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Emerging economic systems in Central and Eastern Europe – a qualitative and quantitative assessment

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Emerging economic systems in Central and Eastern Europe – a qualitative and quantitative assessment

Dissertation

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Contents

1. Introduction	1
1.1. From Neoclassical economics to the New Institutional Economics	1
1.2. New Institutional Economics – three levels of analysis	6
1.3. Comparing institutions	7
1.4. Determinants of institutions	15
1.5. Contribution	17
2. Comparative Institutional Advantage as a determinant of FDI?	19
2.1. Introduction	19
2.2. Comparative institutional advantage and foreign direct investment	21
2.2.1 Type of institutions: Varieties of Capitalism	22
2.2.2 Determinants of foreign direct investment	28
2.3. Methodology	30
2.4. Data	31
2.5. Results	35
2.6. Conclusion	39
3. East European Antipodes: Varieties of Capitalism in Estonia and Slovenia	41
3.1. Introduction	41
3.2. Estonia and Slovenia as LME and CME	42
3.2.1 Industrial relations	45
3.2.2 Corporate governance	47
3.2.3 Inter-firm relations	52
3.2.4 Social security systems	53
3.2.5 Vocational training	57
3.3. Emerging comparative institutional advantages	57
3.4. Conclusion	63
4. Law, Politics and Culture: Lessons from Eastern Europe	65
4.1. Introduction	65
4.2. The determinants of institutions	67

4.2.1 Legal origin	67
4.2.2 Political Economy	69
4.2.3 Culture	71
4.3. Institutional diversity	73
4.4. The transition from socialism to capitalism	75
4.5. The determinants of institutions in Central and Eastern Europe	77
4.5.1 Dependent variables	77
4.5.2 Legal variables	78
4.5.3 Political variables	78
4.5.4 Cultural variables	79
4.5.5 Control variables	80
4.5.6 Cross-country dataset	80
4.5.7 Panel estimation	87
4.6. Conclusion	91
5. Conclusion	96
References	99

List of Figures

Figure 2.1: Marginal effect on FDI	36
Figure 2.2: Marginal effect of value-added	39
Figure 3.1: Real GDP (1989 = 100)	43
Figure 3.2: Unemployment	43
Figure 3.3: Employment Protection Legislation (regular employment)	55
Figure 3.4: Contributions to the trade balance (Lafay-Index)	59
Figure 4.1: Coordination Index	74

List of Tables

Table 2.1: Stylized institutional complementarities in CMEs and LMEs	24
Table 2.2: Coordinated, mixed and liberal market economies	25
Table 2.3: Industry specialization of Germany and the USA	26
Table 2.4: Prevalent innovation patterns per industry	31
Table 2.5: Summary statistics	33
Table 2.6: Results of OLS regressions	35
Table 2.7: Robustness Checks	38
Table 3.1: Coordinated versus Liberal Market Economies	44
Table 3.2: Corporate Governance features	51
Table 3.3: Employment protection	54
Table 3.4: Unemployment protection	56
Table 3.5: Foreign direct investment stocks per selected activities	61
Table 3.6: Foreign direct investment stocks by geographical origin	62
Table 4.1: Predominant privatization strategies	76
Table 4.2: Factor loadings of cultural values dimensions	80
Table 4.3: Estimation results - Proportionality	82
Table 4.4: Estimation results - Legal Origins	83
Table 4.5: Estimation results - Culture	85
Table 4.6: Estimation results - Law, Politics and Culture	86
Table 4.7: Results of dynamic panel estimation	89
Table 4.8: Estimation results - EU member states and non-EU members states	91

1. Introduction

Comparative institutional analysis has increasingly gained interest from economists in the recent decade. Globalization, European integration and the dual transition of a host of countries from authoritarian and socialist systems to democracy and capitalism have drawn attention to the divergent ways to organize market economic systems. Most importantly, the new institutional economics pinpointed the importance of written and unwritten institutional rules for the formation of incentives in an economy (Coase 1937; Coase 2005, North 1990). This dissertation examines the type of institutional systems that emerge in Central and Eastern European transition countries. The introduction serves to set the three separate articles of the thesis into their broader context¹. To do so, it will provide a brief overview of the development of the new institutional economics out of questioning a number of assumptions in the neoclassical economic framework of a general equilibrium. A distinction of the New Institutional Economics according to several levels of analysis provides a useful backdrop to discuss a number of approaches to compare institutions and their determinants. The influential approach to compare market economies of the varieties-of-capitalism framework is then introduced as a synthesis of New Institutional Economics approaches and political science interest in comparative capitalist systems. The contribution of the three articles will be briefly sketched.

1.1 From Neoclassical economics to the New Institutional Economics

The central tenet of neoclassical equilibrium theory is expressed in the First Fundamental Theorem of Welfare Economics about the existence of an equilibrium, which was proven by Kenneth Arrow and Gerard Debreu (1954). It states that under the assumption of complete markets all competitive exchange equilibria are Pareto-optimal. The market completeness assumption entails several crucial assumptions regarding actual exchange: first, the law of the single price means that both producers and consumers face the same prices. Moreover, they are price takers. This is meant when the Walrasian process is characterized as competitive. Second, no disequilibrium trading is allowed meaning that no trading at any but the equilibrium prices can happen. A different definition of competitive markets assumes large numbers of anonymous market participants with negligible entry and exit costs, in which case

1. Since the three articles are self-contained, some repetition of concepts in the introduction and the articles is unavoidable.

the assumptions above do not need to hold. This entails also the assumption of complete market transparency meaning that all market participants know the relevant prices. It is irrefutable that Walrasian equilibrium theory is a powerful tool to point out economically efficient allocations and the strong role of relative prices for reaching them. In this respect it was adequate for neoclassical economic theory, for one of its main focuses was the proof of Adam Smith's famous notion of the invisible hand. The allocational power of decentralized exchange, in which no actor needs to know more than market prices, was rigorously proven. Also the way the firm is characterized gave some important insights. It stressed the role of returns to scale. Very generally, it allows to analyze how optimal production choices vary with prices. Furthermore, continuative models relaxing the assumption of perfect competition help to understand aggregate industry behaviour (Hart 1995: 16-17). However, Walrasian competitive equilibrium and the firm as a production function as sketched here have been criticized both for conceptual weaknesses and more generally for the strong assumptions accompanying the crucial market completeness assertion. The long list of implicit and explicit assumptions for the general equilibrium is aptly summarized by Blaug 1997: "... *perfectly rational, omniscient, identical consumers; zero transaction costs; complete markets for all time-stated claims for all conceivable contingent events, no trading at disequilibrium prices, no radical, incalculable uncertainty; (...) only linearly homogeneous production functions; no technical progress requiring capital investment ...*" The fact that further questions were raised by the Walrasian notion of competitive equilibria and its assumptions was the main reason for the further development of economic theory beyond the competitive equilibrium perception and particularly the incorporation of transaction costs and institutional analysis. The fact that goods and factors in the Arrow-Debreu world are homogenous precludes any kind of longer-term relationships between market participants, since singular contracts are reached on spot markets. Issues such as reputation and trust, which seem important for business relations cannot be modelled. Absence of spatial preferences rules out transaction costs including such costs as search costs and informational costs. Complete market transparency also implies that all relevant information is costless and all participants must be capable of processing information instantly and correctly. While the neoclassical theorists acknowledged the existence of transaction costs and institutions, they treated the former mostly as negligible and the latter as "allocationally neutral" (Furubotn and Richter 2005: 12). In fact, Furubotn and Richter (2005: 12-13) summarize a number of incidences, which allow to point out an implicitly accepted neutralism regarding actual institutional set-ups in the allocational mechanism in the neoclassical world.

With respect to production, institutional neutrality manifests itself most importantly in the distinction of markets and hierarchies. Ronald H. Coase asks in his seminal article "The

Nature of the Firm” (1937) why firms exist in the first place given the efficiency of the market. Obviously, within the firm the price mechanism is abrogated: “[i]f a workman moves from department Y to department X, he does not go because of a change in relative prices, but because he is ordered to do so” (387). Hence, in Coase’s words the “distinguishing mark of the firm is the supersession of the price mechanism” (389). Neoclassical models, which resort to the black-box production function view of firms cannot explain this, because taking away a transaction out of the market represents an inefficiency. Contrastingly, they are able to explain why it should not matter whether factors are owned or rented: “in a perfect competitive market it really doesn’t matter who hires whom: so have labor hire capital” (Samuelson 1957: 894). This, however, presupposes complete uniformity of power distribution among members of a society/economy (Stigler 1968: 181). Moreover, regardless of the market type, be it monopoly or atomistic firms, bargaining would nevertheless lead to a Pareto-optimal outcome (Demsetz 1968) provided complete foresight and information are assumed (Arrow 1979). Apart from that, Furubotn and Richter (2005) add observations relating to the sphere of exchange in the neoclassical model. In fact, it does not make a difference whether trade takes place with the use of money or barter (Samuelson 1968). Furthermore, neither frequency of exchange nor any form of social relationship among actors affects the outcome. By some, the contribution by Coase 1960, which made history within economic theory under the heading of the ‘Coase theorem’, was taken as an expansion of the set of cases expressed in the First Fundamental Theorem of Welfare Economics, where decentralized allocation mechanisms lead to efficient outcomes (Buchanan and Tullock 1962). However, if read carefully, Coase also makes the assumption that efficient outcomes of bargaining over the internalization of externalities occur if there are no impediments to bargaining, thus the ability to write complete contracts. But in those very cases the Fundamental Theorem also works, hence the Coase theorem is not even needed (Farrell 1987). What Coase yet calls for is twofold: first, he points out that the market is not the only way to implement a Pareto-superior allocation. One policy implication is that in some cases more precisely formulated and tradable property rights are needed. Second, Coase makes clear under which conditions the private rearrangement of property rights might solve coordination problems, when neither markets or states through Pigouvian taxation can succeed (Bowles 2004: 227-230).

A further well documented peculiarity of the Walrasian model relates to the comparison of opposed economic systems, capitalism and socialism. Starting in the depression period in inter-war America a group of mathematical economists applied the mathematics of the general equilibrium to planned economies. Leading figures were Oskar Lange (1936) and Abba Lerner (1934). The intellectual seed for this had been planted by Vilfredo Pareto, who

had noted, or rather tentatively speculated that a government wanting to maximize well-being could also set the coefficients of productions so as to match the conditions of a perfect competition when price equals marginal costs. Specifically, Lange envisioned a system, in which the means of production belong to the society, or the state for that matter. His system has been described as a liberal form of market socialism (Young 2005). Since this involves the removal of competitive markets, artificial markets are created, for which so-called managers of production (Lange 1936: 61) set prices arbitrarily and proceed in a trial-and-error fashion to arrive at equilibrium prices. The similarity to Walrasian auctioneering is central to the argument: “... *prices in a socialist economy can be determined by the same process of trial and error by which prices on a competitive market are determined*” (66). Moreover, Lange considered his system superior to a competitive capitalist economy, since it does not need to accommodate interest groups. All revenues are diverted to the state, which can arrange for a more egalitarian distribution of income (‘the socialist dividend’). He and his collaborators again used Pareto’s cautious remarks that one should carefully discern limitations of the invisible-hand-model in order to establish situations in which it can work and where it does not hold (Young 2005). However, in using this as the starting point for an intellectual and conceptual assault on competitive market coordination they put the argument upside down. This is so, because just like Arrow and Debreau, Lange also needs the assumption of costless markets to make the mathematics of his model work. Hence, what Pareto had called for, namely research into the conditions for the invisible hand to work is conducted by neither of them. It was Hayek 1945, who dismissed the theoretical possibility of planning according to equilibrium prices, because the complexity of information would not be manageable for planners. Hence, he conducts early conceptual steps in the direction of taking information costs and limited cognitive ability of actors seriously. However, what leaves the observer most astonished is the fact that making use of “*the zero-transaction-cost world of neoclassical economics, the two economic systems that have been viewed as the arch rivals of [last] century, capitalism and socialism, can be modelled by general equilibrium systems.*” (Furubotn and Richter 2005: 18).

The origins of the New Institutional Economics² are not rooted in a conceptual critique of the workings of the Walrasian equilibrium, but are primarily based on an uneasiness with the

2. It should be noted that a broad range of approaches usually unite under the heading of the New Institutional Economics. Furubotn and Richter (2005) in their overview of the literature count at least ten subfields: while they regard transaction cost economics, property-rights analysis and the economic theory of contracts as the core of New Institutional Economics, the following subfields are also related to it: New Institutional Economic History, Historical and Comparative Institutional Analysis, Evolutionary game theory, Constitutional Economics, theories of Collective Action, the neo-institutional approach to political science and institutionalism within organization theory and sociology. While these approaches differ with respect to objects of study and sometimes are interwoven to a non-trivial extent, they have in common that all subscribe to the view that transaction costs should be acknowledged and that individuals are not completely rational.

assumptions of it: “*the world of zero transaction costs turns out to be as strange as the physical world would be without friction*” (Stigler 1972: 12). Hence, Williamson’s (1985: 19) criticism of economists, who at his time of writing had not yet followed the physicists’ example to leave the world of frictionless models and explicitly take transaction costs (“*the world around them*”) into account. The shift from complete rationality to bounded rationality is connected to the work of Frank Knight (1922) and Herbert Simon (1955). The introduction of positive transaction costs was called for by Ronald H. Coase (1937) and most notably further developed by Oliver E. Williamson (1975, 1985).

The acknowledgement of the need to explicitly include transactions and their costs into the analysis of economic exchange is the main tenet of the New Institutional Economics. In its earliest definition, transaction costs are the “cost of using the price mechanism” (Coase 1937: 390) or even more broadly the “costs of running the economic system” (Arrow 1969 cited Williamson 1985: 18). Furubotn and Richter (2005: 51-57) distinguish between market transaction costs, managerial transaction costs and political transaction costs. In addition to the introduction of transaction costs into economic models adherents to the New Institutional Economics also question the assumption of complete rationality within neoclassical thinking. The neoclassical model assumed perfect rationality, which essentially means that a “*completely rational individual has the ability to foresee everything that might happen and to evaluate and optimally choose among available courses of action, all in the blink of an eye and at no costs.*” (Kreps 1990: 745). The most prolific critic of this view is Herbert Simon. He sets out on the “*task (...) to replace the global rationality of economic man with a kind of rational behavior that is compatible with the access to information and the computational capacities that are actually possessed by (...) man...*” (Simon 1955: 99). This capacity, he argues, “*is very small compared with the size of the problems whose solution is required for (...) rational behavior (...) or even for a reasonable approximation...*” (Simon 1957: 198). This means that both the complexity of problems and the limited cognitive aptitude of human beings leads to a situation, in which perfect rationality cannot be upheld (also North 1990: 25). In effect, individuals can be regarded to be “*intendedly rational, but only limitedly so*” (Simon 1947). Simon is influenced by Knight’s (1922) distinction between uncertainty and risk. In a situation of risk individuals are able to assign probability values to possible future states of the world. In this case actors can calculate expected utilities and feed them into traditional utility-maximizing models. However, in the case of uncertainty this is no longer possible, because no predictions on the basis of probabilities are possible. Simon argues that the world should be characterized as inhibiting uncertainty. Then man is not able to perceive all imaginable choice alternatives, nor assess and consistently value consequences (pay-offs) of all feasible alternatives. It should be further stressed that both concepts of transaction

costs and bounded rationality are closely interrelated. Stated differently, if we were to assume complete rationality, then the concept of positive transaction costs would not make sense, because a completely rational actor, who ‘knows everything’, does not need to invest in any of the ex ante costs of contract initiation and ex post costs of supervision and enforcement. On the other hand, given the cognitive limits stressed by Simon, any contract but the very simplest one becomes “unavoidably incomplete” (Williamson 2000: 601).

