Nordic business systems.

In my political analysis, I find changes to the trajectories of the Greek, Japanese, and Irish business systems, while the trajectories of the US, German, French, and Nordic business systems are largely unchanged. Finally, I argue that international money markets and EU integration have severely limited the range of feasible choices available at the domestic political level.

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1. Introduction

Since the 1980s, tremendous attention has been directed at the phenomenon of national capitalist diversity. The apparent decline of US and UK industries at the time stood in stark contrast to the economic success enjoyed by Germany and Japan, which challenged understandings in neoclassical economics that assumed one optimal model of economic organization (Jackson & Deeg 2006). In focusing on optimal markets, factors of production, and efficient allocation of resources, traditional economic theories failed to account for the importance of institutions in its analysis (Coates 2005). Rather than happening in a vacuum, economic activity takes place in a context largely shaped by different national institutions, which were significant factors in explaining the diverging fortunes in the 1980s of the US and the UK on the one hand, and Germany and Japan on the other.

While the competitiveness of the US and UK economies have been restored, acknowledging the importance of national institutional configurations for economic activity remains important. Today, the study of different models of capitalism is broadly known as Comparative Capitalism (CC).The CC literature sees national institutional configurations, made up of complementary and interdependent societal institutions, to shape private economic activity. The intuition is that several stable institutional configurations may exist, and that more than one national model of capitalism can lead to economic success.

If understanding national institutional configurations is important for the structuring of national economies, how, why, and when do they change? Traditional CC frameworks contend that the socio-economic institutions structuring the economy are very stable, and that wider-scale changes to an institutional configuration often require a shock, a so-called 'critical juncture', to upset the systemic status quo. The global financial crisis (GFC) and the ensuing debt crisis in Europe are particularly interesting in this context. Recessions, crises of employment and business defaults are among the many economic and social consequences that have followed the outbreak of the financial crisis across the globe (Griffith-Jones et. al. 2010). Because of this, the GFC and the sovereign debt crisis in Europe can be considered a systemic shock, significantly affecting virtually every developed economy. In other words, the GFC and the sovereign debt crisis provide the conditions under which the mainstream CC literature indicates that extensive change to national models of capitalism can come about.

Another factor contributing to the importance of institutional change is the host of inter-related and international change processes affecting national economies. Processes of financialization, liberalization, globalization, and regional integration, especially in the case of the European Union (EU), are considered to apply isomorphic pressures on national institutional environments, pressures that may ultimately result in the convergence of national models of capitalism. Thus, while convergence is not necessarily the final outcome, gradual changes, flowing from international pressures, also hold the potential for transformative change to national models of capitalism in the longer run (Streeck & Thelen 2005). Alternatively, international pressures on national economies might be internalized and reacted to in different ways by different types of capitalism, resulting in relatively minor adjustments to the existing models rather than wholesale changes (Hall & Soskice 2001).

The global financial crisis and continuing international convergence pressures provide two excellent and relevant examples of institutional change mechanisms, which may impact importantly on capitalist models in the developed world. Unfortunately, there is little systematic, overarching evidence on the recent impacts of these factors of change. Thus, my research seeks to understand:

> *How have national models of capitalism developed institutionally in the fore- and aftermath of the global financial crisis?*

In addressing this research question I employ Whitley's (1999) national business systems framework as the starting point. The national business systems framework allows for nuanced distinctions between national models of capitalism, which provides a basis that is both coherent and inclusive for the study of capitalist diversity. The allowance for several kinds of capitalist models, rather than e.g. a dichotomous approach, is instrumental to understand development of distinct national economic models. Furthermore, the framework successfully integrates cultural elements and leaves scope for the role of state and labor in the institutional make-up of business systems.

Traditionally, the CC literature has relied on qualitative studies limited to a single or very few countries at a time but since the beginning of the new millennium, quantitative studies have become more popular because they allow for the simultaneous analysis of larger groups of countries. Their increasing popularity also reflects that data across countries should be able to confirm what the CC literature posits, namely that there is more than one model of capitalism. Unfortunately, the quantitative studies have so far not been directed at the study of institutional change. On the contrary, they exert a significant stability bias by im- or explicitly assuming that models of capitalism are stable and highly resistant to change. The result has been analyses that rely on averages from a number of years and/or data points that do not match in time (e.g. Hall & Gingerich 2009). In doing so, such analyses forego important information about and insights into how models of capitalism may be changing.

In this thesis, I seek to bridge part of this literature gap by conducting a longitudinal quantitative analysis of nine institutional dimensions in 30 OECD economies from 2000-12. Rather than looking at averages or non-matching data points, an analysis of year-to-year data contains far more potential for the detailed study of institutional change. The analysis builds on 13 two-stage cluster analyses (one for each year from 2000-12) and is based on a data set, derived from different sources. Cluster analysis is an effective tool when looking for structure in multivariate data sets because it allows for the identifying of distinct clusters which share similar characteristics, in this context, distinct national business systems.

In order to complement the quantitative approach by understanding whether political developments hold the potential to alter the longer-term trajectories of national business system, a secondary analysis and discussion will investigate developments at the political level in the US, Japan, Germany, Ireland, the Nordic countries, France, and Greece following the outbreak of the financial crisis. The impact of international money markets and EU integration will also be discussed in this context. This approach reflects the increasing attention paid to the political dimension in the CC literature which is very closely connected to the socio-economic institutions shaping national business systems (Konzelmann et. al. 2012).Furthermore, the supplementation of the quantitative, longitudinal analysis with a more qualitative approach to events in the political arena provides a significant degree of cross-fertilization, strengthening the analysis and the insights that can be derived.

The cluster analyses yield four distinct types of national business systems: a compartmentalized, a collaborative, state-organized and a Nordic business system. The longitudinal analysis also reveals a steady decrease in union strength over the period across the four business system types. Additionally, general decreases in trust and the financial system scores and an increase in state dominance followed the outbreak of the financial crisis in 2008. My analysis also indicates changes to the institutional distances *between* the four business system types, albeit the movement does not support a convergence argument per se. Most notably, the state-organized business systems have become more distinct, particularly in the institutional sub-domains of paternalism and the strength of the public training system. The analysis also shows that the compartmentalized, collaborative and Nordic business systems have moved slightly closer to one another with regards to the centralization of bargaining and the strength of the public training system while maintaining their external distinctiveness and internal coherence.

The political analysis adds several interesting findings to the insights generated by the quantitative approach. I find that the trajectory of Japan's business system may be switching away from the compartmentalized business system, although a new direction is still under development, and that the collaborative business system in Ireland seems to be moving towards a compartmentalized business system as a result of the financial and sovereign debt crisis. In the Nordic countries no major shifts seem to have occurred, and the US and Germany also seems locked in to the trajectories of compartmentalized and collaborative business systems respectively. In France, policy initiatives have largely reflected its *dirigiste* tradition, one which is also reflected in its state-organized business system type, while the severity of the Greek crisis has left the country virtually without political autonomy which has been transferred to its creditors despite fierce resistance among the population. Finally, I find that dependence on international money markets and EU integration related to competition regulation, budgetary autonomy, and membership of the Eurozone have been important for political developments because they severely limit the palette of possible national political directions.

My thesis contributes to the CC literature in several important ways. Theoretically, the longitudinal, quantitative approach represents a novelty in the CC literature and avoids the stability and continuity bias inherent in existing quantitative CC studies. In doing so, it proposes a way to direct the explanatory powers of quantitative methods to the study of institutional change in national economies, a research area of particular importance in the CC literature of today. Empirically, I add to and lend support to the growing literature on national business systems through my analysis of almost 5000 data points. Both the quantitative and qualitative analyses also contribute to the ongoing debate concerning institutional change and national models of capitalism, a theme which is even more relevant in the context of the financial and sovereign debt crisis and the continued impact of international change processes.

1.1 Thesis outline

The next chapter of this thesis reviews and discusses the literature on Comparative Capitalism and institutional change. The first section introduces the general CC literature and some of its key concepts such as institutional complementarity and theoretical nationalism. Here, I argue for employing Whitley's national business systems framework over the Varieties of Capitalism framework. The following section discusses the role of institutional change in relation to the study of capitalist diversity. It considers sources of institutional reproduction and change and argues for an inherent stability bias in most quantitative CC studies. Finally, the third section details the GFC and the sovereign debt crisis and argues why they can be considered a critical juncture.

In chapter 3, the thesis methodology, the primary method (cluster analysis), and the research design are presented and discussed. By considering national economies as shaped by relatively coherent institutional configurations, the thesis methodology takes up an inherently *holistic* position while the quantitative approach implies a *positivist* position within the philosophy of science. The primary method, cluster analysis is presented and explored before turning to the research design. Here, I will argue for at the time period from 2000-12, selecting 30 OECD economics as the objects of study, and the particularities related to the application of cluster analysis in the context of my thesis. The research design section will also in detail discuss and argue for the quantitative proxies employed to capture nine institutional sub-domains from Whitley's national business system framework before turning to the limitations of my approach.

Chapter 4 presents and discusses the main findings of primary analysis, i.e. the longitudinal cluster analysis. The chapter starts out by considering the first step in the cluster analysis, determining the number of viable cluster for each year under consideration, by discussing outliers and conducting a single-linkage robustness test. It finds four clusters as relatively stable across the time period, three of which are relatively consistent with the compartmentalized, collaborative, and state-oriented business systems theorized by Whitley, and a fourth, a Nordic business system, which also has wide support in the literature. The chapter continues by studying and discussing observable change in the nine institutional indicators employed. General changes across the four business system types include a steady decrease in union strength, while the financial system score and trust decreases substantially after the onset of the GFC and state dominance increases. Finally, the chapter concludes by discussing in detail the cluster solutions from 2010-12 which seem to indicate convergence between the Nordic, compartmentalized and collaborative business systems. An exhaustive analysis of the institutional indicators, however, find that while slight convergence do occur in terms of the strength of public training systems and centralization of bargaining, the result more accurately reflects divergence by the state-organized business systems, particularly with regard to the paternalistic institutional sub-domain.

The fifth thesis chapter analyzes and discusses action at the political level to discern whether developments in the political arena following the GFC seem to have altered institutional trajectories for business system. Political struggle, compromise, and action is closely connected to a wide range of institutions which shape the form of private economic activity. Changes at the political level related to the direction of particular business systems may take time to materialize in the institutional indicators considered in the previous chapter. The political analysis of two compartmentalized business systems, the US and Japan, two collaborative business systems, Ireland and Germany, two state-organized business systems, France and Greece, and the Nordic countries thus complements the analysis and adds to the findings of the previous chapter. Here, I find that the Japanese business system is in a state of uncertainty following the rejection of the liberalization policies related to its compartmentalized business systems, while the fragile social pacts in Ireland seem to have collapsed during the crisis, combining with austerity measures to push Ireland from a collaborative business system in the direction of a compartmentalized business system. Political action in France, the Nordic countries, Germany, and the US seem to be mostly in line with the institutional logic of their respective business system types, while the debt crisis in Greece has meant the surrender of national political power and the imposition of austerity measures by its creditors, despite popular resistance. Finally, I discuss the impact of international financial markets and EU integration on the political choices of states and find that both have restricted the options of individual states by hindering certain types of policy directions.

Finally, chapter 6 concludes the thesis.

2. Literature review

In analyzing institutional change in the period leading up to, during, and immediately after the crisis, this thesis relies extensively on the CC literature and its approach to the study of capitalist diversity. For this reason, this chapter critically reviews the CC literature. This includes discussions regarding how to conceive of institutions, of theoretical nationalism, as well as an introduction to the key concept of institutional complimentarity. Finally, the national business systems framework will be presented and its utility illustrated by comparing it to the popular VoC framework. In the following section, this literature review will turn to institutional change and look at both how institutions are reproduced and how they change. The last section will examine the financial crisis of 2008 and the European sovereign debt crisis as an international critical juncture in terms of institutional change.

2.1 Comparative Capitalism

Comparative capitalism encompasses a broad literature that seeks to make sense of capitalist diversity, and to do so in terms of institutional contexts. It is heavily based on neo-institutional underpinnings (Ebenau et. al. 2015) in emphasizing the role of informal and formal institutions in structuring capitalism. According to Jackson & Deeg (2006:30), the literature on comparative capitalism can be said to have three overarching characteristics: 1) It proposes distinct types of capitalist systems based on typologies of their institutional configurations, 2) it incorporates comparative institutional advantage as a means to explain the strengths and weaknesses of the capitalist systems, and 3) it ex- or implicitly relies on institutional path dependence to explain different responses by different systems to what may otherwise be considered pressures for convergence.

2.1.1 Institutions and institutionalisms

CC scholars conceive of capitalisms in terms of their institutional configurations. Doing so, not only enables scholars to incorporate a high degree of complexity in an intuitively appealing manner, it is also an explicit recognition that embeddedness matters for action (Djelic 2010:16). In the context of studying capitalist diversity this means that private economic activity is shaped by the institutional context in which it takes place. Early institutionalism focused mostly on formal state institutions and the rules upon which they were build (Peters 2011). The CC literature, however, leans on the understandings of a 'new institutionalism', which includes informal institutions as potentially powerful explanatory variables, and as a means of incorporating rational-choice and behavioralist insights while re-emphasizing institutions as enablers and constrainers of action (Hall & Taylor 1996). Much like political science in general, CC frameworks can also be understood in reference to three streams of thought within neo-institutionalism; sociological, rational choice, and historical-institutionalist neo-institutionalism (ibid.).

Rational choice institutionalism tends to see institutions as efficient solutions to collective action problems, providing the structural frames that encourage actions beneficial to the collective. Sociological institutionalism typically applies a much broader understanding of institutions, including cultural patterns and sense-making which inform agents in their action (Djelic 2010). Finally, historical institutionalism, while mostly conceiving of institutions as formal organizations and the patterns of behavior which springs from them, incorporates both 'calculus' and 'cultural' explanations when explaining the link between action and institutions (Hall & Taylor 1996: 940), i.e. it draws on elements from both rational choice and sociological institutionalism.

As Hall & Taylor (ibid.) points out, the three streams, despite developing relatively independently of each other, share a substantial amount of common ground. This makes it possible to not exclusively conceive of institutions as either efficient compromises reflecting rationality, broad cultural patterns informing action, nor as "essentially structural frames, organizational solutions, and formal rules or systems" (Djelic 2010:25). Instead, a compromise is possible and indeed desirable given that each of the three neo-institutionalisms generate genuine insights into actor-institution relationships (Hall & Taylor 1996:956). Thus, this thesis will employ a broad understanding of institutions as "rules of the game providing stability and meaning" with the important insight that the rules of the game are "formal and informal, material and cognitive, organizational and cultural" (Djelic 2010:26.). This not only makes sense at the methodological level but also specifically for the research purpose of this thesis. Expanding our understanding of institutions allows for a more nuanced interpretation, contextualization and discussion of the results of my data analysis.

2.1.2 Institutional complimentarity

A concept very much related to the three characteristics proposed by Jackson & Deeg (2006) and common to much of the CC literature is the idea of institutional complimentarity. Here, complimentarity signifies that institutions do not exist in a vacuum, rather they are interconnected and function in relation to other institutions (Crouch 2010). Mutually reinforcing, i.e. complimentary, institutions, and the positive synergies between them is what leads to the sense and claim that some combinations of institutions "seem to 'belong' together to form a *Gestalt*" (Crouch 2010:117, emphasis in original). Institutional complimentarity thus plays a substantial role in determining the effectiveness of different institutional combinations and, ultimately, their longer-term viability. Given this, the existence of institutional complimentarity is both a strong argument for a holistic approach to the study of institutions and has important implications for policy-making and institution-building. If certain elements of an institutional configuration owe their success as much to the surrounding institutions as to their own characteristics, a thorough understanding of the institutional environment as a whole, and the specific complementarities in play is paramount for the effective construction of institutions and policies. (ibid.).

Institutional complimentarity is closely linked to the notion of comparative institutional advantage in the CC literature (Casper 2010:345). Comparative institutional advantage suggests that different economies have competitive advantages in different areas of economic activity based on their institutional configuration. Since distinct sets of institutional complementarities lead to distinct and enduring models of capitalism (Hall & Soskice 2001), and given that comparative institutional advantage springs from differences in institutional environments, institutional complimentarity is also a key concept for understanding comparative institutional advantage in the CC literature. Additionally, the application of comparative institutional advantage often comes with an implicit assumption of equifinality or supermodularity (Jackson & Deeg 2006), i.e. the idea that different institutional configurations may produce similar results in terms of their economic performance (Hall & Gingerich 2009).

Finally, institutional complimentarity can also inform the notion of path-dependence fostering different responses from distinct models of capitalism in the face of similar challenges. Path-dependency as a concept as well as its relation to institutional change and continuity will be discussed further below, for now, suffice to say that institutional complimentarity can be said to support path-dependent responses. Since distinct forms of capitalism, by definition, rely on different institutional configurations, responses designed to maintain positive inter-institutional synergies can be assumed to differ substantially in many cases. The combination of institutional complimentarity and path-dependence processes thus forms a strong argument for the enduring nature of distinct models of capitalism, especially among the advanced economies where institutions can be assumed to be relatively stable (Casper 2010).

2.1.3 Theoretical nationalism

The majority of the CC literature points to the country level as the proper one for the study of institutional configurations related to the organization of economic activity. The idea of theoretical nationalism, however, has been questioned extensively. This section addresses two of the main criticisms theoretical nationalism in the CC literature encounters.

One line of criticism argues that important nuances may be lost by looking exclusively at the country level and downplaying differences within and across countries (Wood et. al. 2014a), and scholars have been encouraged to exercise caution in the study of institutional configurations in terms of typologies because of increasing internal heterogeneity (Deeg & Jackson 2007). That internal diversity in terms of the organization of economic activity may be increasing is an interesting observation. This, however, does not disqualify the national as a proper level of analysis. Hollingsworth & Streeck's (1994) observation that institutional configurations are nationally distinct in the majority of cases still holds true today, as nations remain "the central unit of political-economic organization, competition and control" (Whitley 2008:22). Even in the face of increased internal heterogeneity, powerful explanations are most likely to be found at the national level, as long as that is where the availability and characteristics of resources are primarily negotiated. The national is often the level at which the economic activity of firms is shaped, e.g. through laws and regulations or the access to and the form of resources.

Other critics present a somewhat contrary argument against theoretical nationalism, namely that the country level is not distinguishing *enough*. According to this thinking, global convergence pressure are diminishing capitalist diversity to a degree where it no longer makes much sense to talk about substantially different national institutional configurations. This erosion of capitalist diversity is generally expected to continue in the face of processes such as liberalization, globalization, financialization, and even EU integration (Jackson & Deeg 2012). If such convergence processes are successful the study of capitalist diversity, at least at the national level, is rendered moot. The asserted erosion of national differences due to international change processes is something that is currently being investigated quite intensively in the CC literature (Jackson & Deeg 2012)and it constitutes a key piece in the formulation of the research purpose of this thesis. CC theory in general predicts that national institutional systems will respond to such forces in manners which maintain general institutional coherence and thus reproduces national distinctiveness (Deeg & Jackson 2007). This thesis, however, sets out to explore, among other things, how the GFC and global change processes have affected the degree of capitalist diversity at the national level. The national level is thus crucial in investigating if international processes are actually facilitating convergence.

In short, a subscription to theoretical nationalism does entail issues that need to be considered. Such issues, however, do not take away from the silver lining that the national level continues to be the primary level for organization, competition, compromise and control in the political economy. For this reason, it constitutes a natural level of analysis for this thesis going forward and the CC literature more generally.

2.1.4 Comparative Capitalism frameworks

The CC literature encompasses many different approaches with distinct emphases. Esping-Andersen (2013) distinguishes capitalisms through the type of welfare state they employ, underlining the importance of sociological dimensions in studying capitalisms. Albert (1993), examining the organization of private economic activity, categorizes economies into a flexible Anglo-Saxon model or a Rhineland model much more concerned with long-term planning, drawing mostly on historical-institutionalist thinking. A governance approach, including for example the social systems of production framework developed by Hollingsworth and Boyer (1997), outlines "the diversity of coordination mechanisms used in the governance of economic activity" (Jackson & Deeg 2006:24) by focusing on concepts such as social norms and logics of appropriateness. Understanding institutions as socio-economic equilibria, Amable (2003) uses cluster analysis on data for 21 OECD countries to support his deductive theoretical argument for different models of capitalism.

2.1.4.1 Varieties of capitalism

While the theoretical landscape of CC is quite rich and diverse as demonstrated above, this literature review will focus on the popular Varieties of Capitalism (VoC) framework developed by Hall & Soskice (2001) and highlight why the national business system framework has grown to become a more suitable option for the study of capitalist diversity. For Hall & Soskice (ibid.) the crucial dimension of national capitalisms is that of coordination. A proponent of both theoretical nationalism and the idea of institutional complementarity discussed above, the VoC framework suggests two ideal types mainly inspired by the American and the German economies; Liberal and Coordinated Market Economies (LMEs and CMEs) that, respectively, rely on non-market and market coordination.

