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# The “varieties of capitalism” theory and multinational companies: Can institutional advantages predict investment flows?

An empirical test within the OECD  
from 1981 - 2003

Master's thesis in political science

Spring 2007

## Acknowledgements

I would like to thank my supervisor, Professor Indra de Soysa at the Norwegian University of Science and Technology (NTNU), for guidance and comments throughout the work with this thesis. I have also benefited greatly from comments and discussions at the World Global Forum, thanks to Karin Dyrstad, Øystein Hetland and Øystein Rafoss. In addition, Professor Jonathon W. Moses, Ole Magnus Theisen, Rune Gjelvold, Håvard Figenschou Raaen and Morien Rees have all provided helpful comments and suggestions. Finally, I am grateful to my colleagues at "Brakka" for making this semester an unforgettable experience.

Any remaining errors remain my sole responsibility.

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Dragvoll, June 12, 2007

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## List of abbreviations

BEA	Bureau of Economic Analysis
CEO	Chief executive officer
CME	Coordinated market economy
EU	European Union
FDI	Foreign direct investment
GDP	Gross domestic product
LME	Liberal market economy
MME	Mediterranean market economy
MNC	Multinational company
NAFTA	North American Free Trade Area
OECD	Organisation for economic co-operation and development
OLI	Organization, location, internalization
OLS	Ordinary least square
PCSE	Panel-corrected standard errors
PPP	Purchasing power parity
SME	Social market economy
UNCTAD	United Nations Conference on Trade and Development
UNICE	Union of Industrial and Employers' Confederation of Europe
VIF	Variance inflation factors

# 1. Introduction

What countries are most attractive to foreign investment? Do multinational companies prefer to invest in liberal market economic, or can social, non-market coordinated economies be equally competitive? This question goes to the heart of the debate on whether globalization forces national economies to follow certain economic policies. Consider for instance the following quotes from the final televised debate in the 2007 French presidential election: (Royal and Sarkozy 2007: my translation):

When you ask foreign investors why they come to France, do you know what they cite as their premier reason? The quality of the public services in France. (...) I believe that economic competitiveness is not incompatible with social progress, *au contraire*.

Ségolène Royal, French presidential candidate, Socialist party

If capital is too heavily taxed, it will leave. If capital leaves, there will be neither jobs nor growth. The problem for France, Madame [Royal], is to understand that we are in a competitive environment, and that we cannot impose higher taxes on our companies than our neighbours.

Nicholas Sarkozy, French president, Conservative party

While the French Conservatives argue that competitiveness depends on tax levels and regulations, the Socialists claim that it is a product of social progress. Similar debates are fought in other countries. In Norway, the largest opposition party advocates curbing the power of trade unions, reducing taxes and liberalizing working regulations in order to increase economic competitiveness (Fremskrittspartiet 2005), and many believe that Japan needs liberal reforms in order to remain one of the leaders in the world economy (Katz 2003).

Scholars have long debated whether globalization is forcing countries to adopt liberal economic policies. The main divide goes between the “convergence” school and the “governed interdependence” school (Weiss 2003), which are built on fundamentally different views of economic competitiveness. The former believes that countries fundamentally need to choose between equality and efficiency, and that social welfare comes at the expense of economic output. Since globalization has increased the cross-border mobility of capital, economic policy autonomy for countries has been reduced. Therefore, this school expects countries to converge on liberal economic policies that supposedly are most attractive to business (Rodrik 1997; Held and McGrew 2000).

But according to governed interdependence school, convergence is unlikely. One influential account in this tradition, the “varieties of capitalism” theory by Peter Hall and

David Soskice, argues that US-style liberal market economies (LMEs<sup>1</sup>) and German-style coordinated market economies (CMEs) both are “capable of providing satisfactory levels of long-run economic performance” (Hall and Soskice 2001: 21). Instead of a trade-off between social, non-market coordination and efficiency, this “coordination” is seen as a source of competitiveness. Germany has a large welfare state, powerful unions and encompassing business associations, but still generates similar amounts of wealth to its citizens as the United States, where social institutions are weak in comparison. This understanding of institutional competitiveness offers different predictions in terms of how countries will perform and adopt to the challenges of globalization.

According to Hall and Soskice, the principal difference between countries lies in way in which companies coordinate relations with employees, financiers and competitors. US companies generally use arm’s-length market transactions, while German companies rely heavier on strategic coordination through powerful business associations and networks. Differences in micro-level coordination gives rise to divergent comparative institutional advantages for companies and thus to economies as a whole. LMEs are better at radical innovation, important in sectors such as finance, software and pharmaceuticals; while CMEs on the other hand are advantageous in incremental innovation, central to the manufacturing of consumer durables and machine tools. These advantages are strengthened when companies rely on the same way of coordination (markets or strategic relationships) in all its relations. On the macro level, the most institutionally coherent of economies should therefore be most successful, contrary to the view that liberal economic policy is the only source of economic competitiveness.

In the face of globalization, the varieties of capitalism theory argues that multinational companies (MNCs) should “shift some of their activities across national borders in order to benefit from these comparative institutional advantages” (Hall and Soskice 2003: 248). If this argument is correct, MNCs should *ceteris paribus* locate production based on incremental innovation to CMEs, and activities requiring radical innovation to LMEs. Still, Hall and Soskice (2001: 60) ambiguously admit that MNCs could be more favourable to LMEs, since distant investors prefer to “supply capital on arm’s-length terms that emphasize transparent, balance-sheet criteria”. However, knowing that foreign direct investment (FDI) puts resources to their optimal use (Lipsey 2000) and enhances domestic competition and productivity

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<sup>1</sup> I systematically use the abbreviations CME, LME, MNC and FDI throughout the study.



(Caves 1996; Moosa 2002), this represents a fundamental challenge to their theory. If LMEs were better off from global investment, it would seem like CMEs have a long-term problem.

In a previous study, Hall and Gingerich (2004) confirmed that comparative institutional advantages are important to economic growth, but others have recently questioned these findings (Campbell and Pedersen 2007; Kenworthy 2006; Vårheim 2005). Thus, this study offers a new evaluation of the varieties of capitalism theory based on new data. By looking at FDI flows it addresses two key issues in contemporary international political economy at the same time: the empirical merits of the varieties of capitalism theory, and whether these varieties both can be equally successful faced with globalization.

### **1.1. Research question**

Specifically, this study examines how MNCs respond to the varieties of capitalism theory: Does FDI flow according to comparative institutional advantages? Assuming that FDI is equally spread out in sectors where LMEs and CMEs have comparative institutional advantages, both FDI inward flows and stock should be concentrated to the countries that are most institutionally coherent. The theory will also be tested on FDI inflows into the manufacturing, machines, services and financial sectors, where incremental and radical innovation respectively is important. Due to potential weaknesses in the FDI data, particularly in the sector-wise statistics, the analysis are also performed using US outflows data only. In addition, the competing hypothesis that MNCs are biased towards LMEs will be tested. The use of a range of different FDI indicators adds robustness to this study's conclusions.

Through a time-series regression research design, this study aims to say something about the varieties of capitalism theory's general validity. In order to gauge "coordination", quantitative measures are borrowed from both Hall and Gingerich (2004) and Kenworthy (2006). The study is limited to the twenty most developed OECD countries, due both to limitations in the availability of data, and to the fact that FDI has a different impact in rich and poor countries (Bloningen and Wang 2005). This is not to say that the present study is of no interest to developing countries, but that more work will need to be done both in terms of data and theory development in order to expand the sample size to include larger parts of the world.

### **1.2. Why does globalization matter?**

Globalization is currently "*the* catchphrase for the perils and promises facing humanity in the 21<sup>st</sup> century" (de Soysa 2003: 7, authors emphasis). During the last 20 years, restrictions on

capital mobility and trade have significantly decreased across the world. MNCs have become increasingly important actors in the world economy through FDI and diversification of production to reap the benefits of comparative advantages. Globalization is a central feature of contemporary political economy, and how it relates to the varieties of capitalism theory should be of high political and academic interest.

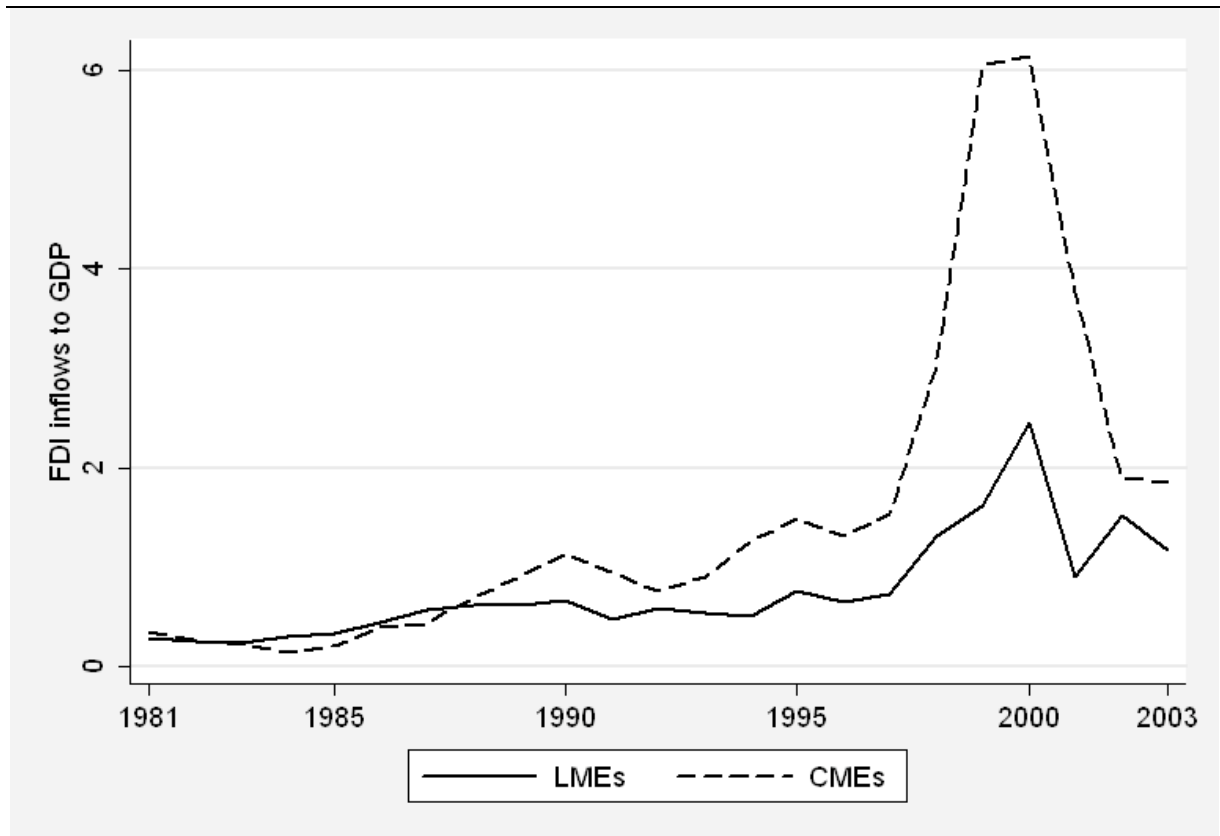
For the purposes of this study, globalization will be defined in economic terms as “the integration of national economies into the international economy through trade, direct foreign investments, short-term capital flows, international flows of workers and humanity generally, and flows of technology” (Bhagwati 2004: 3). The most frequent way of quantifying globalization is by using indicators of trade and FDI (de Soysa 2003: 2), and both phenomena have grown rapidly since the 1980s. The driving forces of this growth has been technological advances, particularly in communications, but also that governments throughout the have pursued policies aimed at liberalizing international trade and investment (Bhagwati 2004; Frieden 2006; Spero and Hart 2003).

Foreign direct investment is defined by OECD (1996: 8) as a “ten per cent or more” purchase of a foreign company, and therefore indicates long-term investments aimed at achieving control, contrary to portfolio investment or currency speculation. For these reasons, FDI is often used as an indicator of how foreigner investors perceive the competitiveness of a country (Ham and Kleiner 2007; Jakobsen and de Soysa 2006; Li and Resnick 2003; OECD 2003; Oman 2000; Oneal 1994).

In figure 1 on the next page, the increase in foreign direct investment inflows relative to GDP can be observed for the OECD countries over the 1981-2003 period. Interestingly, the figure reveals that CMEs actually have slightly more FDI inflows relative to the size of their economies than LMEs. This simple graph reveals that LMEs are not necessarily the chosen option by foreign investors. But this figure does not control for other factors known to influence investors such as wealth, economic growth, formal restrictions to investors and foreign ownership in the economy. In any case FDI has increased steadily, and while the 1997-2001 period represented a significant spike, foreign investment has on average tripled relative to domestic production for the OECD as a whole from 1981-2003.

Even if FDI strengthens domestic competition and puts resources to their optimal use, the varieties of capitalism approach does not necessarily argue that this alone is enough to generate change, since the underlying social institutions in an economy have their own dynamic. At the same time, Hall and Soskice (2003: 245) admit that eliminating “economic efficiency altogether as a factor in analyses of institutional change would be a mistake”.

**Figure 1. FDI inflows by GDP 1981-2003, LME and CME group averages**



Sources: UNCTAD (2007), World Bank (2007), Hall and Soskice (2001).

While economic competitiveness is the sum of many different factors, it is reasonable to expect that one of these is FDI. Thus, if MNCs are systematically biased towards particular economies, it is probable that there would be a certain extent of pressure on other countries to change in direction of the more successful economies.

### **1.3. Outline of this study**

This study will begin with a presentation of the greater debate on globalization between the competing “convergence” and “governed interdependence” schools (Weiss 2003). While the neoclassical economic theory adheres to the former school, the Hall and Soskice’s “varieties of capitalism” belongs to the latter. In the following sections, Hall and Soskice’s theory will be presented in detail, with particular emphasis on the concept of comparative institutional advantages. Germany and the United States serve the role as examples of CMEs and LMEs, respectively. Critiques of the theory will also be presented and discussed, with a focus on how institutional change is explained in the face of external pressures, and how coordination in one sphere of the economy can have complementary effects on coordination in other spheres of the economy. Subsequently, John Dunning’s ownership-location-internalization (OLI) model

is presented as a framework for analyzing MNC behaviour, before I look at FDI empirics and previous research on determinants of FDI. Finally, I arrive at hypotheses predicting the behaviour of MNCs relative to the varieties of capitalism theory. FDI in “incremental innovation” is expected to flow to CMEs, while “radical innovation” activities prefer LMEs.

My results can be summarized as follows: Institutional advantages do not predict FDI flows. Instead, the results appear to support neoclassical economic theory, since more investment flows to the LMEs. The findings are robust to different indicators of FDI, model specifications and estimation techniques, and are similar to others that have questioned the varieties of capitalism theory (Campbell and Pedersen 2007; Kenworthy 2006; Vårheim 2005). While the results clearly reject the varieties of capitalism theory, the consequences for the greater globalization debate can be interpreted in two ways. They can be taken to support the neoclassical, convergence view of globalization, forcing countries to liberalize in order to compete for FDI. Otherwise, if Hall and Soskice have overlooked important factors of the competitiveness of social economies, further theoretical development could lead to other conclusions on comparative institutional advantages and FDI.

## 2. Institutions and competitiveness

Labour-market reforms easing employment protection legislation and lowering tax wedges on labour income would boost global economic integration.

Nicoletti et al. (2003: 72)

Both liberal and coordinated market economies seem capable of providing satisfactory levels of long-run economic performance.

Peter Hall and David Soskice (2001: 21)

After the fall of Soviet communism and the worldwide expansion of capitalism, the internal differences of capitalist countries become more apparent. By examining the political economies of the advanced capitalist countries it rapidly becomes clear that capitalism coexists in different varieties. In a stylized manner the main divide is observed between liberal and coordinated market economies, shareholder and stakeholder capitalism, or “liberal America” and “social Europe” (Albert 1993; Hall and Soskice 2001; Hutton 2002; Pontusson 2005). The United States is typically used as an example of liberal market economies (LMEs), since it puts shareholder interests over other stakeholders in the company (such as management, labour and financiers), and allows for managerial flexibility both in terms of wage negotiations and layoffs. In Germany on the other hand, which is a coordinated market economy (CME), different stakeholders in the company are all at the table when important decisions are made, wage-bargaining is coordinated through labour unions and business associations, and extensive protections against layoffs to workers granted together with generous welfare benefits from the government.

But which variety of capitalism offers the best economic performance? The success of an economic system can of course be conceptualized in many different ways, from social harmony and life span, to innovation levels, wage growth and employment levels. In most simple terms success implies that society’s goals are attained, whatever they may be. But practically speaking, as discussed in the introduction, there is no escape in the long run for being competitive. Understanding the source of competitiveness is a “principal issue” (Hall and Soskice 2001: 55) for political economists and policymakers, in particular when cross-border economic interaction is increasing. In the long run, therefore, economic indicators such as growth rates, employment, and productivity are important to all nations. While most observers and scholars agree that different styles of capitalism exist, there seems to be no clear consensus on what constitutes the most successful economic policies. An increasingly

competitive environment caused by globalization has made this question more important. Thus, this study will focus the different schools of thought on how globalization influences national economic policy-making.

## **2.1. The greater debate on globalization**

According to Linda Weiss (2003), there are two main schools of economics in the globalization debate: the convergence school on the one hand, and the governed interdependence school on the other. They are built on a different understanding of economics, and can therefore serve as an organizing framework for this study. While many adherents to the former school argue that liberal economic policies lead to the best economic performance, the latter views globalization more as a two-way process where national states are still the most important actors. Instead of convergence on liberal economic policies, countries are expected to adopt in different ways, based on its institutional structure (Garrett 1998b; Hall and Soskice 2001; Kitschelt et al. 1999; Pontusson 2005; Weiss 2003). This study's focus, Peter Hall and David Soskice's "varieties of capitalism" theory, belongs to the governed interdependence approach, but in order to clearly set the theoretical stage for this study, I will briefly present how it relates to the larger debate on globalization.

### **2.1.1. The convergence school**

The convergence school builds on the idea that globalization forces countries to converge on a liberal model of economic governance, with few regulations, labour protections and low taxes (Held and McGrew 2000; Rodrik 1997; Weiss 2003). While the convergence school also includes Marxist and dependency theorists, this paper will focus on the neoclassical economic view of the world. When I in this study refer to neoclassical economics, it is placed within the convergence school. Neoclassical economics, or neoliberalism as is often referred, witnessed a renaissance in the 1980s in the UK and the US in particular, when the role of the state and strategic organization in the economy were attacked (King and Wood 1999; Nilsen and Marsdal 2006).

Central to the neoclassical theorists is the belief that there is a fundamental trade-off in society between efficiency and equality. "You can't have a cake and eat it too" as one scholar put it (Okun 1975: 1), if society desires higher levels of social protection and government, this comes at the expense of economic efficiency. While a certain level of both is needed to have a functioning society, nation states originally had more freedom to manoeuvre in order to find the desired balance. But since countries regulations and taxes ultimately are seen as the most

important sources of competitiveness, excessive focus on equality will lead to weaker economic performance in the age of globalization. Following from this comes the contention that globalization will lead countries to converge on liberal economic policies (Gwartney and Lawson 2006; Lopez-Claros et al. 2007; OECD 2003; Okun 1975).

In Norway, the Conservative party (Høyre) wants to “continue reducing total taxation and develop systems that increase the competitiveness” for businesses and employment (Høyre 2005: 26). The more rightist Progress Party argues that the Norwegian system of centralized wage bargaining breeds inefficiency, and should instead be organized “through deals between employees and employers in each company” (Fremskrittspartiet 2005). They are joined by the OECD, advocating the view that liberalizing employment protection regulation, curbing union power, and reducing tax levels would boost global economic integration (Nicoletti et al. 2003; OECD 2003; OECD 2005). The Economist Intelligence Unit (2006b) similarly emphasizes the improved investment climate in terms of taxes and regulations in their FDI projections for the 2006-2010 period, and they are to a certain extent joined by the United Nations Conference on Trade and Development (UNCTAD) (2007b) in arguing that liberal economic policies are more attractive for multinational companies (MNCs).

This understanding of competitiveness led to the fear that countries are being forced into a “race to the bottom”, where taxes, wages and regulations were cut in order to attract MNCs and prevent domestic companies from moving production abroad (Rodrik 1997). The increased openness to other countries with roughly the same factor endowments (i.e. similar prices of capital and labour) has tilted bargaining power towards capital through increasing the elasticity of demand for low-skilled labour. Rodrik argued that if nothing were done, this could eventually challenge the social compromise on which the liberal economic order after World War II was built (Gray 2000; Held and McGrew 2000; Rodrik 1997; Ruggie 1994). But Rodrik’s idea of policies being forced upon countries by invisible international market forces has not generally been confirmed by empirics (Garrett 1998a; Hirst and Thompson 2000). Denmark is on top of the Economist’s competitiveness index while imposing some of the highest taxes in the world (Economist 2006b: 12), and some 80 percent of global foreign direct investment (FDI) goes into rich countries, where wages and taxes generally are significantly higher than in emerging economies. The increasing inequality witnessed in many countries also stem in part from technological change and the increased importance of the service sectors in OECD countries, since productivity gains and the following wage increases often are smaller in services than in manufacturing (Iversen and Cusack 2000).

Thus, over the years there has been a development in the neoclassical economic paradigm towards an increasing focus on human capital and institutions. While the composition of comparative advantage traditionally has been seen as a product of business-friendly liberal policies together with natural resources, these are today supplemented by education levels, health, infrastructure and political stability (de Soysa 2003; Dunning 2000; Li and Resnick 2003). Indeed, neoclassical studies have repeatedly pointed at the importance of good public institutions in order to attract multinational investment, and have revealed that indicators of good governance lead to more FDI inflows (Oman 2000). The World Economic Forum's competitiveness report for 2007 concluded that "a well-trained labour force, and strong institutional underpinnings are emerging as the key drivers of prosperity" (Lopez-Claros et al. 2007: 3). A company would not want to invest heavily in a country with only low-skilled workers, bad public health, inadequate roads and railroads, and a chaotic political situation. The risk of losing on the investment would simply be too large, since firms prefer stability and predictability. The neoclassical paradigm of today is therefore far from previous accounts of laissez-faire capitalism.