1.2 New Institutional Economics – three levels of analysis

A useful distinction of strands of the new institutional economics for this dissertation is given by Williamson (2000). The distinction is made according to three levels of institutional analysis. The two overarching level are related to the institutional environment given by cultural roots and legal rules. Those are the levels, which provide the institutional environment or simply the informal and formal “rules of the game”. The main question when analyzing the two levels relates to the impact of formal and informal institutions on incentives of individuals and firms. On a third level of analysis, the property-rights school and transaction cost economics as a special case look at governance structures on the firm level or institutional arrangements. The main questions are who should own an asset, or stated differently, when should a firm produce a good or service in-house or when should it be outsourced.

The literature on governance structures can be best distinguished according to those approaches, which model them as ex-ante incentive alignment devices and those, which see them as ex-post governance (Gibbons 2005). Williamson’s transaction cost economics (1985) as part of the latter centers around the analysis of the type of transaction a firm deals in. Asset specificity, frequency and uncertainty of transactions are three dimensions of the transaction, which determine outcomes with regard to contractual relations. Among these, asset specificity or the degree of idiosyncrasy of investments is the key dimension. Asset specificity refers to the degree to which an investment can be redeployed to alternative uses without decreasing its value of the first-best employment. Hence, typically a situation emerges, in which an investment generates higher returns in a particular application than elsewhere. Stated differently, if a specific asset were nevertheless redeployed to a second-best application, a loss in income would occur. The difference between the incomes of first-best and second-best usages is referred to as the quasi-rent (Klein et al. 1978). It can be regarded as a measure of asset specificity: a larger quasi-rent is associated with a higher asset specificity, and vice versa (Williamson 1985: 52-56). Coupled with the frequency with which the transaction takes place, a transaction with a high specificity of assets tends to be produced within the firm, while transactions with lower asset specificity are most efficiently procured

on the market. The overall empirical evidence of the transaction costs economics approach is not clear. While Williamson repeatedly claims that the theory is an “empirical success story” (Williamson 1999: 1092; 2000: 605) and earlier reviews such as Shelanski and Klein (1995: 335) come to the conclusion that the empirical results are “remarkably consistent” with TCE’s predictions, recent representative reviews come to more careful conclusions. Reviewing a number of studies selected on the basis of citation impacts David and Han 2004 find 47% of 63 empirical papers (including 163 empirical tests) with supporting evidence. Best results are obtained when asset specificity is used as the independent variable. However, the authors note that for instance the frequency of transaction does not enter the analysis in any of the papers in their sample. Hence, there is no study, which would test all three main characteristics, which are said to influence the choice of governance modes, asset specificity, uncertainty and frequency (Carter and Hodgson 2006: 467). Bearing in mind the great amount of empirical applications, which the approach has generated, the overall picture painted by recent reviews is rather meagre. So far, most studies cannot be consistently compared, because methodologies and data employed greatly differ. Hence, it can be foreseen that the already bulging literature will (and should) grow even more.

What are the connections between the institutional environment and particular institutional arrangements? Williamson (1991: 287) proposes to view “the institutional environment as a set of parameters, changes in which elicit shifts in the comparative costs of governance”. In other words, the institutional environment determines (in parts) the comparative costs of different governance mechanisms. *Ceteris paribus*, then, the “*effect of changes in the institutional environment within nation states and differences in the institutional environment between nation states can both be investigated in this way*” (Williamson 2000: 97).

1.3 Comparing institutions

Generally speaking, two strategies of comparing institutions of the institutional environment across countries are found in the literature. There are a large number of studies, which look at single institutions or spheres of institutions and then conduct cross-sectional or longitudinal comparisons. This is the approach of the “new comparative economics” (Djankov et al. 2003). A second strategy involves modeling institutions as part of institutional systems. Here, the notion of institutional complementarities is central. While the first approach is generally interested in the institutional root causes of divergent development records, the second approach models different variants of market economic interaction, which are able to generate good macroeconomic outcomes in terms of income.

In order to explain capitalist diversity by way of the “new comparative economics”, Djankov et al. (2003) set out from the basic concept that every institutional setting attempts to find an efficient solution to a trade-off between dictatorship and disorder. Dictatorship is seen as expropriation by the state through murder, taxation or selective granting of monopoly positions to single firms, while disorder refers to expropriation by private individuals such as theft, violation of agreements and also “private subversion of public institutions” through bribery. The trade-off arises from the observation that a strong state, which in principle is able to control private expropriation (disorder), at the same time has the capacity of dictatorial abuse of its powers (Weingast 1993). Institutions here have the function to control the dangers arising out of the trade-off between dictatorship and disorder. In this sense, the control of dictatorship is referred to as rule of law, while law and order controls potential disorder of private activities (Shleifer 2002). Conceptually, an institutional possibilities frontier is introduced, which is constructed by feasible combinations of different degrees of disorder and dictatorship. As a way of illustration, Djankov et al. (2003) discuss four representative mechanisms for the protection against monopoly pricing or predatory behaviour by companies. The mechanisms represent different degrees of disorder and dictatorship, hence different solutions to the trade-off. The lowest degree of dictatorship is presented by private orderings. The market disciplines market participants by weeding out adverse behaviour. The authors take the example of the efficiency and quality of information disclosure in securities markets: in this setting the private ordering solution submits that issuers of securities have incentives for good conduct, because in order to remain in business, they need to build up reputation. State influence and hence dictatorship is at a minimal level in this setting. However, as the authors note, the low degree of security against private expropriation can have adverse effects such as monopoly building, underinvestment in security of workplaces, and in the extreme can lapse into mafia-like conditions. The steep shape of the institutional possibilities frontier means that the marginal rate of substitution between disorder and dictatorship is large: a large degree of disorder can be removed by increasing dictatorship by relatively little. Independent judges (employed by the state) are installed in order to impartially solve legal disputes, when contract partners feel mistreated. There can be differences between judicial systems as regards judicial discretion, which can have slightly different results for the extent of disorder and dictatorship present in the society. Government regulation of securities issues represents the third mechanism, which increases state influence yet more. In the case of securities markets this means that a public agency is set up, which lays down rules of disclosure and conduct and inspects the behaviour of market participants. Regulatory entities can be more efficient than judges, because they can act preemptively and are arguably less susceptible to bribery than judges (Glaeser and Shleifer 2003). The fourth type of controlling the securities market would be to nationalize

security issuance, in which case the state fully controls it. That would entail a large increase in dictatorship with a modest decrease of disorder in any given economic activity. In some areas, however, it can be efficient, for instance with regards to safety issues. The basic framework is used in number of studies. The initial paper contains some comparative studies, where the framework is used. It encompasses both cross-country approaches at one point in time (also Glaeser and Shleifer 2002) and longitudinal studies of one country over time (also Glaeser and Shleifer 2003). Furthermore, references to legal institutions in development issues and institutional possibilities in transition countries are made. Other papers, most notably within the Legal Origins tradition (La Porta et al. 1997, 1998, 1999, 2008), do not always explicitly refer to the framework of the new comparative economics, but nevertheless generally adhere to the basic ideas, can be seen as empirical applications, and include the same group of researchers.

Glaeser and Shleifer (2003) start from the observation that the American Common Law tradition dramatically changed its stance from a dominance of private litigations to increasing government regulation at the turn of the 19th and 20th century. The system of private litigation became unsustainable with the emergence of large corporations ('robber barons') during American industrialization, which had the power to circumvent law and shape it according to their needs. As a result, an "inequality of weapons" arose, which made it virtually impossible for private individuals to get justice in disputes with large corporation (Glaeser and Shleifer 2003: 407). However, from the 1880s onwards and with increasing speed after the turn of the century the American legislative put into existence numerous public regulations acts. They ranged from antitrust measures (Sherman Act in 1890), food and drug safety legislation in 1906, banking in 1913 and eventually regulation of securities market in the 1930s. This increase of regulation can be explained using the framework introduced above. In terms of Figure 4 it means that before regulation the US economy operated on an equilibrium somewhere on the upper half of the institutional possibilities frontier with a predominance of private litigation. However, industrialization and rising inequality between capital and labour among other things shifted the institutional possibilities frontier both outward (i.e. every quantity of dictatorship is associated with higher disorder) and steepened the slope (i.e. the marginal rate of substitution between disorder and dictatorship increases and hence relatively more disorder can be decreased when dictatorship is increased). In the new setting, it was efficient for the society to move along the new institutional possibilities frontier downward to a new equilibrium, in which disorder is greatly reduced (for instance to the pre-industrialization value) by introducing more governmental regulation (and thereby increasing dictatorship). A similar story in a cross-country setting is developed in Glaeser and Shleifer (2002). This paper explains the emergence of the common

law tradition in England and the civil law system in France in the 12th and 13th century. While England at that time was a relatively peaceful country with a strong king, who held central power over the entire country, in war-torn France local nobilities had considerable power and could use the local legal institutions to their favour. In terms of the framework, France's institutional possibilities frontier at that time was farther from the origin than England's because of the prevailing and constant threat of disorder. It was also steeper, because at the margin the use of dictatorship to contain disorder was more effective, partly because of the high quantity of absolute disorder and the decentralized political sphere. Hence, out of efficiency considerations it was more efficient for France to choose a civil law system with relatively more dictatorship comprising state-employed judges and stringent procedural and legal codes minimizing discretionary decision power by judges. England, in contrast, could 'afford' to install a decentralized common law tradition with independent judges and judge-made law, because due to the relatively peaceful environment and centralized rule of the king the laws were not as vulnerable to private misuse as in France.

Djankov, Glaeser et al. (2004) go on to argue that not always are institutions chosen on efficiency grounds but through simple transplantation of institutions from one country to another. Closely related to this transplantation effect for developing countries, the second set of empirical papers follows the basic idea of legal tradition and submits in a series of papers that the law tradition within a given country matters for financial development and hence for economic development. La Porta et al. (1997) start from the observation that different legal families provide different degrees of shareholder and creditor protection. English common law is portrayed as the most investor-friendly, while German and French civil law exhibit the least investor-friendly features. As a fourth legal family, Scandinavian law takes a middle position. With regards to law enforcement a similar ranking results after controlling for income differences of countries (La Porta et al. 1998). Even more so, countries with common law tradition have better functioning governments than those with French civil law tradition (La Porta et al. 1999). In the series of papers La Porta et al. establish the claim that on the whole the common law countries with greater degrees of freedom result in better financial markets and eventually lead to better economic performance. La Porta et al.'s results are, however, challenged by Berkowitz et al. (2003), who give a more nuanced account by considering the way a specific law (or legal tradition) was transplanted in different countries (see also Kogut and Ragin 2006). As a result, it is more important how receptive a country is to the transplanted law, hence "the country's ability to give meaning to the imported law" (174). The receptivity refers to the process of transplantation: in the case of conscious adaptation it is assumed that the receiving country has a grasp of the meaning of the legislation. This is proxied by whether changes to the adopted laws have been made or not

(i.e. whether it is understood that the adopted law must be adjusted to local conditions) and a measure of familiarity with the laws. In the latter case it need not be the case that colonial transplantation was always connected to imposing unfamiliar law to the conquered country: in the case of large influx of settlers bringing the legal system with them, familiarity was essentially there (see also Acemoglu et al. 2001). Berkowitz et al. use the same sample of countries as La Porta et al. and are able to show that the not the legal family as such is important for economics performance, but the way it was adopted and the ability of the receiving country to actually work with these laws. Hence, while La Porta et al. derive as a policy implication for developing countries to introduce the more liberal common law rather than civil law (specifically not the French type), Berkowitz et al. come to subtler policy recommendation: before introducing a legal system make sure it not completely unfamiliar to locals. This can be done by either taking into account a similar legal heritage or invest in training in order to acquaint legal actors with the meaning of the new laws.

The theoretical observation that institutions are crucial for economic performance has triggered a burgeoning empirical literature on the scope and magnitude of the effect and on the direction of causality. Most of the research focuses on the relationship between institutions and GDP growth or GDP levels³. Arguably the earliest contribution is Barro 1991. His primary goal, however, is to explore the lack of statistical evidence for the theoretical tenet within growth literature that low income countries grow faster than high income countries (the main reason for this is diminishing returns to capital). One of the control variables Barro includes is the political stability of countries measured as the number of coups d'états and political assassinations into both investment and growth equations for several long periods. He finds that they have significantly negative impacts on both, however, cannot clearly establish the direction of causality. Several papers follow in Barro's fairway. Knack and Keefer 1995 find significant influence on investment in the periods from 1974-89 and 1960-89. Apart from indirect effects they also find some direct effect on growth. A similar estimation is carried out by Brunetti et al. 1998 using above mentioned survey results on political credibility of countries. They find a positive impact of credibility on investment and growth. More recently, the problem of the direction of causality between institutions and economic performance came to the forefront. This led researchers to include instrumental variables. Mauro 1995 uses ethnolinguistic fragmentation⁴ as an instrument for corruption.

3. Methodological issues arise both with respect to the choice of institutional proxies with authors using both subjective and objective measures of institutions and the choice of the independent variable as either GDP growth or stocks. Thirdly, a direct effect from institutions must be kept separate from intermediate effects on investment levels or financial development. For more detailed discussion see Aron (2000).

4. Measured as the probability that two randomly drawn members of a society do not belong to the same ethnolinguistic group (Mauro 1995: 692).

By means of a principle-agent reasoning Mauro develops a story that higher ethnolinguistic fragmentation tends to render control of agents harder or make for larger cronyism by bureaucrats favouring certain groups over others. Corruption, then, tends to increase. Hall and Jones 1999 and Acemoglu and Johnson (2005) use instruments for GDP levels as dependent variable. The former employ the distance from the equator and the share of the population speaking a major European language as instruments for the institutional environment ('social infrastructure' in their parlance). Both instruments are intended to approximate the extent of European influence on a country. The first refers to the intuition that European tended to settle in sparsely populated and climatically moderate areas, whereas the second captures cultural aspects.

A subtler version of this is presented in Acemoglu et al. (2001). They start from the observation that European colonizers essentially followed one of two colonization patterns: on the one extreme extractive states where established, whose only purpose was to exploit natural resources. The other extreme entailed settling in colonies with the purpose of long-term engagements. In the former case, no institutions of property rights were established, while in the latter case European-style institutions of private property and government checks were imported and reproduced. The underlying reason why one strategy was chosen over the other was the state of environment: in places, where the climate was inhospitable and disease-ridden, Europeans would not settle, but rather exploit. Conversely, where the conditions were favourable to Europeans and survival probability high, they stayed and settled (Acemoglu et al. 2001: 1370). Hence, settler mortality is used as an instrument, because it is argued that it influenced institutions as they exist now, but has no impact on today's performance. When instrumenting institutions, Acemoglu et al. (2001) find large support for the relevance of institutions for economic development and are able to establish a clear causality, which runs from institutions to wealth. Hall and Jones (1999) and Mauro come to similar results.