The framework draws extensively on both historical-institutionalism and rational choice theory. The national institutional configurations incentivizes firms to organize and operate in particular ways, while constraining them from others by controlling which resources are available. The framework draws on rational choice theory in assuming that firms are rational, profit-maximizing agents which recognize their surroundings and adapt accordingly. Firm strategy thus follows structure (Jackson & Deeg 2006:22), leading to economic activity in national economies clustering at the two extremes of a state-market coordination continuum. The institutional context itself is assumed to be highly resistant to change. Path-dependency processes, institutional complementarity and comparative institutional advantage are said to lead economies towards either of the two ideal types. Significantly disturbing the, now, status quo requires quite large endogenous shocks.

The VoC framework is one of the few CC typologies to have been tested to a relatively high degree on the basis of quantitative data. The results are, however, mixed. While there is a substantial amount of research that points to the VoC framework being able to capture national economies and their characteristics quite well (see e.g. Hall & Gingerich 2009, Hall & Soskice 2001, Allen 2006) an equal and opposing body of work contends that it does not possess the explanatory power generally attributed to it (see e.g. Ahlquist & Breunig 2009, Taylor 2004, Herrmann 2008). Indeed, it has been posited that it has become "widely accepted (...) that understanding distinct forms of capitalism would also require infusing more complexity into its trademark dichotomy" (Ebenau 2015:48). While the rumors of the death of VoC are greatly exaggerated, it does have severe limitations in properly explaining capitalist diversity outside the nine or ten countries which fit reasonably well into either stylized ideal type (Casper 2010:344). For instance, the Mediterranean economies do not align well with the LME- nor CME-model.

Despite its contention of two dominating capitalisms, the VoC approach actually leaves very little scope for the state to have a role in determining how private economic activity is organized (Schmidt 2012). This is due to the great emphasis put on the firm as the center of analysis. It is, however, a considerable limitation of the approach that actors outside of the firm, such as the state or indeed the labour force, are given a limited role. In addition, it can be argued that the VoC framework also underestimates the sociological dimensions of the organization of economic activity, e.g. the impact of cultural patterns and sense-making on economic behavioral patterns (Witt & Redding 2013).

2.1.4.2 National business systems

A more promising approach for the future studies of national capitalisms, and the framework which will be employed for this thesis, is Whitley's (1999) national business system framework. It allows for the sort of nuanced distinctions that the VoC-dichotomy struggles to provide while retaining many of the same qualities (Hotho 2014). In addition, it lends significant scope to both labor and the state in the make-up of business systems where the VoC framework does not. This is important because the state can play a considerable role in national economies, e.g. by advancing certain industries over others or by creating national champions. The role of organized labor can be similarly important in relation to the firm and its options. Finally, the business system framework clearly acknowledges that cultural patterns do play an important role in the organization of economic activity, indeed, to a degree that some label it a "sociological framework" (Jackson & Deeg 2006:28). These strengths - especially in comparison with the popular VoC framework - may explain why the national business system approach has seen a substantial rise in popularity as of late (Wood et. al. 2014b).

Types of business systems

Whitley defines his business systems as:

"*distinctive patterns of economic organization that vary in their degree and mode of authoritative coordination of economic activities, and in the organization of, and interconnections between, owners, managers, experts, and other employees."*

(Whitley 1999:33)

These organizational patterns of economic activity are characterized by three key dimensions: 1) Type of ownership coordination, 2) type of non-ownership coordination, and 3) employment relations and work management (see table 1 for an overview of what each coordination dimension encompasses) . According to Whitley, there are multiple interdependencies - or complementarities - at play between the particular characteristics, e.g. alliance ownership makes collaboration between competitors and vertical integration within the alliance more likely, because there are positive synergies to be reaped from such coordination (Whitley 1999:39-40). In this sense, interdependencies push business systems towards particular constellations of characteristics while contradictions between characteristics are likely to hinder the reproduction of other

TABLE 1 (from Whitley 1999:34)
Key characteristics of business systems

Key characteristics of business systems
Ownership coordination
Primary means of owner control (direct, alliance, market contracting)
Extent of ownership integration of production chains
Extent of ownership integration of sectors
Non-ownership coordination
Extent of alliance coordination of production chains
Extent of collaboration between competitors
Extent of alliance coordination of sectors
Employment relations and work management
Employer-employee interdependence
Delegation to, and trust of, employees (Taylorism, task performance discretion, task organization discretion)

constellations. Consequently, despite the wide array of possible constellations of characteristics, only a few of these are likely to be established and reproduced in the longer term (Hotho 2014). Whitley (1999:43-44) deduces six such constellations or ideal types:

Fragmented business systems are typically settings where owner-controlled but small companies dominate in fast-paced and competitive markets (Jackson & Deeg 2006). These business systems exhibit both a low degree of ownership, non-ownership coordination, and degree of coordination in employment relations (Whitley 1999:41).
There is also a prevalence of direct ownership, small firms, and lack of ownership integration in *coordinated industrial districts business systems,* but they do exhibit a considerable amount of inter-firm coordination (Whitley 1999:41). In addition the workforce is usually more skilled (Hotho 2014) allowing for more interdependence and trust between employers and employees (Whitley 1999).
Compartmentalized business systems contain large firms and there is thus a much higher degree of ownership coordination with integration both of production chains and across sectors common (ibid.). Furthermore, ownership control is usually exercised through financial markets. These firms compete in arms-length markets with low degrees of cooperation and coordination with either competitors, business partners or employees (Jackson & Deeg 2006). *State-organized* business systems exhibit many of the same traits as compartmentalized business systems. Large firms with high degrees of intra-firm coordination are prevalent in the market and collaboration with other firms or the employees is low. Despite the size of these firm, a type of developmental state has typically subsidized credit, allowing families or business partners to retain direct ownership, and the state has taken on an active role in economic development severely enabling in some endeavors while constraining them in others.
Collaborative business systems combine alliance-ownership, large companies, and relatively high degrees of coordination, although they "do tend to focus on particular industries rather than diversify across the board" (Whitley 1999:44). They are often corporatist in nature and tend to develop both trust and interdependencies with their employees (ibid., Jackson & Deeg 2006). *Highly coordinated* systems are very similar to collaborative systems in the way they are organized. Importantly, however, they do coordinate economic activity across sectors, and the state is usually very involved in the direction of economic development as whole (Hotho 2014).

The role of institutions
For Whitley, the important institutional dimensions are those that control the access to and the form of resources such as social and financial capital (Whitley 1999:47). The four key dimensions are; the state, the financial system, the skill development and control system, and trust and authority relations (Whitley 1999:48). Table 2 presents an overview of key institutional features associated with the business system framework. A more detailed account of the meaning of each feature as well as a discussion of the

TABLE 2 (from Hotho 2014:678-9)
Key institutional features of business systems

The state
Dominance of the state and its willingness to share risks with private owners
State antagonism to collective intermediaries
Extent of formal regulation of markets
Skill development and control system
Strength of independent trade unions
Centralization of bargaining
Strength of public training system
Trust and authority relations
Reliability of formal institutions governing trust relations
Predominance of paternalist authority relations
The financial system
Capital market or credit based

quantitative indicators employed to capture them, will follow in the method chapter of this thesis.

Whereas firm strategy is seen as following directly from the national institutional configuration in the VoC approach, Whitley emphasizes a somewhat weaker linkage between macro-institutions and the organization of economic activity, namely that institutional features discourage or encourage certain types of economic organizational patterns (Jackson & Deeg 2006:27). The advantage of this is that it lends scope to studying the "micro-macro links between institutions and the organization of economic activity" (Hotho 2014:672). Amable (2008), for example has proposed the innovation system as an important link between the two. While Whitley does consider the micro- and macro-level to be distinct, they are still very closely connected. The institutions themselves, however, are to a large part seen the result of path-dependency processes. The differing institutions in place and particular historical contingencies are key factors in explaining why the development of industrial capitalism has taken on different forms (Whitley 1999:5). Distinct capitalist regimes have emerged from this historical context through economic and political competition and under the influence of complementarities and contradictions between ownership structures, social groupings and macro-institutions - a process which in several ways mimics the coming about of the business system characteristics.

The above paragraph illustrates how the conception of institutions in the national business systems framework builds on both historical-institutionalist and rational-choice insights. The framework, however, also draws on sociological insights, particularly in relation to trust and authority relations between employers and employees. In doing so, it combines insights from all three streams of neo-institutional thought into a coherent and inclusive framework apt for the study of capitalist diversity. Institutional change, how it relates to a traditional conceptions of institutions in the CC literature, and what it means in the context of this thesis is the next academic area covered in this literature review.

2.2 Institutional change

The employment of historical-institutionalist conceptions of institutions underlines the issues posed by convergence pressures at the international level. In combination with the importance lend to path-dependence, it encourages scholars to think about change dichotomously, i.e. as either "very minor (...) *or* as very major" (Streeck & Thelen 2005:6, emphasis in original). Essentially, it assumes periods of great stability only interrupted by systemic shocks which upset the systemic status quo and can lead to transformational changes in the institutional environment. Typically, the periods of continuity have been the emphasis in academic research (Capoccia & Kelemen 2007). This section will first outline sources of institutional reproduction and demonstrate the stability bias implicit in quantitative CC studies. Next, forms of institutional change will be considered including critical junctures, but also gradual change such as formal change in institutions, and informal changes in the function of institutions.

2.2.1 Sources of institutional reproduction

Campbell (2010:90-91) provides an excellent overview of path dependence arguments for the continued reproduction of institutional environments. One is the existence of positive feedback mechanisms which rewards actors for continuing to act in accordance with existing institutions, hereby reproducing institutions and the behavior associated with them. A second argument is more sociological in nature and suggests that institutions become taken-for-granted. Deliberate reform or transformation of institutions require an awareness of what is possible to change. Consequently, if institutions or behavior are taken-for-granted they might avoid questioning or change. Finally, institutional complementarity, so common to the

CC literature, forms a strong rational-choice argument for the persistence of institutional configurations (see Casper 2010). If the institutional environment is complimentary, it substantially increases the costs of change. The cost is no longer only related to one institution but to the systemic synergies which economic actors can reap the benefits of.

The majority of the CC literature rests on such im- or explicit arguments for stability or continuity in terms of the institutional environment (Streeck & Thelen 2005). This is perhaps particularly evident in quantitative studies of CC frameworks. While it may be argued that such studies are too uncommon, to the degree they have been conducted, it has been with a clear, albeit often implicit, assumption of stability. Hall & Gingerich (2009), for example, relies extensively on averages of quantitative indicators over time periods of up to 14 years. Ahlquist and Breunig (2009) do the same when testing the VoC framework and Esping-Andersen's welfare state typology, albeit taking averages of 4 and 5 year intervals instead. Common to the quantitative studies of scholars like Hall & Gingerich (2009), Amable (2003), and Hotho (2014) is also that in taking institutional stability and continuity as an assumption, it allows them to use data points and averages that do not actually refer to exactly the same points in time. The use of averages spanning several years and data points from different years and intervals demonstrate and, arguably, accentuates the problems the CC literature faces in explaining incremental institutional change. It also aptly illustrates the literature gap this thesis seeks to fill. The next section will turn to institutional change and how it may come about.

2.2.2 Sources of institutional change

While the emphasis tend to be on institutional persistence in historical-institutionalist accounts such as the national business system framework, they do point to so-called "critical junctures", i.e. systemic shocks, as moments in time where change can be fast-paced and transformational (Pierson and Skocpol 2002). These critical junctures may rupture the feedback mechanisms and thereby institutional interdependence. In time, this may lead to the emergence of new recurrent patterns of behavior, new feedback mechanisms and thus a new state of institutional entrenchment. Importantly, however, "change is not a necessary element of a critical juncture" (Capoccia & Kelemen 2007:348). Instead, it reflects a substantial increase in the likelihood of considerable change.

A growing body of literature contends that this does not align particularly well with ideas of continuous change processes at the international or global level and argue that gradual change may very well be influenced by path-dependency arguments often used to downplay the role of incremental change (Campbell 2010:). Also, relying on exogenous shocks for substantial institutional change assumes that change comes from the outside rather than change being a product of the system itself. Basically, the implication is an implicit assertion that only positive, reinforcing feedback mechanisms exist within the institutional environment (Streeck & Thelen 2005). Here, the proposition is that incremental change should also be considered, and perhaps even more so, a significant factor in substantial institutional change, rather than the idea of critical junctures rupturing institutional equilibriums exercising great inertia.

Streeck and Thelen (2005:19-30) distinguishes between five forms of incremental institutional change which can lead to transformational outcomes. As institutions are no longer perceived to serve the interests of actors, intentional institutional change can occur through their *displacement*, or the institutions can be brought back into alignment with said interests through the process of *layering*. This is interesting, because institutional complimentarity draws on functionalism and technical efficiency in arguing for the persistence of institutional environments. In these cases, however, the two may also be sources of institutional change themselves (Campbell 2010). On a related note, the interdependency of institutions may also be a source of institutional change in certain instances. Change in one institution may prompt or increase the likelihood of changes in connected, complimentary institutions (Jackson & Deeg 2012).

Interestingly, Streeck and Thelen (2005) also suggest that a considerable degree of institutional change happen unintentionally and not through formal institutions per se, rather the functions of institutions can *drift*, be *converted*, or become *exhausted*. They speak of institutional *drift* when the institutional environment of an institution change in a way which transforms the nature of an institution's functions. An institution is *converted* when its functions are redirected, and it becomes *exhausted* when it fails to serve its purposes, leading to its breakdown. The possibility of actors learning from and experimenting with institutions may also lead to a re-interpretation of the institution and a change of its functions through drift, exhaustion or conversion (Deeg & Jackson 2007).

The idea that incremental change is important and can be of transformational character have gained traction with the observation of international or global change processes that some scholars argue are leading to convergence among economic systems. If economic systems are indeed converging, it seems to represent a sizeable challenge to how we think about national economies and the diversity between them (Deeg & Jackson 2007). In the process of liberalization, socio-economic problems are increasingly addressed through market means rather than, for example, the state bureaucracy (Streeck & Thelen 2005). In a somewhat similar vein, globalization has been predicted to "globalize" the competitive pressures facing firms thereby driving them towards a single, optimal model of organization (Amable & Palombarini 2009). The very idea of an "ever closer" European Union also suggests, EU integration could represent another pressure towards international convergence. Finally, the financialization process has, across distinct types of capitalisms, seen financial activities take on an increasingly larger role in both national economies and non-financial corporations at the expense of activities associated with goods and services (Nölke & Perry 2008). Consequently, or so the thinking goes, national economies are forced to gradually adapt to a degree where it can lead to transformational change (Streeck & Thelen 2005). In the next section I look at the Global Financial Crisis as an example of a systemic shock and critical juncture across advanced economies.

2.3 The Global Financial Crisis - a critical juncture

The Global Financial Crisis has had widespread economic and social consequences including unemployment, underemployment and negative economic growth (Griffith-Jones et. al. 2010). What started as a sub-prime crisis in the US financial system quickly spread, and by the time Lehman Brothers went bankrupt in September 2008, devastating confidence in money markets in the process, all the signs were there of a global recession in progress (Begg 2012, Campbell 2011). The credit crunch turned a crisis in the financial system into an economic crisis so severe it had not been seen since the Great Depression (Wilson & Grant 2012). While the effects were most severely felt among industrialized countries, developing countries also experienced it to a larger degree than other smaller crises, making the GFC truly global in scope (Pepinsky 2012). Despite this global character, the effects of the financial crisis were not uniform. In Europe, for example, the GFC developed into a sovereign debt crisis in 2010, implicating in particular countries such as Greece, Portugal, Ireland, and Spain and, by association, much (if not all) of the EU (Begg 2012). In spite of a differentiated impact, there is little doubt that the GFC was a "common shock" to the developed world (Wilson & Grant 2012:2). Indeed, what makes other international economic crises pale in comparison, with the notable exceptions of the Great Depression in the 1930s and the stagflation crisis in the 1970s, is the depth and "world-wide systemic implications" (Grifith-Jones et. al. 2010:1) of the financial crisis turned debt crisis. The GFC can thus be considered to constitute a systemic shock to the global economy, and perhaps in particular to the 30 OECD countries being analyzed in this thesis.

The literature points to a multitude of causes for the GFC (see e.g. Campbell 2011:214 for an overview). It is, however, well beyond the scope of this thesis to give a detailed account of what lead to the crisis. Suffice to say that there seems to be a consensus that institutional failure played a very substantial role in facilitating the GFC (ibid.). What we have then is a severe economic crisis with a global impact rooted to a significant degree in the institutional setup. Global economic shocks of this character with "an immediate effect on national economies" are exactly what constitute "prime candidates for critical junctures" (van Hooren et. al. 2014:607). This was also very much the perception during and in the immediate aftermath of the crisis. An excellent example is when Newsweek in February 2009 declared "We Are All Socialists Now" on its cover, echoing Nixon's famous quote regarding Keynesianism. There were also widespread calls for dramatic change and signs of a paradigmatic shift occurring. The World Bank and Gordon Brown hosting a G20 summit, declared the Washington Consensus, a fundamentally neoliberal approach to economics, for dead and over(The Telegraph 2009). Perhaps most telling was a comment made by President Obama's chief of staff in 2008, Rah Emanuel, observing that: "You never want a serious crisis to go to waste. ... It's an opportunity to do things that you think you could not do before" (quoted in van Hooren et. al. 2014:606). These statements, and many more of the same sort, point to the expectation and probability of big changes. Given this sentiment that very significant change was, if not imminent, then at least considerably more likely in the context of the crisis as well as the dire economic and social consequences inflicted on countries all over the world, the GFC and the ensuing sovereign debt crisis in Europe can be considered an excellent example of an international critical juncture.

There is, of course, a range of CC literature which deals with the financial crisis. Some focus on the immediate consequences and responses by single or a handful of business systems. Konzelmann & Fovargue-Davies (2012) investigates the surprising different consequences and responses by Anglo-Saxon economies, and Schmidt (2012) studies the GFC and the sovereign debt crisis in relation to Spain, Italy, and France in particular. Others have taken a somewhat broader perspective to the CC study of the crisis. Kalinowski (2012) examines how different varieties of capitalism exhibit distinct preferences in regulating international finance after the crisis, in turn making it a difficult endeavor. Nölke (2015) finds that the Eurozone crisis partly stems from the sharing of a common currency a group of heterogeneous economies. Campbell (2011) takes a closer look at the unintended consequences of dynamic institutional complementarities and how they might in some cases lead to institutional imbalance.

To the author's knowledge, however, no studies have been conducted which look at a large group of industrialized countries over time and assess what institutional data has to say on the matter of institutional change in general, both within and between business systems before during and after the crisis. This mimics the lack of emphasis put on institutional change in the large scale CC studies that has been conducted on the basis of institutional data and which are thus ill suited to study institutional change whether it takes place incrementally or in a more transformational manner. By applying Whitley's business systems framework, this thesis sets out to investigate both incremental developments and potential institutional shifts for 30 OECD countries as a result of the crisis in the time period beginning in 2000 and ending in 2012. This investigation will primarily be carried out by conducting the sort of quantitative longitudinal study currently missing from the CC literature and subjecting yearly institutional data on nine institutional sub-domains to the process of cluster analysis with the goal of identifying different types of institutional configurations and identify changes within and between them. A macro-study of this nature is naturally limited in its ability to generate detailed insights into institutional change at the level of individual countries, rather I aim to identify, analyze and discuss institutional change general to the 30 OECD economies and different types of national business systems. In doing so, I seek to fill a significant literature gap within CC and to provide novel research on the impact of the GFC and the European sovereign debt crisis on national models of capitalism. The following chapter will go into detail with the thesis methodology, the applied clustering method, and the specific research design employed.

3. Method

Examining institutional change in the fore- and aftermath of the GFC is the overarching research purpose of this thesis. This examination is conducted by studying quantitative institutional indicators for national business systems and how they change over time. The methodology underpinning the research is thus both *positivist and holistic*. Operationalizing this approach, cluster analysis is employed to investigate general trends of institutional change and its impact on the clustering of advanced economies. This section will outline and discuss the methodological foundation of the thesis, the methods applied, and the specific research design utilized. The purpose of this section is to provide a clear and comprehensible guide of the key meta-theoretical underpinnings, the applied methods, and their operationalization in form of the research design. In turn, this allows for the accurate reproduction of the analyses undertaken and for scholars to build on the gathered insights.

3.1 Methodology

Engaging in research in the social sciences means deciding through which lenses to study the social world. The application of different lenses affect not only what kind of questions can be asked but, and perhaps in particular, also how they can be answered. In essence then, the methodology provides the silver lining going from the analytical focus to the applied methods.

In studying institutional change on the basis of quantitative indicators, this thesis takes a *positivist* position in the philosophy of science. A pure positivist position entails that one approaches the social world much like one would approach the natural world. It means seeing the world as consisting of well-defined objects with well-defined characteristics, and it includes an assumption that these objects and characteristics can be measured objectively, often leading to the development of general laws and rules that capture the social world (Saunders et. al. 2009:113-4). In the context of this thesis, the objects to be measured are national institutions. A key strength of adopting a positivist position is that it allows for the study of institutional configurations across national contexts. In doing so, it allows cross-country comparisons and analysis necessary for the study of institutional change across national business systems in the fore- and aftermath of the financial crisis.