But even if the focus on institutions has evolved in by neoclassical economists and the constraints school, institutions are still merely treated as control variables for liberal economic policies, while they neglect the non-market relationships "that may be equally important" (Hall and Soskice 2001: 38). This is where the convergence approach and the governed interdependence school diverge.

### **2.1.2. The governed interdependence school**

Instead of the classical economical expectation of convergence on the most business-friendly policies, the governed interdependence school states that each country should adopt to globalization based on national institutions (Garrett 1998b; Hall and Soskice 2001; Kitschelt et al. 1999; Pontusson 2005; Weiss 2003). Among the many reasons not to expect convergence is the lack of consensus on what policies are most successful. Even though LMEs recently have been considered more successful, it is important to keep in mind that Japan and Germany were seen as the examples to follow in the 1980s (Dore et al. 1999; Kitschelt et al. 1999).

Contrary to the neoclassical view that all countries become more equal, Linda Weiss (2003) emphasizes the role of states and policies and describes the era of globalization as "governed interdependence". Instead of arguing whether international market forces constrains the choices of national economies or not, she makes the case that the process goes



both ways. Global markets influence national economic systems, but states are still in charge. While neoclassical economics is concerned with the allocation of resources at a single moment in time, assuming that interactions were done in a “frictionless world, that is, one in which the institutions did not matter” (North 1990: 131), the governed interdependence approach emphasizes the important role played by institutions in shaping technological development and economic growth. Economic activity does not take place in a vacuum: money, capital and property rights are all man-made institutions that are vital in order to have a well-functioning market economy. This does not reject the importance of profits and prices for business activities, but it argues that further explanations are needed in order to explain the patterns of economic performance (Hall and Soskice 2001).

In other words, while there are some constraints on national behaviour, states can at the same time increase their powers in new areas, such as strategic cooperation with businesses. Weiss (2003) has three main justifications for advocating the governed interdependence approach. Firstly, increased vulnerability would in most democratic societies lead to popular demand for protection against the vagaries of the global market. Secondly, the belief that MNCs only focus on low taxes and wages simply is not true in the age of global production, since businesses increasingly need highly trained personnel and good innovation capacity, which often can be advanced by an active and expensive governments (Weiss 2003). Finally, amid pressures from globalization, countries should not be expected to fight for survival, but instead to intensify cooperation nationally and internationally in order to address their concerns.

This is where Peter Hall and David Soskice’s varieties of capitalism theory becomes relevant. Globalization creates external pressure for change, but adaptation differs depending on the institutional background. They argue that both liberal and coordinated market economies can perform equally well on macroeconomic factors such as economic growth and employment, assuming that equality-oriented countries can be just as efficient as more liberal economies. Thus, one of its major innovations is to question the whole notion of a trade-off between equality and efficiency. While a common feature for many theories in the governed interdependence tradition is that they are general and difficult to test in quantitative cross-country analyses, Peter Hall and David Soskice’s varieties of capitalism theory offers clear and testable hypotheses. The quest for simple testable assumptions about the world inevitably implies simplification, and is to some extent the price to be paid in order to arrive at a parsimonious theory (Waltz 1979). On the following pages the varieties of capitalism theory will be presented in detail, including theoretical and empirical findings and critiques.

## 2.2. The varieties of capitalism

*The varieties of capitalism: The institutional foundations of comparative advantage* (Hall and Soskice 2001) has been praised for representing an “important milestone” in the study of comparative capitalism (Coates 2002: 661). Indeed, it has already informed a wide range of studies, spanning from social policies (Estevez-Abe et al. 2001; Mares 2001), international cooperation and European integration (Callaghan and Höpner 2005; Fioretos 2001), changes in labour market institutions (Thelen 2001; Thelen 2003; Wood 2001), differing management strategies in European airlines (Lehrer 2001), corruption (Larsson 2002), and unemployment and general macro-economic performance (Campbell and Pedersen 2007; Hall and Gingerich 2004; Hall and Soskice 2001; Kenworthy 2006).

In Hall and Soskice’s theory, countries are divided into two groups, US-style liberal market economies (LMEs) and German-style coordinated market economies (CMEs), and coordination is established as the key differentiating variable. Effective coordination in relations with employees, clients, competitors, financiers and the state are central to the success of a company, and can be done in two basic ways. In LMEs, coordination is based on arm’s-length market forces, competition, formal contracting and price-sensitive calculations; in CMEs on the other hand there is extensive use of strategic relationships outside of the market place, such as relational contracting, information sharing in private networks, and collaboration management of companies. Table 1 on the next page describes the differences in coordination across five different spheres of company relations. In sum, the way companies coordinate relations in these five spheres determines the institutional characteristics of an economy, since companies are expected to act according to the existing institutional structure in an economy. Importantly, it is the simultaneous interactions between the actors in the economy that create these institutional structures. No firm alone decides the rules of the game, and while the government can influence the economy, it needs to base policies on the existing institutional structure in the economy.

The economy in general is expected to be most competitive when companies can coordinate relations in the same way in all spheres of the economy. Liberal coordination in one sphere of the economy has complementary gains if other spheres are also coordinated by market institutions, and vice versa. When an economy is “institutionally coherent”, efficiency gains are made that would not else have been achieved. If corporate finance is based on relational networks and not on current earnings, for instance, it has been argued that this facilitates the existence of long-term employment (ibid). Following from this, Hall and Soskice predict that countries will cluster into either the LME or CME camp. To test this,

**Table 1. Hall and Soskice's spheres of coordination**

	<i>Liberal market economies (LME)</i>	<i>Coordinated market economies (CME)</i>
Industrial relations	<ul style="list-style-type: none"> <li>- Macroeconomic and market competition controls wages and inflation</li> <li>- Easy to hire and fire</li> </ul>	<ul style="list-style-type: none"> <li>- Wage setting coordinated by labour unions and employers associations</li> <li>- Centralized wage-control reduces poaching of employees</li> <li>- High employment protection</li> </ul>
Vocational training and education	<ul style="list-style-type: none"> <li>- Education provides general skills</li> <li>- In-house training of industry-specific skills</li> <li>- Weak incentives to invest in company-specific skills</li> </ul>	<ul style="list-style-type: none"> <li>- Unions and associations supervise collaborative training schemes</li> <li>- Eliminates free-rider problem</li> </ul>
Corporate governance	<ul style="list-style-type: none"> <li>- Focus on current earnings and equity market valuation</li> <li>- Toleration of mergers and acquisitions, including hostile takeovers</li> </ul>	<ul style="list-style-type: none"> <li>- Relational networks provides data on performance, less focus on current earnings</li> <li>- Cross-ownership and banks</li> </ul>
Inter-firm relations	<ul style="list-style-type: none"> <li>- Market relationships and enforceable legal contracts</li> <li>- Technology transfer through movement of scientists and engineers</li> <li>- Higher degree of product-market competition</li> </ul>	<ul style="list-style-type: none"> <li>- Business associations promote technology transfer and standard setting</li> <li>- Collaborative research efforts usual between competitors, coordinated through associations and the state</li> </ul>
Employee relations	<ul style="list-style-type: none"> <li>- Top management decides unilaterally</li> </ul>	<ul style="list-style-type: none"> <li>- Stakeholder model, employees have a say in running of firm</li> </ul>

*Source: Based on Hall and Soskice (2001).*

Peter Hall and Daniel Gingerich (2004) constructed a coordination index consisting of six quantitative indices on industrial relations, corporate governance and employer relations, based on data from the 1990-1995 period. They found that most OECD countries cluster into either of these two groups, and these results also constitute the basis for the classification in Hall and Soskice (2001). The 20 OECD countries in this study can be observed in table 2 on the next page. Also, since institutionally coherent economies have more specialized comparative institutional advantages, these are the economies predicted to show the best macro-economic performance.

Welfare systems are different in CMEs and LMEs, but Hall and Soskice argue that business in both economies are supportive of the different strategies. In CMEs, governments provide extensive unemployment benefits and social assistance to large sections of the population, while the liberal economies have much lesser benefits that are carefully means-tested. In CMEs, the welfare system is a critical component supporting non-market coordination in labour markets, corporate finance and vocational training, while the lack of such non-market institutions in LMEs reduces the need for business to support extensive

**Table 2. LMEs, CMEs, and coordination indexes**

<i>Country</i>	<i>Country code</i>	<i>Hall-Gingerich coordination index</i>	<i>Kenworthy institutional coherence position</i>
<b>Coordinated market economies (CMEs)</b>			
Austria	AUT	1.00	High
Germany	DEU	0.95	High
Italy	ITA	0.87	Low
Norway	NOR	0.76	High
Belgium	BEL	0.74	Intermediate
Japan	JPN	0.74	High
Portugal	PRT	0.72	n/a
Finland	FIN	0.72	Intermediate
Denmark	DNK	0.70	Intermediate
France	FRA	0.69	Low
Sweden	SWE	0.69	High
Netherlands	NLD	0.66	Low
Spain	ESP	0.57	n/a
Switzerland	CHE	0.51	Low
<b>Liberal market economies (LMEs)</b>			
Australia	AUS	0.36	Intermediate
Ireland	IRE	0.29	Low
New Zealand	NZL	0.21	Intermediate
Canada	CAN	0.13	High
United Kingdom	GBR	0.07	High
United States	USA	0.00	High

*Sources: Hall and Soskice (2001: 20-21), Hall and Gingerich (2004: 14), Kenworthy (2006: 76)*

welfare policies. Simply put, German companies benefit from the extensive German welfare state, while US companies benefit from the more retracted US welfare system (ibid; Estevez-Abe et al. 2001). Some have argued that this constructs a defence for liberal economic policies and large inequalities (Blyth 2003; Goodin 2003), but Hall and Soskice (2001) make it clear that their theory is non-normative and does not take a position on the desired levels of equality and efficiency in an economy.

Based on the different ways of coordinating relations between firms and other actors in the economy, CMEs and LMEs have divergent capacities for innovation and production. In CMEs, the informal contacts and networks reduce transaction costs for incremental innovation, while the institutionalized market mechanisms in LMEs reduce transaction costs for radical innovation.

Incremental innovation can be defined as “the continuous and small-scale improvement to existing production lines and processes” (ibid: 39). Machine tools, consumer durables, engines and transport equipment are examples of production that rely on this type of innovation, which is often capital intensive and with a long-term perspective. Incremental innovation is enhanced by secure and stable employment, by workers who are able to influence the decisions of the company, where firms and clients cooperate closely, and where networks of trust exist between companies, employees, clients, competitors and banks. These are institutions that exist in CMEs.

LMEs on the other hand are best at radical innovations, characterised by “substantial shifts in product lines, the development of entirely new goods, or major changes to the production processes” (ibid). For example, radical innovation is critical to developments in biotechnology, software, advertising and corporate finance. In LMEs, radical innovation is promoted by flexible wage systems, high executive compensations that reward work and risk-taking, more managerial flexibility to hire and fire, and large venture capital funds that fund radical and risky innovative projects.

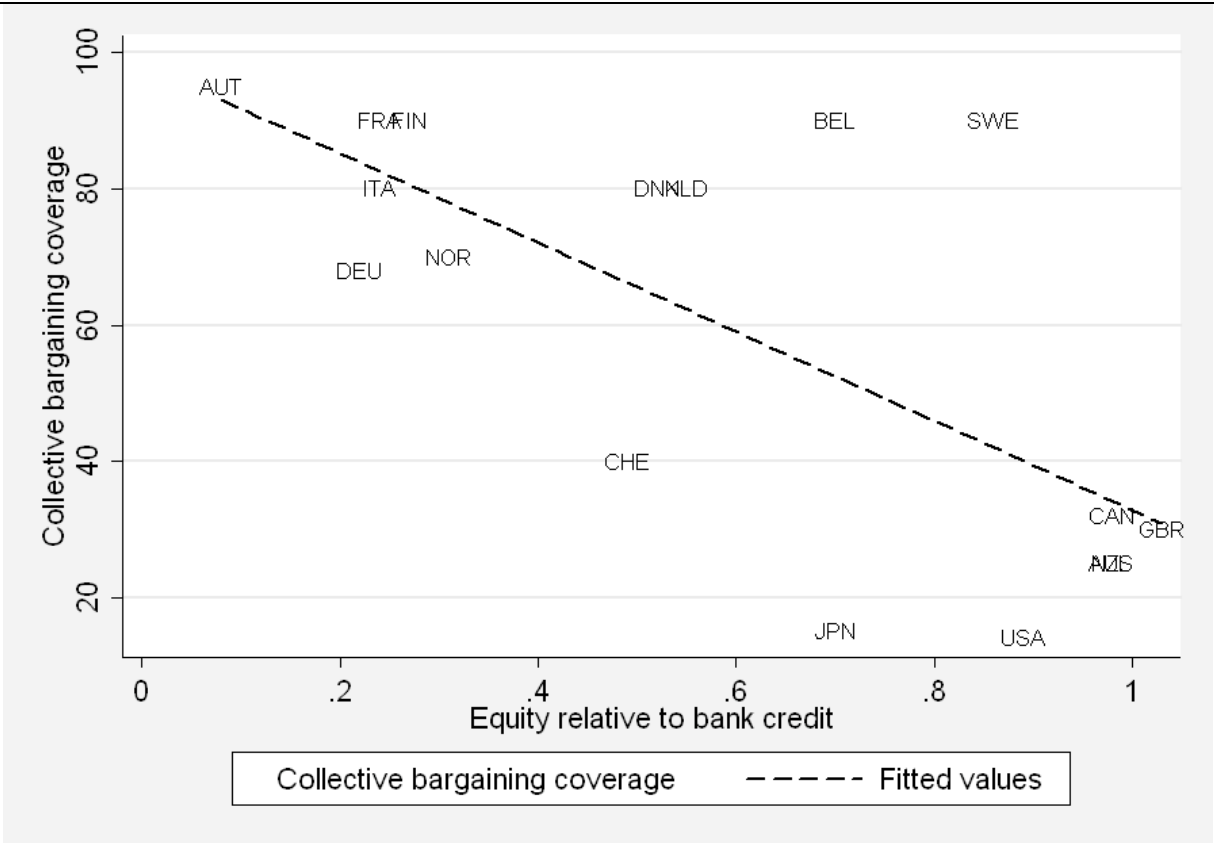
Hall and Soskice expect companies to gravitate towards the kind of innovation and production supported by the country’s institutional structure. They do not deny that companies or activities take place against the dominating paradigm of production, i.e. that incremental innovation takes place in LMEs, but nevertheless they argue that such broad generalizations can be made.

### **2.2.1. LME: The United States**

The classical example of a LME according to the Hall and Soskice is the United States, known for its fluid capital markets with a high propensity for risk, and a flexible labour force supporting the risk-taking capital markets. Managers usually run the firm in a unilateral manner, free to hire and fire as they see fit. The relatively short job tenure also means that there are more jobs available to those seeking new employment. In the field of vocational training, American education is focused on general skills, since shorter job tenures makes it less attractive for firms to involve themselves in apprenticeship programs. Tough antitrust legislation regulates the relationship between companies, and instead of joint ventures often seen in CMEs, the transfer of technology more often happens through the diffusion of workers, scientists and engineers between companies (Hall and Soskice 2001).

In figure 2 on the next page reports equity to debt ratios for OECD countries, indicating the size of firms’ assets relative to their debt. US companies have an equity-to-debt

**Figure 2. Equity/debt ratio and collective bargaining**



Source: Based on Pontusson (2005: pp. 22 and 26)

ratio of 0.9, comparatively much lower than Austria and Germany at the other end of the scale, reflecting the fluid capital markets and the higher reliance on stock exchanges to raise capital for businesses in the US. Money is available, but large, long-term debts are much less common in LMEs than CMEs. Similarly, the collective bargaining coverage is less than 10 percent, among the lowest in the OECD. Figure 3 on page 18 shows that employment protection legislation is practically absent in the US, offering more freedom to managers and each employee in terms of wage bargaining, hiring, firing and swapping jobs. At the same time, public social spending is only 15 percent of GDP, far lower than the CMEs, which means that public welfare is limited and that each employee is more individually responsible for himself.

When looking at patent statistics the United States has a high number of innovations precisely in fields where radical innovation is believed to be important. US companies seem to be particularly strong in information technology, biotechnology and pharmaceuticals, among others, while in sectors such as machine tools, civil engineering, and mechanics, their relative position in the world is weaker (Hall and Soskice 2001: 44). In other words, it is no surprise that Google was established in the US. Larry Page and Sergey Brin invented a new

search technology at Stanford University in California, and thanks to the extensive venture capital market in the US and in particular in Silicon Valley, they easily secured financing for their idea. Thanks to fluid labour markets, they attracted professionals to the company, while at the same time knowing that they could easily be laid off if the company encountered problems. There are numerous examples of US companies that have led the world in inventing new technologies, but the number of failures is also high. This entrepreneurial spirit, together with economic institutions that underpin risk-taking and facilitates rapid changes, is a basic characteristic of LMEs.

Critics have contended that the US system of corporate governance is not as transparent and efficiency enhancing as supporters often argue. One prominent scholar has for instance dubbed the 1990s as the “greediest decade in history”, when US companies generated record profits through inventions in bookkeeping (Stiglitz 2003). Many of the liberal features of the US are what Michel Albert (1993: 18) famously described as vulgar consumption-based economic policies without long-term social perspective:

“The neo-American model is based on individual success and short-term financial gain; the Rhine model, of German pedigree but with strong Japanese connections, emphasizes collective success, consensus and long-term concerns”.

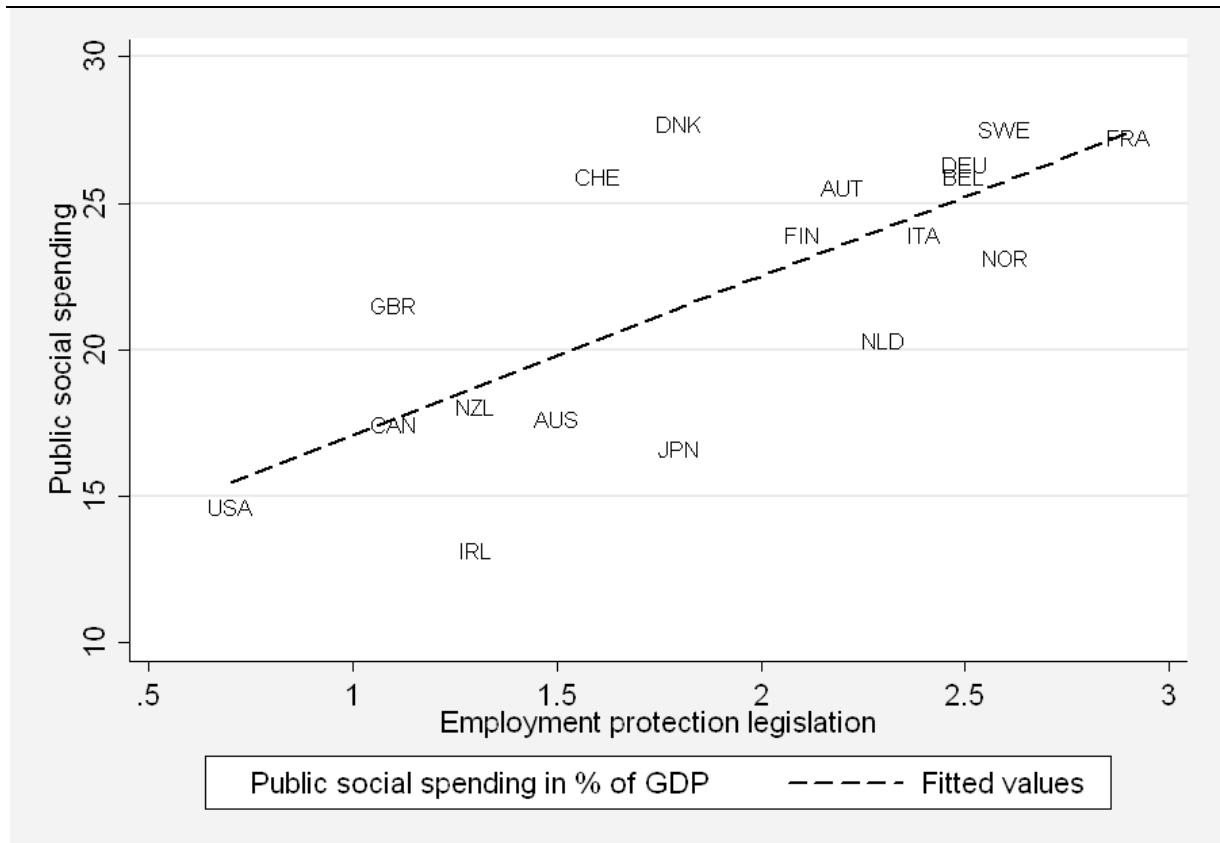
Hall and Soskice agree that the US is heavily governed by market institutions, but from a non-normative point of view. The success of the American economy, they argue, is in particular due to the coherence in market institutions throughout the economy that reduce transaction costs for radical innovative production.

### **2.2.2. CME: Germany**

Germany represents in many ways a completely different system from that of the United States, and is used as a classical example of CMEs. In terms of patents, the statistics show that Germany has almost the opposite profile to the US, with most innovative activity taking place in mechanical engineering, product handling, transport, consumer durables, and machine tools (Hall and Soskice 2001: 44). According to the varieties of capitalism theory, this is because the coherence of non-market coordination institutions reduces transaction costs for these particular kinds of production.

One central element of the German economy is the close relations between banks and their corporate clients. Bank directors often sit on the board of governors of their clients, securing information about the company in a way that lowers the transaction costs for evaluating the company’s financial position. Figure 2 on the last page revealed that the average value of equity amounts to only 0.2 of total corporate debt, implying that it is

**Figure 3. Public social spending and employment protection legislation**



Source: Based on Pontusson (2005: 26).

relatively easier for a German company to engage in projects with a long-term horizon. Social networks with the providers of finance allow for trust building and a different way of evaluating the prospects of projects relative to the LMEs.