Systemic approaches at comparing institutions center around the concept of institutional complementarities (Aoki 1994, 2001). One approach, which takes up both presented concepts in the tradition of the new institutional economics and concepts coming from political scientists' attempts at comparing democratic capitalist systems, centers around the varieties-of-capitalism (VoC) literature (Hall and Soskice 2001). It stands in a long tradition of political science approaches of comparative capitalism, whose origins reach back as far as Andrew Shonfield's "Modern Capitalism" in Shonfield 1965. Shonfield analyses the capacity of states in supporting the modernization of economies after the war. He describes German capitalism as cooperative and organised with *de facto* planning features due to the universal banking system. In France official planning authorities exerted considerable control of the economy, often by a small elite circumventing official legislation. In contrast to that, in the

British and U.S. approach Shonfield identifies the underlying principal of a passive state guaranteeing institutional frameworks, but not engaging in planning. In the 1970s the phenomenon of rising inflation and unemployment (“stagflation”) in the industrialized economies triggered the literature on *neo-corporatism* which predominantly deals with macro-issues. For example, states are grouped according to their scope of wage-bargaining (Schmitter and Lehbruch 1979). This approach also deals with sectoral differences in coordination. On the micro-level *neo-institutionalism* looks at the institutional setting with regard to the finance sector and the role of the state Hollingsworth and Streeck 1994. At about the same time another strand of literature emerged which Hall 1999 classifies as *Organization of Production*. It distinguishes various modes of coordination of work processes in firms and particularly considers changing modes of production and accompanying institutional requirements (Chandler 1990, Lazonick 1991).

The VoC approach draws on its predecessors, but drawing in part on the new institutional economics was developed further in essentially three respects. Firstly, it is a micro-approach placing firms as central actors of an economy in the centre of analysis. Thus, the central question is: how do firms deal with coordination problems that arise in the interaction with capital owners, workers and other firms. The authors argue that the existent institutions for coordination distinguish different types of capitalism. In ‘liberal market economies’ (LME) coordination is primarily characterized by price signals and formal contracting in competitive markets. In contrast to that, in ‘coordinated market economies’ (CME) there are several non-market institutions that influence processes of strategic interaction. This division is understood as a continuum on which countries cluster around the prime examples Germany and the USA. Although deviations occur within these groups, the Scandinavian countries, the Continent and Japan are regarded as CMEs, whereas the UK, Ireland, Canada, New Zealand and Australia complete the group of LMEs. France and other Mediterranean countries are regarded as mixed cases (Hall/Soskice 2001: 19-21). As a second element of the approach, Hall and Soskice take up the idea of institutional complementarities. The idea is similar to the concept of Edgeworth complementarity, which means that two elements (factors) are complements if employing more of one element increases the marginal returns to employing more of the other. Transferring this to institutional economics⁵, Hall and Soskice (2001: 17) argue that “*two institutions can be said to be complementary if the presence (or efficiency) of one increases the returns from (or efficiency of) the other.*” This means that the prevailing, systematically different modes of coordination in various sub-systems of an economy

5. The transfer of the economic concept of complementarity to institutional economics is to be ascribed to Aoki’s (1994) treatment of the Japanese firm. He argues that the main bank system and an imperfect labour market are institutional complements, which are able to jointly tackle the danger of moral hazard in team-production.

(industrial relations, corporate governance, social system, vocational training and inter-firm relations) are linked to each other in a mutually reinforcing, systemic way. The concept is outcome-related meaning that the *combined* effect of complementary institutions leads to specific functional results. These outcomes are related to both company strategies and workers' incentives to invest in different degrees of specificity of human capital. For instance, comparing the sub-systems of social security and the financial system or the markets of corporate governance, we observe a different picture in a CME and an LME: in a CME we find a bank-based financial system, which is able to provide firms with 'patient' capital, meaning that investments are monitored through close relationships to stakeholders in dense business networks and cross-ownership with overall large block holders of shares, and not so much through capital markets. This gives firms opportunities to embark on product strategies based on incremental innovation of 'diversified quality products' (Streeck 1991). On the other hand, a social security system characterised by a high employment protection gives workers an incentive to invest in firm-specific and industry-specific skills, which are needed for this kind of production (Estevez-Abe et al. 2001). Quite on the contrary, for firms in LMEs access to capital is through highly liquid markets, in which investments are secured through shareholders' voice or exit. In this market-based financial system takeovers are common disciplinary measures and firms must be able to frequently produce good short-term profitability indicators. This creates a situation, in which firms on the one hand are in a certain way constrained in that they face more difficulties when pursuing longer-term investments. On the other hand, they are enabled to faster movements into new business activities and radical innovations. Firms rely mostly on a workforce with general skills and conduct additional traineeships and in-house training. Complementarily to this, a low employment protection in the social security system gives incentives for workers to invest in highly portable and general skills.

The third step the authors take offers far-reaching implications: Hall and Soskice argue that these complementarities bring about *comparative institutional advantage* of industries. This comparative institutional advantage is connected to different types of innovation: the overall longer-term investment horizon and more consensual model of a CME enables firms to pursue strategies that rely on incremental innovation, which is necessary for diversified quality production. Complementarily, workers and firms in CMEs have incentives to invest in firm-specific and industry-specific skills. In LMEs the institutional setting characterized by faster decision-making and fierce competition in various sub-systems generally favours investment in general skills. This leads to a comparative advantage when it comes to products based on radical innovation. Accordingly, comparing patents in Germany and the US, Hall and Soskice (2001: 41-44) observe that German firms are relatively more active in

manufacturing sectors like machine tools, consumer durables or mechanical engineering, while American firms are relatively better in areas such as biotechnology, semiconductors or telecommunication.

1.4 Determinants of institutions

One influential school of thought of determinants of institutions has already been discussed above. The Legal Origin approach posits that the main determinant of a host of institutions in the economy is determined by the legal tradition of a country. This concerns not only investor protection as discussed above, but extends to labor market institutions (Botero et al. 2004) and conscription Mulligan and Shleifer 2005 among many others. A recent review (La Porta et al. 2008) gives an overview of the areas under study. In a nutshell, it is argued that the legal tradition determines a certain way of doing things, which translates in different kind of institutions. Common Law countries respond to regulatory challenges rather with more market-friendly solutions, while Civil Law countries tend to involve the state in solving problems. Legal Origins has come under considerable attack, specifically from lawyers. Spamann (2009) questions the validity of the survey the original investor protection indicator. His own indicator, which is also based on expert surveys remains only weakly correlated with the initial by La Porta et al. (1998). Djankov et al. (2008) take some of the criticism to heart and present an updated and adjusted version. Siems (2007), Milhaupt and Pistor (2008) and Pistor (2005) question whether the broad distinction of legal families have any explanatory value at all and suggest looking at specific legal phenomena that are distinct across legal systems. One such example is given by the prevalence of good faith and the allocation of initiation rights in the legal system (Pistor 2005)

A different and somewhat competing approach develops political arguments to explain determinants of institutions. Both the electoral rules and the form of government have potential impact on institutional outcomes Persson and Tabellini 2004. Regarding electoral rules, Pagano and Volpin (2005) model the preferences of managers, workers and investors and their manifestation under different electoral rules. In a proportional system, which allows for coalitions of government parties, preferences of workers and managers tend to align against the preferences of investors. As a result, a coalition is formed granting both employment protection in the interest of workers and low investor protection, which is in the interest of managers. On the contrary, a majoritarian system produces single-party governments, in which a coalition building of managers and worker is not possible. Empirically, it can be shown that countries with proportional electoral systems show more labor market rigidity and worse investor protection than countries with majoritarian systems. Persson and Tabellini 2000 arrive at similar results modeling the incentives of politicians. In

a proportional system parties have to secure support from a broad base of the population, while in majoritarian system it is often enough to win over certain swing districts. This leads politicians in proportional systems to propose relatively more universal redistributive programs than in majoritarian systems. A similar result is found by Austen-Smith 2000: proportional systems tend to have higher taxes and a flatter distribution of income than majoritarian systems. This is so, because in a proportional system the preferences of the electorate with the average worker income is promoted, while in a majoritarian system the individual with the median income of the entire electorate tends to win political representation.

In general, proportional systems are highly connected with more corporatist or coordinated market economies, while majoritarian systems go together with liberal market economies. This point is also reiterated in political science literature, see for instance Iversen and Soskice 2006.

In the theoretical literature, the form of government as a second form of political divergence between countries is less connected to institutional outcomes but more broadly with incentives to increase the size of government spending. Persson et al. 2000 show that in a parliamentary system, where the threat of ousting a sitting coalition by a nonconfidence vote is present the coalition in government is forced to show a strong cohesion or party discipline. In this way the strong position can be sustained. In such a setting a stable majority in the legislation pursues the interest of the majority of the electorate by increasing spending programs directed at the broader population (possibly at the cost of the minority). On the contrary, in presidential systems the government does not face the threat of a non-confidence vote, which means the the legislation is much less disciplined. As a result, there is less incentive for broad spending programs, but rather many small spending targeted at specific constituencies. Persson and Tabellini (2004) report empirical results in favor of such a claim.

Recently, researchers have begun to rigorously tackle the impact of informal institutions, or simply 'culture' on institutions and economic outcomes. Cultural attitudes influence preferences and thereby institutions and constitutions. This, in turn, will have an effect on economic outcomes such as income or growth (Guiso et al. 2006). The main problem of the literature is to find a workable and comparable definition of culture. Some employ religion (McCleary and Barro 2006), trust (Guiso et al. 2006), answers to the World Value Surveys (Pryor 2005) or develop other indicators of cultural attitudes (Licht et al. 2005, 2007). Also, it should be noted that cultural attitudes can be expected to influence not only outcome variables such as employment protection directly, but through other channels as the political system, which suggests to use it as instrumental variable. By and large, the evidence of an impact of culture on institutions is there. Licht et al. (2005) find correlations between cultural attitudes such as the preference for egalitarianism to be correlated with corporate governance

institutions.

1.5 Contribution

The contribution of the following three articles is threefold. The first article analyzes in depth the structural claim of comparative institutional advantage made by comparative economic system approaches such as the varieties-of-capitalism approach. While the fact of divergent capitalist organization is well known and appreciated and also the claim that different types of capitalist systems are capable of producing good macroeconomic outcomes in the long run seems widely accepted, the idea of comparative institutional advantage runs deeper and has far-reaching consequences. That is, if comparative institutional advantages of nations prove to be durable, there is little argument in favor of world-wide convergence of institutions towards one universal way of doing things. The paper here takes a novel approach by investigating locational choices of companies in the form of foreign direct investment (FDI). The hypothesis is straightforward: if a comparative institutional advantage exists, it can be expected to influence the locational choice of a firm. That is, *ceteris paribus* we would expect a country to receive more FDI in a given sector if the country possesses an institutional advantage in this sector. On the basis of sectoral data of German outward FDI in 21 countries it can be shown that depending on the size of a sector, German companies tend to locate in a country with a comparative institutional advantage. Stated differently, the size of a sector alone does not influence company decision, but a large sector with a comparative advantage receives more FDI.

Having established the importance of comparative institutional differences in terms of structural outcomes the second and third paper turn to the Central and Eastern European experience. The second paper conducts an in-depth case study of two countries, Estonia and Slovenia, with respect to their institutional development in spheres established by Hall and Soskice (2001) as crucial complementary institutions. The case study develops further Feldmann's 2006 study of labor market institutions and industrial relations. It is similar to Mykhenko 2007, which provides a comparative country study of Poland and the Ukraine. The result of the country studies is that Estonia developed into a very liberal market economy with no corporatist features whatsoever, while Slovenia can be characterized with a coordinated market economy much like Austria or Germany.

The third paper complements the rich institutional description of Estonia and Slovenia by quantitatively assessing a wider sample of transition countries in terms of competing determinants of institutions. Put simply, while the second paper answers the question, what kind of capitalist system emerges in Central and Eastern Europe by use of a case study, the third paper attempts to answer the question, why did institutions evolve as they did. As

discussed above, there are cultural, legal and political approaches to explain institutional development. Their influence on investor protection, labor market institutions and on a broader measure of coordination is estimated using both cross-sectional and panel data. The focus is on the type of institutions and not on differences in quality, which would lead to differences in economic development. In fact, as in many similar studies, the GDP per capita is an explanatory variable measuring the overall development status of countries. The advantage of the Central and Eastern European sample is the fact that variation of political indicators both over time and across countries helps to investigate theories, which have been mostly applied to stable, mature democratic systems. Results suggest that the political institution of the electoral system explains the emergence of institutions best with legal origins having somewhat less explanatory power.

2. Comparative Institutional Advantage as a determinant of FDI? Evidence from German sectoral data

Article 1

This paper is joint work with Sang-Min Park and Lena Calahorrano.

2.1 Introduction

The comparative capitalism literature around Hall and Soskice's (2001) *Varieties of Capitalism* puts forward a strong claim of comparative institutional advantage. The institutional set-ups in coordinated (CME) and liberal market economies (LME) are said to provide firms with comparative advantages in specific industries, in which dominating research patterns are more prominently utilized than others. Specifically, in LMEs institutions facilitate radical innovations and hence, firms have a comparative advantage in the very industries, which require radical innovation to prosper. On the other end of the spectrum, CMEs exhibit institutional features, which give the opportunity to engage in more incremental innovation strategies, which are utilized more in some industries than in others. The literature provides a considerable number of empirical investigations into the existence and the extent of comparative institutional advantage. The overall picture is mixed, but taking everything into consideration there seems to be considerable evidence in favor of comparative advantage of nations.

A further logical step for Hall and Soskice (2001) is then to propose a concept of institutional arbitrage: firms should exploit existing comparative institutional advantages by shifting production to countries, where the institutional set-up is best for the activity. Decreasing barriers to the flow of production factors and goods due to "globalization" make it easier to shift production to other countries. Apart from "traditional" determinants of foreign direct investment such as differences in labor cost, market size, transport costs and generally the distance between countries, the concept of institutional arbitrage implies an institutional motive for locational production choices of companies.

The empirical literature on the new institutional economics has long introduced institutional variables in order to explain foreign direct investment and trade patterns. The focus there, however, is on the *quality* of institutions in the colloquial sense of the word meaning "good" institutions. For instance, it can be shown that lower corruption in countries correlates with higher FDI inflows; similarly, the quality of contract enforcement in countries can explain

parts of the production pattern of countries. This resonates with the large Doing Business project led by the World Bank (2007), which collects worldwide data on institutional differences in a wide range of areas. These data are then utilized to show the impact of institutional quality on financial development and growth.