Here, it is useful to introduce the concept of *fractal distinctions* borrowed from Abbott (2001) which generally relates to disagreement between two ideas (Seabrooke & Tsingou 2014). Its basic contribution in this context is to note that within each group in general agreement, here positivists, minor disagreement is also evident and thus positivists themselves can be divided into two groups with relative ease, based on the degree to which they recognize the contribution of constructivism to the social sciences for example. The same operation can then be employed with regards to the two new groups of positivists and so forth. The result is the appearance of *fractal distinctions* within a group in supposed agreement.

This concept very much applies here as an extreme positivist stance will not be the basis of this thesis. Rather, as discussed in the literature review, institutions are complex and multifaceted and thus notoriously difficult to measure. The position of this thesis is then that quantitative measurement of institutions does not entail an exhaustive nor objective description of the institutions and their functions. It does, however, capture a s*ufficient* degree of the nature of complex institutions for the purpose of this thesis and because of this, quantitative indicators of institutional features do have a place in the study of comparative capitalism and can generate valuable insight.

On a related note, in order to understand socio-economic institutions it is not sufficient to study them separately and independently. Here, the particular institutions are part of a greater institutional context, the national business systems. This thesis takes a *holistic* position (Saunders et. al. 2009) in that the impact of particular institutions cannot in a meaningful way be separated from the workings of the system as a whole. In particular, the key notion of institutional complementarity in the CC literature suggests that it is more useful to conceive of institutions as part of institutional configurations, rather than analyzing and investigating them as autonomous entities, since the effect and workings of a single institution feed into and is influenced by the workings of other parts of its institutional configuration.

Finally, this thesis follows the emerging consensus in the comparative capitalism literature in taking a relational view of institutions and actors (Jackson 2010). Rather than one dominating the other, the institutions and actors are seen as mutually constitutive, combining the two poles in the classical structure-agency debate. "*Men make their own history but not in circumstances of their own choosing*" (Marx quoted in Jackson 2010:65). Although institutions and structures can change through deliberate or coincidental agency, the institutional setup provides a set of circumstances that provide incentives to act and organize in specific ways.

3.2 Cluster analysis

The methodological positions of this thesis will be operationalized through the application of cluster analysis, a method to look for structure in multivariate data sets. The cluster analysis will be employed for the analysis of a unique and extensive dataset containing nine institutional variables, spanning 13 years from 2000-12, covering 30 OECD countries, and containing more than 4,500 data points.

In order to examine the institutional configurations of the sample countries, and to examine shifts in country membership and the institutional configurations longitudinally, cluster analyses will be performed on the data. Cluster analysis is an umbrella term for a number of statistical algorithms which groups cases based on variables (Kaufman & Rousseeuw 2009). It has been widely applied across the social sciences and has even been operationalized in the CC literature at times as well (see e.g. Amable 2003, Witt & Redding 2013, Hotho 2014, Ahlquist & Breunig 2009). The big strength of cluster analysis is that it can identify structure in large multivariate datasets. It does so by maximizing between-group heterogeneity and within-group homogeneity at the same time (Hair et. al 2010, p. 501). While one may intuitively be able to distinguish groupings within datasets consisting of cases with two or three variables, such an exercise becomes nearly impossible when dealing with multivariate analysis (ibid.). In this thesis, nine institutional features of Whitley's business system framework are estimated as quantitative variables. Cluster analysis thus provides an apt method for the identification of different types of institutional configurations in the multivariate dataset.

Generally, two types of cluster analysis are used, hierarchical and non-hierarchical. Hierarchical cluster analyses work in a stepwise fashion and provide a range of cluster solutions, normally by starting with each case as its own cluster and combining the most similar cases into cluster before ending up with a single big cluster. Non-hierarchical cluster analysis on the other hand sort the cases into a predefined number of clusters based on their distance to initial cluster centers (ibid.). This thesis will follow the literature (Punj &

Stewart 1983, Ketchen & Shook 1996) in conducting a *two-stage cluster analysis* based on Ward's method and an iterative k-means analysis as recommended by the literature (Punj & Stewart 1983). This implies drawing on hierarchical cluster procedures to determine the number of groupings the data encompasses, and non-hierarchical procedures to accurately assign the cases to one of the predefined clusters based on their distance to the cluster center, in my case the squared Euclidean distance as calculated by SPSS 22.

3.2.1 Operationalization of the two-stage cluster analysis

Performing a two-stage cluster analysis entails several choices of significance to the outcomes of the analysis and thus to the possibility of replicating them. Here, the specifics regarding the standardization of variables, the hierarchical clustering algorithm, the distance measure employed, and the non-hierarchical cluster analysis will be detailed.

Standardization of variables

In conducting any cluster analysis, an important decision is whether or not to standardize the variables. Standardizing the variables means converting them into standard scores (Z-scores) with a mean of 0 and a standard deviation of 1. It is usually recommended if variables are not of the same scale (Hair et. al. 2010, p. 524), since the variables with the highest standard deviation tend to influence the cluster solutions the most. Given that the institutional indicators employed in this thesis are of different scale and that there is no theoretical nor conceptual reason to oppose the standardization of variables, this procedure will be conducted here for each year. Standardizing variable also has the added benefit of lending equal importance to each of the institutional key features, rather than letting variables exert smaller or grater explanatory power through the size of and variation in their numerical values.

Hierarchical clustering algorithm

In conducting a two-stage cluster analysis, another important step is to specify the clustering algorithm. The clustering algorithm is the manner in which it is decided, which clusters should be joined (or, more rarely, which should be divided). This thesis follows Hotho (2014) in employing *Ward's method* as the cluster algorithm. Ward's procedure tends to create clusters of roughly equal size because its similarity measure is negatively correlated with the number of cases in a given cluster (Hair et. al. 2010). Here, this is an advantage as one would expect the distribution of countries across business systems to be relatively even. Having selected the appropriate cluster algorithm to apply on the standardized data, cluster solutions were selected based on the agglomeration schedules and dendograms provided by SPSS 22, and cluster centers, i.e. the average membership value for each institutional indicator, were calculated.

Distance measure

Cluster analysis uses distance measures to classify the data, and the selection of a distance measure bears significance for both the hierarchical and non-hierarchical part of the analysis. Here, the squared Euclidean distance will be used for two reasons: 1.) It is intuitively easy to understand as it is the straight line distance (in a nine-dimensional space) squared, and 2.) It is the recommended distance measure to combine with Ward's method (Hair et. al. 2010:521). Employing the squared Euclidean distance as the measurement thus ensures that the hierarchical and non-hierarchical parts of the cluster analysis are congruent.

Non-hierarchical cluster algorithm

An iterative k-means cluster analysis will be performed in the second stage of the two-stage cluster analysis. Here, the number of clusters found in the hierarchical stage will be employed as the basis for the distribution of cases. In addition, the literature recommends that cluster seeds, i.e. temporary cluster centers for the classification of cases, are used . This thesis follows the literature in using the cluster centers from the hierarchical cluster analysis as the cluster seeds for the final stage of the analysis (Punj & Stewart 1983, Ketchen & Shook 1996, Hair et. al. 2010).

3.3 Research design

While the previous two sections concerned themselves with the theoretical level, this section outlines the specifics at the practical level. First, the selection of 30 OECD countries as the object to study will be justified. Next, the time period from 2000-12 will be discussed. Third, the data sources employed will be reviewed. Fourth, the institutional indicators and their justification will be addressed. Finally, limitations of the methodology will be discussed.

3.3.1 Case selection

Determining which countries to include in the analysis is an important step in the research process. The inclusion of too many countries risk distorting the results and can lead to invalid inferences, while excluding relevant cases on the other hand, diminishes the reliability of the results. The sample of countries employed in this thesis will the OECD member countries and specifically, as the 30 OECD member countries in 2000. There are several reasons for this case selection. First, using OECD countries as cases is well established in the quantitative CC literature (e.g. Amable 2003, Hall & Gingerich 2009, Ahlquist & Breunig 2009) which makes cross-study comparisons more feasible. Second, Whitley's national business system framework applies mainly to countries where relatively stable institutions have been formed, and the 30 OECD countries represent a sample of countries where such a criterion can reasonably be assumed to have been met. Third, a sample of 30 advanced economies should certainly include the vast majority of the population indicating a high degree of reliability and validity of the findings, and the sample size compares very favorably to other quantitative CC studies. Fourth, more homogeneous data is available when focusing on OECD countries rather than including other countries which may be considered to have developed stable institutional configurations.

3.3.2 Time period

Deciding on a suitable time period for this study has been informed mainly by two sets of considerations. The time period needs to reflect the theory in the sense that the time period should allow scope for both institutional change rooted in incremental developments and the GFC to show up in the findings. Settling on a suitable time frame based on this is, however, insufficient. Data availability is another element that needs to be considered. The time period should also reflect the availability of data, preferably across the entire time period from the same sources so as to minimize interference.

Here, the time frame that best accommodates these considerations is found to be 2000-2012. First, the best data available both in terms of scale and scope starts in 2000 for the majority of the national economies under consideration and ends in 2012 at the time of writing. Second, this period should for ample time on both sides of the GFC to consider both incremental developments and the GFC itself as sources of institutional change.

3.3.3 Data sources

Variable data will be drawn from several secondary sources, the most important one being The Executive Opinion Survey (EOS) from the Global Competitiveness Report (GCR) from year 2000 through 2012. The

GCR, published yearly by the World Economic Forum, is widely recognized as an excellent source of data being used widely by prominent NGOs, IGOs, think tanks and academics alike (GCR 2014, p. 85) and provides great data coverage both in terms of the cases and the time period. By surveying business leaders all over the world and asking them to answer on a 1-7 scale, the EOS provide quantitative data which captures aspects of what is otherwise considered qualitative institutional domains. One minor challenge with drawing on the GCR and its EOS is that it has evolved substantially both in terms of scale and scope from 2000 to 2012, and with it its questionnaire. Although this also pertains to some of the data utilized here, the changes to the questions posed are mostly very minor and the results continue to capture the basic institutional characteristics. Where such changes do need to be addressed they will be discussed below when justifying the rationale behind the institutional indicators and how they are aligned with the national business system framework[1]. All in all, the GCR thus constitutes an excellent data source for the research purpose here.

Complementing the survey data provided by the GCR, the research design will also utilize other sources for two of the institutional indicators. First, the World Bank's World Development Indicators will be employed for financial data on the capital and credit markets of the 30 OECD countries. It draws on "officially recognized sources" (World Bank 2016) and provides national longitudinal data on a range of different indicators. Second, the ICTWSS Database 4 will be relied upon for data on trade union density, i.e. the ratio of salary and wage earners that are trade union member to the total number of salary and wage earners (OECD 2016). It represents a collection of time-series data through 2012 that is specifically aimed at providing data on institutional characteristics of the OECD economies, EU economies and a few emerging economies in the form of labor statistics. As such it fits very well in the research design.

3.3.4 Institutional indicators

I lean extensively on Hotho (2014) when it comes to settling on institutional indicators. A key reason for doing so is that it considerably increases the validity and thus the quality of this thesis's findings. Additionally, it reflects that I consider his selection of variables to generally be able to capture the key institutional features of Whitley's framework well. The research purpose of this thesis, however, does face different challenges in this domain than the one encountered in Hotho (ibid.). He is examining whether the typology suggested by Whitley is actually supported by the data, using data points ten years apart. I, on the other hand will be investigating institutional change on a year-to-year basis, using his analysis as a stepping stone. Undertaking a longitudinal analysis substantially increases the demands imposed upon the data coverage, both in terms of the time period and the sample countries.

The challenge is then to find the right balance between building on previous work and selecting variables that give good data coverage, both in terms of the time period, the 30 OECD countries, and which properly reflect the different institutional aspects of national business systems. Table 1A provides an overview of the institutional sub-domains and indicates which of Hotho's indicators meet the criteria of this thesis in terms of data coverage and analytical focus, as well as which indicators have been employed particularly for this thesis. Table 1b outlines the corresponding institutional constructs.

[1] For an overview of which data sources are used for which institutional constructs, consult Appendix A.

TABLE 1A. Key institutional features of business systems	TABLE 1B. Corresponding institutional constructs
<u>*Borrowed from Hotho (2014)*</u>	<u>*Borrowed from Hotho (2014)*</u>
The state	*The state*
Dominance of the state and its willingness to share risks with private owners	State dominance
State antagonism to collective intermediaries	Prevalence of clusters
Extent of formal regulation of markets	Burden of regulation
Skill development and control system	*Skill development and control system*
Strength of independent trade unions	Union strength
Centralization of bargaining	Centralization of bargaining
Trust and authority relations	*Trust and authority relations*
Reliability of formal institutions governing trust relations	Trust
Predominance of paternalist authority relations	Paternalism
<u>Employed particularly for this thesis</u>	<u>Employed particularly for this thesis</u>
The financial system	*The financial system*
Capital market or credit based	Financial system score
Skill development and control system	*Skill development and control system*
Strength of public training system	Strength of educational system

The state

Dominance of the state and its willingness to share risks with private owners translates into the independence of the state bureaucracy and the role the state plays in the economy with regard to risk-taking and coordination (Whitley 1999). By combining the GCR indicators *the effectiveness of anti-monopoly policy* and *favoritism in decisions of government officials* into one institutional construct, I capture both facets of this institutional feature highlighted by Whitley. First, the independence of the state bureaucracy is assumed to be negatively correlated to the favoritism in decisions of government officials. Second, the support of monopolies by the state in form of absent or ineffective anti-monopoly policy is a good indication of the role of the state in the economy, both with regards to coordination and risk-taking. Effective anti-monopoly policies thus reflect a lack of willingness by the state to coordinate and share risks in the economy, while ineffective anti-monopoly policies indicate precisely such a willingness. In short, an inverted average of the two scores reflects this institutional feature to a considerable degree[2].

State antagonism to collective intermediaries reflects the degree to which the state promotes "important intermediary economic associations between individuals ,firms, and the state" (Whitley 1999, p. 48),and the *state of cluster development* in the GCRs is utilized as the indicator capturing this institutional feature. The rationale is that the state's attitude to intermediaries is reflected in the actual formation of well-developed, deep clusters as experienced by business leaders.[3]

Extent of formal regulation of markets entails the extent to which the state constrains economic actors in their activities through regulation, and the degree to which the state regulates entry and exit barriers for

[2] Hotho (2014, p. 680) combines two other indicators for his state dominance indicator for 2000, namely *the independence of government policies from special interest groups* and *the extent to which government subsidies promote fair competition*. Here, however, these indicators are not well suited as they were discontinued in the beginning of the time frame, thus providing insufficient data coverage.

[3] Note that the cluster indicator is not available for 2005 and 2006. Instead an average of the 2004 and 2007 scores will be used for both years.

markets (ibid.). In this case, the *burden of government regulation* from the GCR will be employed as the institutional indicator. The argument for employing this institutional indicator is that the degree of state regulation of markets should be reflected in the burden of regulation experienced by firms and business leaders. For interpretive purposes the institutional indicator is inverted.

The financial system

Capital based or credit based refers to the prevalent method of obtaining external capital for firms, i.e. whether it is done through capital markets or through specific institutions, typically banks or state agencies. Here, two ideal types are placed on opposite extremes of a continuum going from purely credit based financial systems to purely capital based financial systems. The data is drawn from the World Development Indicators of the World Bank and encompasses *Stock market capitalization to GDP* as a measure for the prevalence of capital markets as a source of capital and *Private credit by deposit money banks to GDP* as a measure of the reliance on credit institutions for capital.

Hotho (2014) utilizes the capital to credit ratio for this indicator. While this does capture the institutional feature, I will argue for an improvement in to this indicator which allows more nuance to the business systems characterized by credit based financial systems. This is of particular importance for my thesis as the GFC is studied as a systemic shock to institutions *vis-á-vis* more incremental institutional change, and one would expect significant developments in the capital to credit relationship. Using Hotho's approach a national economy with a stock market capitalization to GDP ratio of 100 % and a private credit by deposit money banks to GDP ratio of 100 % would score 1 on this indicator. If the stock market capitalization to GDP is instead 200 %, while the credit to GDP ratio remains the same, the business system would instead score 2. If, however, a national economy has a credit to GDP ratio of 200 % and its stock market capitalization corresponds to 100 % of GDP, it will only score 0.5 using this method. The consequence is that the credit-part of the scoring scale is slightly compressed compared to the capital-part and thus lend slightly less significance.

Here, this indicator will instead be coded in order to lend equal importance to the credit and capital aspects of the financial system. This will be done by applying the following algorithm to the longitudinal data on stock market capitalization to GDP and private credit by deposit money banks to GDP:

If stock market capitalization to GDP > private credit to deposit money banks to GDP, the following calculation will be conducted:

$$Financial\ system\ score = \frac{Stock\ market\ capitalization\ to\ GDP}{Private\ credit\ by\ deposit\ money\ banks\ to\ GDP} - 1$$

If, on the other hand, private credit to deposit money banks > stock market capitalization, the score will be calculated as follows instead:

$$Financial\ system\ score = -1 \times \frac{Private\ credit\ by\ deposit\ money\ banks\ to\ GDP}{Stock\ market\ capitalization\ to\ GDP} + 1$$

This operation plots the financial system score around zero with a positive value signifying a financial system relying more on capital than credit, and a negative score one that depends mostly on credit. Furthermore, the scores themselves are intuitive and easy to interpret. A score of 0.5 means that the capital part of the financial system is 50 % larger than the credit part, while a score of -1.5 indicates that the credit institutions are 150 % more important than the capital markets for financing.

Skill development and control system

Strength of public training system encompasses the extent to which there is a "strong collaborative training system" (Whitley 1999, p. 50) in place. Hotho (2014) utilizes the intra-class coefficient, i.e. the degree to which differences among schools account for student performance, from the OECD PISA reports as his indicator and tested its robustness by re-running the analyses, employing instead the impact of socio-economic background on performance. Here, however, this data simply does not provide sufficient data coverage over time to be useful, since PISA reports are only published every third year. Instead the *quality of the educational system* indicator in the GCR is used. It provides time-series data from 2003 through 2012[4] for all cases and thus provides substantially better coverage. Importantly, it can also be expected that the strength of the public training system is strongly and positively correlated to the quality of the educational system as experienced by business managers.

Strength of independent trade unions quite simply relates to the extent to which firms and employers in general are affected by the trade unions with regards to their labour-management strategies and in their overall strategic decision-making (Whitley 1999). The measure used here is the trade union density provided by the ICTWSS database 4.0. The argument is that the strength and impact of trade unions is well captured by the trade union density, because it is taken to be strongly and positively correlated with the proportion of the workforce that are trade union members.

Centralization of bargaining is captured by the *flexibility of wage determination* indicator in the GCR[5]. Per definition, centralized bargaining processes entail less scope for individual employers in determining the wages of employees. The rationale is then that a strong negative correlation exist between the degree that bargaining is centralized and the flexibility of wage determination experienced by business leaders. For interpretive purposes the scores for this quantitative indicator are inverted.

Trust and authority relations

Reliability of formal institutions governing trust relations entails the degree to which formal social institutions foster trust between "relative strangers" (Whitley 1999, p. 51). This thesis follows Hotho (2014) in arguing that the *public trust in politicians* indicator from the GCR reflects this relationship. As Hotho (ibid., p. 681) points out, trust in politicians may not account for every aspect of social trust but there is significant empirical support for a strong and positive correlation between the two.

Predominance of paternalist authority relations reflects Whitley's distinction between formal and paternalist cultures. In formal cultures, subordinates are included in the decision-making processes and the superordinates abide by formal procedures and rules limiting their scope for discretion. This generally encourages greater cooperation between super- and subordinates. Paternalist authority relations on the other hand implies a high degree of superordinate discretionary scope and a low degree of autonomy for subordinates, discouraging close collaboration between management and employees. The GCR indicators

[4] From 2000-02 the *quality of public schools* indicator is utilized instead.

[5] In the 2001 version this indicator is excluded and it is denominated wage-setting in the 2000 version. For 2001, an average of the wage-setting indicator in the 2000 GCR and the flexibility of wage determination indicator in the 2002 GCR is utilized.

the willingness to delegate authority and *cooperation in labor-employer relations* effectively measure this and by combining the two, I am able to capture the two most important aspects of the formal-paternalist cultural dichotomy suggested by Whitley. For interpretive purposes the average of the two GCR indicators is inverted.

3.4 Limitations

Before turning to the analysis and discussion, it is necessary to consider the main limitations related to my positivist position in the philosophy of science and the data employed. In the social sciences, any methodological approach considers how to conceive of the social world and, in turn, how knowledge about social phenomena is generated. Distinct ideas about methodological issues lead to different ways of approaching research, and ultimately to distinct answers, even to similar questions. It is perhaps worth noting that such variation does not imply a hierarchy with regards to the philosophy of science or the applied methods, rather different methods and methodological position create different types of insights and entail different sorts of limitations.