In addition, Germany has strong national labour unions and business associations. Wage-bargaining is coordinated sector-wise, allowing both labour and management stability in terms of wages. Figure 2 showed that 70 percent of German workers are covered by collective bargaining agreements. Workers are represented on the board of governors and have an important say in the running of the firm, together with work councils that channel employer input to the firm management. A company’s purpose is not solely to create profits for its shareholders; Germans “tend to see the firm as something of a community of the people working in it, if also as a public institution with public responsibilities” (Dore 2000: 18). This is also reflected in high levels of employment protection legislation, as observed in figure 3 above, together with high public spending on welfare for the unemployed. Often these institutions are attacked by neoclassical economists for reducing the value of working and distorting correct incentives for productive activity. But Hall and Soskice argue that German



companies benefit from them, and will lobby to retain non-market coordination since this is their main source of comparative institutional advantage.

The system of vocational training in Germany has been hailed for its ability to use companies to train workers with company-specific skills, due to close relations and strong networks of trust between companies. Even if a student conducting training in one company ends up working for another company, industry-wide participation in the training efforts secured by strong business associations keeps the system going (Hall and Soskice 2001).

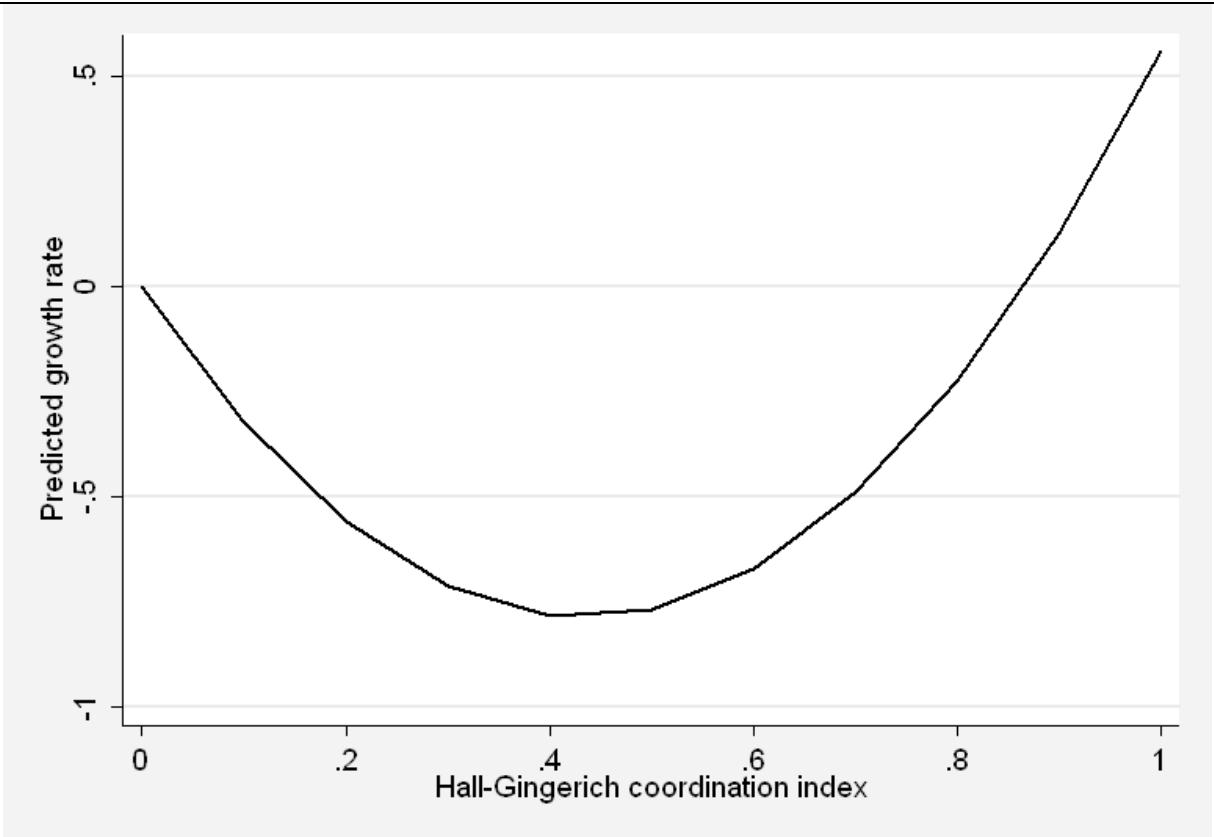
While German companies have an impressive track record in mechanics and machines, they have been lagging somewhat behind in the so-called new industries, in particular service sector areas as finance and computer software. The increasing importance of these sectors in the economy has led to calls for reform (Hutton and Giddens 2001). Critics have also argued that close networks between central actors in the economy easily lead to rent-seeking, lack of competition, and outright corruption. The CMEs have indeed been characterized as “crony capitalism” (ibid). Defenders of the German model on the other hand often turn to normative arguments such as the virtues of equality, or the importance of long-term perspectives in order to enjoy development in the long run (Dore 2000; Albert 1993).

But Hall and Soskice argue in a non-normative way that the institutional setup in Germany mitigates particular transaction costs, which in turn give German companies a competitive advantage in activities that benefit from these lowered costs. Thus, the fact that Germans are somewhat behind in radical innovations does not matter, because in the long run their firms will gain access to this technology and then be in a better position to develop it further through incremental innovations. The differing transaction costs in Germany and the United States will on a global scale lead to increased prosperity, with new innovations being made in the US but then later developed and refined by the Germans.

### **2.2.3. Economic performance empirics**

In order to empirically test whether institutional coherence and comparative institutional advantages matter to economic performance, Hall and Gingerich (2004) constructed the coordination index previously presented. Unfortunately, the index is computed for one year only due to lack of available time-series data. Still, by using “hard” cross-national indicators that are not based on any subjective evaluation, this should open for a more objectively evaluation of the theory’s merits (ibid). Hall and Gingerich do indeed find strong support for the claim that institutional coherence is decisive for economic performance. This is graphically illustrated with the u-curve in figure 4 on the next page. The vertical axis

Figure 4. Hall and Gingerich coordination scores and growth, OECD 1971-97



Source: Hall and Gingerich (2004: 28-29).

represents predicted growth rates in the 1971-1997 period, and the horizontal axis shows the coordination index score. Controlled for other factors, the most liberal *and* coordinated economies experienced fastest economic growth in the period, while countries in the middle are worse off.

Like any major theory, the Hall and Soskice theory has been met with a wide range of different empirical criticisms. The authors acknowledge the problematic issue of collecting data that actually tests all the basic tenets of the theory, but argue that the coordination index is the most accurate representation available. Lane Kenworthy (2006) applauds the attempt to create a “hard” index consisting of objectively derived data, but argues that the resulting index falls short of actually testing the theory they present. Sweden for instance has a lower score than expected, and Japan, in many studies singled out as the world’s most strategically coordinated country, is number 6 on the list. Kenworthy speculates that the reason could be that the index is biased towards certain spheres of the economy. It only tests the spheres of industrial relations, corporate governance and employer relations, while omitting the spheres vocational training and inter-firm relations omitted completely. Kenworthy’s alternative measure derived from a subjective interpretation of the degree of coordination the last 30

years finds no support for the institutional coherence on growth rates, and thus questions the foundation of the theory.

Case studies have also cast doubt on the institutional coherence thesis. In Denmark, Campbell and Pedersen (2007) found that macro-economic performance has been good during a period when coordination of certain spheres of the economy moved from CME to LMEs. Denmark is now more a “hybrid” economy, and her good economic performance thus leads Campbell and Petersen to imply that the Varieties of Capitalism theory is “logically flawed”. Vårheim (2005) shows how Ireland has undertaken more strategic coordination of wage-bargaining with excellent economic results. Since Ireland is considered a LME, this is contrary to the varieties of capitalism theory, expecting it to experience worse economic performance by moving towards more non-market coordination. Thus, the empirical evidence on Hall and Soskice’s theory are mixed.

#### **2.2.4. Other varieties?**

By emphasizing differences between LMEs and CMEs, Hall and Soskice have organized capitalist economies similar to many others (Garrett 1998b; Jackson and Deeg 2006; Kitschelt et al. 1999; Pontusson 2005). Still, not all countries fit perfectly in either group. In particular it seems like it is easier to distinguish the liberal market economies, while there is larger variation among the rest (coordinated economies). In figure 2 on page 16, LMEs cluster together in the bottom right-hand corner with low collective bargaining coverage and high equity to debt ratios. CMEs on the other hand are spread out on a larger area, even though they generally are located in the upper left hand section of the graph.

Further, it is problematic to assume, even if the US and Germany have many contrasting features, that all other countries can be placed on a continuous index based on the degree of coordination (Goodin 2003). There could also be other factors and dimensions that matter for a country’s economic performance, not *only* the degree of non-market coordination.

Hall and Soskice (2001) acknowledge the possibility of other varieties of capitalism, and talk in particular about France, Italy, Spain and Portugal as “Mediterranean market economies”. These countries appear to have a different combination of institutions than expected by Hall and Soskice, and according to the varieties of capitalism this incoherent combination of institutions should cause inferior performance. This fits well with the weaker growth and employment record often witnessed in these countries (ibid; Pontusson 2005).

Japan has already been mentioned, and in figures 2 and 3 it clusters closer to the LMEs, with low collective bargaining coverage, low public social spending, intermediate

employment protection legislation and high equity to debt ratio. Still, Japan is generally held to be a coordinated country, and many scholars have therefore included an East Asian model in their capitalist universe (Hutton 2002; Dore 2000). While East Asian economies have many similarities with European CMEs, they tend to have even tighter social relations between the actors in the economy, relations that are often perceived as protectionism by the outside world. Corruption is not generally more common in the absence of US-style transparency, contrary to the popular account of “crony capitalism”, and according to Hutton (2002) this is due to the cultural fact that people do not want to lose face. In other words, cultural aspects reduce the transaction costs for particular production.

A third possible divergent group is the Nordic countries, which together with other small states were the focus of Peter Katzenstein’s (1985) classical study *Small states in world markets*. He argued that strategic coordination can be an essential feature for small countries heavily dependant on international trade and investment, since this national consensus on coordination better positions them to carry out necessary changes in their economies. Norway, Sweden and Denmark have managed to combine high levels of welfare, in particular unemployment benefits and retraining programmes, with rather flexible labour markets (Barth et al. 2003), but also Belgium, Netherlands and Switzerland have shown sound macro-economic performance. This has given the rise of the term “flexicurity” that is perceived as an increasingly influential alternative to improve economic performance while securing social welfare (Boyer 2006; Sachs 2006). But the varieties of capitalism theory in its present form does not highlight the Nordic countries or small states in general; indeed, Sweden and France have the exact same score on the Hall-Gingerich coordination index.

Similarly, it is problematic to talk about comparative institutional advantage for nations as a whole, since there are large local and regional differences inside economies:

The difference between being, for instance, a protected worker or an unprotected worker, university or non-university educated, employed in new economy or old economy sectors, in manufacturing, finance, agriculture or the service sector, matters at least as much to the experience of the economy as where in the advanced industrialized world that experience takes place (Watson 2003: 219).

Firms in CMEs can choose to perform radical innovations despite the general comparative institutional advantage in the economy leans towards incremental innovations (and vice versa for LMEs). This implies that transaction costs need not necessarily be the same across the whole economy (Allen 2004). Economic affairs are also increasingly governed regionally and internationally, such as in the European Union where international regulation often challenges practises in CMEs (Deeg and Jackson 2007).

Equally, institutions can both enhance productive activity and slow down growth (North 1990), but this can be difficult to operationalize. For instance, even though the union coverage in Norway and France is approximately equal, membership levels in unions are completely different. Only 10 percent of the French workers are members of a union, compared to 54 percent in Norway (Pontusson 2005: 99). Due to the large membership in Norwegian unions, they are arguably more moderate than their French counterparts. Thus, the existence of unions does not necessarily mean that they work to enhance productivity.

To gauge all these differences in a simple index is a challenging task, which could easily lead to loss of significant details. Hall and Soskice admit that there may be some local and regional differences in institutional comparative advantages, and that there are differences between highly CMEs such as Germany and Japan. Still, they retain that most regulation and legislation are “the preserve of the nation state” (2001: 4), and remain committed to nationwide coordination as the main differentiating feature between countries in the name of parsimony. In the following section I will take a closer look at how the varieties of capitalism theory explains institutional change in general, and when faced with globalization in particular. Several scholars have criticized Hall and Soskice in this regard by focusing on the intriguing but problematic concept of institutional complementarities.

### **2.2.5. Globalization and change**

How have LMEs and CMEs changed over time? Globalization has reduced barriers to trade and investment and made it easier for companies to move production abroad. But instead of regarding business as a constant force for deregulation, as the convergence school, Hall and Soskice argue that business does not behave similarly across nations. Based on the concept of institutional complementarities, countries should reinforce their coordinating institutions when faced with external pressures. In CMEs they will fight to preserve the institutions of strategic coordination that are the very source of their competitiveness, while in LMEs they will fight for deregulation.

Empirical data provided by Hall and Gingerich (2004) (table A1 in appendix) show that the pattern of adjustment during the last 20 years follows the predictions of their theory. The LMEs have become more liberal, and while CMEs in some areas have become slightly more liberal, this is not generally the trend for other spheres of the economy. Trade union density and coverage have for instance plummeted in LMEs, but have been strengthened in CMEs. Income inequality and executive compensation have increased globally, but the increase is much more profound in the LMEs. Even though there have been some changes to

the debt/equity ratio in the sphere of corporate finance in CMEs, the difference between CMEs and LMEs is still large.

Others have confirmed this view of institutional change in the face of globalization. When Germany for instance tried to strengthen the venture capital market through establishing the American-inspired “Neue Markt” stock exchange, the efforts failed and ended with the closing of the stock exchange. Some have argued that the reason was that capital markets were liberalized without similar changes in the labour market, and without more flexibility for both employers and employees opening up labour turnover, the liberalization of the stock market would not have its intended effect (Vitols and Engelhardt 2005). Similarly, German companies have been found to respond to challenges from globalization by expanding coordination in their industrial relations (Thelen 2001; Thelen 2003; Wood 2001).

But several studies have also shown a clear liberalization of German corporate governance, contrary to the varieties of capitalism theory (Buck et al. 2004; Höpner 2005; Jackson 2005). Will this move towards more liberal institutions be followed by similar moves in other spheres of the economy? Does this pose a threat to the CMEs? Or could this be an adaptation to common standards that actually does not matter for the comparative institutional strengths of Germany? The Hall and Gingerich coordination index does not gauge this change since the index is time invariant, but nevertheless this is an important question for understanding the viability of the different varieties of capitalism in the future.

The fundamental problem with the concept of institutional complementarities is that they are not necessarily equally important across the economy. Even if non-market strategic coordination in the spheres of industrial relations and corporate governance work together to promote incremental innovation, the machine tool sector seems more likely to gain from institutional complementary advantages than the software sector (Deeg 2005). With the varieties of capitalism theory in its current form, it is not clear between which spheres complementarities are largest, nor what changes that can be made to promote new types of production without jeopardizing the existing institutional structure. In the realm of corporate finance, for instance, more openness and transparency could as indicated by Hall and Soskice lead to more foreign investments, but this is impossible to test empirically based on the theory’s current framework. Further theory development on institutional complementarities could also better explain the possibilities for welfare systems in LMEs. Critics have perceived the varieties of capitalism theory as a source of legitimacy for anti-welfare policies with and societies with large inequalities (Blyth 2003; Pontusson 2005), but could certain social

adaptation be made also in LMEs without changing their fundamental strength for radical innovation?

Also, the historical background of comparative institutional advantage is widely ignored in Hall and Soskice's theory. Coordination is expected to continuously develop in the interaction between the different actors in the economy. But exactly how the process of institutional change takes place in Hall and Soskice's theory is not entirely clear. They expect companies to act according to established institutional structures, and that aggregated company behaviour thus gives an overall picture of the economy. But aggregates can hide important information about sectors, and this has led critics to argue that the varieties of capitalism theory is unable to explain institutional change (Jackson and Deeg 2006). Similarly, the current institutional designs have not always existed in the same form. For instance, the United States and United Kingdom both had significantly higher tax levels before 1980, and trade unions were previously a significantly stronger force in the economy<sup>2</sup> (Dore et al. 1999; Frieden 2006). In the same way, Germany and most of today's CMEs were in the previous golden age of globalization governed in a far more liberal manner than today. The German worker participation legislation, today one of the cornerstones of Germany as a coordinated market economy, was passed as late as in the 1970s. Was the United Kingdom before Margaret Thatcher still a LME, wasn't Roosevelt's "New Deal" really an attempt at non-market coordination, and has Germany always been a CME (Dore et al. 1999)?

The understanding of institutional complementarities and consequently the reactions to institutional change represents the most significant weakness of Hall and Soskice's theory. Still, faced with these criticisms, Hall and Soskice (2003) remain committed to coordination as the determining element of capitalist divergence. Ultimately, if Hall and Soskice's theory is right, MNCs should invest according to comparative institutional advantage. Before specifying the hypotheses to be tested, I will examine the how MNCs decide on where to investment, and empirical data on FDI.

## **2.3. MNCs and international production**

### **2.3.1. John Dunning's model of international production**

When a company wants to expand its operations abroad, it has several options. The easiest solution is to produce goods in its home country and export them to consumers in other

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<sup>2</sup> UK collective bargaining coverage rates have plummeted from 70 percent of the work force in 1980 to 30 percent in 2000 (Pontusson 2005: 99).

countries, while the second alternative is the licensing of production to companies in another country. Finally, foreign direct investment (FDI) takes place when a MNC actively acquires a company in another country in order to carry out the production itself (mergers & acquisitions), or by establishing a new local company (greenfield investment). FDI involves many challenges, such as cultural and language barriers, lack of knowledge of the local market relative to local producers, political risks and so on.

In international business studies and political economy, the ownership-location-internalization (OLI) model has been widely accepted as the leading framework for explaining decisions of international production by MNCs (Caves 1996; Dunning 1988; Moosa 2002; Spero and Hart 2003). Essentially, a MNCs exploits market failures. If all markets worked according to neoclassical trade theory, international trade and production would be done through arm's-length transactions. The model argues that a company needs specific advantages relatively to local firms in order to overcome the disadvantages foreigners inevitably have in foreign markets. In other words, the MNC must have a way of lowering transaction costs in the international market place.

Firstly, the firm needs to have a smarter way of doing things than local firms in the host country. This ownership advantage can be technology, managerial efficiency or market access. MNCs often develop efficient business organizations, and more often than not they have access to exclusive patented technology unavailable to domestic capitalists in the host country, such as the recipe of a drug, or custom-made machinery for producing cars.

Secondly, a further prerequisite for FDI is internalization advantages such as the ability to provide market access, or vertical internalization of the whole production process. The market for intermediate products often has certain uncertainties attached, leaving the firm vulnerable to change in prices or production decisions of other firms. In the oil industry, for instance, companies often own both crude production facilities and the refineries that produce the final products. Again, this implies some degree of market failure, since no internalization gains would exist with a perfect market in which everybody had access to all information and if there was perfect competition. In a perfect market companies would choose exports.

Finally, the country must be more profitable relative to other alternative locations for the investment. The most obvious location would of course be for the company to expand in its home country, where it already knows how the market functions and is familiar with cultural and legal codes. For FDI to take place, the host country needs localization advantages relative to the home country, but also towards other potential host countries. In the view of the convergence school, these advantages can be tax and wage levels, access to foreign markets,



easier labour regulations (OECD 2003; Spero and Hart 2001). In the varieties of capitalism view institutional coherence and comparative institutional advantages should provide location advantages.

For the Norwegian media company Schibsted, ownership and internalization advantages led it to focus on expanding operations abroad. Until 1996 it was purely a Norwegian enterprise that owned Norway's two largest newspapers, VG and Aftenposten, but in 1996 it acquired the Swedish newspaper Aftonbladet and embarked on a strategy of Scandinavian and eventually European expansion. With 35 percent of its 2005 revenue coming from online advertising, Schibsted is one of the media companies that have best adjusted to the challenges posed by the internet (Economist 2006a). According to its 2005 annual report, this business model is now one of Schibsted's core ownership advantages:

Our growth in Europe is based on two pillars. The first (...): export of established concepts from the Scandinavian markets. The second is just as important: export of expertise and the development of creative and flexible organizations (Schibsted 2006: 17).

These ownership advantages are best exploited through direct control over foreign companies, implying that Schibsted has certain internalisation advantages relative to exporting. In the media sector these are best exploited through direct ownership. The question remaining is to understand *where* Schibsted and other companies choose to expand.

For the purposes of this study, I assume that ownership and internalization advantages are constant. This could lead to important company-specific effects being overlooked, but it is nevertheless a necessary simplification, since the construct of the OLI model is so eclectic that all three advantages cannot be assessed at the same time. FDI is a widely used proxy for how investors evaluate the competitiveness of countries, and is often viewed as a pool flowing to the most attractive countries (Jakobsen and de Soysa 2006; Li and Resnick 2003; Oneal 1994).