The comparative capitalism literature has a different focus: different *types* of institutions exist as a result of multiple equilibria with complementary institutions. As stated above, the focus here is on the different investment incentives provided by different varieties of institutions. Hence, simply put, institutions in advanced capitalist countries are not better or worse, but lead to different outcomes with respect to industrial structures and dynamics or distribution of income. While it can be shown that institutional differences in kind lead to different sectoral growth rates and investment strategies (Carlin and Meyer 2003), the impact on cross-country investment and thereby the existence of institutional arbitrage has not been tested empirically, yet, on a cross-sectoral level. We make a first step of doing so using data of German outward foreign direct investment (FDI) on a sectoral breakdown. We follow the gravity equations approach, which explains cross-country variation of FDI flows on the basis of market size, labor costs and distance between host country and the country of origin. In order to model the institutional set-up of the host-country we include a number of institutional variables ranging from a simple binary system variable showing whether a host country is classified as CME or LME to indicators for specific institutional sub-systems of the host countries. Hence, the basic measure says whether countries are liberal market economies or coordinated market economies. This is amended by continuous measures of degrees of coordination using an indicator developed by Knell and Srholec (2007) and an expanded and updated version of the coordination index proposed by Hall and Gingerich (2004). In addition, we include indicators of industrial relations, corporate governance and labour laws. In a similar fashion as Allen et al. (2006), we group industrial sectors according to the dominant innovation pattern.

Our analysis suggests that there is a systematic institutional arbitrage to be observed by German companies. In other words, German companies contemplating relocation do seem to be influenced by the institutional endowment of host countries. However, this effect depends on the size of the receiving sector: larger sectors receive more German FDI if they exhibit a comparative advantage. If the advantage is not present, the size does not matter.

The analysis proceeds as follows: chapter 2 sets the stage by incorporating the concept of comparative institutional advantage of the comparative capitalism literature into its usage within the broader stream of new institutional economics. Against this backdrop, we then discuss the concept of institutional arbitrage as advocated by Hall and Soskice and give an overview about the empirical determinants of FDI. Chapter 3 presents our methodology, which follows widely used empirical methods of international economics to model direction

of investment; chapter 4 presents the data. The results of our data are presented in chapter 5, while chapter 6 concludes.

2.2 Comparative institutional advantage and foreign direct investment

Comparative advantage refers to lower opportunity cost of production in certain goods and services. In different strands of trade theory, comparative advantage based on labour productivity (Ricardo) and relative factor abundance (Heckscher/Ohlin), explains specialization and the direction of trade. Simply put, firms specialize in industries, for which in their respective countries the opportunity costs of producing are lowest and export those goods. Introducing institutions into the concept of comparative advantage of nations gives rise to the notion of comparative institutional advantage. It states that institutions (North 1990) provide companies in a given country with comparative advantages in the production of specific goods and services (Hall and Soskice 2001, Belloc 2006). For our purposes it is less relevant, whether countries have comparative or absolute advantages from the institutional environment. What is more, empirically observing trade or investment patterns of countries allows to infer a comparative advantage and not an absolute advantage (see also discussion in Franzese and Mosher 2002).

The theoretical and empirical literature on comparative institutional advantage can be broadly classified along two lines. On the one hand, some authors attempt to show that a higher *quality* of institutions in one country provides firms with a better contracting environment relatively to firms in a country with lower quality of institutions. This then has an effect on the whole economy. The second line of research, to which the present paper attempts to make a contribution, puts the main emphasis on different *types* of contracting institutions, which create different institutional environments entailing sectoral comparative advantages.

Including quality differences of institutions in theoretical and empirical studies to explain growth and development differentials around the world has substantially advanced growth theories. It has been shown that the quality of institutions, in particular of contracting institutions, has a long-term impact on the development of countries (Acemoglu et al. 2001, Acemoglu and Johnson 2005, North 1990). Also, trade theory is increasingly incorporating institutions and differences in contract enforcement as a way to reconcile theoretical predictions with actually observed trade patterns (Belloc 2006).

The theoretical background is provided by institutional economics approaches such as property rights theory (Hart 1995, Hart and Moore 1990) and transaction cost economics (Williamson 1985, 2000). There, the unifying feature is the importance of relation-specific investments for the choice of specific types of contractual arrangements. Property rights

literature emphasizes the crucial role of residual control rights in an enterprise. Since contracts are incomplete, it is the owner who decides over the distribution of total surplus in cases of ambiguities or imprecision. Hence, there will always be under-investment of the non-owner as compared to a first-best solution. Low quality of contract enforcement in a country aggravates this because under-investment in relation-specific assets of non-owners will be even greater. *Ceteris paribus*, it is argued that the better the contract enforcement in a country, the more relation-specific investments are undertaken. As a consequence, countries with better contract enforcement (for instance less corruption in the judiciary) enjoy a comparative institutional advantage in those economic activities, which heavily rely on relation-specific investments. Oxley (1999) makes a related observation in a transaction cost economics framework: the quality of intellectual property rights protection in a host country has an influence on the governance choice by the foreign investor: the weaker the protection the more hierarchical the chosen governance structure.

Recently, a rapidly growing literature has used trade data to investigate whether trade flows follow the theoretically predicted lines of comparative institutional advantage. All of them use similar indicators to capture the differential need for contracting institutions, such as the contract intensity of industries as proxied by the thickness of input product markets (Nunn 2007), the complexity of products in industries measured by the concentration of input goods (Levchenko 2007) or survey results about the complexity of tasks in a given industry (Costinot 2009). They find that countries with better contracting institutions export relatively more of contract-intensive products than countries with worse institutions.

Differences in the quality of financial systems can also impact on comparative advantages of countries otherwise equally endowed (Baldwin 1989, Bardhan and Kletzer 1987). Earlier theoretical contributions are more broadly echoed in the Law and Finance literature (see an overview by Beck and Levine 2005 and La Porta et al. 2008). Empirical investigations that explicitly model comparative advantages arising of better (or worse) financial systems confirm this (e.g. Svaleryd and Vlachos 2005).

Including quality measures of institutions in theoretical and empirical papers in a wide range of economic applications is commonplace. Less attention has been paid to different types of institutions, such as different degrees of non-market coordination. This will be discussed in the following section.

2.2.1 Type of institutions: Varieties of Capitalism

Contributors in this tradition emphasize the point that institutions of coordination can protect relation-specific investments and thereby lower the degree of under-investment. That is,

given equally good contract enforcement characteristics, different institutional settings result in incentives to invest in relation-specific investments. Hence, national institutions affect the production capacity differently across sectors of the economy.

Tightly coupled with this is the notion of institutional complementarities: simply put, two institutions are complementary when the existence of one raises the efficiency of a second institution. (Amable 2000, Aoki 2001, Aoki 1994, Hall and Soskice 2001, Höpner 2005). A related interpretation is that one institution within a domain *A* can only function efficiently, when a second institution is present in domain *B*. The mathematical foundation is based on the notion of super-modularity, which essentially means that elements are linked in discrete structures.

An encompassing framework within this line of work is provided by the Varieties of Capitalism (VoC) literature (Hall and Soskice 2001, Estevez-Abe et al. 2001). It takes a firm-centered view of the economy by analyzing the predominant coordinating device used by firms. In liberal market economies (LME) firms rely predominantly on the use of markets, hierarchies and arm's length contracting. In coordinated market economies (CME) there are additional non-market institutions, which facilitate coordination among companies. Table 2.1 provides a stylized overview of the predominant institutions in CMEs and LMEs.

As already postulated by North (1990), the institutional environment provides incentives, in what kind of skills and knowledge to invest. While North is primarily concerned with the development of economies and hence lays great emphasis on the distinction of "good" vs. "bad" institutions, here the focus is on the type of investment decisions facilitated by the institutional environment. For Hall and Soskice this is connected to the specificity of investments and accompanying innovation strategies. In short, it is argued that in CMEs the institutional environment gives incentives to invest in highly specific assets, both for employees and for firms. On the contrary, in LMEs individuals will invest comparatively more in general assets, which can be put to use in a broad range of activities without losing value. The institutional settings in the sub-system of corporate governance and social security can serve as an example: in a CME the high protection of both employment and unemployment of workers gives incentives to invest in specific human capital on the part of the workers.

Table 2.1: Stylized institutional complementarities in CMEs and LMEs

	CME	LME
Financial System	Bank-based	Capital market
Corporate Governance	Stakeholder	Shareholder
Industrial Relations	Country-, industry-level	Firm-level
Social Security	High protection, low flexibility	Low protection, high flexibility
Vocational training	Specific human capital	Generic human capital
Inter-firm relations	Cooperation	Competition

They expect that the appropriation of the quasi-rent of specific assets, i.e. being fired and having to accept a job with a different skill profile, is less likely than elsewhere. The management of the firm can furthermore commit itself to retaining the workforce during economic hardships, because the corporate governance system is built around the principle of ‘patient capital’. This means that banks and stakeholders secure credit through dense webs of cross-shareholding and other monitoring devices (Vitols 2001, 2004). Hence, the company can pursue investment strategies, which rely on incremental product innovations, such as diversified quality production (Streeck 1991). Here, it can be seen that the focus is on outcomes of institutional complementarities: as a result of “fitting” institutions an innovation strategy of incremental innovation is feasible. For LMEs, the logic runs the other way: here employment and unemployment protection is not existent or low, hence employees will invest in portable, generic skills. They cannot be sure that investment in higher specificity of assets would pay off. For the management of firms in LMEs, it is of utmost importance to be able to present good performance measures to shareholders. Flexible labor laws make it possible to ‘hire and fire’, which is one way of achieving good short-term profitability figures. Here, the resulting innovation strategies for firms are radical innovations. Liquid financial markets and hostile takeovers make it easy to move fast into new markets and change innovation strategies quickly. Also, as stated above, fluid labor markets foster radical shifts of companies into new business fields. Hence, institutional complementarities both constrain and enable actors to engage in particular activities.

To sum up the basic rationale of VoC, the institutional environment in CMEs and LMEs facilitates different predominant types of assets in both systems. These, in turn, go together with different innovation strategies. Apart from Germany as the prime example other European and Asian countries are considered a coordinated market economy, while the Anglo-Saxon countries form the group of liberal market economies.

Table 2.2: Coordinated, mixed and liberal market economies

Coordinated Market Economies	Liberal Market Economies	Mixed Market Economies
Germany	United Kingdom	Italy
Netherlands	United States	France
Belgium	Canada	Spain
Austria	New Zealand	Portugal
Switzerland	Australia	Greece
Denmark		
Finland		
Sweden		
Norway		

Apart from that, some countries are not placed in the CME camp, because they lack some decisive features of it. Greece, Spain, Portugal, Italy and also France are such ‘mixed market economies’ (Hall and Soskice 2001; Molina and Rhodes 2007). See Table 2.2 for an overview. Some authors argue that it makes more sense to talk about liberal market economies and lump everything else into one ‘non-liberal’ group, whose defining feature is the stark contrast to countries, which predominantly rely on market relationships (cf. in Streeck and Yamamura 2001).

Having defined sectoral innovation strategies and institutional differences between countries, it is argued that those innovation strategies give rise to comparative institutional advantages of nations, because different sectors rely more on one type of innovation than others. The support from institutional complementarities for certain activities as described above is different in LMEs from CMEs. It can be expected that this is reflected in the structure of the economy. Hall and Soskice (2001) submit the hypothesis that CMEs are relatively better at product strategies connected to incremental innovation, such as machine tools, consumer durables, engines and so on. LMEs, by contrast, are seen as relatively better in activities such as biotechnology, semiconductors, IT and so on. To provide evidence, Hall and Soskice provide patent data from the European Patent Office for patents from Germany and the US are used to calculate a specialization index. For the respective country, an industry is listed if that country specializes in the respective technology field. Specialization is given when the share of patents of a particular industry in total domestic patents is larger than the respective global share.

Table 2.3: Industry specialization of Germany and the USA 1993/1994 (Patents)

CME (Germany)	LME (USA)
Civil engineering	Surfaces
Consumer goods	Basic materials
Weapons	Agriculture, food
Nuclear engineering	New materials
Transport	Biotechnology
Agricultural machines	Pharmaceuticals
Handling	Organic chemistry
Mechanical elements	Medical engineering
Engines	Control systems
Machine tools	Optics
Environment	Semiconductors
Thermal processes	Information technology
Material processing	Telecommunications
Surfaces	
Process engineering	
Basic materials	
Pharmaceuticals	
Polymers	
Control systems	
Electrical energy	

As can be seen from Table 2.3, Germany is specialized in the very areas, which are usually conferred to as incrementally advanced diversified quality production. On the other hand, American firms are relatively better in industries, which rely on radical innovations.

Taylor (2004) in a first step confirms Hall and Soskice's (2001) classification of industries in either relying on incremental or radical innovation. Extending the analysis over a longer time span and a larger country set, however, he finds that the significance of results of clear comparative advantages between Germany and the USA exist hinges on the inclusion of the United States.

Apart from patents, trade data are also used to map comparative institutional advantage. Panuescu and Schneider (2004) use the share of high-tech and medium-tech technology sectors in total exports of a country as a dependent variable. The intuition is that LME countries will specialize more on high-tech industries with a large R&D-intensity, while CME countries specialize on medium-tech activities characterized by a lower R&D intensity. To correct for imports they include the relative advantage of both for a total of 20 countries. The results are overall supportive for the claim that LMEs specialize in industries dependent on high R&D expenditures and hence radical innovations, while the comparative advantage

of CMEs of high relative to medium-tech categories is significantly lower than for LMEs (52-55). More rigorously, Allen et al. (2006) and Allen (2006) classify economic activities as being either based on specialized supplier relations or science-based industries. The former are associated with incremental innovation strategies, while the latter rely on radical innovation. The authors find broad support for VoC's claim of comparative advantages for all countries studied by the literature. Watson (2003) in turn, does not find support for trade flows following the pattern of institutional differences using a social-security index and a size-adjusted trade index of country pairs. Similarly, Beyer (2006) reports mixed results.

Carlin and Mayer (2003) undertake a related approach. They investigate empirically the relationship between institutions of the financial system (such as disclosure requirements), structural characteristics (such as ownership concentration), and sectoral growth and R&D investments. Sectors with a high dependence on equity and high skills grow stronger and display higher R&D expenditures with more information disclosure and higher ownership concentration. The results suggest that differences in corporate governance systems could provide comparative advantages for technologies, which require different kinds of funding and/or commitments.

2.2 *Institutional arbitrage*

The notion of comparative institutional advantages among nations has strong theoretical appeal. The empirical record with regard to quality differences of institutions appears to be strong, while evidence on the impact of types of institutions and systems differences are mixed. At the same time, international factor movements have increased since the 1980s with foreign direct investments playing an increasingly strong economic role. In the second half of the 1990s, FDI inflows worldwide grew annually by 40% on average. The worldwide inward stock of FDI is 23% of the World's real GDP in 2005 (UNCTAD 2006).