The positivist approach I take in this thesis is no different. Positivists see the social world as relatively well-defined in terms of both the units of analysis, national institutional configurations in my case, and their characteristics and assume that it can be measured. This necessarily means foregoing a great deal of information relating to the context and complexity of institutions. By conducting a macro-analysis based on quantitative variables, I position myself towards the parsimony end of the parsimony-complexity tradeoff, downplaying the importance of exhaustive knowledge, analysis, and information at the individual country and institutional level in favor of creating insights and comparing institutional configurations at the macro level (Abbott 2004). Consequently, the knowledge generated through the quantitative, longitudinal analysis cannot replace and does not contain the same level of detail as in-depth qualitative analysis of one or a few institutional configurations. As such, while my thesis may inspire or complement such analyses, it is inherently limited in its ability to make inferences at the micro level. For instance, learning and experimentation by economic agents can lead to a change in the way institutions work (Deeg & Jackson 2007) in the form of drift, conversion or exhaustion (Streeck & Thelen 2005). Emphasizing the macro level, my analysis cannot track such functional changes to nature of institutions.

The parsimony-complexity tradeoff also relates to the *level of analysis*. My analysis, like much of the CC literature, subscribes to theoretical nationalism. As discussed in the literature review, the national level is a suitable level for the analysis of capitalist diversity in general. In individual cases, however, coherent institutional configurations may not be found primarily at the national level, but rather at the regional or local level. Again, my analysis does not capture such national differences as it is limited to the generation of general insights, rather such issues should be explored through other types of analysis.

Finally, the institutional indicators employed in this thesis may constitute yet another limitation. If they fail to capture a sufficient degree of Whitley's institutional features, they limit the validity of the findings of the analysis considerably. There is no easy way to address such an issues but it can be mitigated to a certain extent. To do so I have put a significant amount of time and energy into the selection and discussion of the institutional constructs. Furthermore, Hotho (2014) undertook a fuzzy-set analysis which showed consistent matches between the outcomes of his cluster analysis and innovation specialization providing significant support for his choice of institutional indicators. By employing seven out of nine of the same variables as the basis for my analysis, I also ensure considerable empirical support for my variable selection.

4. Cluster outcomes, analysis and discussion

This chapter presents the findings of the 13 two-stage cluster analyses conducted for the time period 2000-12. The first section presents the findings of the first step of the analyses, namely the hierarchical cluster analyses. This includes addressing outliers and validating the final hierarchical cluster outcomes by re-running the analyses using the single-linkage method. The second section turns to the results yielded by the non-hierarchical cluster analyses, the second and final step in the cluster analyses, on the basis of the hierarchical cluster analyses. Here, a distinction between cluster and country groupings are introduced, and the identification of four distinct business systems is discussed. In the third section, general developments both in relation to the time period in its entirety but also to the years influenced by the GFC are presented. Finally, the fourth section investigates the finding of two- and three-cluster solutions in 2010-12 and concludes that it is not the result of convergence *per se* but rather a combination of slight convergence between three of the country groupings and significant divergence by the last of the four country groupings.

4.1 Hierarchical cluster results and robustness tests

The first step in conducting the cluster analyses was determining the number of clusters for each year through the application of hierarchical cluster analysis. Table 4 summarizes the findings of the initial hierarchical cluster procedure. At first glance, the hierarchical cluster analyses do not seem to indicate a stable number of clusters across the period with two, three, four, and five cluster-solutions all being suggested more than once although four is the most prevalent solution.

TABLE 4
Initial hierarchical cluster outcomes

Year	Number of clusters
2000	4
2001	5
2002	5
2003	4
2004	3
2005	4
2006	4
2007	4
2008	4
2009	5
2010	2
2011	3
2012	2

4.1.1 Outliers and financial system scores

A closer look, however, reveals that the three five-cluster solutions (2001, 2002, 2009) can all be directly attributed to the financial system measure, and that an improved interpretation of the hierarchical cluster analyses yields four-cluster solutions for the years in question. For 2009, Iceland is suggested as a single cluster with a standardized financial system score of -4[6]. This represents a clear outlier related to Iceland experiencing its own financial crisis towards the end of 2008, which caused its stock market capitalization to fall dramatically. For 2001 and 2002, Austria and the Slovakia form a single cluster, an outcome which can also be attributed to financial system scores ranging from -2 to -3 in the two years. While such results should not be discarded automatically, the outliers in question are of such magnitude that they dwarf the explanatory power of the eight other variables combined. In addition, they are partly the product of a financial system measure which can be volatile, perhaps especially at the credit end of the financial system score continuum, because it incorporates stock market capitalization. Moreover, the standardization of variables for each year can also play a role with regards to this. If financial system scores which may otherwise be considerate as relatively normal or merely moderate outliers are found in years where the group of countries as a whole display decreased variation, the effect of their scores is amplified. For this reason, the prudent interpretation of the hierarchical cluster outcomes for 2001, 2002, and 2009 is a four-cluster solution for each year. This was confirmed by excluding the financial system scores and re-running

[6] I.e. four standard deviations lower than the mean in 2009.

the cluster analyses for the years in question , a process which yielded four-cluster solutions for each of the three years in question.

Given this, two additional issues need to be addressed regarding the financial system measure. First, the GFC needs to be accounted for. The hierarchical cluster analyses suggest a two-cluster solution for the first time in 2010 and 2012 and three-cluster solution for only the second time in 2011 after the onset of the financial crisis. Considering that the GFC heavily impacted financial markets, including stock markets, and that the financial system measure can be volatile and have an excessive impact, especially in combination with the standardization of variables, one may suspect the financial system indicator to be the source of the cluster outcomes from 2010-12. Second, year 2000 and years 2003-08 need to be accounted for in terms of the impact of the financial system score. If it caused invalid cluster outcomes in 2001, 2002, and 2009, one may suspect it has done so in other years as well. Addressing both these concerns at the same time, hierarchical cluster analyses were re-run as a robustness test for the remaining years[7], excluding the financial system scores. The cluster outcomes for the remaining years were identical with the ones presented in table 4. Consequently, the combination of a relatively volatile financial systems measure, the standardization of variables, and the GFC did not distort the hierarchical cluster outcomes outside of 2001, 2002, and 2009.

4.1.2 Single-linkage robustness test

Another concern requiring attention is the choice of cluster algorithm, which is addressed through an additional robustness test. As outlined in the method section, the hierarchical cluster analyses rely on Ward's method which tends to yield clusters of roughly the same size. This potentially means that the existence of small or even single-country clusters may be overlooked by the clustering algorithm. Accordingly, 13 hierarchical cluster analyses were conducted using the single-linkage method instead. The single-linkage method joins clusters according to the shortest distance between a pair of cases (in this case, countries) belonging to different clusters (Hair et. al. 2010). This makes it useful to identify potential smaller or single-country clusters because pairs including a case from said clusters will not be joined with other clusters until the very end of the hierarchical clustering process.

The single-linkage analyses found few examples of small or single-country clusters. Austria and the Slovakia were identified in 2000, 2003, and 2004 as potentially constituting two single-country cluster. Similarly, Iceland was suggested as a single-country cluster in 2008, and 2010-12. When the financial system measure was excluded from the cluster analyses, however, the three countries in question did not appear as single-country clusters. Here, I followed the line of thought from the years 2001, 2002, and 2009 in excluding them as possible single-country cluster due to the volatility of the financial system measure.

The single-linkage analyses, however, did point to one particularly interesting case which may be considered a single cluster, namely Italy. Italy emerges as a potential single-country cluster around 2006 mainly due to the combination of high scores on the prevalence of cluster and a high burden of regulation. As Hotho (2014) notes, the features of Italy partly resembles Whitley's (1999) coordinated industrial

districts due to this combination. Nevertheless, it also differs on some dimensions. Most notably, it exhibits a very high degree of centralization with regards to its wage-bargaining processes contrary to the

[7] I.e. 2000, 2003-2008, 2010-2012

coordinated industrial districts ideal type. A likely explanation is that the institutional features for Italy are caught between the regional and the national level. When considering business systems, Whitley (1999) argues that they are generally national in nature but also concedes that regional business systems may be found. Furthermore, it is widely recognized that the regional level does play a significant role in terms of Italy's economy. The attention paid to 'Third Italy' as a macro-region in the North-eastern and central parts of Italy displaying, for Italy at least, unique traits in terms of institutional features (Calafati 2014) springs to mind, and Carradore (2014) also find several distinct regional welfare systems in Italy. For the purpose of this paper, however, it makes sense not to consider it a single-country cluster in the coordinated industrial district mold. The main reason is that while regional institutional features may be visible in certain indicators, the majority of the variables measure the institutional features for Italy as a whole and it is problematic to try and distinguish when and how individual variables may contain information about one or several Italian regions. Additionally, as a point of comparison with the other OECD countries considered here, it becomes doubly troublesome. Thus, while Italy's regions may exhibit significantly different institutional features, it is more suitable to consider the macro-institutional features here. For the reasons stated above, Italy will not be considered a single-country cluster in this thesis but I do recognize that for other research purposes this may be a fruitful undertaking.

Having undertaken extensive robustness tests to ensure the validity of the hierarchical cluster outcomes, the final number of clusters differ from the original suggestions in three years (see table 5): 2001, 2002, and 2009. A four-cluster solution proved stable in the time period 2000-09 with the exception of 2004, where the hierarchical cluster analysis suggests a cluster solution with three distinct clusters. In 2010 and 2012, however, a two-cluster solution is provided instead, and the 2011 analysis yields three clusters. Intuitively this would seem to indicate a significant degree of convergence between the original clusters but as we shall see below, such a conclusion, at least without qualification, would prove too hasty.

TABLE 5
Final hierarchical cluster outcomes

Year	Number of clusters
2000	4
2001	4
2002	4
2003	4
2004	3
2005	4
2006	4
2007	4
2008	4
2009	4
2010	2
2011	3
2012	2

4.2 Non-hierarchical cluster outcomes

With the hierarchical cluster analyses having provided the suitable number of clusters for each year the role of the non-hierarchical, iterative k-means is to distribute the country cases into suitable clusters for each year. As described in the method section, the hierarchical cluster outcomes also provides the basis from which to calculate the initial cluster centers, or seeds, which are then utilized by SPSS 22 as a starting point when assigning the countries to clusters. The cluster membership for each country is summarized in table 7.

Analyzing the cluster membership of the countries across the time period, a trend that stands out is the existence of four groups of countries which tend, to a greater or lesser degree to cluster together throughout the period. For this reason it also becomes useful to distinguish between the *clusters* of a given year and the *country groupings* or *groups* existing across the period, i.e. c*lusters* refer to the non-hierarchical cluster solutions for a given year while c*ountry groupings* indicate the general membership for the entire period spanning from 2000-12. The country groupings are presented in table 6. Furthermore, table 8 illustrates which years the individual countries cluster with their respective country groupings, and in the years they do not, which country grouping cluster the two-stage cluster analysis have then assigned them to.

TABLE 6
Membership of country groupings[a]

Country group 1	Country group 2	Country group 3	Country group 4
US	Czech Republic	Germany	Denmark
UK	Mexico	Ireland	Finland
Switzerland	Poland	Austria	Iceland
Canada	Hungary	Belgium	Sweden
Japan	Turkey	Netherlands	Norway
Luxembourg	Greece		
Australia	Slovakia		
New Zealand	Portugal		
	Spain		
	Italy		
	Korea		
	France		

[a]Ranked according to the number of times the countries appear *outside* their country grouping, starting with the fewest.

4.2.1 Four stable institutional configurations

The existence of four country groupings, which are relatively stable in terms of their membership for the time period considered, is important because it lends empirical support for the national business systems framework. If there was no discernible pattern to be found in cluster membership across the time period it would on the contrary indicate significant problems with identifying distinct forms of capitalism based on the institutional domains highlighted by Whitley (1999). This section examines more closely the country groupings presented in table 6 and relate it to the national business systems (see also table 9), the VoC framework, and the CC literature in general .

Two of the four country groupings identified are consistent with both the VoC literature and Whitley's national business system framework, namely country group 1 and 3. Country group 1 contains countries normally associated with an Anglo-Saxon institutional configuration, known as Liberal Market Economies in VoC terms, such as the US, the UK, and Australia. The institutional features of this group corresponds well to one of Whitley's (1999) ideal types, namely the compartmentalized business system. These countries exhibit a low degree of state dominance, centralization of bargaining, and burden of regulation, and firms are relatively more reliant on capital markets when seeking to raise capital. Country group 3 consists of what referred to as coordinated market economies in the VoC literature and counts among its member countries such as Germany and Austria. The institutional configurations of this group entail a significant degree of market regulation, a credit-based financial system, stronger trade unions, and a much more centralized bargaining process and are largely consistent with Whitley's collaborative business systems in terms of their institutional features.

TABLE 7

Cluster membership

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Group 1													
US	1	1	1	1	1	1	1	1	1	1	1	1	1
UK	1	1	1	1	1	1	1	1	1	1	1	1	1
Switzerland	1	1	1	1	1	1	1	1	1	1	1	1	1
Canada	1	1	1	1	1	1	1	1	1	N/A	N/A	N/A	N/A
Japan	1	1	2	2	1	1	1	1	1	1	1	1	1
Luxembourg	2	N/A	N/A	2	1	3	1	1	1	1	1	1	1
Australia	1	1	1	1	1	3	1	3	1	1	1	1	1
New Zealand	1	1	1	1	1	3	1	3	3	1	1	N/A	N/A
Group 2													
Czezh Republic	2	2	2	2	2	2	2	2	2	2	2	2	2
Mexico	2	2	2	2	2	2	2	2	2	2	2	2	2
Poland	2	2	2	2	2	2	2	2	2	2	2	2	2
Hungary	2	2	2	2	2	2	2	2	2	2	2	2	2
Turkey	2	2	2	2	2	2	2	2	2	2	2	2	2
Greece	2	2	2	2	2	2	2	2	2	2	2	2	2
Slovakia	2	2	2	2	2	2	2	2	2	2	2	2	2
Portugal	2	1	2	2	2	2	2	2	2	2	2	2	2
Spain	1	1	2	2	2	2	2	2	2	2	2	2	2
Italy	2	3	3	3	2	2	2	2	2	2	2	2	2
Korea	4	2	2	2	2	1	2	1	1	2	2	2	N/A
France	2	1	2	2	1	3	2	2	1	2	2	2	2
Group 3													
Germany	3	3	3	3	3	3	3	3	3	3	1	1	1
Ireland	3	3	3	3	3	3	3	3	3	3	1	1	1
Austria	3	2	2	3	3	3	3	3	3	3	1	1	1
Belgium	3	3	3	3	1	3	3	3	3	3	1	1	1
Netherlands	1	3	3	1	1	3	3	3	3	3	1	1	1
Group 4													
Denmark	4	3	4	4	3	4	4	4	4	4	1	4	1
Finland	4	4	4	4	3	4	4	4	4	4	1	4	1
Iceland	4	4	4	4	3	4	4	4	4	4	1	4	1
Sweden	4	4	3	4	3	4	3	4	4	4	1	4	1
Norway	4	3	3	3	4	4	4	N/A	N/A	N/A	N/A	N/A	N/A

Note: N/A indicates that data for a country in the given year is missing.

Group signifies country grouping.

TABLE 8

Yearly country group membership

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Group 1													
US													
UK													
Switzerland													
Canada										N/A	N/A	N/A	N/A
Japan													
Luxembourg		N/A	N/A										
Australia													
New Zealand												N/A	N/A
Group 2													
Czezh Republic													
Mexico													
Poland													
Hungary													
Turkey													
Greece													
Slovakia													
Portugal													
Spain													
Italy													
Korea													N/A
France													
Group 3													
Germany													
Ireland													
Austria													
Belgium													
Netherlands													
Group 4													
Denmark													
Finland													
Iceland													
Sweden													
Norway									N/A	N/A	N/A	N/A	N/A	N/A

Note: N/A indicates that data for a country in the given year is missing.

Group signifies country grouping.

Country group 2 is the biggest of the four country groupings identified and consists of no less than 12 countries. Geographically speaking this is a quite diverse group including Mediterranean countries such as France and Spain, Eastern European countries such as Hungary and the Slovakia, and the sole Latin American OECD-member included in this analysis[8], Mexico. This group of countries bears very close resemblance to Whitley's state-organized business systems with institutional features of significant state involvement and regulatory burdens, little scope for intermediary associations, relatively weak trade unions, and a high degree of paternalist authority relations. It does not, however, fit well into VoC's traditional LME-CME dichotomy (Hall & Soskice 2001). Despite this, there is substantial support in the literature for considering this group a distinct form of economic organization. Amable's (2003:177-79) analysis reveals a 'Mediterranean' model of capitalism whose institutional characteristics and membership correspond well to those of country group 3. Additionally, Schmidt (2003, 2012) has suggested to break the VoC dichotomy and introduce a third ideal type, the State-oriented Market Economy (SME), exemplified precisely by members of country group 2, namely France, Italy, Spain, Korea, and Greece. Furthermore, her characterization of SMEs as institutional configurations with an active state, leaving less scope for intermediary associations is very much in accordance with what the institutional characteristics of country group 3.

The cluster analysis also reveals the Nordic countries, e.g. Denmark and Finland, as having a distinct institutional configuration and they constitute the final country grouping, country group 4. The Nordic countries exhibit traits that do not correspond well to any of Whitley's (1999) ideal types. Most notable is the absence of a dominant state and burdensome market regulation combined with the presence of strong trade unions, a centralized bargaining process and a strong educational system. The data thus suggests the existence of a new type of business system not theorized by Whitley (1999) nor by the traditional VoC literature (Hall & Soskice 2001). While a Nordic institutional configuration is absent from these two major frameworks, Boyer (2004) and Amable (2003) also find empirical evidence that the Nordic countries have a particular mode of economic organization. Additionally, Campbell and Pedersen (2007:308) argues that the complementarities, in the case of Denmark, between "market and nonmarket institutions" is a strong source of economic performance and challenge the VoC claim that hybrids, in terms of the VoC-dichotomy, are likely to perform worse economically.

4.2.2 Unexpected findings

Despite the national business system and VoC ideal types failing to account for one and two, respectively, of the four country groupings identified, the broader CC literature lends substantial support to the cluster outcomes. There are, however, also two surprises in the make-up of the country groups. The first one is Japan, which scholars have traditionally been more inclined to group with the collaborated business systems of Continental Europe (see e.g.), i.e. country group 3, rather than with the compartmentalized business systems consisting mostly of Anglo-Saxon countries in country group 1. A possible explanation is that the national business system of Japan "has changed rapidly since the mid-1990s" (Jackson 2009:607)[9] when it was living through its "Lost Decade". Specifically, the literature points to a financial system which has become less dependent on credit, and a labor system relying less and less on long-term employment (ibid., Morgan & Kubo 2005).

[8] Chile became a member in 2010 and is thus not considered for the purpose of this thesis.
[9] Jackson does not directly mention the national business systems framework but is instead referring to the traits of Japanese firms.

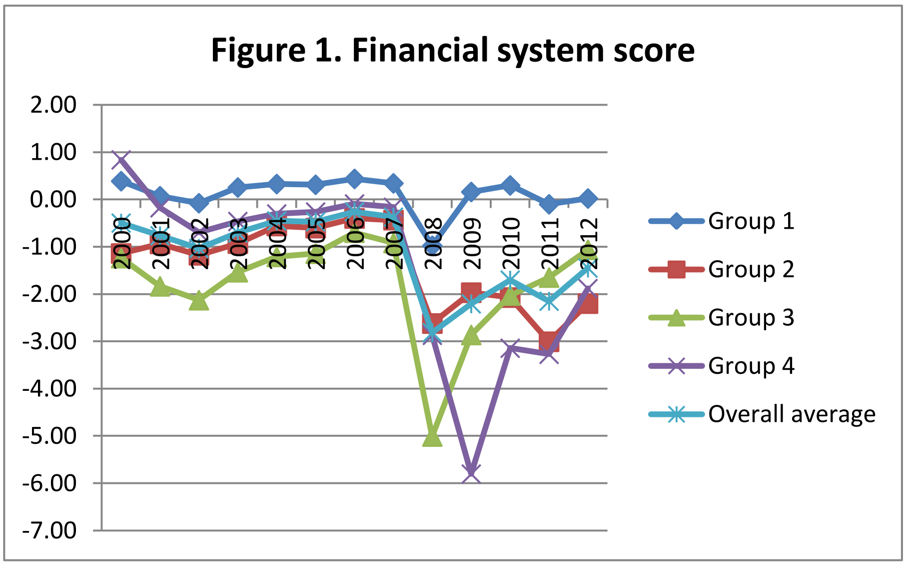
Ireland constitutes something of a role reversal compared to Japan. Ireland is often classified with the Anglo-Saxon economies in country group 1 as a compartmentalized business system but the cluster analyses here places it firmly among the collaborative business systems in group 2. Harcourt and Wood (2003:757), however, characterizes Ireland as an "emergent collaborative business system" pointing to a moderately high degree of union strength and centralization of bargaining. Amable (2003:176-177) also groups Ireland with countries from group 3 in his Continental European Model.

While the idea of country groupings is useful because it allows for an easy way to think about the cluster outcomes for the entire period, it also has other applications. By analyzing when and how often countries appear together with their country group, it may indicate whether they are loosely or more firmly connected to it. The intuition here is that if a country is only loosely connected to a country group, the more likely a country is to attach itself to another cluster than that of its country group in a given year, for example because of minor changes in its institutional indicators, the institutional indicators of neighboring clusters, or the standardization of variables.

4.3 Institutional change across countries

I now turn to analyzing general developments which can be attributed to either gradual change processes or are connected to the GFC. In particular, four institutional indicators show significant movement during the period, namely the financial system indicator, union strength, trust, and state dominance.