### **2.3.2. Trends in foreign direct investment**

Figure 1 on page 5 showed how FDI inflows to OECD countries gradually increased from 1980 to 2003, and spiked from 1997-2001. This was the height of the dot-com bubble, when the considerable investments were also heavily influenced by a few spectacular cross-border acquisitions. In 2000, for instance, German FDI inflows reached 208 billion US dollars, more than the total inflow in the ten previous years, due to Vodafone's purchase of Mannesmann (Economist 2003: 177). While this signifies the potential volatility of FDI flows as an indicator, the general trend between 1981 and 2003 still shows a significant increase in the

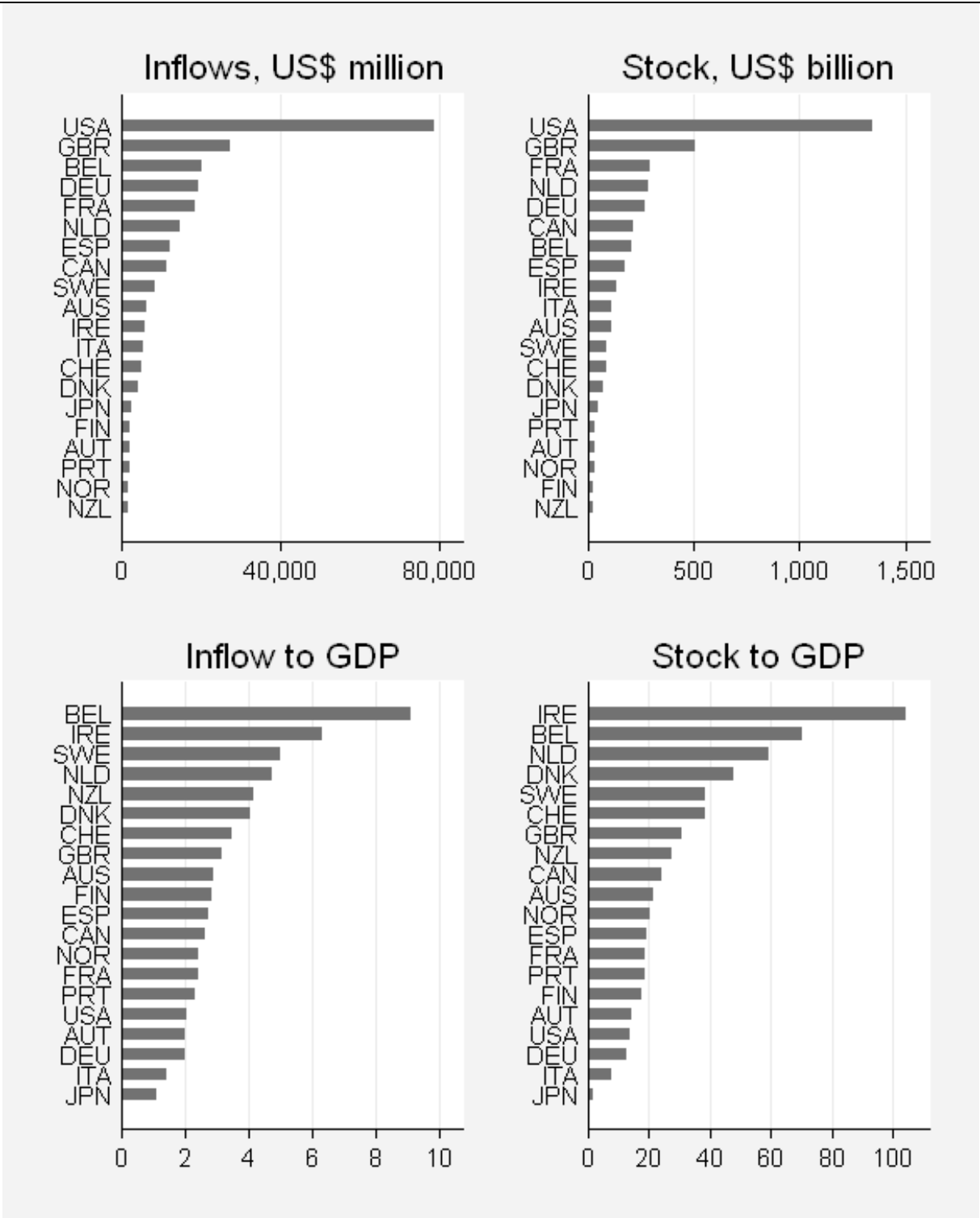
OECD. The 1980 average of 2.5 billion US dollars per country had in 2003 been multiplied by a factor of six, to almost 17 billion, and relative to GDP it tripled in the period. In the OECD countries most FDI now take place as mergers and acquisitions.

Simply put, FDI is an active choice from a firm situated in one country to invest in another, through the establishment of new production facilities or by acquiring an existing company. Contrary to portfolio investment or currency speculation, FDI is expected to have a longer perspective and be aimed at achieving control, and is defined as a 10 percent or larger purchase of a foreign company. Towards the end of the 1990s, 80 percent of world FDI was conducted between OECD countries. While this figure is decreasing due to the increasingly attractive opportunities in China and other emerging economies, the OECD countries still retain the lion's share of world investment (Caves 1996; Moosa 2002; Spero and Hart 2003).

Figure 5 on the next page shows that the United States is by far the largest host country in absolute dollars, with a 2003 FDI inward stock equal to the UK, France and Netherlands combined. The group averages for LMEs and CMEs are almost identical, (not shown here); CMEs on average had inflows of 2.2 percent of GDP during the 1981-2003 period, while LMEs attracted inflows of 2.5 percent relative to GDP. However, in terms of inward stock, which is a measure of total foreign ownership in an economy, there are larger differences. In CMEs the inward stock to GDP ratio in 2001 was 15 percent on average, while it was 40 percent in the LMEs. Many CMEs such as Belgium, Sweden, Denmark and the Netherlands attract relatively large sums of investments to their size, second only to Ireland among the LMEs.

Ireland experienced high growth rates throughout the 1990s, and attracted sizable amounts of FDI relative to GDP. This is often attributed to Ireland's open access to EU markets, and its geographic position that makes it a natural location for US companies expanding to Europe. Traditional accounts also emphasize the favourable corporate tax regime in Ireland (Economist 2003; Oman 2000). Japan, on the other hand, has the lowest flows and stocks of foreign investment relative to its size in the OECD. On average in the 1980-2003 period, annual FDI inflows amounted to only 0.1 percent of GDP (figure 5 next page). While officially welcoming FDI, there are numerous barriers to foreign investment in Japan, and formal restrictions are among the highest in the OECD (table 4, page 30).

Figure 5. FDI inward flows and stock, OECD



Sources: UNCTAD (2007a) and World Bank (2007). Note: FDI inward flow are 1981-2003 averages, inward stock is from 2001.

How do the two prime examples of LMEs and CMEs respectively perform – USA and Germany? Both have large inward flows and stock in absolute dollars, with the US on the top of the list due to its large economy. Relative to GDP they are quite similar, both at the bottom end of the scale. Germany has less formal restrictions on investment than the United States, but has an industrial culture somewhat sceptical to hostile takeovers. In 2000 this became clear with the battle for phone company Mannesmann, eventually acquired by the British company Vodafone (BBC News 2000). The leading foreign investors in Germany are the US, the UK, Netherlands and France, and like other OECD countries the largest share of investments is in mergers & acquisitions (Economist 2003: 177). Table 3 below reports the five principal mergers & acquisitions in Germany in 2002, and the telecom sector attracted the largest through the US investment in America Online Europe.

The US similarly retains scepticism towards FDI inflows in particular sectors, including infrastructure deemed important to national security. These include port facilities, where a Dubai-based company eventually was forced into withdrawing its bid for a New York port operator (BBC News 2006). While the US remains the most profiled location for FDI, often attributed to its business-friendly environment and long-term political stability (Spero and Hart 2003), the relative position of foreigners in the American economy is towards the bottom of the OECD with total FDI inward stock amounting to only 13 percent of GDP. British investors own the largest share of US FDI stock, followed by Japan and the

**Table 3. Top five mergers & acquisitions in the US and Germany, 2002**

<i>Target company</i>	<i>Investing company</i>	<i>Investing country</i>	<i>Value of deal US \$ bn</i>	<i>Sector</i>
<b>United States</b>				
Niagara Mohawk Holdings Inc.	National Grid Transco	GBR	8.3	Utilities
Miller Brewing Co.	SAB	South Africa	5.6	Brewing
Texaco Refining & Marketing	Royal Dutch Petroleum	NLD	3.9	Energy
Bcom3	Publicis	FRA	3.2	Advertising
Zomba Music Group	Bertelsmann AG	DEU	2.7	Broadcasting
<b>Germany</b>				
AOL Europe	AOL Time Warner	USA	6.6	Telecoms
Reemtsma Cigaretten	Imperial Tobacco Group	GBR	4.6	Tobacco
Deutsche Bank's Us leasing business	General Electric Co.	USA	2.9	Financial services
VAW Aluminium AG	Norsk Hydro ASA	NOR	2.8	Metals
Veba Oel AG	British Petroleum	GBR	2.6	Energy

*Source: (Economist 2003: 142-144)*

Netherlands (Economist 2003: 163). The largest 2002 M&A in the United States took place in the public utilities sector, when British firm National Grid, the world largest independent electricity transfer company, acquired Niagara Mohawk for 8.3 billion US \$ (Public Utility Law Project 2000).

### **2.3.3. Effects of FDI on host economies**

The exact role of MNCs in the world economy is not clear and the debate is often dominated by polemics. Traditionally, sceptics of globalization believe that MNCs are the manifestation of an exploitative capitalist system, while optimists view them as efficiency-enhancing vehicles that increase welfare (de Soysa 2003). Often, FDI is feared since it implies loss of national control over industries. In Hall and Soskice's (2001) view, large MNCs are often the most vocal defenders of a country's institutional structure, since they benefit greatly from the comparative institutional advantages generated by the system.

Bloningen and Wang (2005) pointed out that the effects of FDI are most likely different in developing and developed countries. In developed countries, the area of interest here, there seems to be some consensus that FDI can increase productivity, either through technology transfer or through boosting domestic competition (Caves 1996; Moosa 2002). The OECD argues that FDI is an "important driver" of economic growth (2003: 157). At the very least, according to Lipsey (2000), FDI puts resources to their optimal use, since the very existence of MNCs proves that they are more efficient than domestic capitalists.

However, it could be argued that LMEs are more dependent on FDI than CMEs, since they are more reliant on market coordination to secure competitiveness. In CMEs, the strengthened product market competition from foreign investment could be replaced with discipline in relational networks. Yet table 4 on the next page shows that CME countries are not more hostile to FDI than LMEs. Formal restrictions<sup>3</sup> to FDI for both LMEs and CMEs have been sharply reduced since 1980. Formal restrictions to FDI actually are slightly higher

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<sup>3</sup> The FDI restrictions indicator includes: (1) foreign equity limits, where national law creates a maximum limit for the amount of stocks in a company that can be owned by foreigners. They are common in sensitive sectors such as transportation, telecommunications, and energy; (2) mandatory screening of investment forcing investors to present evidence that their investment will bring economic benefits; (3) formal notification requirements in the absence of screening that also have a negative signalling effect; and (4) other restrictions include limitations on the ability of foreign nationals to work in the affiliate, reducing the investor's degree of control over investments (Golub 2003).

**Table 4. FDI restrictions over time**

	1980	1990	2000
<b>CME</b>	<b>0.363</b>	<b>0.288</b>	<b>0.146</b>
AUT	0.432	0.432	0.268
BEL	0.291	0.291	0.091
CHE	0.306	0.278	0.172
DNK	0.246	0.161	0.087
ESP	0.336	0.230	0.165
FIN	0.521	0.463	0.177
FRA	0.487	0.233	0.111
DEU	0.181	0.174	0.084
ITA	0.264	0.264	0.097
JPN	0.251	0.237	0.230
NLD	0.264	0.243	0.083
NOR	0.510	0.466	0.182
PRT	0.569	0.223	0.157
SWE	0.429	0.335	0.140
<b>LME</b>	<b>0.345</b>	<b>0.256</b>	<b>0.186</b>
AUS	0.460	0.332	0.270
CAN	0.484	0.379	0.352
GBR	0.215	0.167	0.064
IRE	0.345	0.250	0.074
NZL	0.396	0.237	0.189
USA	0.171	0.170	0.169

*Source: Golub (2003: 105)*

in LMEs, and that the United States has higher protection than the CME average, while CMEs on average have reduced barriers more than the LMEs since 1980s. The restrictions to FDI are uncorrelated with the Hall and Gingerich' coordination index ( $r=-0.1$ ), confirming that there is no systematic pattern that more coordinated countries have higher levels of protection. These figures are averages, however, and sector effects could still be masked by these averages. In addition, the index does not include particular corporate practises and heavy reliance on informal networks that keep foreigners out, which arguably could be higher in CMEs.

It should also be noted that many countries with low FDI flows relative to GDP still achieve sound macro-economic performance. The United States for example recorded annual FDI flows averaging only 2 percent to GDP, but is still the richest country in terms of GDP per capita. The exact relationship between FDI and satisfactory economic performance is not straightforward. Unfortunately, considering this question in detail is a thesis in its own right,

and I will stop short of assessing exactly how much and how important FDI is to national economies. In any case FDI indicates how MNCs assess a country's competitiveness. Thus, this study contends that FDI has a positive effect on productivity in both LMEs and CMEs, and, if foreign investors systematically disfavour a country, this could pose a long-term challenge to sound economic performance.

## **2.4. How MNCs respond to varieties of capitalism**

Hall and Soskice established coordination between companies and other actors in the economy as the differentiating factor between capitalist economies. When relations are coordinated in the same manner across the economy, this is assumed to increase the country's comparative institutional advantages and consequently its economic performance. MNCs invest abroad because they have particular advantages, and in the process they search for the most profitable location for their production. Thus, MNCs are expected to respond to the varieties of capitalism theory.

When discussing how globalization and international division of labour relates to the varieties of capitalism theory, David Soskice argued that "comparative institutional advantages are important in decision making, and they weaken the argument that MNCs bring pressure to bear on governments to deregulate" (Soskice 1999: 118). Similarly, he and Peter Hall argued when in a 2003 exchange with critics that:

(...) we expect firms in liberal market economies to be relatively better at radical innovation and firms in coordinated market economies to be better at incremental innovation, and companies with international reach should shift some of their activities across national borders in order to benefit from these comparative institutional advantages (Hall and Soskice 2003: 248).

This helps to explain "why Nissan locates design facilities in California, Deutsche Bank acquires subsidiaries in Chicago and London, and German pharmaceutical firms open research labs in the United States", and similarly why "General Motors locates its engine plant in Düsseldorf rather than in Spain" (Hall and Soskice 2001: 57). Thus, faced with increasing trade and investment, countries should specialize in production where they have comparative institutional advantages, and MNCs in turn should organize their production in order to reap these benefits.

Hall and Soskice also admitted that LMEs could be favoured by MNCs on the grounds that investors, "lacking the facilities to monitor the progress of a company closely, usually prefer to supply capital on arm's-length terms that emphasize transparent, balance-sheet criteria" (2001: 60). But if this reservation is true, it represents a fundamental challenge to the

varieties of capitalism theory. If meaningful different comparative institutional advantages exist in different countries, then the profit-maximizing forces of MNCs would be expected to exploit them, never mind if it is slightly more difficult in CMEs. The theory's soundness will be revealed by the following empirical tests.

#### **2.4.1. Institutional coherence and FDI**

First I will look at aggregated FDI. Institutionally coherent countries on the LME and CME side should be more specialized in their comparative institutional advantages, and consequently more attractive to MNCs. This should apply both from year to year (FDI inflows), and over time (FDI inward stock). If assumed that FDI flows in equal amounts to all sectors, i.e. to sectors depending on both incremental and radical innovation, the most institutionally coherent countries should be most attractive<sup>4</sup>.

In a study similar to the present one, Ham and Kleiner (2007) examined how multinationals are influenced by different levels of industrial relations. They found that countries with low levels (i.e. high employment protection and collective bargaining) attracted more FDI investments than countries with high levels of industrial relations. At the same time they found some signs of a curvilinear effect, suggesting that countries with extensive industrial relations attract relatively more than countries in the middle. This is exactly the finding expected by Hall and Soskice's theory, even though Ham and Kleiner used an index consisting of industrial relations only, and did not address the varieties of capitalism theory specifically. Still, in their main conclusion, Ham and Kleiner resort to the trade-off between equality and efficiency, and conclude that even if more liberal industrial relations are more attractive to FDI, this does not necessarily mean that more CMEs should rush out to liberalize their economies.

Figure 6 on the next page shows a simple plot with average FDI to GDP ratios on the vertical axis, the Hall-Gingerich coordination index running on the horizontal axis, and two regression plot lines also included. There seems to be a certain curvilinear connection in the data, but the inverse U-curve is completely opposite to theory. The figure indicates that intermediate countries are more attractive to FDI, and the extremes on the coordination index score among the lowest values. But controlled for other factors known to influence FDI, the results could still change.

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<sup>4</sup> This is a similar assumption to the one made by Hall and Gingerich (2004) when testing the varieties of capitalism theory on aggregate growth rates. A necessary assumption for using aggregate data is that incremental innovation and radical innovation in total are equally important.



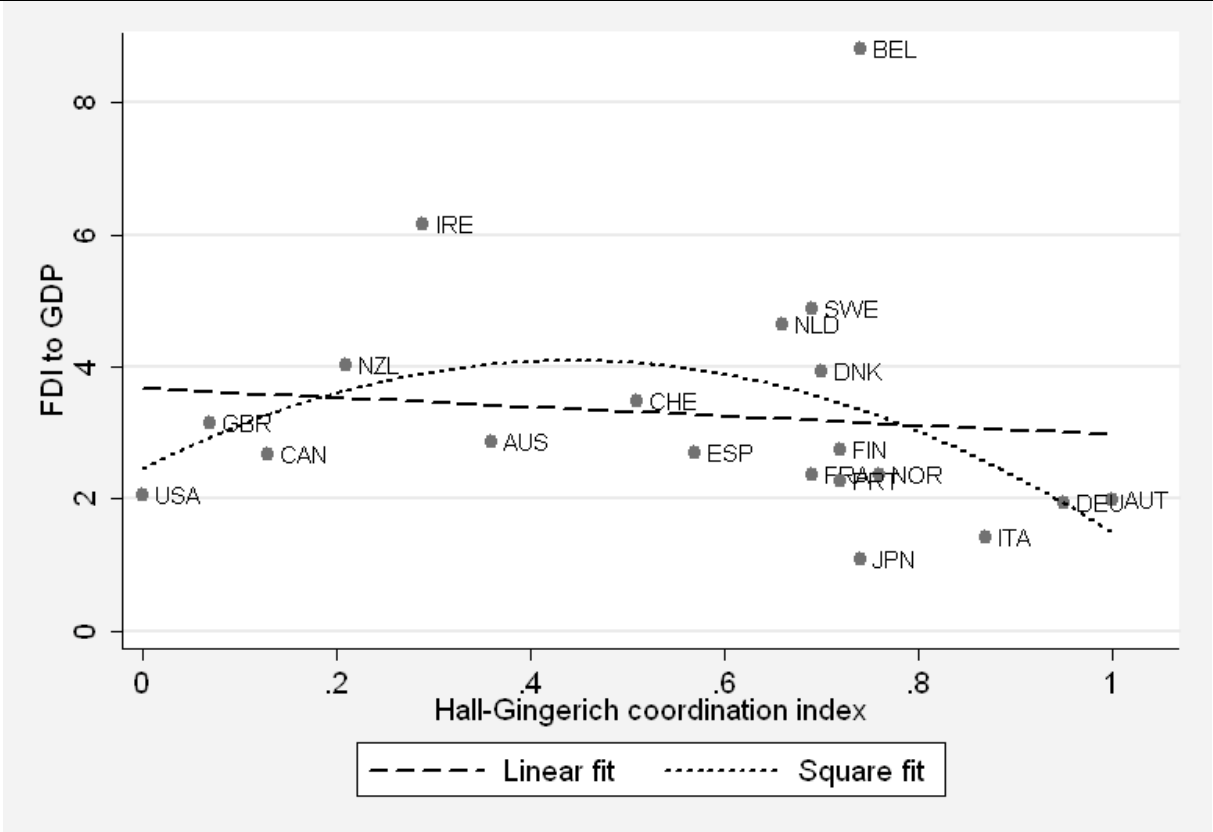
*Hypothesis 1: FDI inward flows are higher in countries where the economy is coherently coordinated.*

*Hypothesis 2: FDI inward stock is higher in countries where the economy is coherently coordinated.*

I also include two control hypotheses. First, neoclassical theory assumes a linear relationship between coordination and FDI, arguing that more coordination outside of the market will lead to loss of efficiency. Therefore, higher levels of coordination are expected to lead to lower FDI inflows and stock. A prerequisite for this analysis, however, is that the Hall-Gingerich coordination index actually is an accurate measure of non-market coordination.

Secondly, in figure 1 on page 5 it was observed that coordinated countries as a group actually attracted more FDI relative to GDP than liberal ones. To test the group average I will include dummy variables for CME and LME countries, and see if liberal countries actually are better off as a group when controlled for other factors.

**Figure 6. FDI to GDP and coordination index, fitted lines, 1981-2003 averages**



Sources: Hall and Gingerich (2004), UNCTAD (2007a), World Bank (2007).

*Hypothesis 3: FDI inward flows and inward stock decreases with higher coordination scores.*

*Hypothesis 4: FDI inward flows and inward stock are higher in LMEs as a group.*

#### **2.4.2. Comparative institutional advantages in industry sectors**

In order to expand the robustness of the analysis, this study will also look at data for particular industrial sectors. Hall and Soskice (2001: 39) specify the respective sectors where LMEs and CMEs have their comparative institutional advantages. Incremental innovation is seen as important to maintain competitiveness in production of capital goods such as machine tools, factory equipment, consumer durables, engines, and specialized transport equipment. Consequently, CMEs have comparative institutional advantages for these kinds of production. With patent statistics from the United States and Germany, Hall and Soskice confirm this relative strength (ibid: 42-43).

Soskice (1999) also provides data showing that CMEs are far more internationally competitive in mechanical manufacturing than LMEs, while the reverse is true in services. Table 5 on the next page reveals that Germany, Italy, Switzerland and Sweden all have more competitive mechanics industries than the UK and US. Competitiveness is here defined as when total exports from the industry are higher than the country's aggregate export share. Mechanical industries require a relatively complex production process, where gains in competitiveness come from strong industrial relations, long-term finances and vocational training schemes. On the other hand, the service sectors are strongholds for LMEs. Here the trend is even clearer, with the US having 44 service industry sectors that export higher than the national average. Services include advertising, international banking, investment banking, consultancies, software development and others (Soskice 1999: 114).