Against this backdrop, the institutional arbitrage hypothesis expects investments to be shifted to those countries, where the institutional environment and corresponding comparative institutional advantage suits them best. As multinational corporations (MNCs) can now easier relocate production to other economies exploiting advantages in resource endowments, factor costs and market sizes, in addition VoC predicts that it is easier to utilize institutional differences across countries and accompanying comparative institutional advantages (Soskice 1999:118, Hall and Soskice 2003:248, Hancké et al. 2007). The opportunity of institutional arbitrage is also much emphasized by the strategic management literature, both in theoretical elaboration (Porter 1990, 1996, Hoskisson et al. 2004) and strategic advice for companies to

exploit institutional differences more consistently (Ghemawat 2003).

However, the extent of the opportunity for arbitrage crucially depends on the capacities of the local sectors. In order for the comparative advantage to play out fully, there has to be an “industrial tradition” of a sector (Resmini 2000), which provides skilled labor and company networks. Ideally, sectoral data measuring for instance skill level or skill intensity would be desirable, but such data do not exist. But, a straightforward way to proxy the strength of a sector in that respect is to look at the value-added it produces. In general, a sector that produces a greater value-added can be expected to be of significant importance and therefore possess the institutional capacities needed to fully reap the benefits of a comparative institutional advantage. So, we will expect the institutional advantage to be most clearly visible in large and potent sectors rather than niche sectors. Econometrically, as will be explained in more detail below, this means introducing interaction terms between value-added and comparative advantage indices.

Accordingly, in order to test the proposition we will suppose that in addition to traditional determinants of foreign direct investment location such as distance, labor costs and market size, the institutional environment should play a decisive role in the investment decision. The next section introduces the empirical literature on the determinants of FDI.

2.2.2 Determinants of foreign direct investment

FDI activities can be categorized as horizontal and vertical FDI. Horizontal FDI refers to a situation when a horizontal stage of the production process is duplicated in a foreign country. Vertical FDI, in contrast, occurs when the production process is split up and a part of the production chain is entirely relocated.

In both cases, trade-offs arise, which a firm contemplating any of the two types of foreign direct investment must resolve. For horizontal investments the firm loses economies of scale on the plant level, because the singular plants become smaller. However, the firm gains better market access. In the second case of vertical foreign direct investment costs of disintegration arise through the split of the production chain. On the other hand, differences of relative factor supplies, hence cheaper factor costs in the host country, are the potential gain for this kind of investment. From the considerations in the previous section it follows that not only differences in factor endowments but also institutional differences can be seen as determinants of (vertical) FDI. Both views can also be treated simultaneously in a unified model, in which horizontal and vertical FDI are considered special cases (Markusen and Maskus 2002).

Both theoretical and empirical problems arise when trying to disentangle country determinants for horizontal vs. vertical FDI. On the one hand exact classification of the type of investment poses problems, since the distinction is not always clear-cut. Then, theoretical predictions of the effects of country traits on either type of investment are unclear. Higher trade costs should encourage horizontal FDI while it should discourage vertical FDI. Larger markets of the host country will most certainly lead to higher horizontal investment, but it can also be shown for vertical FDI (Zhang and Markusen 1999). Cheaper factor costs encourage vertical investments, but no predictions can be made for horizontal.

Apart from that it is very difficult to distinguish between horizontal and vertical types of FDI from the data. One would need to have detailed data on the destination of sales of host country affiliates, whether they are within the host country, are directed to the home country or to a third country. Since such data are not available as in our case, we concentrate on the traditional way to model country determinants using gravity equations. In general, gravity equations attempt to explain the distribution of FDI across countries mainly by factors such as distance, GDP and factor costs (see overview in Barba Navaretti and Venables 2004, chapter 6). In such a setting, researchers have to live with the fact that their data include both horizontal and vertical FDI. Traditionally, gravity models were utilized to explain trade flows and volumes; the first application to investments flows is from Eaton and Tamura (1994).

While in trade theory a recent literature attempts to model institutional diversity of countries and accompanying comparative institutional advantages in order to explain discrepancy between theory and empirics of the traditional trade models (see section 2.1), to our knowledge this has not been done yet in the FDI literature. Studies, which take into account institutions of the host country focus on FDI flows from advanced countries to developing and transition countries (Garibaldi et al. 2002, Kinoshita and Campos 2003, Wei 2000, Du et al. 2008). In contrast, Habib and Zurawicki (2002) and Bénassy-Quéré et al. (2007) have a broader scope by including also bilateral flows between advanced market economies. What these studies have in common is that they focus on the quality of institutions by including World Bank governance indicators or by measuring an institutional distance of quality and do not explicitly focus on comparative advantages. As explained above, our focus is on differences of institutional types exemplified by distinctive institutional systems sewn together by institutional complementarities.

2.3 Methodology

We estimate the amount of German FDI as a function of a vector of explanatory variables including both country and sector characteristics. We estimate the size of German (log) FDI stocks to sector i of country j as a function of country and sector characteristics. We postulate that FDI should tend to flow to sectors enjoying a comparative advantage in the host country. The VoC -Dummy is constructed such that it takes the value 1 if the sector has a postulated comparative advantage, and 0 if not:

$$VoC_{ij} = \begin{cases} 1 & \text{if sector } i \text{ has comparative advantage in country } j \\ 0 & \text{if sector } i \text{ has no comparative advantage in country } j \end{cases}$$

Table 2.4 shows which economic activity of the FDI classification (according to ISIC Rev. 3) we classified as either being favored by a CME and an LME, respectively. The classification follows Allen et al.'s (2006) distinction between radical innovation sectors and incremental innovation sectors and it is in line with Hall and Soskice's (2001) results given in Table 3 for Germany and the USA.

The estimation equation then is:

$$y_{ij} = \beta_0 + \beta_1 Valueadded_{ij} + \beta_2 VoC_{ij} + \beta_3 Valueadded_{ij} \times VoC_{ij} + \beta Gravity + \beta_4 Z + \epsilon_{ij}$$

As stated above, it is expected that the comparative institutional advantage should be strongest in large sectors. In order to capture that effect, VoC and value-added are introduced as interaction terms. The coefficient on value-added is assumed to be positive, since a larger sector should attract more FDI. Also, VoC is expected to enter with a positive sign.

There are two ways to interpret the interaction effect. We expect that *ceteris paribus* a larger sector will receive more FDI if the sector enjoys a comparative advantage. A second way to state the same thing is to expect that the size of the sector is only relevant if the advantage is actually present. As a result, we will have to interpret the marginal effects if the conditioning effect of the comparative advantage is present ($VoC = 1$) and when it is not ($VoC = 0$). This implies that the marginal effect of the size of the sector is given by β_1 if there is no comparative advantage. For a sector with an advantage (so $VoC = 1$) the marginal effect will be $\beta_1 + \beta_3$. The marginal effect of moving to a sector with a comparative advantage is given by $\beta_2 + \beta_3 Valueadded_{ij}$ as it depends on the size of the sector.

Table 2.4: Prevalent innovation patterns per industry

Incremental innovation		Radical innovation	
ISIC Rev. 3 Code	Industry	ISIC Rev. 3 Code	Industry
D28	Fabricated metal products, except machinery and equipment	D24	Chemicals and chemical products
D29	Machinery and equipment, n.e.c.	D33	Medical, precision and optical instruments, watches and clocks
D30	Office, accounting and computing machinery	D353	Aircraft and spacecraft
D31	Electrical machinery and apparatus, n.e.c	J65	Financial intermediation except insurance and pension funding
D32	Radio, television and communication equipment	J 66	Insurance and pension funding, except compulsory social security
D 34	Motor vehicles, trailers and semi-trailers	J 67	Activities related to financial intermediation
D 35	Other transport equipment	K 72	Computer and related activities
D 359	Railroad equipment and transport equipment n.e.c.	K 73	Research and development
D 36	Manufacturing n.e.c		

Note: Based on Allen et al. (2006)

The vector *gravity* includes the distance to Germany, GDP, GDP per capita and unit labor costs as controlling variables. The absolute GDP measure the overall market size of the host country and is expected to have a positive sign. In order to proxy for overall institutional capacities and infrastructure, we include GDP per capita of the host country, which is also expected to enter positively. Unit labor cost differences point at cost considerations of production and is expected to be negative. We include a vector *Z* of industry dummies. All parameters except for the *VoC* indicator are included as logarithms. In addition to that, in order to minimize possible multicollinearity, value-added and the *VoC* indicator are mean-centered.

2.4 Data

Table 2.5 provides some summary statistics of the sample. Panel A of the table shows overall summary statistics of the dependent and independent variables. Panel B shows the countries

in the sample and the number of sectors per country that are classified as having a comparative institutional advantage in this country and the number of those that do not. Our dependent variable represents German outward direct FDI stocks in Euro. The industry-level data by host country are taken from the Deutsche Bundesbank Micro database Direct Investment (Lipponer 2003). We aggregate firm-level panel data over the period 1996 to 2001. This transformation into cross-sectional data is justified because we are examining systemic aspects of the allocation of German FDI. We thus eliminate time-variation in the data.

The Bundesbank measure for FDI differs slightly from the one used by the OECD and the IMF. The difference between the two measures is that the Bundesbank measure “excludes loans to shareholders, affiliated enterprises and enterprises linked with the party required to report through participating interests; and claims on shareholders, affiliated enterprises and enterprises linked with the party required to report through participating interests” (reverse loan capital; see Lipponer 2003: 19). For robustness, we estimate all equations using both measures. The results do not differ qualitatively, which is why we only report estimations with the Bundesbank measure. The main explanatory variable of interest – the VoC indicator – will be operationalized using different measures. The base estimation includes a binary variable as explained above, where the sector either takes the value one, when it is in a country, whose type of capitalism ought to facilitate the sector specific innovation pattern, or zero if otherwise. In the next section we introduce further measures of system differences as robustness checks.

GDP per capita is the mean over the period 1996 to 2001 from World Bank (2005). Mean unit labor costs were calculated as labor compensation over value-added, both from the STAN database for Industrial Analysis (OECD). Data on geographical distances to Germany are from Mayer and Zignago (2006).

Table 2.5: Summary statistics

A	Observations	Mean	Std. Dev.	Min	Max
FDI	723	8.05	1.86	0.46	13.07
FDI if VoC = 1	311	8.24	1.72	2.11	13.07
FDI if VoC = 0	412	7.90	1.94	0.46	12.51
Value-added	618	8.99	1.63	3.06	13.74
Distance	754	6.83	1.21	5.16	9.84
GDP	754	27.01	1.24	24.82	29.88
GDP p.c.	701	10.11	0.28	9.26	10.62
ULC	576	0.45	0.13	0.02	.70

All variables are in logarithms

B	Number of sectors if VoC = 0	Number of sectors if VoC = 1	Total
Australia	4	5	9
Austria	32	17	49
Belgium	46	31	77
Canada	12	18	30
Denmark	30	14	44
Finland	15	10	25
France	36	16	52
Greece	4	1	5
Ireland	5	19	24
Italy	22	13	35
Japan	23	13	36
Korea	5	6	11
Netherlands	39	15	54
New Zealand	0	3	3
Norway	14	11	25
Portugal	3	3	6
Spain	20	12	32
Sweden	26	14	40
Switzerland	36	16	52
UK	21	40	61
USA	19	34	53
Total	412	311	723

2.5 Results

The results of the estimation using OLS are given in Table 6. Columns 1-3 give the results of different specifications using the full sample. Columns 4-6 show results for a smaller sample excluding observations for FDI to Spain, Portugal and Greece. The remaining columns 7-9 list the results, which are obtained including only the “pure” LMEs and CMEs (see Table 2).

In all models, the market size measured by the absolute GDP shows the expected positive sign. The effect is the largest of all independent variables: for a 1%-increase in GDP, FDI into a sector increases by approximately 0.5%. The distance to Germany also has the expected negative sign. Both are highly significant throughout all models. The unit labor costs in a given sector show a small negative coefficient, but it is never significantly different from zero, nor is the coefficient for GDP per capita. Both can be explained by the fact that the countries in the sample are all comparatively rich countries, which do not differ that greatly in overall institutional capacity (proxied by GDP per capita) and productivity (proxied by unit labor cost). We observe that the size of the receiving sector proxied by the value-added of the sector has the expected sign, but it is not significant when entered in models 2, 5 and 8, respectively. The interpretation in models 3, 6 and 9, however, must take into account the introduction of the interaction effect.

The marginal effect of the size of the sector on FDI is given by the coefficient on value-added alone only if VoC is equal to zero. Hence, we can already conclude that the size of the sector does not seem to play a role if the sector does not enjoy a comparative advantage: the coefficient is never significantly different from zero. It does not make much sense to interpret the coefficient on VoC in isolation in models 3, 6 and 9, because that would mean that value-added were zero. For the sake of argument, however, we see that the comparative advantage does not seem to influence the decision to invest in a particular sector, if that sector is small.

The interesting interpretation comes from looking at the joint effect. The coefficient of the interaction effect is positive and significant. It is larger and attains a higher significance level when Spain, Portugal and Greece are excluded, which to a certain extent fulfill expectations we had about those countries. The fact that none of the coefficients of the other variables change greatly after the introduction of the interaction term, lends belief to the claim that this is a genuine effect not driven by possible multicollinearity or by a large significant effect by one influencing variable that would overlie the effect of the other.

Table 2.6: Results of OLS regressions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	full sample			excluding Spain, Portugal and Greece			classical LMEs and CMEs only		
Value-added		0.10 (0.09)	0.11 (0.09)		0.09 (0.09)	0.10 (0.09)		0.07 (0.10)	0.07 (0.10)
VoC	0.01 (0.01)	0.01 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	-0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	-0.00 (0.01)
VoC × VA			0.19* (0.10)			0.23** (0.10)			0.20* (0.11)
Marginal effect of VA if VoC=1			0.30** (0.13)			0.33*** (0.13)			0.27* (0.14)
GDP	0.67*** (0.14)	0.54*** (0.17)	0.50*** (0.17)	0.64*** (0.14)	0.54*** (0.17)	0.49*** (0.17)	0.69*** (0.16)	0.63*** (0.18)	0.57*** (0.18)
Distance	-0.15*** (0.05)	-0.16*** (0.05)	-0.17*** (0.05)	-0.14*** (0.05)	-0.15*** (0.05)	-0.16*** (0.05)	-0.16*** (0.06)	-0.17*** (0.06)	-0.17*** (0.06)
ULC	-0.02 (0.06)	-0.02 (0.06)	-0.02 (0.06)	-0.03 (0.06)	-0.03 (0.06)	-0.03 (0.06)	-0.01 (0.07)	-0.01 (0.07)	-0.01 (0.07)
GDP p.c.	0.10 (0.25)	0.01 (0.26)	-0.01 (0.26)	0.06 (0.34)	-0.02 (0.36)	-0.03 (0.35)	0.13 (0.41)	-0.01 (0.47)	0.05 (0.47)
Constant	0.14 (0.24)	0.36 (0.31)	0.42 (0.30)	0.20 (0.33)	0.39 (0.40)	0.46 (0.39)	0.09 (0.37)	0.30 (0.48)	0.31 (0.47)
Obs.	554	554	554	511	511	511	428	428	428
R ²	0.39	0.39	0.40	0.40	0.41	0.41	0.41	0.41	0.41
F	11.17***	11.22***	11.85***	10.69***	10.73***	11.55***	16.77***	15.97***	14.51***

Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Note: All models include industry dummies. All variables except VoC are in log form and have been normalized between 0 and 1. Value-added and VoC have been mean-centered.