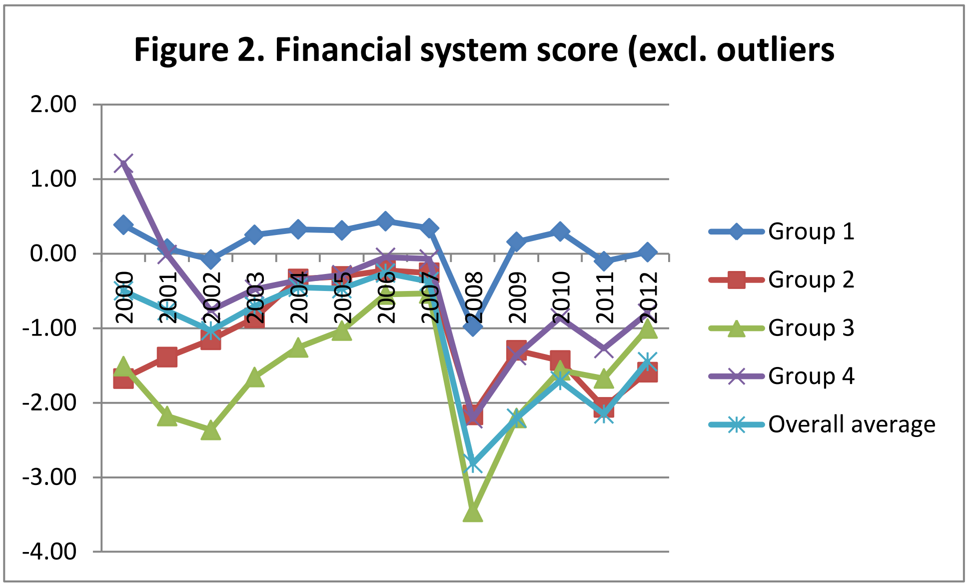
4.3.1 Financial system scores



Unsurprisingly, there is a dramatic response by the financial system score at the onset of the GFC. As figure 1 shows the non-standardized financial system score drops by approximately -2,5[10] on average. This is of course a result of the dramatic shock to stock markets across the developed world. Figure 1, however, also seems to indicate that country groupings are and were not affected to a similar degree. Specifically, country group 1 seems to experience the fewest ill effects, followed by country group 2, while groups 3 and 4 experiences substantially larger drops. In order to assess whether there is an actual and strong association between country group membership, developments in the financial system score, and the GFC, outliers need to be accounted for. A large share of the drop in country group 4's financial system score can be attributed to Iceland, reaching a low of -19,12 in 2009. Similarly, the dramatic drop in the financial system score of country group 4 is mostly due to Ireland and the effects of the European sovereign debt crisis. Similarly, Greece, Italy, Spain, and Portugal account for a significant proportion of the decrease in the financial

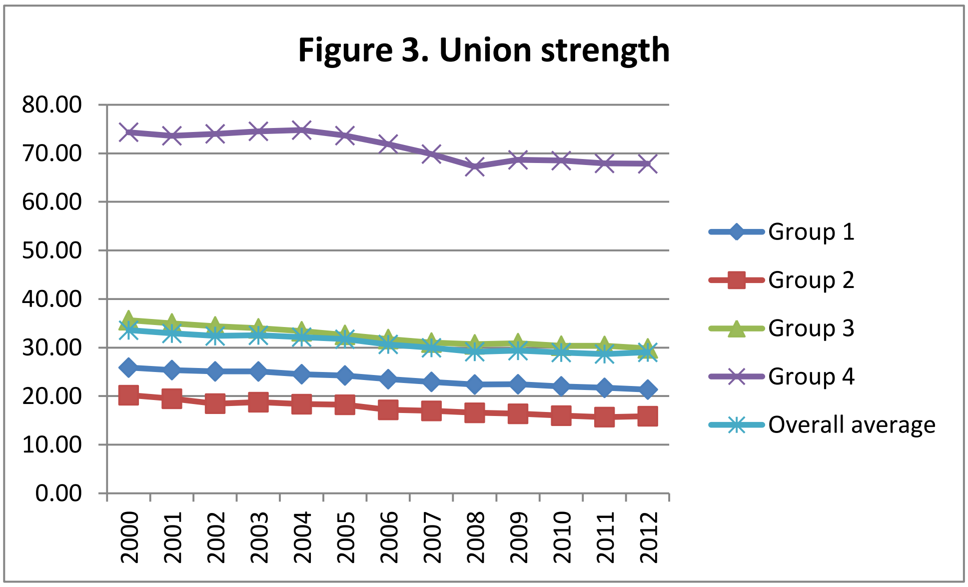
[10] I.e. stock market capitalization decreases by roughly 250 % in comparison to private credit by deposit money banks.

system score of country group 2[11]. By excluding the above mentioned outliers from the data a more even development occurs as shown in figure 2. Country group 1 still exhibits the smallest decrease but the developments are considerably more similar and in 2012 every country group is either recovered or recovering in terms of the financial system indicator. This last point is important because it also shows that while the GFC caused dramatic fluctuations in the financial system indicator, the recovery suggests little evidence of transformational change. In 2012 the data points to the distinct institutional configurations having reverted to or being in the process of reverting to their familiar financial system mechanisms.



4.3.2 Union strength

Figure 3 shows a clear trend of falling union membership across the OECD countries. Not only is this development not restricted to particular country groupings but it is also a gradual development visible throughout the period. The literature indeed supports the notion of declining union density as a general trend connected to international change processes. While early statistical analyses found no direct links between economic globalization and deunionization (Dreher & Gaston) they also only considered what may be termed economic globalization, i.e. a substantial increase in cross-border movements of capital, goods, services, and technology. Deunionization has later been connected to what may be termed social globalization, i.e. the globalization of ideas, norms and information (ibid.). This indicates that deunionization is less connected to the increase of market exchanges over border and more connected to the diffusion of ideas which may come from an increase in market interaction. Ortigueira (2013) points to a supplementary reason for the decline in union strength and union membership. According to him, the role



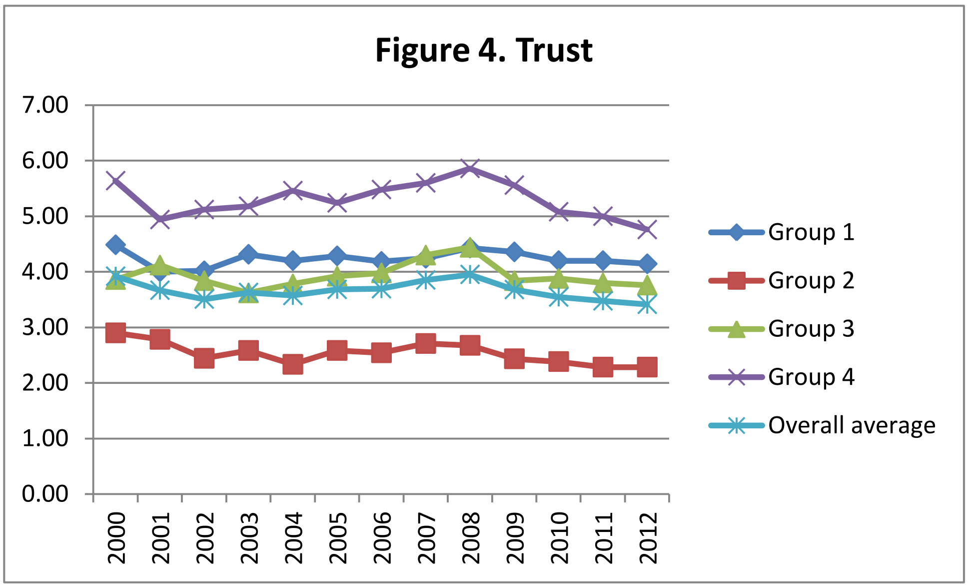
[11] An interesting avenue for future research may be whether there is a connection between the sovereign debt crisis and the state-organized business systems with Ireland constituting the only country outside country group 3 to be at the heart of it.

of technological development should also be considered. More specifically he argues that a larger productivity gap is developing within labor related to more sophisticated equipment and the higher productivity of workers who know how to operate them. Both the diffusion of ideas and a widening productivity gap can help explain the gradual erosion of union strength.

Despite the general trend of deunionization, however, the four types of national business systems identified in this thesis remain equally distinct in terms of union strength. This has two important implications. First, it underscores the general nature of the development across the 30 OECD countries. Second, it implies that this institutional sub-domain has a negligible, if any at all, effect on any relative changes, such as convergence or divergence, between the identified country groups. This last point is particularly noteworthy because the indicator for union strength clearly exhibits the traits of a general incremental change process. As was discussed in the literature review, such processes are generally seen as pushing national business systems towards convergence but here, there is no evidence this is the case.

4.3.3 Trust

The trust indicator is another variable which shows considerable development from the onset of the financial crisis. Trust is widely considered as being important to "broader social and economic processes" (Kestilä-Kekkonen & Söderberg 2015:1). As figure 4 demonstrates, trust decreases for all country groupings starting in 2008 and does not show the same signs of 'recovery' as the financial system indicator in 2011-12, a development which has also been noted by other studies (e.g. van Erkel & van der Meer 2016). While some of the countries experiencing the highest degree of economic hardship in this period also show steeper declines in the degree of trust, the trend of declining trust is visible across the 30 OECD countries. Rather, it should be considered a reflection of the general and continued political inability across OECD countries to manage the crisis (Wilson & Grant 2012) causing trust in the socio-economic institutions of society more generally and in political institutions specifically to drop.

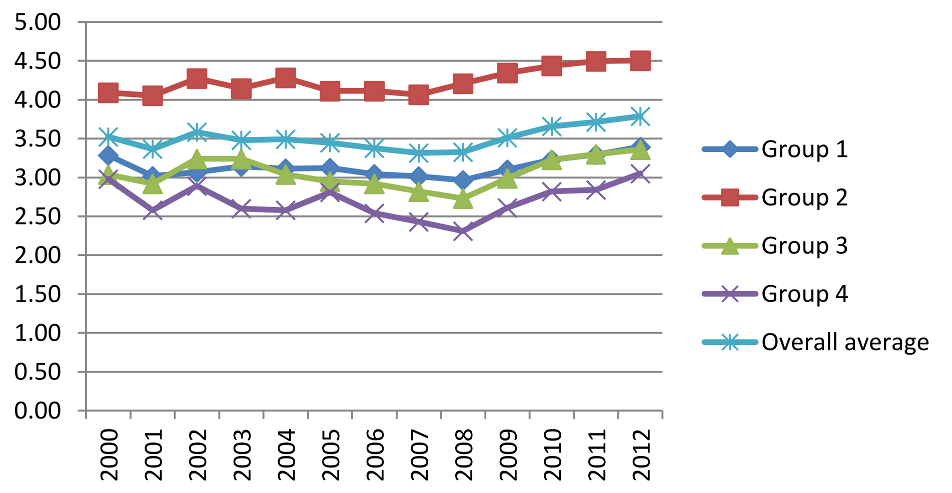


This trust crisis seems linked to a general political development in the OECD countries, namely the rise of anti-establishment parties. The mantra of anti-establishment parties is that alternatives do exist (Hartleb 2015). Alternatives in the way politics are conducted but also, and perhaps more importantly for this thesis, alternative ways of organizing national economies. Such alternatives, from both ends of the political spectrum, are currently enjoying widespread success throughout the OECD countries. In Greece, *Syriza* holds more than a third of the seats in the parliament. In the Spanish general election, Podemos received more than a fifth of the popular vote in late 2015, and Front National in France received more votes than any other French party in the 2014 European Parliament election. This trend is not restricted to Mediterranean or state-oriented business systems. The UK Independence Party has also seen support increase substantially since the onset of the financial crisis. In Denmark the Danish People's Party became the second largest party in Parliament in the 2015 general election, and a brand new party, aptly named The Alternative, received almost 5 % of the popular vote. Finally, the development is also mimicked in the ongoing presidential primary elections and caucuses in the US. At the time of writing[12], presumptive Republican nominee, Donald J. Trump, and one of the two democrats still in the running, Bernie Sanders, are both being characterized as anti-establishment. To a degree this mirrors political developments following the Great Recession and the 1970s oil crises (Bértoa 2014) but its longer-run effects are not yet clear. If anti-establishment parties or candidates are successful in gaining power, however, an effective implementation of their plans may substantially change, or even transform, the organization of private economic activity in the national business systems concerned.

4.3.4 State dominance

There is also substantial movement on the institutional indicator capturing the degree of state dominance in the national business systems. Here, there is a clear general trend of a more active state across country groupings as figure 5 shows. This reflects a tendency across the developed countries of stronger state intervention in the face of the crisis. Increasingly active states in the OECD countries may be seen as running counter to the general decrease in trust discussed above. Wilson & Grant (2012), however, points out that while the state may have lost considerable legitimacy as a regulator, the GFC has also increased the tasks that the state is expected to manage. More specifically, protecting the employees directly affected by the crisis and shielding and steadying the financial and economic systems became urgent, explaining the increase in state interventionism.

Figure 5. State dominance



The development can also be considered surprising from the perspective of the respective national business system configurations. While country group 2 also relies on an active state in general, and country groups 3 and 4 displays significant signs of non-market institutions, e.g. with respect to the centralization of bargaining, the compartmentalized business systems in country group 1 rely almost exclusively on market institutions to organize economic activity. The question then becomes whether we are witnessing a permanent break with the internal institutional logic of compartmentalized business systems, or if the increased state dominance is merely adopted as a crisis measure before returning to business as usual. The

[12] May 11th 2016

next chapter on policy responses will undertake a more in-depth investigation of this and other related issues.

Treating the GFC as a test case of a critical juncture as outlined in the literature review, this section has examined general institutional change across countries. It finds that the financial system indicator decreases dramatically at the onset of the crisis but recovers towards the end of the period making it unlikely to signal permanent and substantial change to the institutional configurations of national business systems. Gradual deunionization is identified as a result of technological development and the diffusion of ideas connected to globalization processes. The country groupings, however, retain their relative distances to each other indicating that this development does not hold transformative change potential at this time. State dominance increases significantly and public trust in politicians drop significantly at the onset of the crisis, and the institutional indicators show few signs of a recovery. This may indicate a greater potential for durable change in the institutional context of the business systems and will be discussed further in the next chapter.

4.4 Two dominant clusters of business systems?

The hierarchical cluster analyses suggested two clusters as a the cluster solution in 2010 and 2012, and a three-cluster solution in 2010. The non-hierarchical cluster analysis revealed that the two-cluster solutions of 2010 and 2012 happens through the merging of country groupings 1, 3,and 4 and that the three-cluster solution is the result of country groups 1 and 3 merging, while cluster 4 constitutes a distinct cluster. For all three years, country group 2 remains a single cluster. The hierarchical cluster analyses yielded four dominant clusters in every year bar one prior to 2010, and the development in the last three years considered here is thus tempting to ascribe to convergence processes between groups 1, 3, and 4. This section, however, will show this not to be the case. This section will start out with showing how the Nordic, compartmentalized and collaborative business systems, in terms of the country groupings, continue to constitute distinct modes of capitalism. Secondly, inter-group changes will be analyzed and discussed to understand what has caused this change in hierarchical cluster outcomes.

4.4.1 Continued distinctiveness and cohesion of country groups 1, 3, and 4

As mentioned in the method section, the goal of a hierarchical cluster analysis is to suggest a number of clusters where there is the greatest internal cohesion and the greatest differences externally to the clusters. Cluster analyses, in general, only provide one solution for a given dataset. This, however, does not signify that their application ends here. Indeed, masked by the one solution provided by the cluster analysis may be several cohesive and distinct clusters. A hierarchical cluster solution only tells us at what number of clusters inter-group homogeneity and intra-group heterogeneity are maximized. A single cluster solution does not tell us if other solution *also* provide coherent and distinct groups of cases, albeit at a smaller degree. The dendogram of the 2010 analysis in figure 6 aptly illustrates this point by showing at what stage of the hierarchical clustering process, the cases/clusters merge[13]. While it is pretty clear, that the two-cluster solution is the one who best fits the criteria for the cluster analysis, it is equally apparent, that the compartmentalized, collaborative and Nordic business systems remain coherent and distinctive[14]. Indeed, a

[13] A dendogram can only be shown for hierarchical cluster analyses and consequently, does not necessarily show the exact final two-stage cluster solution. Here, however, it is included for illustrative purposes.

[14] Iceland joins rather late with the other Nordic business system due to the continued impact of a very low financial system score.

four-cluster solution would according to the dendogram yield four clusters almost perfectly identical to the ones found in the years 2006-09.

To further verify the results, three non-hierarchical cluster analyses were performed for 2010-12 but applying a four-cluster solution proposal instead of the two- and three-cluster solutions given by the mathematical algorithms of the cluster analyses. The three analyses all confirmed that country groups 1, 3 and, 4 remained distinctive externally and cohesive internally. Furthermore, table 10[15] shows that the cluster centers of the country groupings continue to exhibit the same institutional features as earlier in comparison to a randomly selected earlier year, 2006[16]. That is, country group 1 continued to correspond well to Whitley's (1999) compartmentalized business system ideal type, country group 3 to the collaborative business system, and the Nordic countries continue persist in displaying a mix of non-market and market institutions.

[15] In table 10, the institutional indicators are coded as follows: Standardized values higher than 0,5 are coded as high, from 0,1 to 0,5 as considerable, from -0,1 to 0,1 as some, from -0,5 to -0,1 as limited, and finally values lower than -0,5 as low. One exception to this is the financial systems score. For this indicator, values lower than -0,25 are coded as credit, values between -0,25 and 0,25 as mixed, and values above 0,25 as capital, reflecting the type of financial system.

[16] Because of space limitations only one other example is provided but the trend is clear throughout the period. For a full overview, see appendices B and C.

Figure 6. Dendogram.

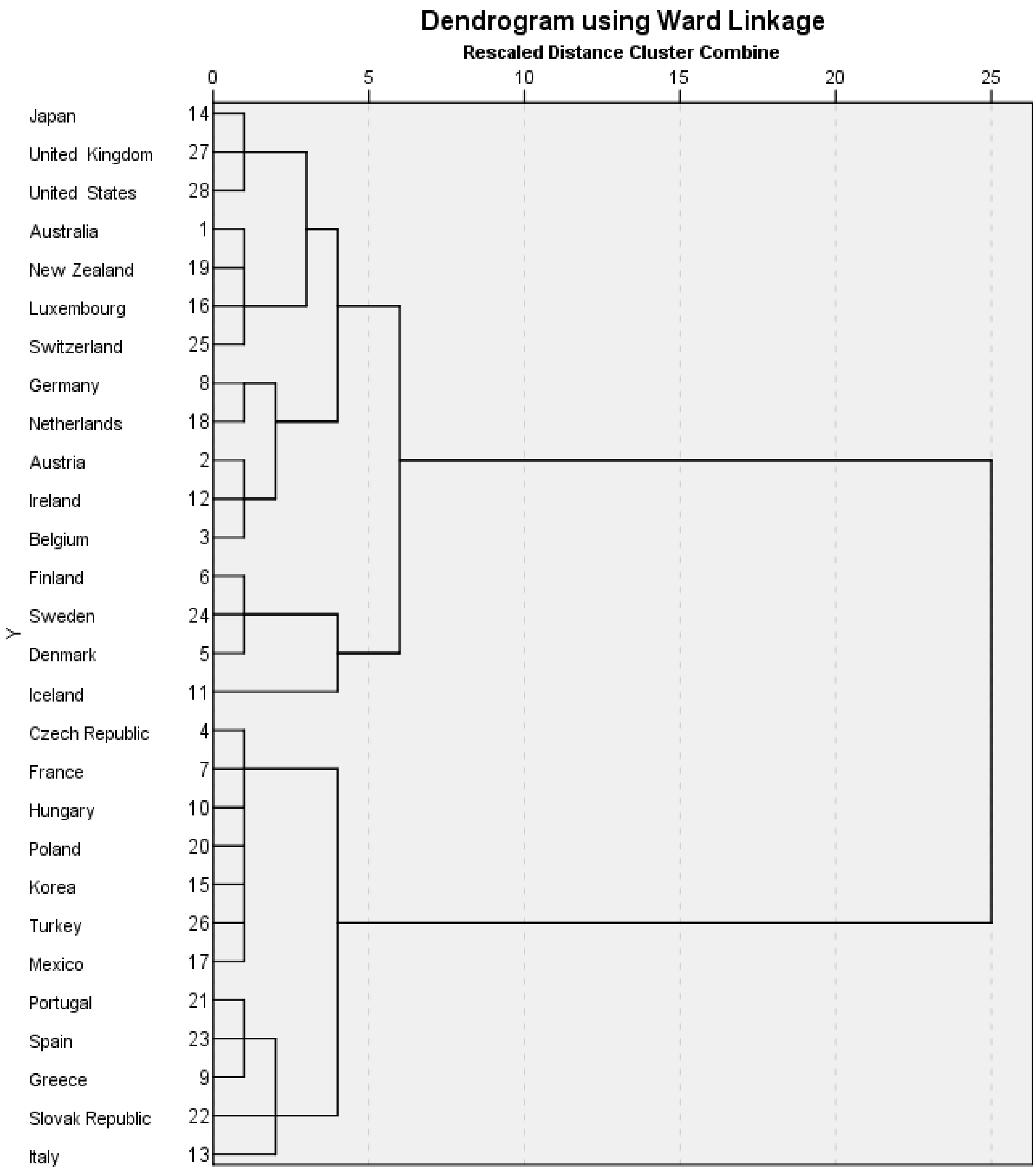


TABLE 10. Comparing clusters and country groups to Whitley's (1999) ideal types

Institutional features	Cluster 1 2006	Cluster 1 2010	Cluster 1 2011	Cluster 1 2012	Compartmentalized business systems	Cluster 2 2006	Cluster 2 2010	Cluster 2 2011	Cluster 2 2012	State-organized business systems
The state										
Strength of state coordination	Low	Low	Low	Low	**Low**	High	High	High	High	**High**
	Low	*Low*	*Low*	*Low*		*High*	*High*	*High*	*High*	
Incorporation of intermediaries	Considerable	Considerable	High	High	**Low**	Low	Low	Low	Low	**Low**
	Considerable	*High*	*High*	*High*		*Low*	*Low*	*Low*	*Low*	
Extent of market regulation	Limited	Low	Limited	Low	**Low**	High	High	High	High	**High**
	Limited	*Low*	*Low*	*Limited*		*High*	*High*	*High*	*High*	
Financial system										
Capital market or credit based	Capital	Mixed	Capital	Capital	**Capital market**	Mixed	Mixed	Credit	Credit	**Credit based**
	Capital	*Capital*	*Capital*	*Capital*		*Mixed*	*Mixed*	*Credit*	*Credit*	
Skill development and control										
Strength of public training system	Considerable	High	High	High	**Low**	Low	Low	Low	Low	**Limited**
	Considerable	*High*	*High*	*Considerable*		*Low*	*Low*	*Low*	*Low*	
Union strength	Limited	Considerable	Some	Considerable	**Low to some**	Low	Low	Low	Low	**Low**
	Limited	*Limited*	*Limited*	*Limited*		*Low*	*Low*	*Low*	*Low*	
Centralization of bargaining	Low	Considerable	Considerable	Considerable	**Low**	Limited	Limited	Limited	Limited	**Low**
	Low	*Low*	*Low*	*Low*		*Limited*	*Limited*	*Limited*	*Limited*	
Trust and authority relations										
Trust in formal institutions	Considerable	High	Considerable	High	**High**	Low	Low	Low	Low	**Limited**
	Considerable	*High*	*High*	*High*		*Low*	*Low*	*Low*	*Low*	
Paternalist authority	Low	Low	Low	Low	**Low**	High	High	High	High	**High**
	Low	*Low*	*Low*	*Limited*		*High*	*High*	*High*	*High*	