In a similar study, Allen et al. (2006) looked at how OECD trade statistics related to comparative institutional advantages. Generally, they found support for Hall and Soskice's theory. In non-electrical machinery, the CME countries have relatively stronger export position than OECD countries in general. The top five in terms of relative export strength in this sector are Germany, Italy, Japan, Switzerland and Austria. The only LME among the top 10 non-electrical machinery exporters is the US. On pharmaceutical production and computers, on the other hand, the LMEs rank highest. But some countries that perform well in sectors despite comparative disadvantage. This leads Allen et al. to suggest that "whilst, in a large number of sectors it may be true that either radical or incremental innovators will be the

**Table 5. Number of internationally competitive industries by sectors**

	<i>Machinery</i>	<i>Services</i>	<i>Non-electrical machinery</i>	<i>Pharmaceuticals</i>
Germany	46	7	258	16
Switzerland	35	14	166	23
Sweden	28	9	144	8
Italy	45	5	248	15
United Kingdom	18	27	99	20
United States	17	44	156	22

*Sources: Soskice 1999: 113-114 (cols. 1 and 2); Allen et al. 2006: 10-12*

most successful, it may not hold for others. (...) Both radical and incremental innovators can succeed within the same market” (2006: 14). These remarks are similar to the discussion above on institutional complementarities and the fact that they are not necessary equal across the economy.

This study builds on these insights in order to create a regression model to test comparative institutional advantages. The OECD (2006) provides data for FDI inflows split by industry sectors. Unfortunately, this dataset generally have many missing cases, since governments historically have recorded FDI in different ways. Four theoretically meaningful sectors have enough observations to be able to run meaningful analysis testing the varieties of capitalism theory; these are manufacturing, mechanics, services and financial services. The inflow ratios in these sectors relative to economy size are reported in figures 7 and 8 below. Countries with high levels of FDI inflows relative to GDP also tend to have large inflows in the industry sector data. Figure 7 on the next page shows that inflows to the mechanical sector are quite small. For this indicator almost 50 percent of observations are missing, which calls for prudence in the analyses. Comfortingly, since the mean value of the coordination index does not change in the different samples, missing cases appear to be distributed randomly across LMEs and CMEs.

CMEs are expected to have comparative institutional advantages in manufacturing. But since this is a large category it could possibly be including some kinds of production for which CMEs have no advantage. In order to test even more specifically, I also look at FDI into mechanics, where the comparative institutional advantages in incremental innovation according to theory are beyond doubt.

*Hypothesis 5: FDI in manufacturing is higher in CMEs.*

*Hypothesis 6: FDI in mechanics is higher in CMEs.*

Service and financial services sectors are based on radical innovation and should therefore be the stronghold of LMEs (Hall and Soskice 2001: 39). Due to the broad nature of the service sector, this could lead to the inclusion of sectors where the radical innovation is not necessarily the source of competitiveness. This is avoided by looking specifically at financial services.

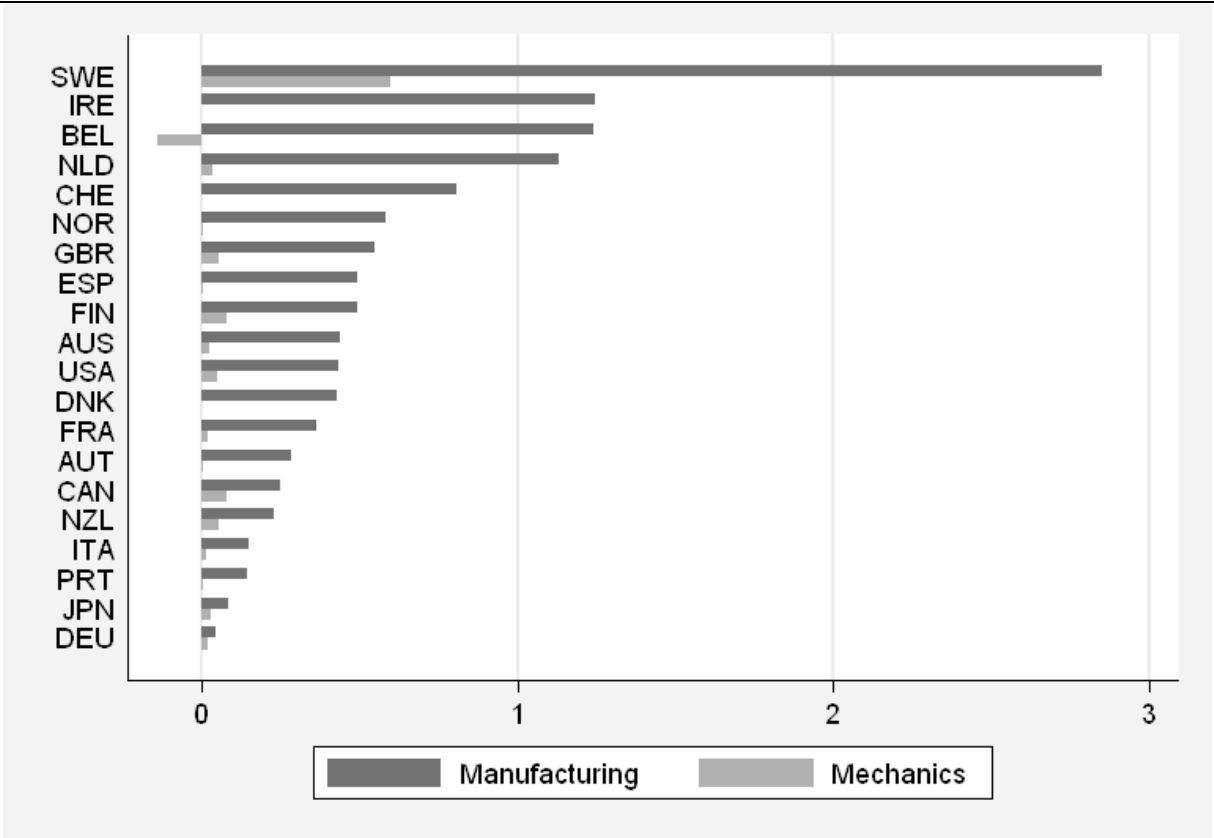
*Hypothesis 7: FDI in services is higher in LMEs.*

*Hypothesis 8: FDI in financial services is higher in LMEs.*

**2.4.3. US outflows**

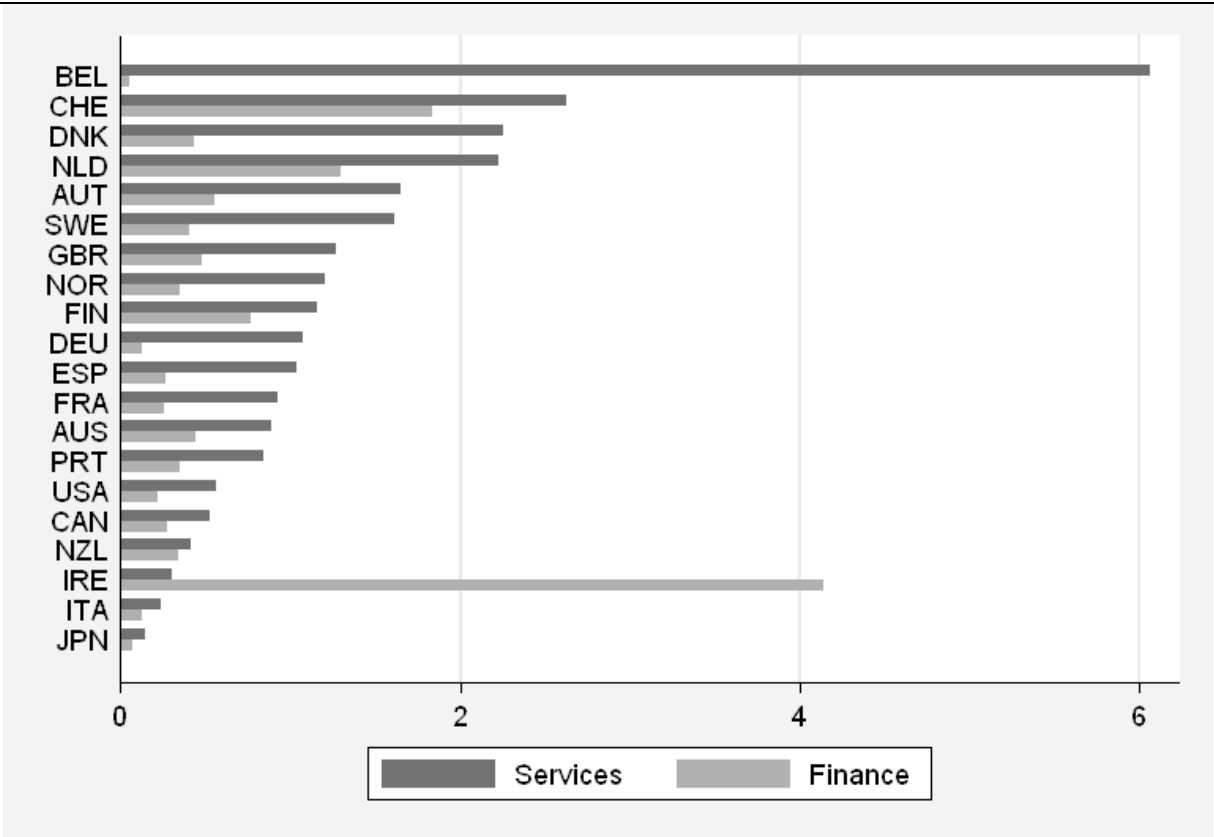
In order to control for possible diverging accounting standards and the large number of missing cases in the OECD data on industrial sectors, this study finally considers US outward direct investment statistics. By using US data only, collection and specification problems

**Figure 7. FDI in manufacturing and mechanics by GDP, 1981-2003 averages**



Sources: OECD (2005) and World Bank (2007).

**Figure 8. FDI in services and finance by GDP, 1981-2003 averages**



Sources: OECD (2005) and World Bank (2007).

should be avoided. Until 1998, the United States recorded all outward investment based on the Standard Industrial Classification system (SIC), in groups such as manufacturing, machines, services and finance, similar to the OECD (BEA 2007b).

When using the US data only, it must be kept in mind that all MNCs in question are based in a LME. Since they according to theory are built on a comparative institutional advantage for radical innovation, they could have a natural bias towards LMEs. Indeed, Canada and the United Kingdom are the two largest recipients of outward US FDI. Still, this study assumes that MNCs are international entities that pick the institutional background that best suits their particular production needs, and that FDI takes place in equal amounts in radical and incremental innovation.

*Hypothesis 9: FDI outward flows from the US to other OECD countries are expected to flow similarly to H5-H8.*

#### **2.4.4. Other determinants of FDI**

In this section previous findings on FDI determinants unrelated to Hall and Soskice's theory and the coordination index will be discussed, based on Ham and Kleiner (2007) and other similar studies (de Soysa 2003; Jakobsen and de Soysa 2006; Lipsey 2000). These control variables include standard macroeconomic indicators such as GDP, growth, wealth and previous levels of foreign investment. Other effects such as language and trade barriers will also be discussed (Caves 1996; Economist 2003; Jakobsen and de Soysa 2006; Li and Resnick 2003; OECD 2003; Oman 2000).

Firstly, there is a close link between previous experiences with FDI and annual FDI flows (Lipsey 2000; Moosa 2002). Previous high levels of FDI suggest that there are many existing relations and networks working to reduce the risk connected with investments (Bandelj 2002). It is easier to follow into countries where others have already invested.

Secondly, all LME countries as defined by Hall and Soskice have English as first language, while all English-speakers are also LMEs. This could possibly present a specification problem if the coordination index and English language are both measuring the same variance, leading to perfect correlation that will halt the analysis. There is also some theoretical support for why FDI would prefer English-speaking countries, since remote languages have turned out to have a negative influence on inflows (Caves 1996). The point was undiplomatically made by the French leader of the European Business Lobby UNICE, Ernest-Antoine Seillière, when he started his address to a summit of the 25 European Union heads of government: "I'm going to speak in English because that is the language of business" (Browne 2006). While this prompted French president Jacques Chirac to leave the meeting in protest, the statement put its finger on a basic fact known in the business community. To test for an independent effect of English language outside of the coordination index, I include a dummy variable for English as first language.

Previous studies also point to relevance of free-trade areas, and in particular it is clear that European integration has heavily influenced the development of FDI in European countries (Caves 1996). At the same time this could also have prompted others to invest in Europe, due to the tariff barriers discussed above. Similarly, the North American Free Trade Area (NAFTA) significantly increased investment opportunities between the US and Canada. But in my sample only Norway and Japan are not members of either EU or NAFTA, and Norway enjoys access to the European single market through the European Economic Area agreement. The motivations discussed here are thus most applicable to Japan, and will therefore instead be analyzed by testing with a dummy variable for Japan.

Also, it is widely established that much FDI is directed at avoiding trade barriers, such as high tariffs on particular kinds of production (Caves 1993; Caves 1996; Moosa 2002). This implies that MNCs for example locate automobile manufacturing plants in the US despite its status as a LME, in order to avoid import restrictions and tariffs to the US market. Unfortunately, it is difficult to quantify these trade-avoiding investments in a cross-country model. It can be argued that some of the effect is caught by GDP, since the larger the size of the economy, the larger the incentive to install production that goes against the host country comparative institutional advantages. Some of this effect is also captured by formal restrictions to FDI, which is a relatively good indicator of the openness of a country.

Finally, using an OECD sample opens for the omission of other variables. One of these, political instability, clearly has a negative impact on investments, but the whole sample enjoys and has enjoyed strong democratic governance throughout the period. In terms of other human capital indicators, such as high levels of education, health, and physical infrastructure such as roads, railroads, telecommunications systems and energy supply, they are quite similar that they can be held as constant in this study. In other words, the OECD sample allows me to control for a host of factors explaining FDI (Bloningen and Wang 2005).

#### **2.4.5. Reverse causality?**

This study assumes that FDI is determined by the variables discussed above. However, it is also possible that the causal relation can go both ways. Indeed, FDI often leads to increased growth and consequently to higher levels of GDP and GDP per capita (Moosa 2002). Recent changes in corporate governance in CMEs is likely to have been influenced by the globalization of trade and investments, implying that FDI also theoretically could have a causal effect on a country's level of coordination. However, since the main independent variable (coordination) in this study does not vary over time, it should not gauge any reverse causality on coordination scores as FDI flows have increased over time. For the purposes of this study it is assumed that the independent variables influence the dependent variable, not the other way around.

#### **2.4.6. Summary of hypotheses**

In table 6 on the next page the hypothesis in this study are summarized. In the proceeding section the precise operationalization from theory to data will be presented in further details.

**Table 6. Summary of hypotheses**

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	<i>Hypothesis</i>
H1	FDI inward flows are higher in countries where the economy is coherently coordinated.
H2	FDI inward stock is higher in countries where the economy is coherently coordinated.
H3	FDI inward flows and inward stock decreases with higher coordination scores.
H4	FDI inward flows and inward stock are higher in LME as a group.
H5	FDI inward flows in manufacturing are higher in CMEs.
H6	FDI inward flows in mechanics are higher in CMEs.
H7	FDI inward flows in services are higher in LME.
H8	FDI inward flows in financial services are higher in LME.
H9	FDI outward flows from the US to other OECD countries are expected to flow similarly to H4-H7.

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## 3. Research design and data

### 3.1. Choice of methodology

Broadly speaking there are two methodological traditions in social sciences, built on fundamental differences in ontology, epistemology and methodology. Naturalist studies believe that there is a “real world” out there, and that the role of science is to identify patterns that exist objectively of human beings. Constructivist studies, on the other hand, believe that human beings inevitably take part in construction of the phenomena we observe, and that the role of science is limited to identify socially constructed patterns and regularities of the world (Moses and Knutsen 2007). Both approaches have their strength and weaknesses, and the appropriate methodology should be chosen depending on the intentions of the researcher and the topic at hand.

In general terms, neoclassical economic theory is naturalistic, while the governed interdependence approach is more inspired by constructivism (North 1990; Reinert 2006). But as noted above, Hall and Soskice have tried to establish a parsimonious theory closing down on one central dimension in order to distinguish one system of economic governance from another: the extent of non-market coordination. While the varieties of capitalism theory has informed studies based on both naturalist and constructivist methodologies, the authors themselves rely on a naturalist, statistical method to confirm their central claim that LMEs and CMEs perform equally well (Hall and Soskice 2001; Hall and Gingerich 2004). The chosen naturalist approach assumes that there are CMEs and LMEs “out there” that are distinguishable along a scale of coordination.

Consequently, this study is also built on a naturalist approach. Also, if coordination is *the* differentiating feature between countries, this should be equally true for all countries. A theory or a statement is true, Karl Popper argued, “if what it says corresponds to reality” (cited in Moses and Knutsen 2007: 29). A large-n statistical cross-country approach allows us to test if the varieties of capitalism theory corresponds with the reality, and at the same time avoiding the bias that inevitably comes with case and small-n studies. Critics have argued that a naturalist approach can be too simplifying to assess the differences between capitalist nations, since “there is reason to be sceptical about the veracity of empirical findings that appear to support linkages between aggregated concepts such as these and aggregated outcomes such as growth, employment and inflation” (Kenworthy 2006: 86). But this can be a

price worth paying for parsimony. Ultimately the empirical record of the varieties of capitalism decides whether it is sensible.

This study will be limited to a 20 OECD countries for two reasons. Firstly, the main independent variable, Hall and Gingerich' coordination index, is only available for these countries. Secondly, there are strong theoretical reasons to limit studies of foreign direct investment (FDI) to either rich or poor countries, since the effects are mechanisms at work are different (Bloningen and Wang 2005). The small sample size creates potentially large weights for each country, but fortunately, the time-series approach increases the number of observations and thereby increases the validity of the findings.

Inevitably, the choice of naturalist methodology and particularly regression analysis as in this study involves the loss of valuable details. Some scholars of comparative political economy have showed that strict reliance on regression can lead to flawed conclusions (Shalev 2006). Therefore I will follow the Kenworthy's (2007) advice and supplement the regression analyses with two-way graphic plots, data tables, and take the reader through all the steps of the analyses. Nevertheless, this study joins many in testing the effect of social variables on aggregate outcomes in a cross-country sample (de Soysa 2003; Hall and Gingerich 2004; Hall and Soskice 2001; Jakobsen and de Soysa 2006; Kenworthy 2006; Li and Resnick 2003), and with reservations in mind, I move on to discuss the particular demands of the method applied here, ordinary least squares (OLS) regression analysis, and the data in question.

### **3.2. Method: OLS regression**

To estimate the relative effect of a set of independent variables and the dependent variable, this study will use ordinary least square (OLS) regression. Based on the data submitted in the model, OLS estimates the parameters of each variable while controlling for the effect of other variables. For this prediction to be reliable, however, three basic assumptions must be met: Standard errors with a mean value of zero, constant variance of errors (homoscedasticity), and uncorrelated errors (no autocorrelation) (Hamilton 1992: 110-111).

With time-series cross-sectional data, such as in the present study, both temporal and spatial autocorrelation is frequently a problem. Values for one year are often highly correlated with the value of the year before, and some times the values of observation A is correlated with observation B. While there is little reason for expecting that Norway's score correlates with that of Spain in this study, the question of temporal autocorrelation still needs to be addressed. I will therefore rely on Newey-West standard errors estimations that control for

autocorrelation. Here the error distribution is assumed to be heteroskedastic, and robust standard errors are applied while correcting for first order autocorrelation (Gerring et al. 2005: 575). In contrast to standard OLS regression, the Newey-West technique reduces the weight of influential cases (Hamilton 2004: 256).

Since there is no general consensus of what method is the best, this study will in addition run the analyses with clustered regression and panel-corrected standard error (PCSE) estimation techniques (Gerring et al. 2005; Jakobsen and de Soysa 2006). The former assumes that errors are correlated within the data for each country, which is plausible in our sample (Hamilton 2004). Coefficients and explained variance ( $R^2$ ) are equal for robust regression and Newey-West; the difference lies in how the standard errors are computed and thus the significance levels. PCSE, on the other hand, assumes that errors are correlated across panels (Stata 2007). If not otherwise reported, regressions tables are reported with Newey-West standard errors.

It is further a necessary requirement that there is a causal connection between the independent variables and the dependent variable, in order to avoid spurious results. In particular a common question in political economy is whether there could be reverse causality, where the dependent variable has a causal effect on the independent variables. Through my theoretical discussion of globalization in general and varieties of capitalism in particular, I have argued that it makes sense theoretically to use FDI inflows as an indicator of how international investors perceive the competitiveness of different countries. This is a central point of possible criticism on which the reader must make his own judgments.

Additionally, the correlation between the independent variables must be under a certain tolerance level, since high correlation will cause multicollinearity problems halting the estimations. As discussed above, the fact that all English-speakers are liberal market economies (LMEs) could pose a problem to the model. By including a dummy variable for English-speaking countries, and testing the variance inflation factors (VIF), potential multicollinearity can be revealed (Hamilton 2004).

Finally, there could in some cases be theoretical reasons to omit observations from the analysis. Omissions can be a helpful tool in sensitivity analysis, but if variables are to be omitted from the final analysis the theoretical reasons must be compelling. This will be further discussed in the next chapter.

### **3.3. Operationalization**

#### **3.3.1. Dependent variables**

FDI data is principally collected by national governments. The United Nations Conference on Trade and Development (UNCTAD) retains the most updated database collection of these, dating back to 1970. FDI is here defined as

an investment involving a long-term relationship and reflecting a lasting interest and control by a resident entity in one economy (foreign direct investor or parent enterprise) in an enterprise resident in an economy other than that of the foreign direct investor (FDI enterprise or affiliate enterprise or foreign affiliate) (UNCTAD 2007b: 293).

The OECD (1996: 8) further defines FDI as the acquisition of 10 percent or more of a foreign company. In theory, all FDI inflows must be recorded as FDI outflow in another country, but on a global level these figures are not completely equal. This signals possibilities of errors and discrepancies between national accounting systems, but errors are so small that they are ignored by most studies. It is reasonable to believe that the available data provides a realistic and reliable report on FDI (Economist 2006b; UNCTAD 2007b).

FDI as inward flow and inward stock data is available in current US dollars for all 20 OECD countries across the time period. One exception is Belgium, where data until 2001 is for Belgium and Luxembourg together. In order to secure that the same collection methods apply, Belgium is set to missing in 2002 and 2003.