Table 2.6 reports the coefficient of the joint effect if VoC=1 and corresponding standard errors. It is significant in models 3, 6 and 9. Accounting for comparative advantage, the size of the sector matters: *ceteris paribus*, for a 10% increase in value-added a sector receives about 3% more FDI *if the sector has a comparative advantage*. If we take the coefficients at face value, this effect is smaller than the effect of the total market size, but it is larger in

absolute terms than the effect of the distance of a country.

A similar interpretation can be put forward looking at the marginal effect of comparative advantage. Figure 1 shows the marginal effect of a sector with a comparative advantage, which is conditioned by the size of the sector. The left-hand diagram shows the effect from model 3, which uses the entire sample, while the right-hand side reports results from model 6. The dashed line in both graphs show the upper and lower bounds of a 95%-confidence interval. The graph for model 9 is similar to the one shown for model 3.

It can be seen from the graphs in Figure 2.1 that the effect of the comparative advantage increases as the sector size increases and that it is not significant for small sectors. So for investments in relatively small sectors the advantage does not matter. A careful comparison of the two graphs reveals that the effect “frays” less for the sample excluding Spain, Portugal and Greece as the value-added increases, which is reflected in the higher significance in Table 6.

Taken together, the data suggest that German multinationals do follow the comparative advantage of a receiving sector when making investment decisions. This depends crucially on the size of a sector. However, the results also suggest that for medium sized sectors this effect does not trump “traditional” gravity-equation explanatory variables such as market size and the distance.

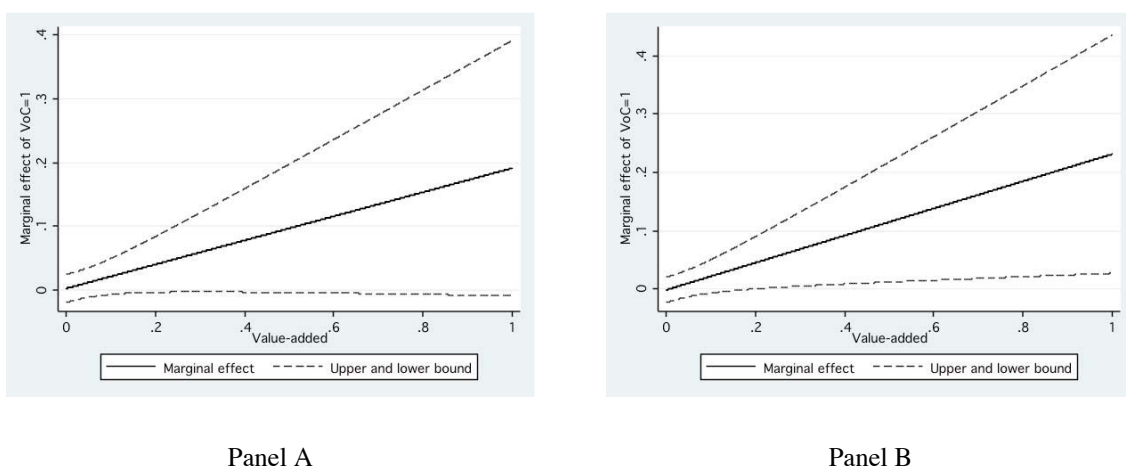


Figure 2.1: Marginal effect on FDI if the sector enjoys a comparative advantage depending on different sector sizes. Panel A shows the effect for model 3 and Panel B for model 6.

To check robustness, we use alternative indices of differences in institutions between host and home country. As opposed to the binary indicator that takes values 0 and 1, these are indicators that vary between 0 and 1. Hence, these indicators can capture different degrees of suitability of institutions. Table 7 shows for each of the additional indices the results for the full sample excluding Greece, Portugal and Spain and the core sample of LMEs and CMEs. In other words, Table 7 shows the models that correspond to models 6 and 9 in Table 6.

First, shown in columns 1 and 2 of Table 7, we use a measure constructed from an updated coordination index following Hall and Gingerich (2004). It is a composite index including indicators for the institutional spheres of industrial relations and corporate governance. The index is the outcome of a factor analysis using measures of centralization of wage bargaining, job tenure, the size of stock market, dispersion of control and shareholder power⁶. In columns 3 and 4, we base our measure on the coordination index provided by Knell and Srholec (2007), which is also the outcome of a factor analysis, but with a slightly different focus than Hall and Gingerich's. Their coordination index is comprised of indicators from the spheres of social systems, labor markets and business regulation. For the two composite indices the results are fairly similar. In models 2 and 4 the sign of the interaction effect is not significant anymore, but the joint effect reaches some significance for model 2, while it is not significant in model 4. The economic effect here is somewhat smaller than in the models using the binary indicator.

As a last step we undertake a robustness test by using institutional indicators for single spheres of the economy instead of global systems indicators. Hence, in order to check whether there are any differences when looking at complementarity "unbundled", we split up our updated coordination index on the basis of Hall and Gingerich (2004) into its two elements: industrial relations (models 5 and 6) and corporate governance (models 7 and 8). Also, in order to check whether labor market regulation alone might account for the sectoral distribution of foreign direct investment, we include Botero et al.'s (2004) labor law index, which is shown in columns 9 and 10. Unbundling the composite index shows that industrial relations and corporate governance indicators have a higher impact on the marginal effect of sector size than the composite indices.

6. We extend the indicator by the countries missing in their sample and use the updated version of the antidirector index from Djankov et al. (2008) as opposed to the earlier one from La Porta et al. (1998) as Hall and Gingerich's shareholder power index.

Table 2.7: Robustness checks

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Coordination index (Hall and Gingerich 2004)		Coordination index (Knell and Srholec 2007)		Industrial Relations (Hall and Gingerich 2004)		Corporate Governance (Hall and Gingerich 2004)		Labor legislation (Botero et al. 2004)	
respective VoC- measures	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	-0.00 (0.01)	-0.00 (0.02)	-0.00 (0.02)	-0.01 (0.02)	-0.01 (0.02)
Value-added	0.09 (0.09)	0.07 (0.10)	0.09 (0.09)	0.07 (0.10)	0.10 (0.09)	0.07 (0.10)	0.10 (0.09)	0.07 (0.10)	0.10 (0.09)	0.07 (0.10)
respective VoC × Value-added	0.21* (0.12)	0.18 (0.13)	0.21* (0.12)	0.18 (0.13)	0.26* (0.14)	0.22 (0.15)	0.27* (0.15)	0.23 (0.16)	0.29* (0.15)	0.24 (0.16)
Marginal effect of VA if comp. adv. present	0.30** (0.14)	0.25* (0.15)	0.30** (0.14)	0.24 (0.15)	0.35** (0.15)	0.29* (0.16)	0.37** (0.16)	0.30* (0.18)	0.39** (0.16)	0.31* (0.17)
GDP	0.47*** (0.17)	0.56*** (0.18)	0.48*** (0.17)	0.56*** (0.18)	0.48*** (0.17)	0.57*** (0.18)	0.49*** (0.17)	0.57*** (0.18)	0.48*** (0.17)	0.56*** (0.18)
Distance	-0.16*** (0.06)	-0.17*** (0.06)	-0.15*** (0.06)	-0.17*** (0.06)	-0.16*** (0.05)	-0.18*** (0.06)	-0.16*** (0.05)	-0.17*** (0.06)	-0.16*** (0.05)	-0.17*** (0.06)
ULC	-0.03 (0.06)	-0.01 (0.07)	-0.03 (0.06)	-0.01 (0.07)	-0.03 (0.06)	-0.01 (0.07)	-0.03 (0.06)	-0.01 (0.07)	-0.03 (0.06)	-0.01 (0.07)
GDP p.c.	-0.08 (0.36)	-0.02 (0.47)	-0.08 (0.36)	-0.02 (0.47)	-0.05 (0.36)	0.02 (0.46)	-0.04 (0.36)	0.02 (0.46)	-0.06 (0.36)	0.01 (0.46)
Constant	0.51 (0.40)	0.38 (0.48)	0.50 (0.40)	0.37 (0.48)	0.48 (0.39)	0.33 (0.48)	0.47 (0.39)	0.33 (0.48)	0.49 (0.40)	0.34 (0.48)
Obs.	510	427	510	427	511	428	511	428	511	428
R ²	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
F	11.26***	14.98***	11.25***	14.84***	11.29***	14.47***	11.56***	14.23***	11.72***	15.45***

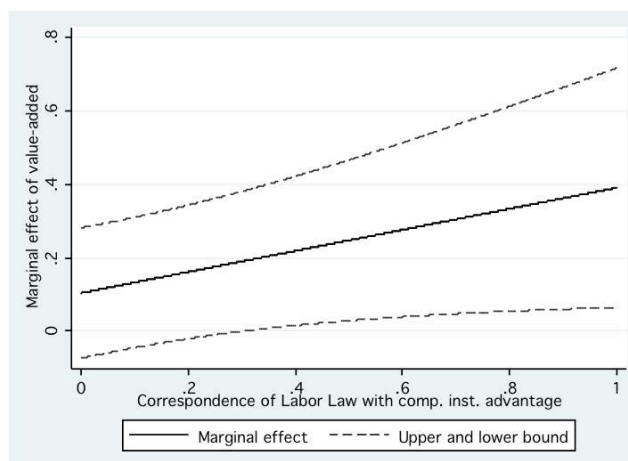


Figure 2.2: Marginal effect of value-added for different degrees of correspondence with comparative institutional advantage

In addition this effect stays significant, albeit economically smaller, when the mixed market economies are excluded. The highest effect seems to stem from labor laws. For a 10% increase in value-added of a sector, FDI into this sector increases by roughly 3 - 4% depending on the chosen sample. This is effect holds only when the labor laws in the country fully correspond to the claimed comparative advantage.

Since the indicator is not a binary one, but takes values between 0 and 1, we can visualize the effect of intermediate values in Figure 2.2. It shows the marginal effect of value-added (and corresponding upper and lower confidence bounds) for different values of the labor law index. A straightforward interpretation of the horizontal axis is that as one moves to the right the correspondence with postulated comparative advantages increases. As expected, the marginal sectoral size effect increases in correspondence.

2.6 Conclusion

The analysis in the paper suggests that there are institutional arbitrage arguments involved in the locational investment decision of firms. Controlling for “traditional” gravity-equation determinants of FDI on both country and sector level, we find that a sector, which in a given country enjoys a comparative advantage due to the institutional surroundings receives a larger chunk of German FDI than a sector without this advantage. This effect depends on the size of the sector: if the comparative advantage is present, a larger sector receives more FDI. On the other hand, the size of a sector is shown to be irrelevant if there is no comparative advantage. This effect has been shown to be robust to several specifications and a

considerable number of operationalizations of institutional advantage. Of course, a wider cross-country set of FDI data involving more home countries than only Germany seems desirable. In general, a sample of bilateral FDI stocks with detailed information on the actual activity undertaken, such as subsidiary sales, could help to better identify multinational strategies. In such a setting, it would be possible to disentangle horizontal and vertical FDI along the lines of the model by Markusen and Maskus (2002). To our knowledge, such data of investment do not exist on a detailed sectoral level. However, that fact that companies from a sample of firms from the biggest European economy do seem to engage partly in institutional arbitrage makes a fairly strong point.

The comparative institutional economics and capitalism literature can help to explain how specific industries or production methods are more likely to be found in some countries rather than others. Taken one step further, we show that by way of institutional arbitrage the effect translates into international investment decisions as well. In a broader context still, the institutional arbitrage argument lies at the heart of a notion of persistent divergence of institutional systems. That is, if globalization makes international capital movements easier, institutional arbitrage should cement institutional differences and not erode them, because country competition for capital investments would not occur in such a scenario.

3. East European Antipodes: Varieties of Capitalism in Estonia and Slovenia

Article 2

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3.1 Introduction

This chapter offers a comparative analysis of Estonia and Slovenia along the lines of the Varieties of Capitalism framework (Soskice 1999; Hall and Soskice 2001). Both countries have been identified as polar opposites against the backdrop of Varieties of Capitalism (VoC). As demonstrated in the chapter by Mark Knell and Martin Srholec in a quantitative study Estonia and Slovenia can be seen as Antipodes regarding their institutional configurations. They come out at both ends of a spectrum of transition economies according to the degree of non-market coordination. This is corroborated by Magnus Feldmann (2006), who analyzes industrial relations of both countries and comes to the conclusion that Estonia and Slovenia can be seen as the incarnations of a liberal and coordinated market economy. Hence, this chapter takes up these results and attempts to confirm them in a continuative analysis. This will be carried out in two ways: firstly, the study of industrial relations will be complemented by additionally analyzing institutions in further four determining sub-systems of a specific variety of capitalism, namely corporate governance, inter-firm relations, social security and vocational training systems (Hall and Soskice 2001, Estevez-Abe et al. 2001). Secondly, the chapter will attempt to illuminate a further implication of the VoC literature, which is the concept of comparative institutional advantages. There, it is argued that specific systems by means of institutional complementarities among sub-systems lead to distinct incentives to invest in different degrees of asset specificity. This, in turn, opens up institutional comparative advantages in different economic sectors according to different innovation patterns. From this it follows that firms and workers in coordinated market economies (CME) are relatively better at producing goods and services which entail incremental innovation. On the contrary, in liberal market economies (LME) the comparative advantage lies within sectors, which largely rely on radical innovation. This helps to explain economic structures of countries, which eventually can be traced back to institutional complementarities. Hence, the qualitative analysis of possible institutional complementarities in Estonia and Slovenia will be complemented by also studying emerging comparative

institutional advantages. This will be done using both contributions to the trade balance and patterns of foreign direct investment into both countries with sectoral and geographical distribution.

Estonia and Slovenia provide excellent cases for comparison for the VoC framework. Not only do they show divergent institutional frameworks, but also both countries display similarly good macroeconomic outcomes. In fact, this statement is crucial, because one central tenet of VoC is that it predicts equally good macroeconomic performance for countries of different variants of capitalist coordination (Hall and Soskice 2001: 20-1; Amable 2003: 213-24). It will be shown that in terms of GDP and unemployment both countries exhibit above average figures in the transition world.

The analysis will proceed as follows. Chapter 2 first briefly introduces macroeconomic performance of both countries and then states which institutions have to be studied in order to be able to trace institutional complementarities as proposed by Hall and Soskice (2001). This task is then accomplished in the second part of chapter 2. Subsequently, in chapter 3 comparative institutional advantages will be assessed as further evidence of emerging institutional complementarities.

3.2 Estonia and Slovenia as LME and CME

Both Estonia and Slovenia managed to perform very well in the transition process being above the average of transition countries regarding growth and unemployment figures. Comparing Estonian and Slovenian catch-up processes one can observe the following picture in Figure 3.1.

Figure 3.1 reveals that particularly Slovenia quickly managed to regain pre-transition GDP levels, the former output level was restored as early as 1997. In Estonia this process took longer, the previous level could not be achieved until 2003. From 1997 onwards both countries are above the average of the transition countries as a whole. Comparing both countries with the more relevant group of the new EU member states and three candidate countries Bulgaria, Croatia and Romania, the picture is similar, albeit less clear in the Estonian case: Estonia manages to catch up with the rest only in 2001.