Note. The cluster center scores for the cluster groups for the specific years are in normal font, while the scores in *italic* refer to the average scores for the general country groupings presented in table 6

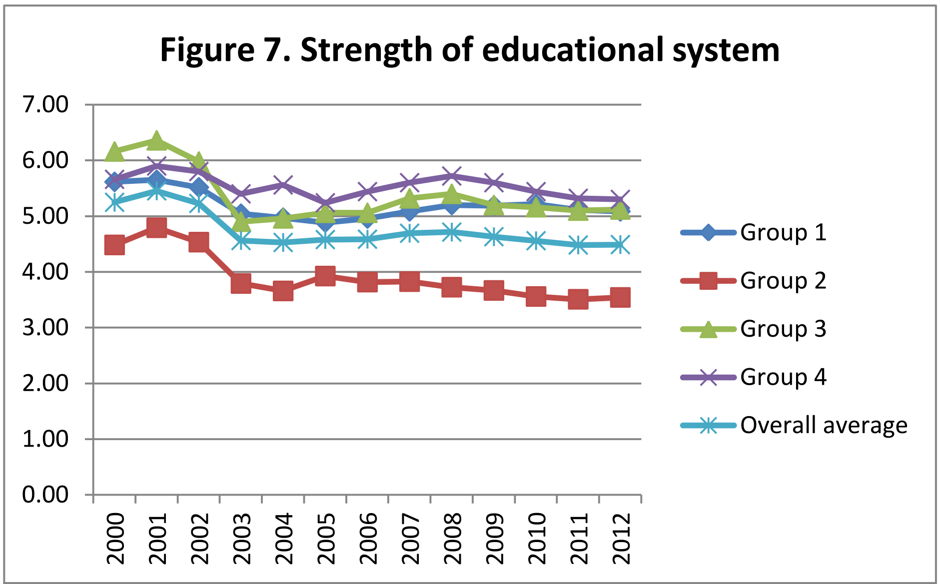
TABLE 10. Comparing clusters and country groups to Whitley's (1999) ideal types

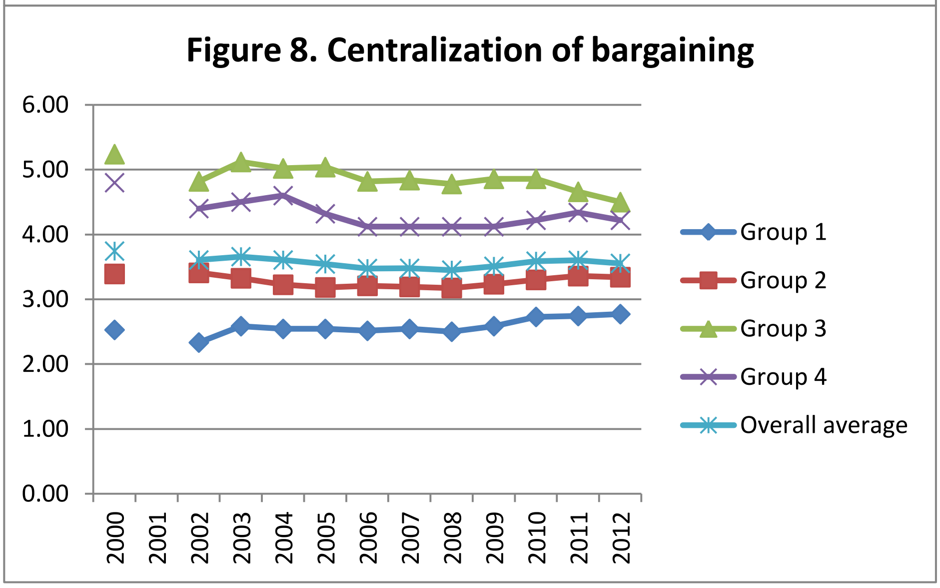
Institutional features	Cluster 3 2006	Cluster 3 2010	Cluster 3 2011	Cluster 3 2012	Collaborative business systems	Cluster 4 2006	Cluster 4 2010	Cluster 4 2011	Cluster 4 2012	Nordic business systems
The state										
Strength of state coordination	Low	N/A	N/A	N/A	**Considerable**	Low	N/A	Low	N/A	**N/A**
	Low	*Low*	*Low*	*Low*		*Low*	*Low*	*Low*	*Low*	
Incorporation of intermediaries	Considerable	N/A	N/A	N/A	**High**	Considerable	N/A	High	N/A	**N/A**
	Considerable	*Considerable*	*Considerable*	*High*		*High*	*Considerable*	*High*	*Considerable*	
Extent of market regulation	Some	N/A	N/A	N/A	**High**	Low	N/A	Low	N/A	**N/A**
	Some	*Considerable*	*Some*	*Limited*		*Low*	*Low*	*Low*	*Low*	
Financial system										
Capital market or credit based	Credit	N/A	N/A	N/A	**Credit**	Mixed	N/A	Limited	N/A	**N/A**
	Mixed	*Mixed*	*Mixed*	*Mixed*		*Mixed*	*Credit*	*Credit*	*Mixed*	
Skill development and control										
Strength of public training system	High	N/A	N/A	N/A	**High**	High	N/A	High	N/A	**N/A**
	High	*High*	*High*	*High*		*High*	*High*	*High*	*High*	
Union strength	Considerable	N/A	N/A	N/A	**High**	High	N/A	High	N/A	**N/A**
	Some	*Considerable*	*Considerable*	*Some*		*High*	*High*	*High*	*High*	
Centralization of bargaining	High	N/A	N/A	N/A	**High**	Considerable	N/A	High	N/A	**N/A**
	High	*High*	*High*	*High*		*High*	*High*	*High*	*High*	
Trust and authority relations										
Trust in formal institutions	Considerable	N/A	N/A	N/A	**High**	High	N/A	High	N/A	**N/A**
	Considerable	*Considerable*	*Considerable*	*Considerable*		*High*	*High*	*High*	*High*	
Paternalist authority	Low	N/A	N/A	N/A	**Low**	Low	N/A	Low	N/A	**N/A**
	Low	*Low*	*Low*	*Low*		*Low*	*Low*	*Low*	*Low*	

Note. The cluster center scores for the cluster groups for the specific years are in normal font, while the scores in *italic* refer to the average scores for the general country groupings presented in table 6

4.4.2 Inter-group changes

In this context, there are at least two factors which can contribute to the 30 OECD countries moving from constituting four clusters to constituting two or three in 2000-12. One path to such an outcome is the convergence of the clusters. A second way this may come about is through the divergence of a particular cluster.



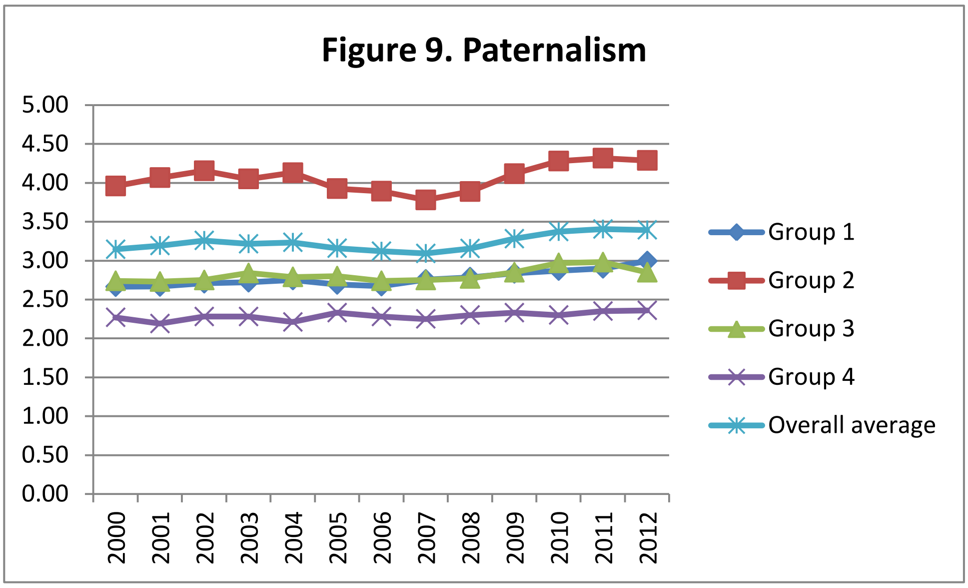


If one of the clusters becomes significantly more distinctive, and does so to a degree that the differences between the remaining clusters become relatively less important than their similarities, a hierarchical cluster analysis would merge the latter clusters to produce a two-cluster solution. In this case, a combination of the two factors has occurred. First, the developments with regards to the strength of educational system illustrated in figure 7[17]. Here, both slight convergence between country groupings 1, 3, and 4 is occurring, driven primarily by a slight decrease for the Nordic countries. During the same period the strength of the educational system also decreases noticeably for country group 2, increasing the difference between country group 3 and the three other country groupings.

Secondly, developments with regards to the centralization of bargaining have contributed. These are illustrated in figure 8. While country groups 1 and 2 remain relatively stable over the full time period, the Nordic and the collaborative business systems converge markedly towards the end of the period, mostly driven by a decrease in the centralization of bargaining score for the Nordic countries. This may be connected to developments such as the labor market reform in Denmark in 2003, which saw the introduction of 'work pay', "employment with a subsidy to the employer" (Kvist & Greve 2011:151), and an

[17] Note that the general fall on the graph from 2002 to 2003 is due to changing from the 'quality of public schools' to the quality of the educational system' indicator in the GCR.

increase in private unemployment insurances. Through relatively large changes to the labor market, the wage-bargaining process may be affected indirectly, resulting in gradual institutional change.



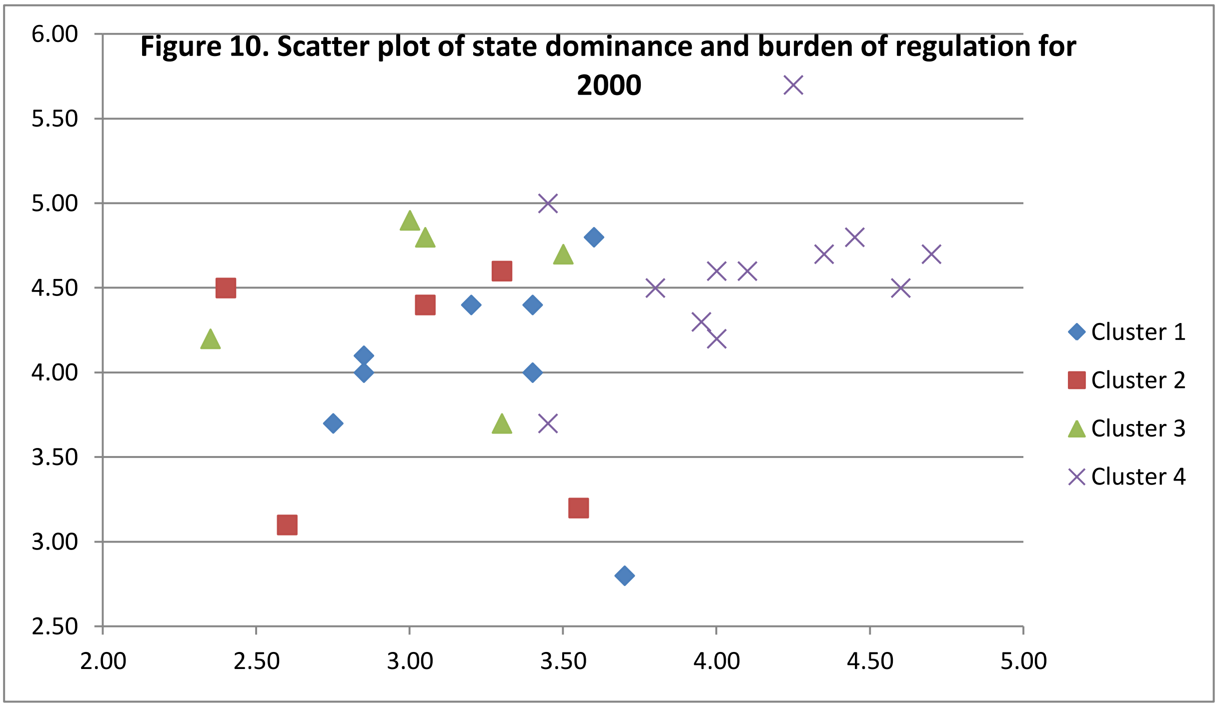
The institutional sub-domain of paternalism is another dimension which shows some promise in explaining the cluster solutions in 2010-12. As figure 9 shows, the paternalism scores are remarkably stable for country groups 1, 3, and 4. For country group 2, however, the paternalism score increases significantly after 2008 and the onset of the GFC. This is interesting and, in part, can be related to the considerable changes in trust discussed in the next session. As Goldmann (2014) points out, the GFC was not only an economic crisis; it may also constitute a crisis of democracy itself. Indeed, many of the countries most significantly affected by the GFC and the European sovereign debt crisis, Greece, Spain, and Italy, belong to country group 2 (Schmidt 2012). As such, the rise in the paternalism score after the GFC may reflect a return to more traditional authority relations as a response to the GFC.

The last institutional indicator showing potential to explain the cluster solutions for 2010-12 is the state dominance indicator presented in figure 5 and also discussed in the previous section. Here, the trend is less clear but country group 2 does diverge slightly from the other three groups towards the end of the period, starting around 2007. The development is relatively minor which makes it more difficult to pinpoint its causes accurately but as Deeg (2012) shows, there has been a retreat of the state in countries belonging to country groups 1, 3, and 4 over the past two decades relative to members of country group 2, where the state remains active. Furthermore, Schmidt (2012) argues that in some state-organized business systems the state has undertaken a more active role in the economy following the GFC.

Taken together, the developments in these four institutional domains are able to explain the two- and three cluster solutions. One factor is a slight but visible convergence in the education and bargaining institutions of the compartmentalized business systems, the collaborative business systems and the Nordic business systems. The second, more important factor, is the increased divergence of the state-organized business systems found in country group 3 with regards to paternalism, the strength of the educational system, and state dominance. Figure 10 and 11 show two scatter plots coded according to country groups illustrating their distribution with respect to two of the institutional features in question, the burden of regulation and state dominance, for 2000 and 2012. While difficult to demonstrate for a multivariate dataset, the scatter plots indicate how the state-organized business systems have become more distinct as an institutional configuration from the start of the time period in question to the its end in 2012.

In the context of the CC literature and the ongoing debate regarding institutional change and international change processes this is a crucial clarification. The fewer number of clusters yielded by the cluster analyses in 2010-12 can only to a small degree be explained by convergence among the identified national business systems. A more significant part of the explanation is one of divergence on the part of the state-organized business systems. This is important for at least two reasons. First, it empirically finds that national business systems show clear signs of *continued* coherence and distinctiveness. Second, it accentuates the importance of applying and developing CC frameworks which are able to distinguish between several types of capitalism rather than relying on only two ideal types, as for example the VoC framework.

Figure 10. Scatter plot of state dominance and burden of regulation for 2000



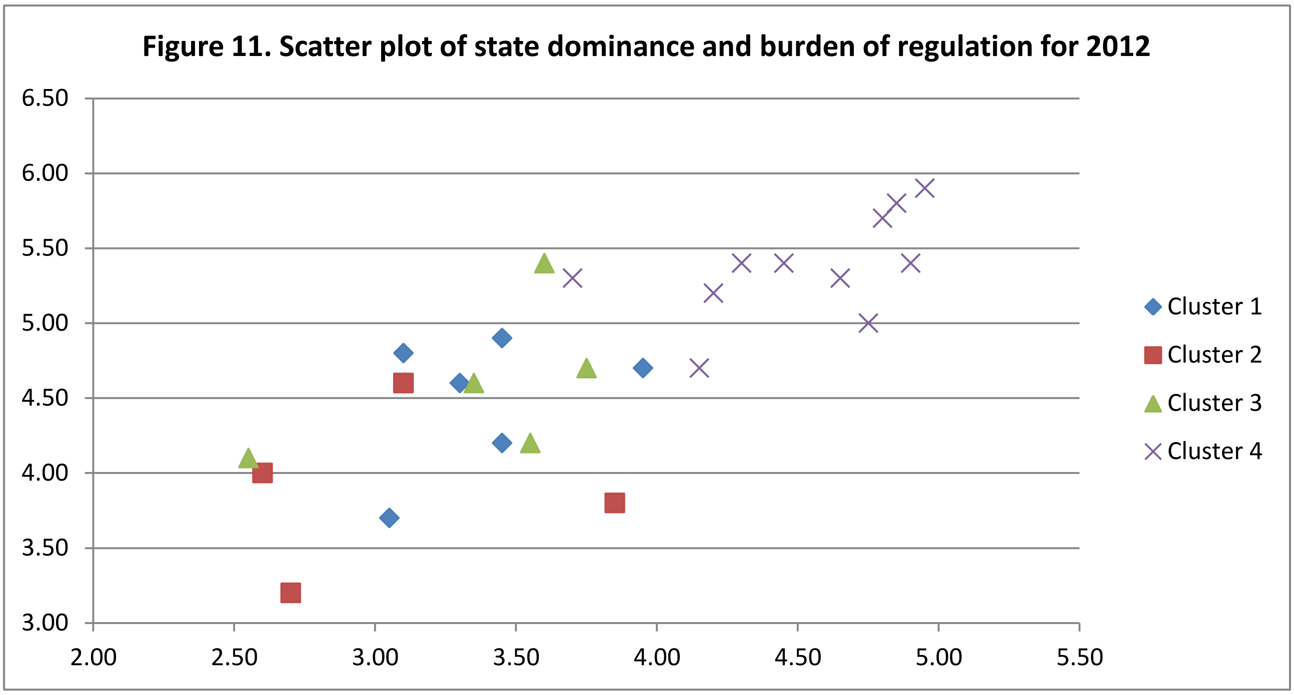


Figure 11. Scatter plot of state dominance and burden of regulation for 2012
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
Cluster 1
Cluster 2
Cluster 3
Cluster 4

5. The institutional trajectories of business systems - a political analysis

The previous chapter, among other things, showed increases in state dominance and decreases in trust across the four national business system types after the onset of the financial crisis. These developments raise several questions regarding the institutional configurations of the national business systems moving forward: Are the more active states merely engaging in adjustments to their respective business systems? And are there cases where a more fundamental restructuring of the institutional context of the national business systems is taking place? This chapter seeks to investigate answers to these questions more carefully by examining developments at the political level following the GFC. Specifically with a view to examine if political action in the wake of the GFC and the subsequent sovereign debt crisis in Europe indicates larger scale changes in the directions or trajectories of institutional configurations in individual business systems . In the context of this thesis, such an undertaking is desirable for three main reasons.