The FDI data can be altered and combined with other indicators depending on the purposes and theoretical foundation of the study. Not surprisingly, the indicator of choosing can substantively alter the results, since there are both theoretical and substantial differences between the different FDI indicators (Hafner-Burton 2005). By using the FDI to GDP indicator, problems with heteroscedasticity can be reduced since the variation and heavy bias in the sample is reduced (Bognanno et al. 2005). Therefore I have created an FDI to GDP variable, using data from the World Development Indicators (World Bank 2007). GDP data is transformed to US dollars based on purchasing power parity (PPP), in order to have comparable figures of the actual strength of the economy. The FDI to GDP variable turned out to be heavily skewed, since many countries in the sample enjoy ratios around 2-3 per cent. To avoid this specification problem I perform a logarithmic transformation of the FDI to GDP variable, which normalizes the variable.

Nevertheless, due to the lack of consensus on what indicator to use, this study will test both the FDI inflows in crude dollar terms, and relative to GDP. The benefit of using the dollar data is that this treats all FDI as a pool that flows to the countries where the conditions

are most favourable. The distribution of FDI inward flow is heavily skewed, and a logarithmic transformation is therefore needed.

As discussed in theory, FDI inflows can vary significantly from year to year. In 2000, Germany recorded more FDI than the previous 10 years (Economist 2003). This volatility in FDI data is avoided when using FDI inward stock, also recorded by UNCTAD (2007a). FDI stock is defined as "the value of the share of their capital and reserves (including retained profits) attributable to the parent enterprise, plus the net indebtedness of affiliates to the parent enterprise" (UNCTAD 2007b: 294). In other words, FDI stock records the amount of foreign ownership in an economy. In order to test hypothesis 2 discussed above it is assumed that foreigners over time have invested in equal amounts in the respective sectors of competitive advantage for both the liberal (LMEs) and coordinated market economies (CMEs). There are no theoretical reasons why this assumption should not be equally valid to FDI inward stock as for FDI inflows.

In order to avoid this assumption, sector-wise FDI data has been downloaded from OECD (2006). The aggregate OECD FDI data are practically equal to the UNCTAD data ( $r=.99$  correlation<sup>5</sup>), but the sector-data are of a much less comprehensive nature, with missing values for 30 percent of the cases involved in the analysis. The countries where large sections of data are missing are the following: Australia, Belgium, Canada, Switzerland, Ireland, Norway, New Zealand, Portugal and Sweden. The results and analysis thus need to be treated with caution, but it is nevertheless possible to distinguish certain sectors where the number of missing cases is lower, where it is possible to run regression analysis. These are manufacturing, mechanics, finance and services. Since the most theoretically interesting indicator is the relative position of FDI in an economy, the FDI sector data is averaged by GDP using purchasing power parity. The observations are heavily skewed, but this specification issue is avoided by performing logarithmic transformations.

Manufacturing data include the following sectors: Food products; textile and wood activities; petroleum, chemical, rubber and plastic products; metal and mechanical products; office machinery, computers, radio, TV and communication equipment; vehicles and other transport equipment. Services include: electricity, gas and water; construction; trade and repairs; hotels and restaurants; transport and communication; financial activities, monetary institutions, other financial institutions; insurance and activities auxiliary to insurance; real estate and business services; other services (OECD 2005: 437). The OECD statistics are based

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<sup>5</sup> Table A2 in the appendix presents bivariate correlation measures of all main variables in this study.

on the United Nations' International standard classification of all economic activities. The UN defines manufacturing as:

the physical or chemical transformation of materials or components into new products, whether the work is performed by power-driven machines or by hand, whether it is done in a factory or in the worker's home, and whether the products are sold at wholesale or retail (United Nations Statistics Division 2007).

The sectors that according to the OECD make up the service sector are not however defined under any service-sector umbrella with the UN. A more general problem for sector-by-sector FDI data is differences in how countries record inflows. Therefore, FDI data split by industry sector is less reliable than the aggregate data.

Outflow data from the United States has been downloaded from the Bureau of economic analysis (2007a). Data collected with the same references is available from 1990 to 1998, when the collection system was changed. This period was chosen in order to avoid a time lag between the coordination index and the FDI data. Similarly to the OECD data all indicators have been transformed logarithmically to correct for skewness.

### **3.3.2. Main independent variable: coordination index**

The main indicator for testing the Varieties of capitalism approach is Peter Hall and Daniel Gingerich's coordination index. The index runs from 0 (liberal market coordination) to 1 (non-market strategic coordination) based on a factor analysis of the six coordination measures observed in table 7 on the next page. As previously discussed, this index is not optimally constructed, but this is largely due to lack of hard cross-country data to cover all five spheres. Nevertheless, it is the index offered by the theory's authors to confirm their assertions, and has been employed in several studies testing the varieties of capitalism theory (Hall and Gingerich 2004; Jackson and Deeg 2006; Kenworthy 2007).

To find the curvilinear relation predicted by theory, with both extremes of the scale showing the best economic performance, a squared version of the coordination index is included (Hall and Gingerich 2004). To address Kenworthy's critique (2006) referred above, I also include his subjectively derived institutional coherence rank, where countries are given a score for the degree of strategic coordination in each sphere, measured as weak, moderate or strong. The averages for each year together create the basis for the period average from the mid-1970s to 2000. Kenworthy's rank is dummy coded with low coherence as the reference category, since high coherence countries are expected to receive more FDI inflows.

In table 2 on page 14 the different coordination indexes were observed. Both are only available as time-invariant variables computed for 20 OECD countries. The Hall-Gingerich

**Table 7. Components of the coordination index**

<i>Measure</i>	<i>Conceptualization</i>	<i>Sphere</i>
Shareholder power	Reflects the legal protection over firms of ordinary shareholders relative to managers or dominant shareholders. High values indicate more rights for shareholders (CME).	Corporate governance
Dispersion of control	Indicates how many firms in the economy are owned by many minority shareholders (opposed to majority shareholders). High scores indicate wider dispersion of control (CME).	Corporate governance
Size of stock market	Market capitalization of equities on the national stock exchange in 1993 as a percentage of gross domestic product. This is a proxy for stock market-based finance with heavy reliance on balance sheets (LME).	Corporate governance
Level of wage coordination	1=firm level, 2=intermediate level and 3=national level. The coordination levels for unions and employers are independently assessed. Higher levels proxies CME.	Industrial relations
Degree of wage coordination	OECD estimation of the degree of strategic coordination of wages. 1=indicates strategic coordination and 3 indicates market coordination.	Industrial relations
Labour turnover	Measures the fluidity of national labour markets and reports the number of employees who had held their jobs for less than one year as a percentage of all employees surveyed in 1995. High turnover proxies more market coordination in labour markets (LME).	Employer relations

*Source: Hall and Gingerich (2004: 11).*

coordinated index is computed for the 1990-1995 period, while Kenworthy has collected data for the 1975-2004 period but presents them as an invariant index. Thus, it is assumed that a country's coordination score does not vary over time. This is obviously highly unrealistic, and reduces the explanatory power of the models that employ the indicator. Unfortunately, data collection on the scale necessary to improve the indicators was not possible in this study.

### **3.3.3. Control variables**

In the preceding chapter several other factors influencing FDI were discussed. In the following paragraphs the data and operationalization of these indicators will be discussed. No variables that theoretically are linked to the Hall-Gingerich coordination index can be included, since this would create multicollinearity that interferes with the regression estimations. In other words, variables such as tax levels, size of capital markets, labour regulations or industrial structure will all be left out of the model. Instead, focus will be kept on general macroeconomic factors known to influence FDI.

To measure previous investments, FDI inward stock data have been downloaded from UNCTAD (2007a). In order to reduce skewness the variable was logarithmically transformed.

Large countries have larger economies and larger markets, where products can be sold to a larger base of customers. They should therefore be more interesting to investors. This is normally measured by using gross domestic product (GDP). Unfortunately, GDP is a catch-all variable that is influenced by a range of factors, such as population, education, health, infrastructure, valuable raw materials and so on. By using FDI to GDP ratio as the dependent variable, country size is already taken into account, and the GDP control variable will therefore only be applied when FDI in current dollars is used as the dependent variable. GDP data originate from the World Bank (2007), are measured in current US dollars converted using purchasing power parities (PPP). The data are heavily skewed, but a logarithmic transformation resolves this specification issue.

Further, previous research has found that richer countries tend to receive more FDI. The standard indicator for wealth is GDP divided per capita. Data is from World Bank (ibid), and are in current US dollars converted to purchasing power parity. The skew is also here avoided by logarithmic transformations.

High levels of trade to GDP are expected to go together with high FDI levels, since much foreign investment is trade-directed. High levels of trade also signify openness to international production. Trade to GDP ratios are available from the World Bank (ibid).

High growth rates also tend to go along with more FDI, since this goes indicates increased opportunities for economic activity. This would for instance apply to Ireland, which has experienced rapid growth during the 1990s in particular. But since the impact of growth comes sometime after the growth has been recorded, the variable is lagged one year. Source of the data is once again the World Bank (ibid).

Formal restrictions to FDI were discussed at length above. The cited OECD study (2003) only provided three data points per country, in 1980, 1990 and 2000. In order to adopt these data to the present time-series analysis, the intermediate gaps are filled in by linear interpolization. The indicator is neither correlated with FDI inward flow or stock, nor with the Hall-Gingerich coordination index. In other words, this control does not interfere with the theoretical argument of CMEs being equally competitive for international capital.

In order to control against an English-language bias, a dummy variable for English language is also included. Incidentally, all LMEs are English speakers, and vice versa. Could the Hall-Gingerich index actually be picking up the effect of speaking English? Table 8 on the next page summarizes the variables and data used in this study.



**Table 8. Variables and data sources**

<i>Variable</i>	<i>Obs.</i>	<i>Unit</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>Standard deviation</i>	<i>Data source</i>
Hall-Gingerich Coordination	20		0	1	0.569	0.268	Hall and Gingerich (2004)
Kenworthy coherence index	20		n/a	n/a	n/a	n/a	Kenworthy (2006)
FDI inward flows	456	Millions US \$	2,089	313,997	12,502	29,698	UNCTAD (2007)
FDI inward flows	456	% of GDP PPP	-0.7	45.5	2.3	4.2	UNCTAD (2007) World Bank (2007)
Manufacturing	366	% of GDP PPP	-2.4	23.2	0.6	1.5	OECD (2006) World Bank (2007)
Mechanics <sup>6</sup>	208	% of GDP PPP	-1.0	2.9	0.1	0.3	OECD (2006) World Bank (2007)
Services	362	% of GDP PPP	-0.6	19.7	1.1	1.8	OECD (2006) World Bank (2007)
Finance	343	% of GDP PPP	-1.6	8.1	0.5	0.9	OECD (2006) World Bank (2007)
FDI inward stock	457	% of GDP PPP	0.3	249.8	22.3	32.3	UNCTAD (2007) World Bank (2007)
GDP, PPP	460	Current US \$	2.17e+10	1.09e+13	8.47e+11	1.57e+12	World Bank (2007)
GDP, PPP per capita	460	Current US \$	7235	41854	21187	6,938	World Bank (2007)
Trade	434	% of GDP	16	182	67	32.6	World Bank (2007)
GDP growth	460	%	-6.4	11.1	2.7	2.0	World Bank (2007)
FDI formal restrictions <sup>7</sup>	400	Index	0.64	0.5344	0.263	0.1	Golub (2003)
English language	6	n/a	n/a	n/a	n/a	n/a	n/a
US outward flow	171	Millions US \$	343	183,035	23,950	30,637	BEA (2007a)
Manufacturing	168	% of GDP PPP	0.1	9.2	1.9	2.1	BEA (2007a) World Bank (2007)
Machines	146	% of GDP PPP	0.0	1.2	0.2	0.2	BEA (2007a) World Bank (2007)
Services	160	% of GDP PPP	0.0	6.0	0.3	0.5	BEA (2007a) World Bank (2007)
Finance	160	% of GDP PPP	0	14.2	1.9	2.7	BEA (2007a) World Bank (2007)

<sup>6</sup> Without Denmark.<sup>7</sup> Summary statistics after linear interpolation.

# 4. Results

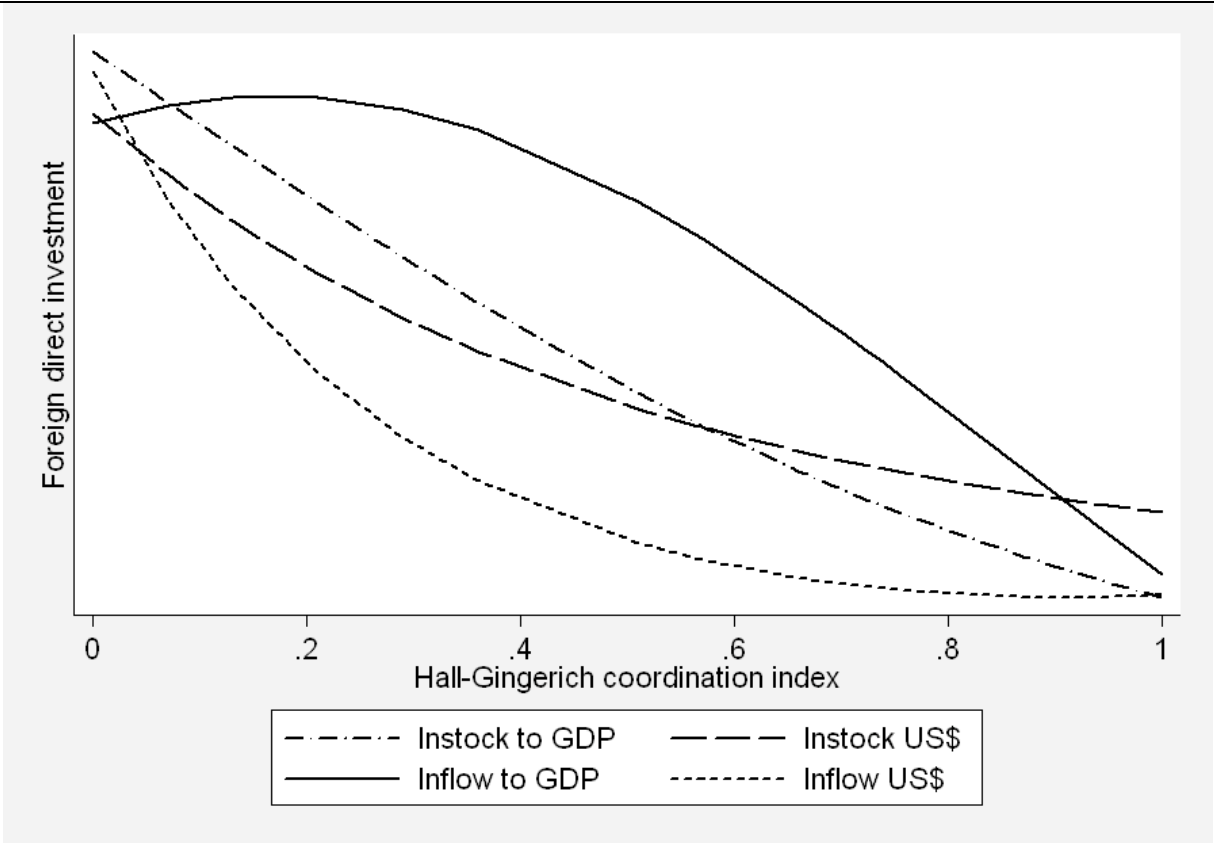
The varieties of capitalism theory predicted that the most specialized liberal (LMEs) and coordinated market economies (CMEs) were most attractive to multinational companies (MNCs). Figure 9 below summarizes the findings based on four different indicators of aggregate foreign direct investment (FDI). The figure reveals that LMEs attract more FDI than CMEs across all four indicators, even though the effect of FDI inflows in current dollars is not statistically significant.

## 4.1. Institutional coherence and FDI

### 4.1.1. FDI inward flows

Results for FDI inward flows are displayed in table 9 on the next page. Model 1 reports FDI inflows relative to economy size, and reveals that extensive non-market coordination results in significantly less FDI. The relationship is not linear, but figure 9 below shows that the curvilinear effect takes form of a weak inversed u-curve, contrary to the predictions of the varieties of capitalism theory. A certain extent of non-market coordination does not deter

**Figure 9. Coordination and four measures of FDI**



*Note: Inflow in US \$ is not statistically significant.*

**Table 9. Regression: FDI inward flow and coordination**

	(1) <i>Ln FDI inflow to GDP</i>	(2) <i>Ln FDI inflow to GDP</i>	(3) <i>Ln FDI inflow US \$</i>	(4) <i>Ln FDI inflow US \$</i>
Hall-Gingerich coordination index	0.353 (0.365)		-2.991 (2.720)	
Coordination index squared	-1.035*** (0.326)		1.643 (2.820)	
Kenworthy high coherence		0.039 (0.075)		-0.557 (0.597)
Kenworthy intermediate coherence		0.404*** (0.083)		0.658 (0.541)
Ln FDI inward stock	-0.025 (0.034)	0.091*** (0.026)	1.017* (0.529)	1.318*** (0.392)
Formal restrictions to FDI	-0.835** (0.333)	-0.590* (0.339)	-2.135 (3.037)	-0.833 (3.074)
Ln GDP per capita	0.023 (0.159)	-0.196 (0.171)	-2.198 (1.453)	-1.846 (1.543)
Ln GDP PPP			0.051 (0.553)	0.105 (0.475)
Trade to GDP ratio	0.008*** (0.001)	0.008*** (0.001)	0.008 (0.009)	0.003 (0.007)
Growth lagged one year	-0.017 (0.017)	0.008 (0.016)	-0.157 (0.157)	-0.105 (0.151)
Year dummies	Yes	Yes	Yes	Yes
Constant	2.121 (1.836)	1.027 (1.778)	16.784 (12.369)	3.895 (10.740)
Observations	379	379	379	379
R <sup>2</sup>	0.635	0.615	0.278	0.281

*Newey-West standard errors in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%*

investors. The UK, Canada, New Zealand, Ireland and Australia have scores between 0 and 0.4 on the Hall-Gingerich coordination index. These countries attract significantly larger amounts of investments relative to the size of their economies, than Austria and Germany with scores around 1. The curvilinear effect is jointly statistically significant at the 1 percent level. According to the varieties of capitalism theory, CMEs are expected to possess a “different kind of flexibility” (Dore 2000: 1), but the result in table 9 above reveal that this flexibility is overlooked by MNCs.

Of the other variables in the model, higher levels of formal restrictions do indeed reduce FDI inflows. Similarly, high dependence on trade increases FDI, confirming the close relationship between trade and FDI. Also, since small countries tend to be more dependent on trade, this indicates that smaller countries have larger inflows of FDI than larger ones. Neither previous high levels of FDI, nor growth rates, have any independent effect.

The results are robust to model specification. A baseline model consisting of the coordination index and coordination squared, together with GDP per capita, generated similar results. When FDI stock was introduced, this added explanatory power to the power, and the stock variable had the expected positive effect on FDI flows. When trade and GDP growth rates for the previous year were included, the effect of coordination index was slightly reduced, but remained statistically significant. The year dummies raise the explanatory power ( $R^2$ ) of the model significantly, and seem to capture the rapid changes to which FDI is vulnerable, such as the enormous German spike in 2000 due to the acquisition of Mannesmann. Formal restrictions have a significantly deterring effect on investors, as expected by theory, but throughout different model specifications the coordination index remains essentially the same. While liberal institutions are attractive to investors, this is not the case for non-market coordinating institutions.

In model 2, table 9, the Hall-Gingerich coordination index is replaced with Kenworthy's measure of institutional coherence. Since the varieties of capitalism theory expects the highly coherent countries to fare better, this index groups the most liberal and coordinated economies together in the "high coherence" group, while "low coherence" is used as the reference category. Could the varieties of capitalism theory be rejected in the above due to weaknesses in the Hall-Gingerich coordination index? When looking at FDI inflows relative to country size, the intermediately coherent countries stand out as most attractive. This group consists of Belgium, Finland, Denmark, Australia and New Zealand, and the findings again go against the varieties of capitalism theory. If multinational companies organize production in accordance with comparative institutional advantages, the most coherent countries should stand out as the success stories, but this is not the case. However, from the Kenworthy measures it is impossible to say whether MNCs prefer LMEs.

By using FDI inflows in current dollars as the dependent variable, a parallel estimation was performed in order to test the robustness of the results. Table 9 reveals that this model lacks explanatory power. The effect of coordination remains jointly insignificant across similar model specifications as was tried for FDI inflows relative to GDP. The relationship estimated by the model is depicted in figure 9 on the previous page, but with an extensive

confidence interval the predictions cannot be trusted. GDP was included as a control variable to capture the fact that larger countries inevitably receive more investments, and this was the only effect with any statistical significance. The lack of statistical support in this model could be caused by the large variance in the FDI inflows variable (Bognanno et al. 2005). The model's explanatory power is weak, but it offers no support to Hall and Soskice's theory either.

#### **4.1.2. FDI inward stock**

To further assess the robustness of the findings, similar analyses were also performed on FDI inward stock. This measure indicates the total ownership of foreigners in an economy throughout time, and is less vulnerable to year-specific developments than FDI flow data. However, the results reported in table 10, next page, confirm the same trend found above. When other factors are held constant, MNCs prefer investing in LMEs, instead of organizing production according to comparative institutional advantages. Figure 9 showed that the curvilinear effect of coordination turns the opposite direction from the FDI inflow to GDP curve, but the effect is weak and practically linear. The results from analyses using FDI inward stock relative to country size and in current dollars show almost the same trend, and are robust to differences in model specification (not reported here).

The variation in FDI flow and FDI stock predictions is largest for countries with a coordination index score between 0.1 and 0.6. The reason for the differences could be due to the fact that stock also measuring foreign investments before the 1981-2003 period to which inflows are restricted. Two LMEs (the United Kingdom and the United States) have been advocates of globalization and free trade longer than others, something that could be reflected in the FDI inward stock data.

When using Lane Kenworthy's coherence measure for inward stock to GDP, the model actually predicts that highly coherent economies have a slightly smaller FDI inward stock than low coherent countries, and the effect is statistically significant at the 10 percent level. Most likely this effect is caused by the fact that LMEs and CMEs are grouped together, and that CMEs with low FDI stocks have a negative influence on the results. This clearly shows that institutional coherence is irrelevant in explaining MNC activity.