Similarly, according to unemployment figures, again Estonia and Slovenia show very good results in comparison with other EU members and candidates. Figure 3.2 depicts the development of unemployment rates from the mid-nineties until 2003 for both countries and again as an average. The latter group reveals larger unemployment than both Estonia and

Slovenia.

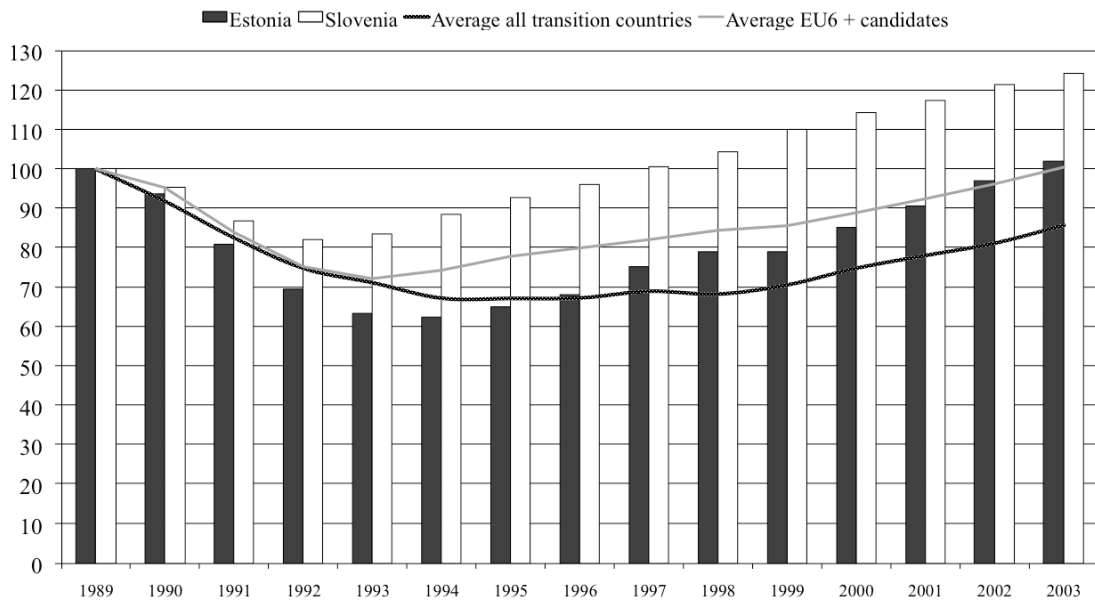


Figure 3.1: Real GDP (1989 = 100) in Estonia; Slovenia; as an average of the remaining Central and Eastern European EU Member States and candidate countries Romania, Bulgaria and Croatia; and as an average of all transition countries (EBRD 2002, 2004, figures for 2003 based on growth estimates)

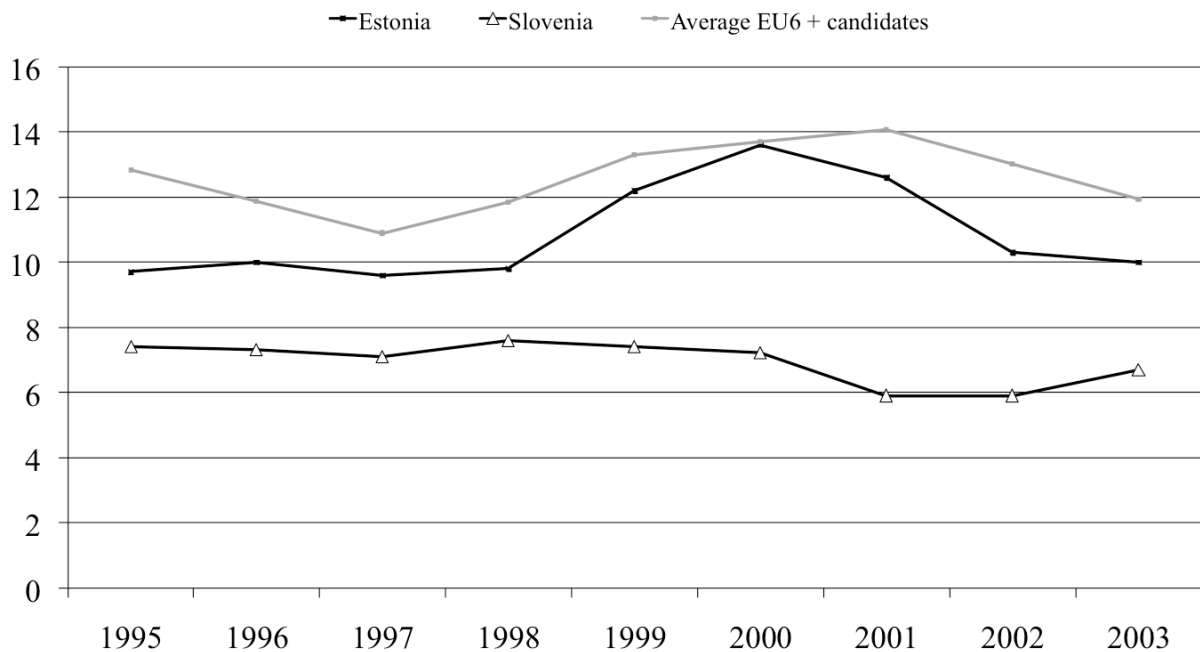


Figure 3.2: Unemployment (in per cent of labour force) for Estonia, Slovenia and as an average of the remaining Central and Eastern European EU Member States and candidate countries Romania, Bulgaria and Croatia (EBRD 2002, 2004, figures for 2003 based on estimates)

Table 3.1: Coordinated versus Liberal Market Economies

CME (Prime example Germany)	Sub-system	LME (Prime example USA)
Encompassing trade unions and employers' associations, high coverage of collective agreements; co-determination.	<i>Industrial relations</i>	Weak trade unions and employers' associations, firm-level agreements.
"Patient" capital, concentrated ownership, <i>stakeholder value</i> ; consensual decision-making in two-tier board structure, comparatively small stock-markets	<i>Corporate Governance</i>	Short-term capital, dispersed ownership-structure, <i>shareholder value</i> ; strong CEO, large stock-markets
Inter-company networks, strategic cooperation (vocational training, R&D)	<i>Inter-firm relations</i>	Standard market-relationships
Both high employment protection and high unemployment protection	<i>Social security</i>	Both low employment protection and low unemployment protection.
Dual apprenticeship system fosters firm-specific and industry-specific skills	<i>Vocational training</i>	Traineeships and in-house training of general skilled labour

Sources: Hall/Soskice 2001: 21-33; Thelen 2001 ; Vitols 2001, Estevez-Abe et al. 2001.

This assessment can be corroborated further by looking at competitiveness figures issued by the World Economic Forum: its 2004 report (Porter et al. 2004) ranks both Estonia and Slovenia highest of all transition economies under study in the "Growth Competitiveness Index" and the "Business Competitiveness Index". Thus, it is safe to say that the two countries are above-average performers among transition countries in CEE.

At the same time, Estonia and Slovenia are associated with opposing approaches to the transition process: while Estonia is commonly seen as a very radical and fast ("big bang") reformer (cf. Smith 2001), Slovenia's way of reforms can be described as more gradual and slow (cf. Mencinger 2004). Accordingly, both countries are good transition reformers with apparently diametrically opposed approaches and outcomes.

VoC covers analyses of institutions in five sub-systems as indicated in Table 3.1 for the prime examples Germany and the USA. Hence, in a qualitative analysis institutional

configurations of both Estonia and Slovenia in the determining sub-systems of industrial relations, corporate governance, inter-firm relations, social security systems and vocational training will be examined.

The analysis emphasises current institutional settings in both countries. Initial institutional conditions and legacies are not more than mentioned in passing. The goal of linking systemic institutional outcomes to origins seems promising, but goes beyond the scope of this paper.

3.2.1 Industrial relations

Trade unions, employers and wage-bargaining

Industrial relations in socialism were fundamentally different from what is traditionally known in western economies. Trade unions were perceived as part of the regime, and usually not rooted on firm levels. From this it follows that reputation of unions was generally bad⁷, so that a drop in membership after the dismantling of the system was inevitable (Boeri and Terrell 2002). Correspondingly, membership figures in both Estonia and Slovenia dropped sharply, in Estonia from 93 per cent of workers unionized in 1990 to 14 per cent in 2000, and in Slovenia from 69 per cent in 1989 to 40 per cent in 2001. However, Slovenian figures are the highest of all CEE countries (Ladó 2002).

In Estonia there are two umbrella organizations, which represent several smaller unions. These are the Confederation of Estonian Trade Unions (*Eesti Ametiühingute Keskkliit*, EAKL), the successor of Soviet time with 26 members representing a total of about 58.000 workers, and Estonian Employees' Unions' Confederation (*Teenistujate Ametiliitude Keskorganisatsioon*, TALO), joint organization for 11 unions and 40.000 workers. Apart from these, the Farmers' Union has about 9.600 members. On the employers' side we find the Estonian Employers' Confederation (*Eesti Töandjate Keskkliit*, ETTK) which represents a mere 4 per cent of firms (Feldmann 2006). There are both tripartite and bipartite agreements. The former include the state, unions and employers and mainly deal with minimum wages and overall working conditions. Bipartite collective wage agreements are not very far-reaching: in the year 2003 eleven out of 37 unions came to conclude an agreement, meaning that 28 per cent of workers were covered by a collective agreement. At the same time agreements on firm levels are the most common. The Ministry of Social Affairs encourages social partners to reach bilateral agreements, but at the same time explicitly underlines their voluntary character (Philips and Eamets 2003a).

In Slovenia, there are 6 umbrella associations, whereby the leading role is played by the

7. Polish *Solidarność* being an exception.

successor organization from communist times, the Association of Free Trade Unions (*Zveza Svobodnich Sindikatov Slovenije*, ZSSS) which represents about half of the organised workforce. This figure has shown to be stable throughout the 1990s. Further 17 independent unions exist. The most influential employers' organization is the Slovenian Chamber of Commerce, to which membership is compulsory (Stanojević 2000). Also, a law from the final years of Yugoslav federalism concerning wage bargaining legislation makes agreements between unions and employers compulsory. This, together with compulsory membership in the Chamber of Commerce creates a situation, in which almost 100 per cent of the workforce is covered by up to three collective agreements. A new law, which by 2005 still is in parliamentary process would most certainly reduce this high figure, because compulsory agreements are against the guidelines of both ILO and EU (Skledar 2005). Apart from the large importance of collective wage-bargaining other institutions point at a strong corporatist culture in Slovenia. The National Council exists among the National Assembly (parliament) as a second chamber composed of representatives according to functional representation. It consists of regional delegates and representatives from different interest groups, such as employers, employees, farmers and others. Although the Council's formal power remains rather small, it is seen to fulfil a supervisory function and counterbalance the party representation in the National Assembly. Furthermore, there is an Economic-Social Council as a tripartite body with growing influence on setting standards with respect to economic and social policies (Lukšič 2003).

To sum up, while in Slovenia we find a corporatist culture with strong employers' associations and unions with far-reaching wage agreements, in Estonia the opposite is true: neither employers nor workers are formally organized. Additionally, the large majority of wages are set on firm-levels. Complementarily to this, on the firm level we expect to find considerable workers' participation in the Slovenian case.

Worker participation

In Estonia, first experimental reform measures were taken in the second half of the 1980s. Workers' councils were founded in a number of firms. Following independence these projects lost significance very fast, councils split off along ethnic lines of Estonians and ethnic Russians, when the independence movement became the dominating issue. "Soviet experiments" were discredited and eventually dropped (Wielgohs 2001). Nowadays workers' councils or any other form of co-determination do not play any significant role anymore (Feldmann 2006).

By contrast, in Slovenia, workers' councils have considerable influence, a fact that can be

traced back to peculiarities of the Yugoslav system of self-management. As a consequence of self-management firms' autonomy in the Yugoslav system was substantially increased and at the same time workers' involvement in the decision-making process of firms increased. In 1993 the system was transformed into a system of councils modelled on the example of German *Betriebsräte*. Works councils in Slovenia are very important entities for unions, because they allow to root union power on the firm levels (Stanojević 2001). Today, in the majority of firms works councils exist (Stanojević 2003: 288).

This brief overview of industrial relations in both countries has shown that in this sphere Estonia and Slovenia can be regarded as polar opposites, as Antipodes. While in Estonia we find firm-level wage-setting accompanied by weak unions and employers organizations, wage-bargaining in Slovenia is conducted industry-wide and both unions and employers are strongly cohesive. This is in line with the institutional complementarities postulated by VoC. The next chapter looks at the sub-section of corporate governance in Estonia and Slovenia.

3.2.2 Corporate governance

The creation of private property is the most fundamental challenge former communist states are facing on their journey from socialism to capitalism. Apart from new companies emerging after liberalization measures, privatization has had a decisive impact on the formation of a new ownership structure of former state-owned companies and thereby on corporate governance. In the following we look at the resulting ownership structure, the way management is organized and stakeholders are represented and at market capitalization figures.

Ownership structure

Estonian privatization can be characterized by two distinct phases. While in the first phase privatization clearly favoured insiders, the second was dominated by direct sales with equal treatment of foreigners. Starting with reform measures during Gorbachev era, a considerable number of small private firms and co-operatives was established. Later, 'leasing' of firms was introduced, and from October 1990 onwards it was possible to sell off 20 per cent of a firm to employees. Following the introduction of the Estonian Kroon (1992) a small privatization scheme was established, which was modelled on the East-German *Treuhandanstalt*. This meant a step away from initial employee-favouring forms of privatization. During this second phase small privatization proceeded fast, so that all small enterprises subject to privatization

were sold by 1994. For large privatization experts from the *Treuhand* were hired to advise a newly founded agency. Especially, equal treatment of foreign investors was secured (Mygind 1997: 40-44). The applied method of direct sales during the second, and larger, wave of privatization is still visible in the high ownership concentration: on average the largest shareholder in Estonia holds 56.2 per cent of shares, while the second and third largest are relatively small holding 9 per cent and 4 per cent, respectively (Berglöf and Pajuste 2003). While the beginning of privatization fostered formation of employee ownership, throughout the 1990s numbers of employee-controlled companies continuously decreased. Another direct consequence of the privatization is a strong foreign ownership of about 25 per cent of shares (Kalmi 2003).

In Slovenia the Law on Ownership Transformation of 1992 laid the legislative basis for privatization. During the course of privatization vouchers were issued in size of 40 per cent of GDP. In the privatization process 40 per cent of the capital of a firm had to be transferred to three state-controlled funds (SCFs), 20 per cent to employees, while for the remaining 40 per cent there were two options: they could be sold either to employees or directly to the public. The majority of firms chose the internal method by allocating this remaining share to insiders. Hence, in Slovenia a mixed scheme of voucher and management and employee buy-outs (MEBO) was carried out, whereby the latter was insider-biased in practice. The actual method of privatization can be seen as a political compromise between left-wing parties favouring insider buy-outs and right-wing parties supporting a voucher scheme (Šušteršič 2004: 403). Privatization Investment Funds (PIFs) were founded to exert active control. Today's ownership structure (of firms listed on Ljubljana Stock Exchange end of 2000) still reminds of Slovenia's privatization method: 25 per cent of firms are held by PIFs or their successors, 16 per cent by insiders, the same amount by SCFs, and 15 per cent by firms. 12 per cent of shares are held by small investors.