First, while I contend that the institutional indicators do capture important aspects of the institutional sub-domains, a quantitative continuum is naturally limited with regards to the depth and complexity of information it can capture. Furthermore, some institutional constructs may exhibit significant degrees of inertia related to both the indicators themselves and to the time it takes for substantial changes in institutions to manifest themselves. Supplementing the quantitative analysis with a qualitative analysis of policy directions in the aftermath of the GFC can, to an extent, help alleviate both these concerns.

Second, and very much related, while much of the CC literature relies almost exclusively on one or the other (see e. g. Hall & Gingerich 2009, Ahlquist & Breunig 2009, Hotho 2014, Thelen & Streeck 2005, Carradore 2014, Redding 2005), combining the quantitative approach with a more qualitative investigation can result in positive synergies between the two approaches. In this sense, the complementary nature of such a research arrangement is augmented even further by my dataset which finds significant movement in the institutional sub-domains of trust in institutions and state dominance.

Third, including the political sphere in this thesis acknowledges that a wide range of institutions have, directly or indirectly, political foundations (Konzelmann et. al. 2013). This also aligns with a growing body of the CC literature emphasizing the importance of political action, conflict, compromise and coalition-building to the institutional make-up of different models of capitalism (see e.g. Hall & Thelen 2009, Amable 2003, Konzelmann et. al. 2013, Thelen 2014). The same is true for Whitley's framework (1999) where institutional sub-domains such as the strength of the public training system, the scope for collective intermediaries, state dominance, and the degree to which bargaining is centralized are clearly connected to outcomes in the political arena

A detailed and exhaustive analysis and discussions of political trends in the 30 OECD countries analyzed in the previous chapter is outside the scope of this thesis[18]. Instead this chapter will focus on developments in countries of particular interest. Here, this means countries afforded a large degree of attention in the broader CC literature, but also countries where recent political developments appear particularly interesting. This chapter proceeds by examining the compartmentalized business systems of the US and Japan, before turning to the collaborative business systems of Germany and Ireland. Developments in the Nordic business systems will then be discussed followed by an investigation of the state-organized business

[18] Indeed, such an undertaking would, at the bare minimum, require a thesis of its own.

systems of France and Greece. Finally, I will argue that EU integration and an increased importance of international money markets for financing of state expenditure have significant and restrictive effects on the autonomy of policy directions at the national level.

5.1 Compartmentalized business systems

Several of the countries identified in the previous chapter as compartmentalized business systems were in many ways at the center of the GFC as it was unfolding in 2008 and 2009, aptly illustrated by the US sub-prime crisis and the Lehman Brothers' bankruptcy in September 2008 catalyzing the unfolding global crisis (Begg 2012). This section analyses and discusses a return to the status quo for the US and what seems to be a larger restructuring of the socio-economic landscape in Japan.

The US

The immediate responses to the financial crisis in the US were swift and somewhat unexpected and could conceivably be interpreted as a rather radical change to the role of the state. Rather than opting for fiscal austerity and a hands-off approach, the US government intervened to a remarkable degree under both the Republican president George W. Bush Jr. in the first months after the Lehman Brothers' collapse, but also after the Democrat Barack Obama assumed office in January 2009. The government interventions included the nationalization of AIG, one of the world's largest insurance companies, acquiring General Motors, sponsoring the takeover of Chrysler by Fiat and the mergers of several large investment banks (Wilson 2012). It also included one of the largest stimulus packages among OECD countries as well as bailout packages amounting to 6,8 % of the US GDP (Hill 2012, Konzelmann et. al. 2013) in clear contrast to the traditional, withdrawn role of the state in compartmentalized business systems. Indeed, up until the mid-term elections of 2010 many things were pointing to a substantial change in the role of the state and perhaps the longer-term trajectory of the US institutional configuration, including the landslide democratic victory in both the presidential election and the congressional elections in 2008.

Due to a variety of factors, however, the longer-term trajectory of the US business system does not seem to have change significantly and the state has again been on the retreat . Playing a significant part in this process was the Democrats, holding the presidency as well as majorities in both chambers of the Congress from 2008-2010, being blamed by voters for lingering effects of the financial crisis (Wilson 2012), leading to the Republicans winning majorities in both chambers of Congress in 2010 and cuts to many parts of the government budget. Another crucial element was the lack of an alternative economic vision from president Obama and the Democratic Party (ibid.). With no persuasive counter-project in place, substantial restructuring of the political economy becomes all the more difficult (Wigger & Buch-Hansen 2014). While state intervention in the wake of the crisis was massive, it did not take the form of significant changes to the overall trajectory of the US business system. From this perspective, the substantial state intervention from 2008-10 served to preserve the status quo in the institutional settings rather than upsetting it. The US political system constitutes something of a political "gridlock by design" with multiple veto points (Crepaz & Moser 2004:280) which further decreases the possibility of substantial changes to the longer-term economic trajectory of the US business system. Even as anti-establishment candidates have gained significant traction in the current presidential primary election, this last point makes it inherently difficult to successfully implement the significant changes they propose to e.g. trade, education, and the financial system. In short, despite an apparent conducive political climate to a political-economic restructuring immediately following the GFC, no such changes to the US institutional configuration have materialized, at least not as of yet.

Japan

Japanese banks were not heavily invested in "subprime-related or structured financial products" leading up to the financial crisis and were thus in a relatively healthy financial situation during the GFC (Volmer & Bebenroth 2012:71). Despite this, the Bank of Japan, informed by its own more local financial crisis in the 1990s, acted swiftly, e.g. by stabilizing inter-bank markets and lowering interest rates (ibid.).The Japanese economy as a whole, however, quickly felt the effects of the crisis with unemployment soaring and economic output dropping (Kawai & Takagi 2011).

Japan had been undergoing a period of "neoliberal transition" since the beginning of the 1980s but the GFC and its economic and social implications has lead to significant opposition directed towards the liberalization of the Japanese economy (Tiberghien 2014:52). The economic hardship caused by the financial crisis combined with the economic stagnation of Japan since the beginning of the 1990s combined to serve as a platform for Shinzo Abe, a member of the Liberal Democratic Party, when running for prime minister in the 2012 elections. Abe was subsequently elected and his economic program, popularly known as 'Abenomics', implemented. Abenomics consists of three elements: 1) Inflation targeting and monetary expansion, 2) fiscal expansion, and 3) structural reforms to ensure economic growth (Hausman & Wieland 2014). The program represents a substantial break with the neo-liberal reform agenda implemented since the early 1980s, particularly due the state obtaining a more central role in the economy. The break with the liberalization trajectory has left Japan in a state of flux while a new, coherent direction for the Japanese economy and its institutions is being developed (Tiberghien 2014). For now, much points to a shift in policies away from those of the compartmentalized business systems.

5.2 Collaborative business systems

This section first looks at how Germany, through a series of collaborative efforts, managed to overcome the financial crisis and how this is connected to a significant development in the labor market, namely a greater difference between core and non-core workers and firms. It then turns to Ireland where the crisis have revealed a large degree of fragility in the social pacts and a turn towards a compartmentalized business system seems to be materializing.

Germany

An analysis of the policy responses in Germany is intriguing because it reveals two related elements. First, Germany has been able to weather the crisis through coordinated initiatives, including cooperation between the state, employers and the banking sector, in accordance with the institutional logic of collaborative business systems. Second, political developments in the aftermath of the GFC also reveal a an increasing dualization of the German economy.

The German commercial banks were heavily involved in and suffered significant losses as a result of the financial crisis. The smaller savings and cooperative banks, however, largely did not participate in the sort of risky investment activities which were primarily affected by the GFC and was thus still able to provide the German manufacturing industry with capital (Schneider 2014). Government initiatives included two moderately sized stimulus packages (Hassel 2014) but several banks were also bailed out and a broad range of market and political actors were involved in the process (Schneider 2014). There was widespread agreement that the banking sector had overextended and should return to a role as a "servant to the real economy" (ibid.:34), i.e. mainly supplying credit to the German manufacturing industry. The stimulus packages included provisions which allowed employers extended use of part-time and short-time contracts. This was complemented by a decreased use of overtime, reduced work-time, and the realization of extra holidays by employers to avoid lay-offs (Hassel 2014). As a consequence, the German economy did suffer moderately in terms of GDP, but unemployment levels actually decreased during the crisis (ibid.).

The extensive use of part-time and short-time employments during the financial crisis reflects a wider trend of *dualization* in the German economy, a trend prior to the GFC. While the backbone of the German economic model remains intact, the German economy is increasingly divided into a core and a periphery (Eichhorst & Tobsch 2015). The core, largely referring to Germany's export-oriented manufacturing sector, remains largely intact with centralized wage bargaining, a highly skilled work force, long-term employment, and substantial cooperation between firms, credit-providers and the state. This stands in contrast to the terms in the growing service sector where wages are low and employments is flexible through the widespread application of short- and part-time contracts (Thelen 2014), an indication of a larger shift from fewer, equal jobs to more, increasingly unequal jobs (Eichhorst & Tobsch 2015, Storm & Naastepad 2015). Liberalizing the employment terms in the service industry has been seen as a condition for sustained competitive advantage in the coordinated manufacturing industry (Hassel 2014). Thelen (2014) notes similar developments in other collaborative business systems. The longer term consequences of this dualistic process, in particular in terms of egalitarian outcomes, are unclear but it did help the German economy weather the crisis relatively well.

Ireland

The quantitative analysis in the previous chapter supported the notion of Ireland as an "emergent collaborative business system (Harcourt and Wood 2003:757). An examination of events in Ireland following the outbreak of the GFC, however, indicates that the financial crisis may have forced Ireland back towards a compartmentalized business system.

Irish banks and the Irish economy in general were heavily integrated into the global financial system (Konzelmann et. al. 2013). From this perspective, it is rather unsurprising that Ireland was hit early and hard by the financial crisis. Despite the government guaranteeing "all the private liabilities of its principal national banks" (Hardiman & Regan 2013:1) in September 2008, GDP dropped sharply and unemployment soared. Rather than a cooperative approach Ireland employed a neoliberal strategy of crisis management by shifting the economic burden of the crisis to market actors and cutting public expenditure by 13 % of the GDP (Regan 2012). From 2008 to 2013, the Irish debt to GDP ratio tripled (Hardiman & Regan 2013) and as government revenues went down and expenditures climbed, Ireland was forced to enter an EU-IMF loan program in 2010 which emphasized austerity measures as a response to the crisis (Clarke & Hardiman 2013). The corporatist 'social pacts' in Ireland, successfully negotiated seven times since 1987, lacked the degree of embeddedness and formalization of other collaborative business systems (Regan 2012). The consequence was that employers and the government were able to abandon the social partnerships with little to no cost. The collapse of the established social pacts and the subsequent employment of harsh austerity measures, partially enforced through the EU-IMF loan program, seem to indicate that the Irish business system may be shifting towards the compartmentalized model with a less active state, weaker trade unions, and a significantly smaller degree of centralized bargaining. As Regan accurately puts it (ibid.:489):

"Ireland has shifted from a tradition of negotiated social pacts to an orthodox liberal market approach because it lacks the embedded collective bargaining institutions at a micro-level to resist a change in government policy."

5.3 Nordic business systems

The political responses to the financial crisis in the Nordic countries display a strong adherence to their characteristic mix of market and non-market institutions. With the notable exception of Iceland, events have been relatively similar across the country group. For this reason, the following section will discuss developments in relation to the Nordic business systems' institutional trajectories generally rather than through a country-by-country analysis as performed above.

The Scandinavian countries are a group of relatively small and open economies and their openness makes them vulnerable to drops in global and regional demand. It is thus no surprise that the financial crisis affected them greatly both in terms of economic growth and employment levels (Martin 2012). Government initiatives directed at the financial system largely followed the "international mainstream" in supporting, and in a few cases in bailing out, the banking sector and introducing moderate stimulus packages (Jochem 2011:142).

Leading up to the GFC, Iceland distinguished itself from the rest of the Scandinavian countries by exhibiting a far greater exposure to and integration into the international financial system. Its responses to the financial crisis, however, differed markedly in two important ways from other experiencing a sovereign debt crisis (Wade & Sigurgeirsdottir 2012).First, the financial costs of the crisis were distributed in an "apolitical" manner over both the public and private sector through the devaluation of the national currency (ibid.:143). Second, the crisis measures included extensive protection of low-income groups. Both points congruent with the Scandinavian characteristic of collective risk-sharing.

Two events in particular affirm the continued distinctiveness of the Nordic economies in general. First, the stimulus programs undertaken in the Nordic countries included substantial investment in public training systems and active labor policies (Martin 2012, Jochum 2011). Second, despite initial difficulties related to the economic and social effects of the crisis, the parties to the labor market were able to settle on compromises and reach new centralized bargaining agreements, agreements which also contained corroborative policies aimed at addressing the effects of an economic downturn (Martin 2012). While the financial crisis has also led to a rise of contractualism in Norway and Denmark at the expense of universalism (Kuhnle & Kildal 2012, Kvist & Greve 2011), and a decrease in unemployment coverage in Denmark (Martin 2012), this aligns with what Thelen (2014) has described as a process of e*mbedded flexibilization* in the Scandinavian countries. On the one hand the labor market is gradually liberalized and made more flexible, for example through a more contractual approach to welfare benefits, on the other hand, the continued investment in the public training systems, a substantial social security net, collaborative industrial relations, and centralized bargaining agreements continue to collectivize the risks associated with a flexible labor market. The policies implemented in the wake of the financial crisis can therefore be seen as following the pattern of a distinctive Scandinavian blend of market and non-market institutions

5.4 State-organized business systems

The previous chapter identified 12 countries, 9 of which are EU-members, as state-organized business systems. Consequently, there is a wide array of possibilities for investigations of political dynamics in wake of the financial crisis and the sovereign debt crisis. Here, events in France and Greece will be examined. France is a natural object of study as it is both one of the largest and most important economies in the OECD and a classical example of a state-organized business system in the literature (see e.g. Schmidt 2003). Greece, on the other hand, has suffered the most as a result of global and European economic turmoil making it an interesting example of interactions between national, international, and supranational institutions in a CC context.

France

French banks only suffered moderate to low losses, especially in comparison to their compartmentalized business systems' counterparts, as a result of the financial crisis and seemed able to weather the immediate economic shock relatively well (Lux 2015). As has been the theme throughout the OECD, government policies included both a large fiscal stimulus package and support to the financial sector in the form of bailout packages (Schmidt 2012, Schneider 2014).

In state-oriented business systems, however, labor and business generally expect "state action to shape the market" (Clift 2012:207). In times of crisis, such expectations are increased. The reaction of the Sarkozy-led government in power in the first stages of the financial crisis continuously strove to satisfy this anticipation. While its crisis measures did include austerity policies such as "pay and hiring freezes in the public sector" (Lux 2015:92), the overall picture was one of significant state intervention and orchestration in the economy. The bailout packages were designed so as to foster the formation of national and international champions in the banking sector (Schneider 2014, Deeg 2012). Mergers between national companies were encouraged by the government while foreign takeovers of French firms met substantial political resistance (Clift 2012). State-driven economic nationalism was also evident in other areas, perhaps most notably in Sarkozy's calls in 2009 on Peugeot and Renault to move production back to France or face sanctions, something which was quickly shut down by the EU (Schmidt 2012). More recently, as the French crisis has worsened and, in particular, unemployment levels have increased, tensions between the role of the state in the French economy and the EU advocacy for austerity measures and continuing adherence to the 'level playing field' of the Common Market seem to have grown. The current left-wing government of France, chaired by Hollande, has for example seen itself forced to finance tax reductions on capital through cuts to social security and public employment, in large part due to the liberal "exigencies of the Common Market and the common currency zone" (Lux 2015:99).

In short, the French state took on a more *dirigiste* role following the GFC and the sovereign debt crisis in the EU in congruence with the traditions of state-organized business systems. The degree of state intervention, however, has been challenged and restricted by the EU.

Greece

While the political events in France suggested a strengthening of the state as a central actor in the French economy, the Greek experience does not indicate a clear direction for the national economy - except, perhaps, down.

When the effects of the financial crisis started to spread, the initial response of then prime minister Karamanlis was one of inaction. Karamanlis and the conservative government insisted in the fall of 2008 that the Greek economy was robust and unlikely to be affected significantly by the GFC (Polychroniu 2011).

As the social and economic severity of the Greek crisis became more apparent, the combination of high debt and large and increasing deficits proved a toxic combination (Verde 2011). A bad crisis turned extreme when the scale of the Greek problems became apparent at the start of 2010. The newly elected Papandreou-led social democratic government revealed that government budgets had been concealing the actual size of deficits. In the space of six months, Greece went from being able to borrow money at roughly the same rate as Germany to virtually being excluded from international capital markets (Ardagne & Caselli 2014). Austerity measures introduced by Papandreou after these developments included a 14 year hike in the average retirement age and cuts and freezes to public sector employment and salaries (Verde 2011).

Around the same time, it became apparent that Greece needed financial help and in May 2010 the Greek government agreed to a bailout loan package of 750 billion Euros with the Troika, i.e. the European Central Bank, The International Monetary Fund, and the European Commission (ibid.). The Papandreou government had little choice but to accept the terms which included the implementation a radical austerity program designed to "reduce its budget deficits by eleven percentage points of GDP within three years" (Hall 2012:393). A second loan package ensued in the summer of 2011 with new conditions. While the austerity measures did cut significantly into the Greek budget deficits, unemployment skyrocketed and the Greek GDP tumbled down (Ardagne & Caselli 2014). The social and economic effects of the crisis and the austerity policies combined with declining trust in the established political parties saw the far-left party Syriza gain second place in the 2012 elections and in 2015, the won 149 seats in the Greek parliament, two short of an overall majority (Agnantopoulos & Lambiri 2015). Syriza promised to both end austerity *and* stay in the Eurozone but elections found themselves in a position of *zugzwang* soon after the 2015 with only bad choices available (Copelovitch et. al. 2016). When negotiations between the Syriza-government and the Troika over a third loan package broke off in the summer of 2015, Syriza wanted a Greek referendum on the loan terms. The Greek banks were closed, capital controls were imposed and when the Greeks rejected the loan terms proposed by the Troika, Syriza, however, found itself forced to restart negotiations and eventually accept a loan package with stricter conditionalities attached to it (ibid.).

Rather than the story of a future trajectory for the Greek business system, in the form of nationally negotiated socio-economic compromises, the sovereign debt crisis has forced Greece to allow creditors and loan providers to lay down the political and economic blueprint for crisis management. That blueprint has been one of extreme austerity measures with severe economic and social costs - one that even Syriza, a party elected on its opposition to this direction, has been unable to reverse or alter.

5.5 EU integration, the Common Currency Zone and international money markets

The Greek case aptly illustrates that during the financial crisis and the European sovereign debt crisis, the trajectories of national business systems have not exclusively been the prerogative of political agency at the national level. In this section I argue specifically that international capital increasingly shape the choices available to governments, and that EU integration, particularly for countries which also form part of the Common Currency Zone, non-domestic influence over national policies is even greater and has been exacerbated by the recent state of crisis. Such outside influence over political choices at the national level is important because it can, and in some cases have, set the parameters within which political agency can lead to lasting institutional change.

International money markets

The influence of international financial markets *vis-á-vis* national governments is closely linked to what

Streeck (2014) describes as the rise of the 'debt state'. Previously, government expenditure was almost fully financed through government revenue in the form of tax collection. Over the last decades, however, borrowing from international money markets have become a critical source of finance for states. In virtually every developed country, government bonds are issued frequently to either pay of old debt or finance new debt (Hager 2015).

Purchasing government debt has traditionally been seen as virtually risk-free but, with states increasingly indebted, the financial crisis and the sovereign debt crisis struck a nerve in international money markets. Suddenly, sovereign debt purchases did not seem as safe as just a few years prior and as a consequence, creditors have emerged as a new group of stakeholders alongside the general population in the rich democracies (Streeck 2014). The reliance on debt financing in international money markets by states empower creditors because of the "constant threat of imposing higher costs on government borrowing" (Hager 2015:518). Lierse & Seelkopf (2016), for example, find a sizeable impact of increases in the cost of borrowing for states on the direction of their tax policies. Particularly if government bonds risk being downgraded, government policies and budgets relying on debt financing need to take into account reactions by credit rating agencies and the international financial market. If the international money markets react negatively to government policies not only does it become more expensive to increase state expenditure, the cost of refinancing existing debt also rises which effectively decreases the economic scope for political action.

EU integration

The ability of individual EU members to shape the trajectories of their respective business systems have been restricted further through the process of EU integration. The diminished range of options available to member countries are related to three dimensions in particular: 1) Competition regulation, 2) budgetary autonomy, and 3) membership of the European Monetary Union (EMU). Whereas competition regulation pertains to all member states, the two former areas have particular implications for EMU members.