**Table 10. Regression: FDI inward stock and coordination**

	(1) <i>Ln FDI stock</i> <i>US \$</i>	(2) <i>Ln FDI stock</i> <i>US \$</i>	(3) <i>Ln FDI stock</i> <i>to GDP</i>	(4) <i>Ln FDI stock</i> <i>to GDP</i>
Hall-Gingerich coordination index	-1.967*** (0.663)		-1.097* (0.567)	
Coordination index squared	0.228 (0.609)		-0.643 (0.519)	
Kenworthy high institutional coherence		-0.164 (0.113)		-0.220* (0.121)
Kenworthy medium institutional coherence		-0.110 (0.140)		0.023 (0.131)
Formal restrictions to FDI	-0.392 (0.526)	-0.849 (0.704)	0.697 (0.512)	0.151 (0.598)
Ln GDP PPP	0.793*** (0.055)	0.817*** (0.054)		
Ln GDP per capita	-0.431* (0.248)	-0.307 (0.341)	-0.765*** (0.271)	-0.599 (0.380)
Trade to GDP	0.019*** (0.002)	0.016*** (0.002)	0.023*** (0.002)	0.020*** (0.002)
GDP growth rate, lagged one year	-0.009 (0.028)	0.049 (0.031)	-0.012 (0.029)	0.050 (0.031)
Year dummies	Yes	Yes	Yes	Yes
Constant	8.174*** (2.976)	5.476 (3.965)	9.987*** (2.802)	7.688** (3.850)
Observations	380	380	380	380
R <sup>2</sup>	0.815	0.697	0.712	0.547

*Newey-West standard errors in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%*

#### 4.1.3. Neoclassical theory: linear coordination effect

Neoclassical theory presumes that there is a trade-off between non-market coordination (equality) reduces FDI (efficiency). To assess whether this effect is linear, the models in tables 9 and 10 were run without the squared coordination variable. The results are reported in table A3 in the appendix, and confirm the pattern found in the previous analyses. LMEs appear to attract more FDI than CMEs. Without the curvilinear term, the effect of the coordination on FDI inflows relative to GDP remains strongly negative and statistically significant at the 1 percent level. Non-market coordination has a linear effect as predicted by neoclassical theory. FDI inflows in current dollars did not return any significant effect, similar

to the curvilinear findings reported above. On FDI inward stock, however, the pattern is clear: multinationals prefer LMEs rather than institutionally coherent economies. These results are mainly for control purposes, since they imply that the varieties of capitalism theory and the coordination index is a valid way of differentiating capitalist economies.

#### **4.1.4. LME and CME dummies**

Figure 1 on page 5 offered some empirical data showing that CMEs on average attract higher FDI flows than LMEs. Even if the general grouping of countries into LMEs and CMEs is generally accepted, Hall and Soskice's specific indicator of coordination has been disputed. However, when a dummy variable for LME was included in place of the Hall and Gingerich index, the LMEs still turned out to attract slightly more FDI<sup>8</sup>. This is somewhat surprising, but a possible explanation could be that Hall and Soskice have not identified the most important features of economies when grouping them as either LMEs or CMEs. Belgium, the Netherlands, Sweden and Denmark are all countries with relatively high FDI inflows, but the dummy variable includes also CMEs that are not equally successful as these four examples.

## **4.2. Comparative institutional advantages in industrial sectors**

An underlying assumption underpinning the analyses so far is that both LME and CME sectors of competitive advantage receive equal amounts of FDI. Therefore the analysis was extended in order to determine whether comparative institutional advantages matter on a sector-for-sector basis. Theory predicted that the service sector, and in particular financial services should be stronghold for LMEs, while manufacturing and particularly mechanical production should be the domain of CMEs.

The results are reported in table 11 on the next page. A strong statistical effect is found when looking at manufacturing inflows relative to GDP, but it goes against the varieties of capitalism theory. CMEs receive significantly less FDI in manufacturing than LMEs. Thus, the expected comparative institutional advantages for CMEs in terms of manufacturing do not seem to be relevant to MNCs. Could this be caused by too many different sectors being included in manufacturing? Model 2 shows the results for mechanical manufacturing, a specific sector where economies with institutional support for incremental innovation should be better off. However, higher levels of strategic coordination are predicted to lead to less inflows of FDI also in this specific sector. While the results are not statistically significant,

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<sup>8</sup> See table A4 in appendix for regression coefficients.

**Table 11. Regression analysis: FDI in industrial sectors and coordination**

	(1) <i>Ln Manufact. to GDP</i>	(2) <i>Ln Mechanic to GDP</i>	(3) <i>Ln Services to GDP</i>	(4) <i>Ln Finance to GDP</i>
Hall-Gingerich coordination index	-1.366*** (0.260)	-0.354 (0.430)	-0.245 (0.301)	-1.535*** (0.336)
Ln FDI inward stock	0.016 (0.068)	0.021 (0.135)	0.160 (0.100)	0.263** (0.102)
Ln GDP per capita	-0.323 (0.384)	0.109 (1.185)	0.403 (0.599)	-1.335** (0.537)
FDI formal restrictions	0.069 (0.866)	4.746*** (1.683)	-0.289 (1.035)	-1.014 (1.043)
Trade to GDP ratio	0.013*** (0.002)	0.011** (0.005)	-0.001 (0.005)	0.024*** (0.004)
GDP growth lagged one year	-0.008 (0.036)	0.109 (0.095)	-0.097 (0.061)	0.012 (0.052)
Constant	2.164 (4.113)	-6.996 (10.746)	-6.668 (5.868)	3.305 (5.122)
Observations	304	172	297	279
R <sup>2</sup>	0.40	0.21	0.44	0.46

*Newey-West standard errors in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%*

they are contrary to the predictions of the varieties of capitalism theory. This could be due to the low number of observations (208), but the results appear to be following a general trend.

What about the competitive sectors in the LMEs? Model 3 reports regression coefficients for the service sector. FDI is highest for the LMEs, similar to the expectations of the varieties of capitalism theory, but also here the estimation is not statistically significant and thus unreliable. This could be caused by ambiguous sectors that are included under the service sector classifications. Financial services, on the other hand, represent a specific competitive sector for LMEs, and coefficients for FDI into this sector is reported in model 4 above. LMEs are clearly most attractive for this kind of foreign direct investment, and the finding is statistically significant at the 1 percent level.

Thus, financial services can isolated be said to support the varieties of capitalism theory, since LMEs have comparative institutional advantages in radical innovation that is important for this sector. However, since the manufacturing and mechanical sectors also turned out to favour LMEs, the varieties of capitalism theory can be rejected. It appears like MNCs, all other things equal, prefer to invest in LMEs.

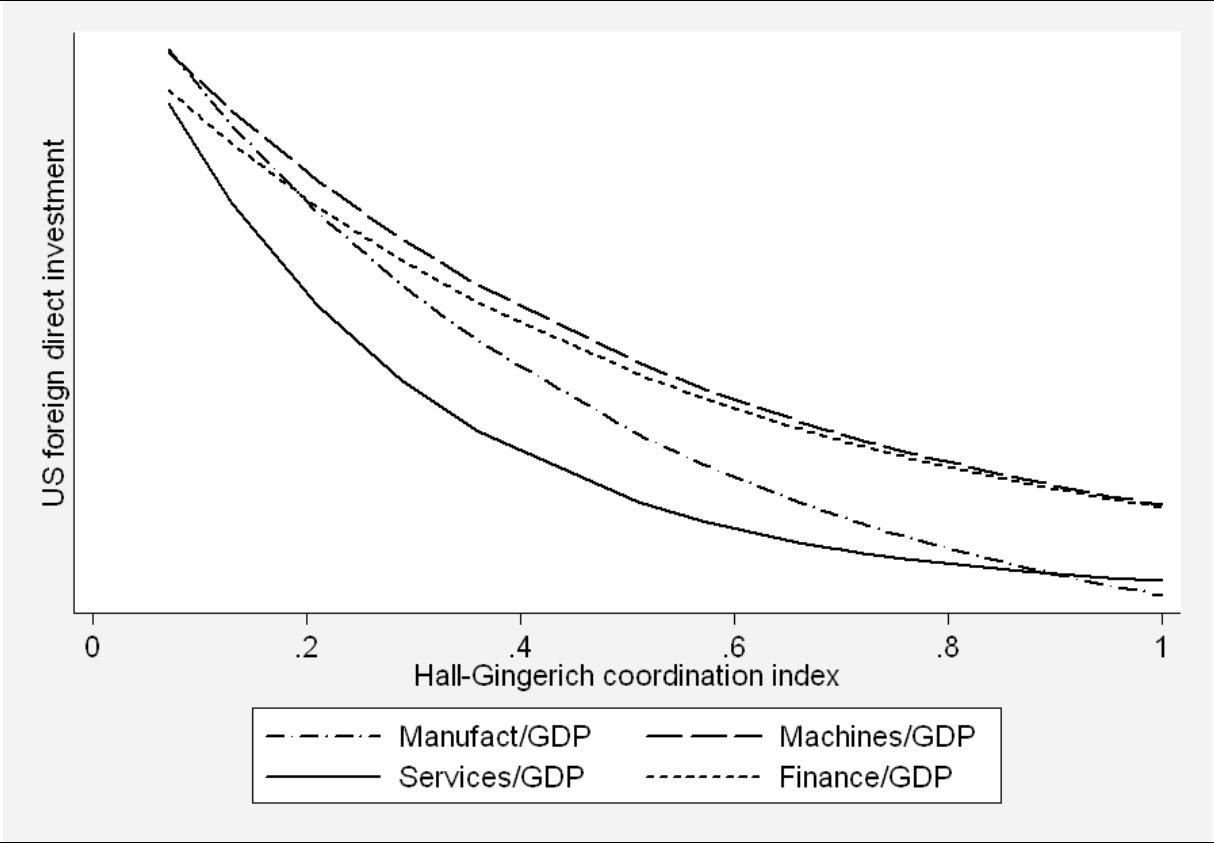


### 4.3. US outflows

As noted in chapter 3, however, the OECD industrial sector data is has large portions of missing data. By using cross-country figures there is also a possibility that different methods and definitions of FDI and industrial sectors have been used in the collecting of data. To avoid this data issue I test how US MNCs respond to the varieties of capitalism theory with US data. The results with FDI outflows relative to recipient country GDP are reported in the figure 10 below, and the results are more unambiguous than the OECD industry data. FDI outflows in all four sectors flows in larger amounts to LMEs. Even in CME strongholds such as machine manufacturing, US companies prefer to locate their investments in LMEs, and all effects are statistically significant at the 1 percent level. The findings are robust to model specifications.

The US outflows results are most likely biased by the close economic and cultural links between US and Canada, the UK and Ireland. The UK and Canada are top two countries for US outflows. While it is feasible to assume that MNCs act as a pool when considering the whole of OECD, this assumption is more likely violated when looking at the US only. Nonetheless, since the conclusions are similar to those from the OECD industry sectors, they reinforce the general pattern: LMEs are more attractive to foreign direct investment. Before

**Figure 10. US FDI by host country GDP, 1990-1998**



the implications of the results are further discussed, I will briefly report on sensitivity checks performed to strengthen the reliability of the findings.

#### **4.4. Sensitivity analysis**

Could there be weaknesses in the analysis that influence and distort the findings? As discussed in chapter 3, if the basic assumptions are violated, the regression analysis could be unreliable. Autocorrelation and homoscedasticity are handled through the Newey-West standard errors estimation technique, and through logarithmic transformations all distributions are approximately normal.

In terms of multicollinearity, the fact that all LMEs also are English-speakers could imply that both variables explain the same variance. The variance inflation factor (VIF) estimates confirm that this is a potential specification issue. When the English language dummy variable is included to the aggregate FDI to GDP analyses, for instance, it has only 12 percent independent variation. This could indicate trouble (Hamilton 2004). However, since the English dummy does not significantly alter the model's predictions, and the curvilinear effect of coordination remains jointly significant, it can be assumed that the multicollinearity is not significantly altering the results in this study.

The year dummies should catch year-specific effects, and not surprisingly the years 1997-2001 are significant across the different dependent variables. These were the years when the dot-com bubble grew and the OECD experienced a rapid increase in FDI. In addition I have also tested for specific effects after the end of the Cold War, which set the scene for the worldwide expansion of FDI. But restricting the analysis to the post-1991 period did not significantly alter the results. In addition, the findings are robust to model specifications. All models have been tested through the same specifications as reported above for aggregate FDI inflows relative to GDP, but they have not been reported for the reader's simplicity and page limitations.

The limited number of cases in the model, only 20 countries in total, also means that very particular instances in one or several countries could significantly influence the models' predictions. In order to strengthen the understanding of the regression, the analyses have also been performed while omitting several countries with theoretical reasons for having different FDI patterns than the general picture. They are summarized below for aggregate FDI relative to GDP. Details are provided in table A5 in the appendix.

Firstly, Ireland's geographic position right in between the US and the EU, including its strong cultural ties with large Irish communities in the United States, could be of importance

in explaining large FDI inflows. However, when Ireland is excluded from the analysis, this does not alter the basic findings. Secondly, Japan is the only non-Western country in the analysis, known for being closed to foreign investment. While the coefficients change slightly without Japan in the model, its omission has no conclusive influence on the model. Thirdly, Belgium could receive more FDI since it is the home to Brussels, the EU capital, but no large changes are prompted by its omission. Finally, what about the United States? It is by far the largest economy in the sample, and therefore has a home market so large that it works as a magnet on MNCs, together with the long history of political stability and beneficial policies towards the corporate world. Nonetheless, the US has no decisive influence either on the model's predictions.

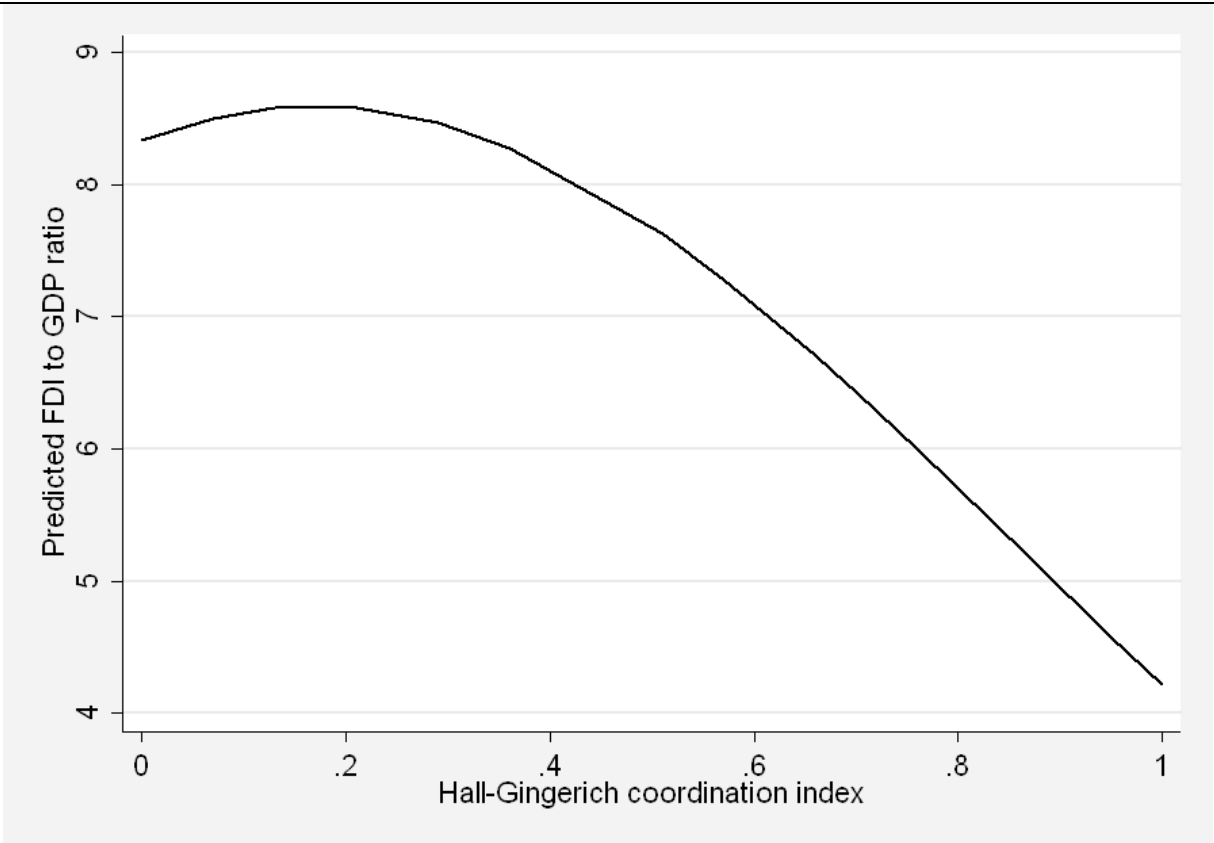
This supports that the results are robust and not overly sensitive to specific countries. The results are also robust to different estimation techniques. Reported results are regression analysis with Newey-West standard errors controlling for autocorrelation and multicollinearity in the data. When performing the analysis with regression clustered on countries, only the standard errors change, and while there are some slight changes to the coefficients and t values with the PCSE estimation technique (AR1), the basic findings for the coordination index remain the same. In total, the results are robust to model specifications and estimation techniques.

#### **4.5. Substantive impact**

What are the exact predictions of the models above? To better assess and understand the results, the substantive impacts predicted for countries with particular coordination scores in the sample can be computed. The model based on FDI relative to GDP arguably gives the most correct and unbiased results, and it is recapitulated in figure 11 on the next page.

The differences between the most strategically coordinated economies and the most liberal countries are substantively large: A coordinated market economy with a score 1 on the scale is predicted to have FDI inflows of 4 percent relative to its GDP, while a LME with a score of 0 on the coordination index would receive 8 percent, when all other factors are held equal. Thus, if a country with Austria's levels of non-market strategic coordination changed its institutions to those of the United States, it would *ceteris paribus* experience an increase in foreign direct investments with 4 percent relative to its GDP. In Austria's case this would amount to approximately 10 billion US dollars for 2003, assuming that the control variables remained unchanged.

**Figure 11. Predicted relationship between coordination and FDI inflows to GDP**



Norway, with a coordination index score of 0.74, would increase its FDI inflows by 2 percent of GDP if it copied the institutional setup of Ireland (0.29), if all other indicators remain the same. In 2003 this would have amounted to almost 3.5 billion US dollars in increased investment.

In the real world, of course, the underlying assumption that all other things are held equal, is of course unrealistic. No country can simply “copy” the institutions of other countries. Reading specific dollar predictions out of the models should therefore be done with prudence.

**4.6. Discussion**

Taken together, the empirical findings show that the varieties of capitalism theory in its current form is unable to predict foreign direct investment. The findings offer two possible explanations. Firstly, comparative institutional advantages are irrelevant to multinational companies, and presuming that foreign direct investment increases economic efficiency, countries would in the long run be forced to liberalize in order to secure FDI inflows. Alternatively, the varieties of capitalism theory could be “logically flawed” (Campbell and

Pedersen 2007), to simplistic and not gauge the social institutions that really matter to multinational companies and economic competitiveness.

To start with the first: in the absence of statistical support for the varieties of capitalism theory, the most obvious conclusion is that neoclassical economic theory is right. The results showed that LMEs are significantly more attractive to foreign investors than CMEs, and the effect is substantially quite large. Investors prefer LMEs also in specific sectors where CMEs according to theory should have comparative institutional advantages. To conclude that the neoclassical theory is right, the indicators used to measure coordination must be correctly specified and indeed be testing the theory's hypothesis.

Kenworthy (2006) argued that the Hall-Gingerich index is poorly conceived, but even when using his alternative measure the results are contrary to the varieties of capitalism theory. Since Kenworthy groups together the countries that are predicted by Hall and Soskice to be most competitive, it is impossible to say whether MNCs prefer liberal or coordinated economies on the basis of this indicator. This, however, is confirmed when testing whether there is a linear effect between higher levels of coordination and lower FDI, as expected by neoclassical theory. Similarly, when tested as a group, LMEs still attract significantly more FDI. Thus, the systematic lack of support for Hall and Soskice's theory appears to indicate that there is a trade-off between higher levels of social, non-market strategic coordination on the one hand, and FDI on the other, even though the lack of time coordination data varying of time could turn out to influence the results.

MNCs invest abroad to make profits, and they appear to regard LMEs to have a greater and more accessible potential for profit-making. This has also been admitted by Hall and Soskice, who suggested that distant investors could "prefer transparency and arm's-length transactions" when expanding abroad because it is easier to manage from a distance. Exactly how much influence FDI has on macro-economic performance in developed countries can be discussed, but it is nonetheless reasonable to expect at least some positive impact on productivity levels and domestic competition (Caves 1996; Lipsey 2000; Moosa 2002). While FDI is not the only determinant of growth and prosperity, this study argues that it has at least some long-term influence on economic performance. Thus, if foreign investors prefer LMEs, this undermines Hall and Soskice's basic proposition that LMEs and CMEs can generate similar macro-economic results. While countries ultimately decide how much efficiency they are willing to trade for more equality, countries with powerful business associations, trade unions, and extensive welfare states appear likely to be outperformed in the long run by their

liberal competitors. In other words, globalization appears to be forcing countries to liberalize if they are to remain economically competitive in the long run.

However, this conclusion presumes that Hall and Soskice's theory is right and indeed captures *the* central difference between capitalist economies. Is it feasible to explain all the diversity through a one-dimensional indicator such as coordination? Hall and Soskice are not the first to argue that one particular indicator can explain capitalist diversity (Kenworthy 2006). Theories should on the one hand be as simple and testable as possible, but on the other hand they need to fit with the real world (Moses and Knutsen 2007; Waltz 1979). Even though Hall and Soskice have offered a very simple and testable theory of the differentiating features between countries, it could seem like important distinctions and details have been lost in the process. For example, there are large differences between CMEs in terms of FDI inflows. Japan, Italy, Germany and Austria are the OECD countries with lowest FDI inflows relative to GDP, while Belgium, Sweden, Netherlands and Denmark are at the top end of the scale (figure 5, page 29).

Still, other studies in the governed interdependence school have come to different conclusions than the present study in terms of how globalization influences countries and whether it forces certain policies on countries (Garrett 1998b; Weiss 2003). Pontusson (2005) compared macro-economic performance in liberal and social market economies (SME<sup>9</sup>), but with a more multi-dimensional view of the differences between economies. His conclusions suggest that with the exception of inequality and employment growth, LMEs and SMEs have similar scores on most indicators. Interestingly, particular countries often influence group averages. With a growth rate much higher than other LMEs, Ireland the reason why liberal economies as a group grew slightly faster than SMEs. Similarly, unemployment in CMEs is biased by Finland, Germany and Belgium than in the rest of the SMEs. Obviously, these data do not say anything about whether both LMEs and CMEs are equally attractive to FDI, but they provide an example of a more constructivist and comprehensive approach to analyzing capitalist diversity.

There are also particular areas in the varieties of capitalism theory where further developments could strengthen the theory and make it more relevant. We need a better understanding of which institutions that are most important to economic performance, how seemingly similar institutions generate different outcomes in countries, and how complementary gains are made between institutions in different spheres of the economy. For

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<sup>9</sup> SME=Social market economy. Pontusson's corresponding term to coordinated market economy. Interestingly, France, Italy and Japan are treated as ambiguous countries that not belong to any particular group.

example, the encompassing Nordic labour unions with high membership rates makes them play a different and more constructive role in the economy than French trade unions (Barth et al. 2003). However, according to Hall and Soskice's theory, Sweden and France have the same institutional structure. There has been a renewed interest in how Nordic countries manage to combine low unemployment with low high productivity levels and indeed high levels of FDI inflows relative to their economic size (Boyer 2006; Sachs 2006). Further theoretical development could highlight those factors that explain the success in the Nordic countries.

Similarly, it could turn out that comparative institutional advantages not require that all spheres of the economy are coordinated in a particular way. For instance, as Hall and Soskice admitted, foreign direct investors may prefer the more transparent arm's-length institutions of LME corporate governance when investing abroad. Studies have shown that CMEs have already changed some of their corporate governance institutions in a liberal direction (Buck et al. 2004; Höpner 2005; Jackson 2005). Will changes in terms of increased transparency and more emphasis on current earnings in CMEs reduce their comparative advantages in incremental innovation? What are the precise complementarities between corporate governance and other spheres of the economy? These are important questions to answer for the varieties of capitalism theory. If certain changes that are important to foreign investors could be made without great sacrifice of competitiveness, then positive effects of non-market coordinating institutions could still be retained. Thus, even though this study has rejected the varieties of capitalism theory in its current form, this can be explained by weaknesses in the theory. Differing results found by other scholars of the governed interdependence school leads to the question if further refinement of the varieties of capitalism theory could yield different results.

#### **4.6.1. Policy recommendations**

I started the introduction with two quotes from the final French presidential election debate. The Socialist candidate, Ségolène Royal, argued that foreign investors preferred France due to the high quality of its public services, while the Conservative candidate Nicholas Sarkozy won the election with his neoclassical view of competitiveness based on taxes and labour regulations. Today, France is defined as a coordinated market economy in the varieties of capitalism theory, and should specialize in coordination in order to increase economic performance. Sarkozy, on the other hand, has promised economic reforms that among other things will curb the power of trade unions, and through tax cuts he will try to increase the total

number of hours worked. Taken together, Sarkozy's reform package will definitely liberalize the French economy. Is this the right thing to do?

According to this study, if the goal is to attract more foreign investment, it seems like the answer is yes. By liberalizing labour market institutions, France would most likely be perceived as more friendly to investors. This could also lead to generally better macroeconomic performance, although it is impossible to conclude on the basis of this study whether unemployment rates would be reduced as foreign investment increases. But in the long run, more FDI would most likely increase economic performance.

Similarly, it follows that the Norwegian Progress Party's (Fremskrittpartiet) aim to increase reliance on market forces in Norwegian industrial relations would also lead to greater interest from foreign investors in the Norwegian market. The price to be paid, as in the case of France, appears to be increased inequality, in line with the neoclassical economic approach. There appears to be a trade-off between extensive non-market coordination and economic performance. One "cannot have a cake and eat it too" (Okun 1975). According to the Norwegian liberal business newspaper *Dagens Næringsliv*, "globalization cannot be stopped, and the only sensible strategy is adaptation" (Wiedswang 2007).

Since liberalization of investment policies since the 1980s systematically appear to have favoured LMEs, it also follows that CMEs should approach further global investment liberalization with care if they want to protect their economic system. Further increases in world FDI would most likely be of more benefit to LMEs and weaken the relative economic position of CMEs.

However, some CMEs are among the most attractive locations for FDI. Belgium, Sweden, the Netherlands and Denmark all enjoy high FDI inflows relative to the size of their economy. Other studies informed by the governed interdependence have also revealed that many socially and equality-oriented economies have generated strong macro-economic results, in many cases superior to the LMEs. (Barth et al. 2003; Garrett 1998a; Pontusson 2005). Since Germany is now again one of the fastest growing economies in the Euro zone, it must be doing something right.

Thus, calls have been made for Nicolas Sarkozy to "look north" to learn from the success of the German economic model (Krauss 2007). Similarly, the leading Norwegian investor Kjell Inge Røkke revealed a strong conviction in Norwegian competitiveness in an op-ed piece published before the 2005 election, arguing that "for too long people have been allowed to claim that Norwegian industry is doomed. In my eyes it's to the contrary" (Røkke



2005). Røkke advocates for more government and cooperation, which is precisely the point of the governed interdependence school (Weiss 2003).

In other words, there are reasons to call for calm when politicians, business or various experts advocate rapid liberalization and the dismantling of economic institutions. We should not ignore the concept of comparative institutional advantages, and policy-makers should in particular be attentive to flaws in domestic institutions that make them work against productivity. Examples of such institutions could be corporate finance systems without sufficient transparency, and too radical labour unions that lack macro-economic responsibility. In such cases, reforms could be advisable in order to restore economic competitiveness.

## 5. Conclusion

This study started out by asking whether multinational companies (MNCs) prefer to invest in liberal market economies, or if social, non-market institutions can create equally attractive locations to foreign investors. The question goes to the very heart of public debate on globalization. Are countries forced to converge on liberal economic policies in order to remain competitive, or can social and equality-oriented countries prosper amid increasing trade and investment? On the one hand, the “convergence” school believes that countries are forced to liberalize, while the “governed interdependence” school on the other perceives globalization as a two-way process where adaptation to external pressures is made within the institutional context of nation states (Weiss 2003).

Peter Hall and David Soskice’s influential “varieties of capitalism” theory belongs to the governed interdependence school, and argues that comparative institutional advantages are the essence of economic competitiveness. Consequently, both liberal (LMEs) and coordinated market economies (CMEs) are able to provide satisfactory macro-economic performance. In the global economy, MNCs are expected to organize production relative to these institutional advantages. Thus, production based on incremental innovation should be located in CMEs, while radical innovation activity should be moved to LMEs.

These hypotheses have been tested on a wide range of data on foreign direct investment (FDI), including aggregate inflows, inward stock, inflows in specific industry sectors, and outflows in sectors from the US only; but no support was found for Hall and Soskice’s theory. The findings are robust to model specification, estimation techniques, and different operationalization of both FDI and coordination. MNCs do not organize investments according to the comparative institutional advantages of countries. Instead, LMEs appear to systematically attract more FDI. The findings confirm similar results found by others who have challenged the varieties of capitalism theory with other indicators (Campbell and Pedersen 2007; Kenworthy 2006; Vårheim 2005).

The results offer two possible interpretations. Firstly, assuming that the varieties of capitalism theory is correctly specified, the findings are supportive of neoclassical economic theory. Lower levels of non-market coordination lead to higher inflows of FDI. If a country chooses to more equality (coordination) relative to others, it would be punished with a weaker long-run economic performance. Consequently, globalization should be expected to lead to convergence on liberal policies, even if changes in economic institutions will take time.

Indeed, liberalization of corporate governance is already in progress, with several studies showing that German companies rely more on balance-sheet LME-style criteria in corporate governance (Buch et al. 2004; Höpner 2005; Jackson 2005).

Hall and Soskice (2001: 60) also admitted that foreign investors could prefer to “supply capital on arm’s-length terms that emphasize transparent, balance-sheet criteria”, in other words LMEs. But this fundamentally challenges their theory. While the short-run effect of FDI on national economies is disputed, there appears to be some consensus that FDI has a positive effect on productivity in the long term. The effect is not immediate and can be mitigated by other sources of growth and wealth, but if MNCs prefer to invest in LMEs, it is problematic to assume that both LMEs and CMEs will provide “satisfactory levels” (ibid: 21) of economic performance in the future.

A second and alternative interpretation of the results focuses on the flaws in the varieties of capitalism theory. It is a daunting task to place all countries on a one-dimension indicator as Hall and Soskice attempt to do, and in particular this seems to be difficult for the CMEs. Several countries differ significantly from the CME ideal model both on theoretical and empirical terms. For example, politicians and experts in continental European countries look to the Nordic model as the solution to many economic problems, but France and Sweden have exactly the same score on the Hall-Gingerich coordination index. The simplicity is both the strength and the weakness of Hall and Soskice’s theory: it deserves credit for trying to incorporate the complexity of capitalist diversity into a testable theory. However, the explanatory power of a theory ultimately depends on whether “what it says corresponds to reality” (Moses and Knutsen 2007; Waltz 1979). It could be that the methodological approach chosen by Hall and Soskice, however laudable, is problematic when considering such complex phenomena such as the varieties of capitalism.

Equally problematic are the foundations of Hall and Soskice main argument that highly coordinated *and* highly liberal economies constitute the economic success stories. This builds on a belief that liberal coordination in one sphere of the economy is reinforced by similar coordination in others, and that these institutional complementarities are equally important to economic performance across all five spheres of company relations. But the straightforward approach offered by Hall and Soskice in this regard is too simple. Faced with increasingly global production, can CMEs sustain their economic competitiveness even if they offer capital on “arm’s-length terms that emphasize transparent, balance-sheet criteria”? Do changes in the sphere of corporate governance necessarily pose a threat to the comparative institutional advantages of CMEs? And similarly, will an increase in social welfare

automatically challenge LMEs relative strength in radical innovation? Through further studies into the complementary effects of different institutions, the varieties of capitalism theory could increase its relevance.

Since MNCs in the OECD appear to systematically favour LMEs, this can easily lead to the conclusion that countries need to choose between social, non-market coordination on the one hand, and foreign direct investment on the other. But with the greater debate on globalization in mind, calls for liberalization should be considered with calm. Other studies in the governed interdependence school have shown that high levels of non-market coordination do not necessarily weaken macro-economic performance, indeed some CMEs are among the best-performing countries in the world (Garrett 1998; Kitschelt et al. 1999; Pontusson 2005). Strict labour market regulations, expensive social policies and powerful business associations have not prevented the Nordic countries, the Netherlands, and other CMEs in producing satisfactory high levels of per capita wealth, low inequalities, combined with high levels of FDI inflows. Denmark, for instance, was in 2006 ranked as the most competitive economy in the world by the World Economic Forum (Lopez-Claros et al. 2007). Signs of German economic recovery also signal that liberal economic policies are not the only way to success (Krauss 2007). It is conceivable that certain changes in German corporate governance could strengthen its competitiveness in the global economy, without jeopardizing the German social economic model. Similarly, some changes in French labour markets as proposed by Sarkozy do not necessarily change it into a LME, they could turn out to strengthen the French economy while preserving the main elements of *le modèle social français*.

Institutions are dynamic and can generate both productive and unproductive outcomes. Hall and Soskice's attempt to create a single, one-dimensional index of capitalist institutional diversity based on the degree of non-market "coordination" is perhaps too simplistic, and ignores important variation along other dimensions. Nonetheless, a further refinement of the "varieties of capitalism" theory could provide a better understanding of how specific institutions matter for economic performance in general, and foreign direct investment in particular. This, in turn, could lead to more powerful explanations of why certain social- and equality-oriented countries remain highly competitive also in the globalized economy.

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# Appendix

**Table A1. Patterns of adjustment in CMEs, LMEs and MMEs**

	<i>CME</i>			<i>LME</i>			<i>MME</i>		
	<i>1980s</i>	<i>1990s</i>	$\Delta$ %	<i>1980s</i>	<i>1990s</i>	$\Delta$ %	<i>1980s</i>	<i>1990s</i>	$\Delta$ %
<b>Industrial relations</b>									
Trade Union Density	55	53	-4	46	31	-33	33	28	-15
Bargaining Coverage	76	76	0	58	38	-34	79	89	13
Bargaining level	1.7	1.8	6	2.3	2.5	9	1.8	2	11
<b>Social protection</b>									
Employment protection	2.3	2.3	0	1.0	1.0	0	3.5	3	-14
Benefit Entitlements	29	36	24	24	23	-4	15	31	107
Social Spending /GDP	23	28	22	15	19	27	17	24	41
<b>Labour market flexibility</b>									
Part-Time employment	18	22	22	16	20.2	26	8	11	38
Avg. Hours Worked	1713	1633	-5	1810	1831	1	1812	1728	-5
Income Inequality	.24	.25	4	.28	.33	16	.31	.31	0
<b>Firm structure</b>									
Average Job Tenure	9.7	10.1	4	7.3	7.4	1	11.0	10.6	-4
CEO Compensation	343	506	48	414	801	93	332	570	72
<b>Corporate governance</b>									
Stk Mkt Capitalization	36	61	69	51	96	88	14	31	121
Debt/Equity Ratio	2.4	2.0	-17	.66	.91	38	2.7	2.1	-22
<b>Earnings and employment</b>									
Real Earnings	22	26	18	22	23	4	24.2	27.9	15
Unit Labor Costs	100	115	15	100	118	18	100	166	66
Total Employment	68	69	1	64	67	5	55	56	2

*Source: Hall and Gingerich (2004: 35).*

**Table A2. Correlation matrix**

	<i>FDI flow</i>	<i>GDP pr capita</i>	<i>Trade</i>	<i>GDP Growth</i>	<i>FDI stock</i>	<i>Coordination index</i>	<i>GDP</i>	<i>FDI restrictions</i>	<i>FDI manufacturing</i>	<i>FDI mechanics</i>	<i>FDI service</i>	<i>FDI Finance</i>
FDI inward flows	1.00											
GDP per capita	0.51	1.00										
Trade	-0.12	0.36	1.00									
Growth	-0.07	-0.07	-0.10	1.00								
FDI inward stock	0.86	0.57	-0.20	0.01	1.00							
Coordination index	-0.36	0.03	0.35	-0.15	-0.48	1.00						
GDP PPP	0.69	0.38	-0.54	0.10	0.83	-0.46	1.00					
FDI restrictions	-0.07	-0.15	-0.29	0.13	-0.09	-0.24	0.06	1.00				
FDI manufacturing	0.82	0.43	-0.19	-0.01	0.77	-0.40	0.72	0.01	1.00			
FDI mechanics	0.03	0.15	0.09	0.03	-0.01	0.04	-0.03	-0.14	0.04	1.00		
FDI service	0.94	0.47	-0.07	-0.11	0.76	-0.25	0.56	-0.10	0.59	0.03	1.00	
FDI finance	0.85	0.51	-0.08	-0.06	0.83	-0.41	0.67	-0.07	0.70	0.01	0.78	1.00

**Table A3. Regression: FDI and linear coordination**

	(1) <i>Ln FDI inflows US \$</i>	(2) <i>Ln FDI inflows / GDP</i>	(3) <i>Ln FDI inward stock</i>	(4) <i>Ln FDI stock / GDP</i>
Hall-Gingerich coordination index	-1.368 (1.065)	-0.704*** (0.107)	-1.742*** (0.162)	-1.727*** (0.162)
Ln FDI inward stock	1.021* (0.533)	-0.049 (0.031)		
Formal restrictions to FDI	-1.995 (3.032)	-0.860** (0.333)	-0.372 (0.509)	0.750 (0.512)
Ln GDP per capita	-2.134 (1.428)	-0.052 (0.156)	-0.423* (0.245)	-0.827*** (0.260)
Ln GDP PPP	0.096 (0.522)		0.800*** (0.045)	
Trade to GDP ratio	0.008 (0.009)	0.009*** (0.001)	0.019*** (0.002)	0.024*** (0.002)
GDP growth, lagged one year	-0.158 (0.158)	-0.018 (0.017)	-0.009 (0.028)	-0.012 (0.029)
Year dummies	Yes	Yes	Yes	Yes
Constant	14.576 (11.411)	3.622** (1.678)	7.865*** (2.662)	8.741*** (2.510)
Observations	379	379	380	380
R <sup>2</sup>	0.28	0.62	0.82	0.71

*Newey-West standard errors in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%*

**Table A4. Regression: FDI and LME/CME dummies**

	(1) Ln Inflows/GDP	(2) Ln Inflows \$	(3) Ln Stock/GDP	(4) Ln Stock \$
LME	0.361*** (0.082)	0.610 (0.629)	1.111*** (0.110)	1.094*** (0.106)
Ln FDI inward stock	-0.034 (0.033)	1.108** (0.532)		
FDI formal restrictions	-1.016*** (0.338)	-2.388 (3.159)	-0.985** (0.496)	0.198 (0.448)
Ln GDP per capita	0.013 (0.160)	-1.952 (1.378)	-0.139 (0.247)	-0.568** (0.249)
Trade to GDP ratio	0.009*** (0.001)	0.006 (0.009)	0.018*** (0.002)	0.023*** (0.002)
GDP growth lagged one year	-0.020 (0.017)	-0.158 (0.159)	-0.028 (0.030)	-0.030 (0.030)
Ln GDP PPP		0.024 (0.532)	0.790*** (0.049)	
Constant	2.128 (1.634)	12.035 (10.597)	2.763 (2.364)	6.860*** (2.552)
Observations	379	379	380	380
R <sup>2</sup>	0.60	0.28	0.82	0.71

*Robust standard errors in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%*



**Table A5. Regression: Ln FDI to GDP and cindex, omitted countries**

	(1) <i>Ireland</i>	(2) <i>Japan</i>	(3) <i>USA</i>	(4) <i>Belgium</i>
Hall-Gingerich coordination index	0.237 (0.361)	0.605* (0.360)	0.296 (0.394)	0.284 (0.362)
Coordination index squared	-1.024*** (0.325)	-1.252*** (0.326)	-0.992*** (0.341)	-1.013*** (0.326)
Ln FDI inward stock	-0.011 (0.032)	-0.039 (0.035)	-0.024 (0.034)	-0.044 (0.033)
Ln GDP per capita	-0.285* (0.164)	0.080 (0.158)	0.034 (0.165)	0.014 (0.154)
FDI formal restrictions	-0.862** (0.333)	-0.917*** (0.346)	-0.806** (0.340)	-0.844** (0.329)
Trade to GDP ratio	0.011*** (0.001)	0.007*** (0.001)	0.008*** (0.001)	0.007*** (0.001)
GDP growth lagged one year	0.007 (0.017)	-0.018 (0.017)	-0.018 (0.018)	-0.012 (0.016)
Constant	3.213* (1.711)	2.015 (1.822)	1.996 (1.877)	2.760 (1.778)
Observations	360	360	360	360
R <sup>2</sup>	0.653	0.639	0.634	0.613

*Newey-West standard errors in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%*

**Table A6. Regression: FDI and coordination, clustered regression**

	(1) Ln Inflows \$	(2) Ln Inflows / GDP	(3) Ln Stock \$	(4) Ln Stock / GDP
Hall-Gingerich coordination index	-2.991 (4.349)	0.353 (0.663)	-1.967 (1.907)	-1.097 (1.575)
Coordination index squared	1.643 (4.446)	-1.035* (0.578)	0.228 (1.801)	-0.643 (1.509)
Ln FDI inward stock	1.017 (0.615)	-0.025 (0.061)		
FDI formal restrictions	-2.135 (3.237)	-0.835* (0.444)	-0.392 (1.039)	0.697 (1.180)
Ln GDP per capita	-2.198 (1.489)	0.023 (0.272)	-0.431 (0.560)	-0.765 (0.635)
Ln GDP PPP	0.051 (0.633)		0.793*** (0.144)	
Trade to GDP ratio	0.008 (0.011)	0.008*** (0.002)	0.019*** (0.003)	0.023*** (0.005)
GDP growth lagged one year	-0.157 (0.190)	-0.017 (0.018)	-0.009 (0.041)	-0.012 (0.042)
Constant	16.784 (15.310)	0.746 (3.007)	6.517 (6.805)	8.102 (6.138)
Observations	379	379	380	380
R <sup>2</sup>	0.278	0.635	0.815	0.712

*Robust standard errors in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%*

**Table A7. Regression: FDI and coordination, panel-corrected standard errors**

	<i>(1) Ln Inflows \$</i>	<i>(2) Ln Inflows / GDP</i>	<i>(3) Ln Stock \$</i>	<i>(4) Ln Stock / GDP</i>
Hall-Gingerich coordination index	-2.343 (2.642)	0.604 (0.567)	-2.241*** (0.670)	-0.367 (0.691)
Coordination index squared	1.521 (3.487)	-1.159** (0.512)	0.462 (0.607)	-1.351** (0.587)
Ln FDI inward stock	1.106* (0.664)	0.036 (0.049)		
FDI formal restrictions	-2.531 (5.280)	-0.751 (0.602)	-0.301 (0.554)	0.914* (0.545)
Ln GDP per capita	-2.080 (2.163)	0.113 (0.329)	-0.257 (0.289)	-0.582* (0.309)
Ln GDP PPP	0.054 (0.685)		0.666*** (0.058)	
Trade to GDP ratio	0.008 (0.012)	0.009*** (0.002)	0.011*** (0.002)	0.016*** (0.002)
GDP growth lagged one year	0.057 (0.128)	-0.015 (0.014)	-0.014** (0.007)	-0.012* (0.007)
Year	0.179 (0.137)	0.054*** (0.020)	0.096*** (0.019)	0.103*** (0.019)
Constant	-342.891 (264.568)	-109.110*** (36.904)	-181.740*** (34.962)	-196.823*** (35.923)
Observations	379	379	380	380

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%