First, competition regulation, implemented and enforced by the European Commission, have restricted member states in their crisis measures in a number of cases. While the Commission did institute emergency rules, allowing domestic crisis responses as e.g. the introduction of bailout packages for national banks, this exception was largely restricted to the financial sector and generally did not apply to the rest of the European economy (Wigger & Buch-Hansen 2014). Perhaps the greatest impact of competition regulation on the member states have come through the enforcement of the EU's state aid rules. The Commission has recently started state aid cases relating to tax policies against some members, and more significantly France and other countries have been prevented in pursuing economic nationalism in, for example, the automobile industry (Schmidt 2012). A continued emphasis on a 'level playing field' and the benefits of competition have severely limited the ability of member states to pursue protectionist, or economic nationalist policies (Wigger & Buch-Hansen 2014).

Second, the Stability and Growth Pact (SGP), passed in 1998, significantly reduces the budgetary autonomy of member states by placing restrictions on the permissible amount of old and new debt. For non-EMU countries such budgetary constraints are country-specific, but for members of the Common Currency area the budgetary requirements amount to restrictions of 60 % of GDP on old sovereign debt and 3 % of the GDP on budget deficits (Bache & George 2006). These fiscal constraints are to a certain degree flexible in the short-term, e.g. in the case of severe recessions, and have been breached by the majority of EU members since 2008, however, balanced budgets are required for the medium- to long-term (Stockhammer 2016). Restricting fiscal policy, which is generally considered to be a cornerstone of state sovereignty, has had a substantial impact on the range of crisis measures available to countries. An emphasis on balanced budgets and low sovereign debt encourages fiscal austerity as responses to the GFC and the sovereign debt crisis at the expense of alternative approaches, e.g. Keynesian stimulus packages. The effect is perhaps most aptly illustrated by the five largest stimulus packages in the OECD being introduced in non-EU countries such as the US and Australia (Hill 2012), despite Hansen (2015) finding that economic hardship is the most powerful explanation for non-compliance of the budgetary requirements.

Third, membership of the Common Currency zone also constrains the strategic choices available to governments and policy-makers at the national level. In the EMU, monetary policy is the exclusive prerogative of the European Central Bank (ECB), an institution designed to be independent from the influence of other EU institutions and member states (Schimmelfennig 2014). Entering into a monetary union also precludes member states from employing exchange rate policies nationally. Consequently, members of the Eurozone have forfeited the use of both monetary and exchange rate policies to the European level (Stockhammer 2016). Iceland, for example, was able to devalue its currency and divide the costs of its crisis rather broadly across its economy while Greece and other Mediterranean state-organized business system did and do not have that option this time around despite relying on devaluations previously (Nölke 2015).

Both the influence of international financial markets and the constraints imposed by EU and EMU membership on national policy-making were prior to the financial crisis and the sovereign debt crisis but have increased significantly throughout and following these events. As argued above, the increasing reliance on debt financing make national economies increasingly vulnerable to economic shocks affecting the budgetary balance negatively. The prime example, of course, is Greece where spreads on sovereign bonds skyrocketed in short time, effectively removing a fundamental source of finance for the Greek state. Spain, Portugal, Ireland, Hungary, and Iceland, however, also found that the costs of borrowing in international money markets went up as their need for raising capital increased (Arezki et. al. 2011).

At the EU level, the sovereign debt crisis in particular have, perhaps rather surprisingly, increased pressure for increased integration at the European level further constraining the policy options available nationally for EMU-countries in particular. Much like a decrease in trust have paradoxically been accompanied by an increase in the scope and scale of tasks states are expected to manage, the EU has also been described as 'falling forward' through the crises(Jones et. al. 2015). That is, a drop in the legitimacy of and trust in EU institutions have been followed by a growing need for the EU to address the effects of the crisis, particularly in the Common Currency Zone. The original EMU agreement specifically contained a provision stating that members of the Common Currenzy zone were not obliged to bail out other members. This no-bailout policy, however, was effectively superseded by the ECB when it created the European Stability Mechanism[19] (ESM) (Schimmelfennig 2014). The introduction of the ESM came with requirements of increased EU surveillance of national budgets and financial systems, further tightening the fiscal restrictions imposed by the SGP (Bauer & Becker 2014). Non-compliant countries are not to be considered for financial support through the ESM, and loan provisions to struggling EMU-members also meant a significant increase in "collective liabilities" (Schimmelfennig 2014:326) which were not part of the original agreement.

[19] And the European Financial Stability Facility, but this is of less relevance here.

Furthermore, when countries seek financial support from the ESM, the ECB and the EC[20] are in a position to impose strong conditionalities as part of the loan programs (Stockhammer 2016). The conditions attached to financial support through the ESM[21] have largely reflected the austerity approach implicit in the SGP, despite intial resistance from the IMF (Schimmelfennig 2014). In this way, the GFC and the sovereign debt crisis have lead to increased integration for EMU-members in the form of stricter budgetary control and, as a result, decreased national autonomy to shape the future trajectories of their national business systems.

In sum, developments at the international level, namely the ascending important of international money markets and the process of EU and EMU integration, matter for the trajectories of national business systems, particularly in the context of the financial and sovereign debt crisis. While the arguments presented here do not support the prediction of convergence among national models of capitalism (e.g. Thelen 2009), international change processes have had a substantial impact in defining the framework within which national policy-making should fit. The influence of international capital markets can mainly be linked to restrictions placed on government expenditure and policies by, potential or actual, increases to the cost of state borrowing. EU integration on the other hand have had a more tangible impact through its competition regulation preventing substantial state intervention in markets outside the financial sector, through the budgetary constraints imposed on EU, and in particularly EMU, members by the SGP and increased after the onset of the financial crisis, and by the inability of Eurozone members to employ exchange rate policies.

The impact has been at the most extreme in the case of Greece, where crisis measures were effectively delegated to the Troika after entering into loan programs but has also been felt in Ireland where the severe austerity measures have undermined the recently established tradition of social pacts hinting at a shift from a collaborative towards a compartmentalized business system. In France, the state's *dirigiste* role after the outbreak of the GFC aligned with its state-organized business system but was also limited by strict enforcement of the EUs competition regulation. In other countries, international money markets and EU integration did not play such a key role. The German response to the crisis featured collaboration between industry, state and trade unions but also unveiled an emergent trend of *dualization* in the German business system, a distinction between core and non-core workers and firms (Hassel 2014). The Nordic countries as a group, despite a rising degree of contractualism, generally adhered to their business system characteristics through continued support to public training systems and centralized bargaining and an emphasis on collective solutions with regards to wage bargaining and crisis solutions, even in the case of Iceland which was hit early and hard by financial turmoil. Initial state intervention in the US, largely unprecedented in scale, amounted to little change in the longer-term trajectory of its business system. In Japan, however, the election of prime minister Abe and the introduction of Abenomics point to a rejection of three decades of liberalization strategies and a move away from the compartmentalized business systems, albeit the new destination still seems undecided upon.

[20] Along with the IMF

[21] Greece, Spain, Portugal, Ireland have obtained loans through the EMS mechanism. Hungary through the EFSF which applies to non-EMU members.

6. Conclusion

In the last few decades the work on Comparative Capitalism has grown immensely to the degree that it now constitutes a rich and mature literature. Recently, the emergence of international change processes that are increasingly important at the national level has directed the attention of the CC literature towards institutional change. Scholars are increasingly concerned with both incremental change internal to national models of capitalism, as well as liberalization, globalization, financialization, and integration of national economies at the regional level, which influence the inner workings of national models of capitalism.

Traditional approaches in the literature have so far contended that transformative substantial change primarily happens through systemic shocks to the national institutional configurations, upsetting the status quo. Such critical junctures open up the possibility of restructuring national economic systems and their institutions. Quantitative studies in Comparative Capitalism have also neglected the role of gradual change in assuming the stability of institutional configurations by relying on averages spanning several years of data or non-matching data points.

The Global Financial Crisis and the European sovereign debt crisis provide an opportunity to study the impact on national capitalist models of such a systemic shock to mature economies. Having inflicted significant social and economic consequences across the world the conditions for an international critical juncture are satisfied. In this thesis, I have set out to study how national models of capitalism have changed from 2000-12, lending explanatory scope to both incremental change processes and a systemic shock in the form of the Global Financial Crisis and the European sovereign debt crisis.

Methodologically, I rely on positivist and holistic insights. My positivist position allows me to rely on detailed quantitative measures of institutional features, facilitating the analysis of institutional change across 30 OECD economies. The holistic elements are reflected in my conception of institutions as complementary, interdependent, and part of national institutional configurations, which structure economic activity. The central implications for my research are that the object of study is national institutional configurations rather than individual institutions, and that these are studied by through the quantification of institutional features, allowing for generation of generalized knowledge.

Facilitating the study of institutional change across national institutional configurations, I have conducted two-stage cluster analyses for each of the 13 years covering the data set. Cluster analysis is a particularly useful tool in this context because it can find structure in multivariate data sets such as this. In doing so, it can identify groups of similar institutional configurations representing distinct national business system types, providing the basis for further analysis and discussion. From this background, the thesis has studied institutional change in 30 OECD economies from 2000-12. covering the period leading up to and following the outbreak of the Global Financial Crisis. Whitley's (1999) national business system framework provides a coherent and nuanced basis for my analysis. For the study of institutional change, I have utilized a unique longitudinal data set spanning 13 years from 2000-12, capturing nine institutional features of Whitley's business systems, and covering 30 OECD countries. Employing a longitudinal data set has allowed me to go beyond the stability bias of other quantitative Comparative Capitalism studies and to apply quantitative methods to the study of institutional change across national models of capitalism.

The complementary political analysis has focused on political developments in the US, Japan, Germany, Ireland, the Nordic countries, France and Greece, as well as relating to the increasing importance of international money markets and EU integration. It aimed to discern whether changes to the overall trajectories of business systems could be identified at the political level. This complementary approach reflects acknowledgement of the key connections between political action and the socio-economic institutions guiding economic activity, in addition to an increasing acknowledgement of these connections in the Comparative Capitalism literature, and possible inertia related to the institutional indicators.

The longitudinal quantitative cluster analyses yielded four clusters of institutional configurations proving relatively stable over the time period. In three of the cases, the institutional features of these institutional configurations corresponded well to Whitley's ideal types, namely the compartmentalized business system, the collaborative business system and the state-organized business system consisting mainly of Anglo-Saxon countries, Central European countries, and a large and diverse group of countries respectively. The Nordic countries constituted a fourth business system type not theorized by Whitley but supported by the CC literature more broadly.

Going beyond the cluster analysis, several instances of institutional change across the identified institutional configurations were observed. As a result of the Global Financial Crisis, trust decreased, state dominance increased, and the financial system scores decreased significantly before recovering towards the end of the time period. Finally union strength was found to be decreasing across all business systems throughout the period. My analysis also revealed that the state-organized business systems are actually becoming more distinct and coherent as an institutional configuration. This development has primarily been driven by an increase in the paternalistic institutional sub-domain, a minor rise in the degree of state dominance relative to the other business systems, and a slight decrease in the strength of public training systems. Another interesting finding was the institutional distances between the Nordic, compartmentalized and collaborative business systems decreasing slightly but remaining distinctive and coherent. This minor development can mostly be attributed to slight convergence in the institutional indicators of the strength of the public training system and the centralization of bargaining. These findings are particularly interesting because they go somewhat against the crux of the convergence argument increasingly presented and highlights the need for Comparative Capitalism frameworks which go beyond the Varieties of Capitalism dichotomy in the classification of national models of capitalism.

The secondary analysis and discussion complemented the quantitative longitudinal analysis with several findings. First, political developments in the US, Germany, the Nordic countries, and France were found to be largely consistent with the institutional logic of their respective business systems, indicating that their longer term institutional trajectories remain mostly unchanged. In the case of Japan, however, the introduction of Abenomics indicates a move away from the compartmentalized business system type. Ireland, through the breakdown of established social pacts and rising government debt resulting in harsh austerity measures, seems to be moving from a collaborative business system towards one more similar to the compartmentalized business system type. In Greece, the burgeoning sovereign debt effectively transferred political decision-making to its creditors, the Troika, resulting in the imposition of widespread authority measure and public sector cuts despite popular outrage. Finally, I found that increasing reliance on international money markets for debt financing along with EU and EMU integration have significantly limited the palette of policy directions available to nation states.

In conducting an extensive quantitative, longitudinal analysis of 30 OECD economies and their national business systems, complemented by a detailed political analysis, this thesis contributes to the academic literature on several fronts. First, the employment of quantitative longitudinal analysis to the study of institutional change represents a way to mobilize the explanatory powers of quantitative methods to the study of national models of capitalism for future research. Second, through the analysis of a unique dataset and the political analysis I add to the growing Comparative Capitalism literature on institutional change. Third, my analysis illustrates the continued applicability of the national business systems framework and add to this literature while showing the importance of going beyond dichotomous approaches to the study of capitalist diversity.

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8. Appendices

APPENDIX A. Institutional constructs and data sources			
Institutional construct	Calculation	Data source	Secondary data source
State dominance	Inverted average	The Global Competitiveness Report *The effectiveness of anti-monopoly policy* *Favoritism in decisions of government officials*	
Prevalence of clusters	N/A	The Global Competitiveness Report *The state of cluster development*	
Burden of regulation	Inverted score	The Global Competitiveness Report *Burden of government regulation*	
Union strength		ICTWSS database 4.0 *Union density*	
Centralization of bargaining	Inverted score	The Global Competitiveness Report *Flexibility of wage bargaining*	
Trust		The Global Competitiveness Report *Public trust in politicians*	*Wage setting*
Paternalism	Inverted average	The Global Competitiveness Report *The willingness to delegate authority* *Cooperation in labor-employer relations*	
Financial system score	Algorithm outlined in method section	World Development Indicators (World Bank) *Stock market capitalization to GDP* *Private credit by deposit money banks to GDP*	
Strength of educational system		The Global Competitiveness Report *Quality of the educational system*	*Quality of public schools*

APPENDIX B. National business systems characteristics for cluster groupings

Institutional construct	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Compartmentalized business systems (cluster group 1)													
State dominance	Low	Low	Low	Limited	Low	Low	Low	Low	Low	Low	Low	Low	Low
Prevalence of cluster	Considerable	Considerable	Considerable	Some	High	High	High	Considerable	High	High	Considerable	High	Considerable
Burden of regulation	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Financial system score	Capital	Capital	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Credit	Credit	Credit	Mixed
Strength of educational system	Considerable	Considerable	High	High	High	High	High	High	High	High	High	High	High
Union Strength	High	High	High	High	High	High	High	High	High	High	High	High	High
Centralization of bargaining	High	High	High	Considerable	High	High	High	High	High	High	High	High	High
Trust	High	High	High	Considerable	High	High	High	High	high	High	High	High	High
Paternalism	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
State-organized business systems (cluster group 2)													
State dominance	High	High	High	High	High	High	High	High	High	High	High	High	High
Prevalence of cluster	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Burden of regulation	High	High	Considerable	High	High	High	High	High	High	High	High	High	High
Financial system score	Credit	Mixed	Mixed	Credit	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Credit	Credit
Strength of educational system	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Union Strength	Low	Low	Low	Low	Low	Low	Low	Low	Limited	Low	Low	Low	Low
Centralization of bargaining	Limited	Limited	Limited	Limited	Limited	Limited	Limited	Limited	Limited	Limited	Limited	Limited	Limited
Trust	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Paternalism	High	High	High	High	High	High	High	High	High	High	High	High	High
Collaborative business systems (cluster group 3)													
State dominance	Limited	Limited	Limited	Considerable	Low	Low	Low	Low	Low	Low	N/A	N/A	N/A
Prevalence of cluster	High	Considerable	High	High	High	Some	Considerable	Some	Considerable	Considerable	N/A	N/A	N/A
Burden of regulation	Considerable	Considerable	Considerable	Considerable	Low	Considerable	Some	Some	Some	Considerable	N/A	N/A	N/A
Financial system score	Credit	Mixed	Mixed	Mixed	Credit	Credit	Credit	Credit	Credit	Mixed	N/A	N/A	N/A
Strength of educational system	High	Considerable	Considerable	Some	High	Considerable	High	High	High	High	N/A	N/A	N/A
Union Strength	Considerable	Considerable	High	Limited	High	Limited	Considerable	Some	Some	Considerable	N/A	N/A	N/A
Centralization of bargaining	High	High	High	Considerable	High	High	High	High	High	High	N/A	N/A	N/A
Trust	Limited	Considerable	Considerable	Low	Low	Considerable	Considerable	High	Considerable	Considerable	N/A	N/A	N/A
Paternalism	Limited	Limited	Limited	High	High	Limited	Low	Limited	Low	Low	N/A	N/A	N/A
Nordic business systems (cluster group 4)													
State dominance	Low	Low	Low	Low		Low	Low	Low	Low	Low	N/A	Low	N/A
Prevalence of cluster	Considerable	High	Considerable	High		High	Considerable	Considerable	High	High	N/A	High	N/A
Burden of regulation	Low	Low	Low	Low		Low	Low	Low	Low	Low	N/A	Low	N/A
Financial system score	Capital	Capital	Mixed	Capital		Mixed	Mixed	Mixed	Mixed	Mixed	N/A	Credit	N/A
Strength of educational system	High	High	High	High		High	High	High	High	High	N/A	High	N/A
Union Strength	High	High	High	High		High	High	High	High	High	N/A	High	N/A
Centralization of bargaining	High	High	High	High		High	Considerable	High	High	High	N/A	High	N/A
Trust	High	High	High	High		High	High	High	High	High	N/A	High	N/A
Paternalism	Low	Low	Low	Low		Low	Low	Low	Low	Low	N/A	Low	N/A

APPENDIX C. National business systems characteristics for country groupings

Institutional construct	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Compartmentalized business systems (country group 1)													
State dominance	Limited	Limited	Low	Limited	Low	Low	Low	Limited	Limited	Low	Low	Low	Low
Prevalence of cluster	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable	High	High	High	High
Burden of regulation	Limited	Limited	Low	Limited	Limited	Limited	Limited	Limited	Low	Low	Low	Low	Limited
Financial system score	Mixed	Capital	Capital	Mixed	Capital	Capital	Capital	Capital	Capital	Capital	Capital	Capital	Capital
Strength of educational system	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable	High	High	Considerable
Union Strength	Limited	Limited	Limited	Considerable	Limited	Limited	Limited	Limited	Limited	Limited	Limited	Limited	Limited
Centralization of bargaining	Low	Low	Low	Considerable	Low	Low	Low	Low	Low	Low	Low	Low	Low
Trust	Considerable	Considerable	Considerable	High	Considerable	High	Considerable	Considerable	Considerable	High	High	High	High
Paternalism	Low	Limited	Low	Limited	Low	Low	Low	Limited	Low	Low	Low	Low	Limited
State-organized business systems (country group 2)													
State dominance	High	High	High	Considerable	High	High	High	High	High	High	High	High	High
Prevalence of cluster	Low	Low	Low	Limited	Low	Low	Low	Limited	Low	Low	Low	Low	Low
Burden of regulation	Considerable	Considerable	High	Considerable	High	High	High	High	High	High	High	High	High
Financial system score	Credit	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Credit	Credit
Strength of educational system	Low	Low	Low	Limited	Low	Low	Low	Low	Low	Low	Low	Low	Low
Union Strength	Low	Low	Low	Limited	Low	Low	Low	Low	Low	Low	Low	Low	Low
Centralization of bargaining	Limited	Limited	Limited	Limited	Limited	Limited	Limited	Limited	Limited	Limited	Limited	Limited	Limited
Trust	Low	Low	Low	Limited	Low	Low	Low	Low	Low	Low	Low	Low	Low
Paternalism	High	High	High	High	High	High	High	High	High	High	High	High	High
Collaborative business systems (country group 3)													
State dominance	Low	Low	Limited	Limited	Low	Low	Low	Low	Low	Low	Low	Low	Low
Prevalence of cluster	High	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable	High
Burden of regulation	Considerable	Some	Considerable	High	Limited	Considerable	Some	Some	Considerable	Considerable	Considerable	Some	Limited
Financial system score	Credit	Credit	Credit	Mixed	Credit	Credit	Credit	Credit	Credit	Mixed	Mixed	Mixed	Mixed
Strength of educational system	High	High	High	Some	Considerable	High	High	High	High	High	High	High	High
Union Strength	Considerable	Considerable	Considerable	Low	Some	Some	Some	Limited	Considerable	Considerable	Considerable	Considerable	Some
Centralization of bargaining	High	High	High	Considerable	High	High	High	High	High	High	High	High	High
Trust	Some	Considerable	Considerable	Some	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable
Paternalism	Low	Limited	Low	Some	Low	Limited	Low	Low	Low	Low	Low	Low	Low
Nordic business systems (country group 4)													
State dominance	Low	Low	Low	Limited	Low	Low	Low	Low	Low	Low	Low	Low	Low
Prevalence of cluster	Considerable	Considerable	Considerable	Some	High	High	High	Considerable	High	High	Considerable	High	Considerable
Burden of regulation	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Financial system score	Capital	Capital	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Credit	Credit	Credit	Mixed
Strength of educational system	Considerable	Considerable	High	High	High	High	High	High	High	High	High	High	High
Union Strength	High	High	High	High	High	High	High	High	High	High	High	High	High
Centralization of bargaining	High	High	High	Considerable	High	High	High	High	High	High	High	High	High
Trust	High	High	High	Considerable	High	High	High	High	high	High	High	High	High
Paternalism	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low