On average the largest owner controls 32 per cent of shares, with 15 per cent and 11 per cent for the second and third largest investor. The average coalition voting block of the three largest owners in over 70 per cent of firms amounts to 62 per cent. This figure is close to Austrian and German percentages (Gregorič 2003: 33ff.). In this relatively dense corporate network with considerable cross-ownership the central role is played by various state funds.

It is widely held that initial privatization methods were planned considering both political acceptability and speed of transformation. Therefore, it can be expected that initial ownership structures will be changing during transformation when 'true' owners with an economic interest will acquire shares of companies. Thus, further insight is gained by also considering changes in ownership.

In Estonia the number of employee-controlled firms fell from 17.2 per cent of all firms to 5.7 per cent between the end of the privatization process and 2001 including both privatised and new companies (Jones and Mygind 2005). Additionally, the percentage of domestic investors controlling firms fell more modestly from about 31.5 per cent to 25 per cent. Manager-owned firms spread continuously over the years, from 24 per cent to 34 per cent. Foreign control remained fairly unchanged at about 25 per cent (Kalmi 2003: 1222).

In Slovenia SCFs on aggregate decreased their stakes by about half in the period from 1998-2002. Shares of domestic firms more than tripled. Shares held by PIFs, banks, managers and minority holders remained unchanged, while foreign stakes doubled coming from a very low level. The number of firms in which insiders constitute the dominant group dropped from 50 per cent of firms in 1998 to about 18 per cent in 2002, while the overall aggregate ownership stakes of insiders remain fairly high at 26.8 and 26.2 per cent in 2001 and 2002. The amount of firms with SCFs as dominant holders remained unchanged. Cases where domestic firms act as dominant owners of other firms increased from 11 per cent to 33 per cent. (Damijan et al. 2004). Here we can observe a consolidation process: SCFs seem to concentrate on firms where they have a dominant position, while domestic non-financial companies increase their voting power. Insiders are slowly withdrawing from enterprise control, but also seem to consolidate. It is interesting to note that the ownership share of insiders (managers excluded) in Slovenia has a statistically significant positive effect on management decision power (Prasnikar and Gregoric 2002).

Organization of management

In 1995 the new Commercial Code brought far-reaching changes for Estonian enterprises. A two-tier board structure was introduced, which is based on the German model with management board and supervisory board (Gerndorf et al. 1999). Like Estonia, Slovenia adopted a two-tier board structure as well, following legislation in 1993 (Bohinc and Bainbridge 1999).

Representation of stakeholders

The Estonian Commercial Code does not define the composition of the supervisory board in detail: Representation of workers and other interested groups is not compulsory and generally does not occur (Gerndorf et al. 1999: 13). Shareholders holding more than 50 per cent of shares have the right to unilaterally appoint the supervisory board.

In Slovenia, workers participate in both supervisory boards and management boards. In

companies employing more than 1.000 workers, half of the supervisory board consists of workers' representatives, whereas in firms with more than 500 employees at least one third of the supervisory board is appointed by workers, except for financial institutions. Moreover, one representative – the “workers' director” – can be part of the management board. Workers and the firm agree on a contract of participation rights, which includes information obligation on part of the management, consultation, co-determination and workers' veto rights on personnel decisions (Prašnikar and Gregorič 2002: 274 f.). Pahor et al. (2004) study a representative sample of companies with respect to composition of supervisory boards: in about 22 per cent of companies employees take up more than half of the board seats. Representatives of state funds are present in about one third of companies.

Market capitalization

The Estonian stock-market is considerably larger than the Slovenian, it reaches 41,7 per cent of GDP in 2003 as compared to 14,6 per cent in Slovenia. Moreover, the Estonian stock-market capitalization is the highest of all eight CEE latest accession countries to the European Union. However, the Estonian value is still much smaller than corresponding values for typical LMEs as the UK and the USA. Also, the turnover ratio, i.e. the value of shares actually traded is much lower in Estonia (EBRD 2004).

Comparing our results with practice prevailing in the UK, an LME, and Germany, a CME, we observe the following picture in Table 3.2. Two observations catch the eye: first of all the striking similarities between Slovenia and Germany regarding management organization and representation of stakeholders clearly confirms the view of Slovenia as a CME. In both areas legislation was modelled on the German example. Looking at ownership structure we find legacies of post-socialist reforms, though: considerable shares held by insiders and state-controlled funds. Banks do not play any significant role in corporate governance apart from influence exerted through bank-owned PIFs (Gregorič 2003). Taken together, this is clearly a deviation from western CME-type corporate governance coordination. With regards to state influence Pahor et al. (2004) examine emerging company networks with regard to ownership and control patterns (seats on supervisory boards). They come to the conclusion that direct state influence in the economy remains within the two types of state-run funds. Stated differently, in order to eradicate state control entirely dissolution of these funds would suffice.

Table 3.2: Corporate Governance features in Estonia, Slovenia, the UK and Germany

LME		CME	
Estonia	UK	Slovenia	Germany
<i>Ownership structure</i>			
Very strong largest voting block; considerable foreign ownership, declining insider ownership	Small largest voting block; overall dispersed	Relatively large voting blocks (large coalitions); considerable insider ownership (employee and managerial)	Large voting blocks (large coalitions)
<i>Management</i>			
Two-tier board structure with management and supervisory board	One-tier management board	Two-tier board structure with management and supervisory board	Two-tier board structure with management and supervisory board
<i>Representation of stakeholders</i>			
Voluntary	Voluntary	Workers' and other interest groups' representatives on supervisory board	Workers' and other interest groups' representatives on supervisory board

The second observation is not that straightforward, on the contrary, the Estonian picture seems highly inconsistent with VoC. On the one hand Estonia has the biggest capital market in CEE and representation of stakeholders is voluntary. This does not go well together with large ownership concentration and German-type two-tier board structure. However, looking at practice, we discover deviations from the stakeholder model. Gerndorf et al. (1999) report that in daily practice supervisory boards are often circumvented when it comes to decision-making⁸. It is perceived as overly bureaucratic. Moreover, the high concentration of ownership allows circumvention of the system by carefully choosing members of the supervisory board.

Generally speaking, the introduction of a market-based system of corporate governance right away from the beginning of the transition process does not seem feasible. Berglöf and Bolton (2002) ascribe this to weak and not credible protection of small shareholders, a lack of experts in firms and banking, costly information gathering, and a comparably risky business environment. Additionally, Djankov and Murrell (2002) find that when it comes to enterprise restructuring a concentrated ownership delivers better results than dispersed ownership.

8. In this case one should not assume this to be an institution, because it is not perceived as one by actors (Aoki 2001: 13). However, in this case anecdotal evidence is reported, hence, thorough empirical evaluation would be needed to clarify matters.

Hence, there are good reasons why a pure shareholder model of corporate governance cannot evolve early after the change of system. Also, in the Estonian case, the chosen privatization method just could not lead to dispersed shares of companies.

The divergent dealing with insiders in the Estonian and Slovenian case is remarkable: while in Estonia the initial insider-favouring conditions of privatization were replaced with a model of direct sales to outsiders, the insider-biased approach of Slovenia lasted throughout the whole process. Accordingly, as already mentioned above, employee ownership dropped sharply in Estonia in time. In Slovenia, figures also decreased, but seem to consolidate on a higher level. If we assume that employee ownership can be an incentive to acquire firm-specific skills (Blair 1999) the comparison of Estonia and Slovenia as opposites has in store potential transitional institutional complementarities. In this case employee-owners could be a functional equivalent (Crouch *et al.* 2005: 375) to an efficient banking system in a post-communist CME. As seen above, the Slovenian banking sector is not in the position to grant 'patient capital' to companies, whose managers cannot credibly commit themselves to retain the workforce in economic downturns. Then, the equivalent incentive for workers to acquire firm-specific human capital can be owning shares of the company and thereby assuming responsibility. Accordingly, in Slovenia a far larger portion of firms was and still is in the hands of employees, while in Estonia the initial preferential treatment of employees was abandoned. Prasnikar and Gregoric (2002) report that insider ownership does not necessarily lead to "employeeism" (Nutti 1997) in Slovenia, while in the Estonian case one can speak in parts at least of degeneration of employee ownership (Kalmi 2003). However, one has to bear in mind that this complementary institution can be efficient as a "transitional institution" (Qian 2003), but it could vanish while the economy matures.

In sum, while in Slovenia we find a stakeholder approach to corporate governance with insiders and state influence, analysis of the Estonian case reveals a somewhat imperfect stakeholder approach to corporate governance, or stated differently, the Estonian model seems to be neither a pure shareholder nor a perfect stakeholder approach.

3.2.3 Inter-firm relations

Due to strong state control, in socialist countries comparable kinds of inter-company relations did not exist. R&D was centrally conducted by planning authorities, which also decided, in which sectors which technology for which production should be used (Kornai 1992). Moreover, any kind of horizontal informational flows did not fit into the logic of the whole

system (Ericson 1991).

After removal of the planning system firms had to find ways how to cooperate. In Estonia, no significant attempts to cooperate “beyond the market” were made; following VoC this is not necessary and not possible, due to lack of encompassing business organizations. When it comes to CMEs, Goodin (2003: 208-212) remarks that trust is a precondition for the building of committed cooperation between firms. For many firms had to build up completely new relationships with new business partners following the breakdown of firms and markets in CEE, it is not surprising that in Slovenia trust is not well developed yet⁹ (Czaban et al. 2003). Nevertheless, institutional infrastructure enabling cooperation is given by the strong presence of chambers and business associations.

3.2.4 Social security systems

Before turning to the contemporary situation in both countries under study, it is useful to first depict peculiarities within this system during socialist rule. In socialism the state fulfilled a paternalistic function. It gave a job guarantee for every citizen, and losing one’s job rarely happened. Therefore, employment protection (EP) was very high in socialism. Firms were also involved in other welfare activities by providing kindergarten, health care or vacation facilities. On the other hand, unemployment protection (UP) was low for citizens, who were not part of the workforce, apart from subsidies on rents and basic food (Götting 1998: 57-88). Thus, the task for transitional economies was to change labour legislation to more market-based rules and to institutionalize a system of UP.

Employment protection

To compare LMEs and CMEs, Estevez-Abe et al. (2001) calculate an index consisting of two OECD-indexes, employment protection legislation (EPL), which captures the restrictiveness of individual hiring and firing rules for regular employments, and collective dismissals protection. As a third indicator they construct an index of company-based protection (see Table 3.3 for explanations). With the help of these three indexes an overall index of employment protection is calculated as a weighted average. In Table 3.3 I calculate this index for Estonia and Slovenia using figures for EPL and collective dismissals protection legislation estimated by Riboud et al. (2002). We then compare it with results for the USA (LME) and Germany (CME). For Slovenia two figures are given to capture changes associated with a new Labour Code that came into force January 1st 2003.

9. However, more recent data is needed to assess this more accurately, for Czaban et al. (2003) report research conducted in the first half of the 1990s.

Table 3.3: Employment protection in the UK, Estonia, Germany and Slovenia.

	Employment protection legislation (EPL by OECD, regular employment) (1)	Collective dismissals protection (OECD) (2)	Company-based protection ^a (3)	Index of employment protection ^b
UK	0.8	2.9	1	0.18
Estonia	3.1	4.1	1	0.44
Germany	2.8	3.1	3	0.59
Slovenia	2.9 (3.4) ^c	4.9 (4.8)	3 (3)	0.67 (0.71)

a) based on the following criteria: (a) presence of employee-elected bodies with a significant role in manpower decisions, (b) existence of strong external unions with some monitoring and sanctioning capacity, and (c) use of employee sharing practices like job-sharing or job-rotation. Where at least two criteria are met, a '3' is assigned, and a '1' where none is present. A '2' for mixed cases (Estevez-Abe et. al 2001: 166). Due to the existence of workers' councils and strong unions I assigned a '3' for the Slovenian case, the absence of both in Estonia allows a value of '1'. To my knowledge job-rotation and similar practices are not practiced in the transition world.

b) weighted average of columns 1-3; the weights are 5/9, 2/9 and 2/9 for column 1-3 respectively, as in Estevez-Abe et. al (2001). Each indicator has been standardized to vary between 0 and 1. However, values for the USA and Germany differ from those in Estevez-Abe et. al (2001), because there the highest value within the sample has the value 1. To be able to compare the indexes with Riboud et al. (2002), here EPL for Germany and the UK is standardized using the whole scale, which takes values between 0 and 6. This does not change the ranking of values in column 4.

c) values in brackets refer to the pre-2003 Labour Code.

Sources: Estevez-Abe et. al (2001: Table 4.1), OECD (1999). Riboud et al. (2002), own calculations.

The similarity between Slovenia and Germany is striking. The higher overall value of 0.67 almost exclusively can be put down to a higher collective dismissals protection in Slovenia. With respect to EPL-values Slovenia can be grouped together with Germany, Austria or the Netherlands (OECD 1999). In Estonia EPL-Index is still higher than in Germany, the archetypal CME. By 2005, a new Labour Code is being discussed in Parliament most probably leading to a lower value of EPL (Philips and Eamets 2003b, 2004).

A comparison of the EPL-index (first column of Table 3.3) for groups of CMEs, LMEs, and transition economies, results in the following picture.

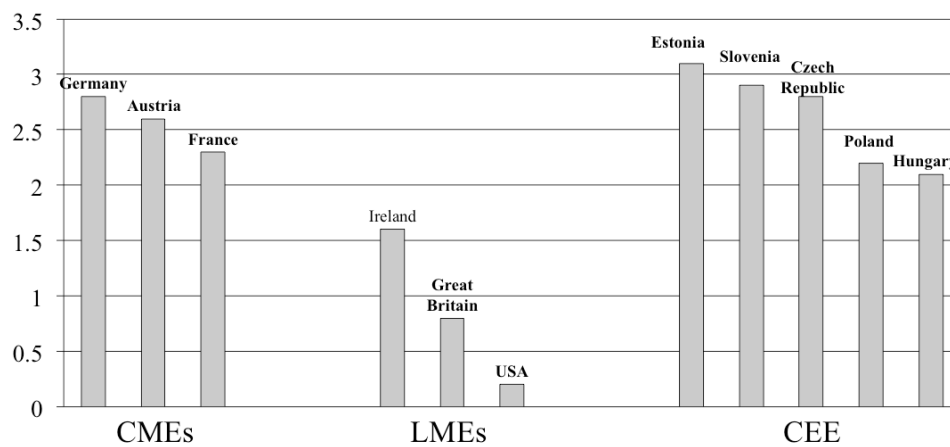


Figure 3.3: Employment Protection Legislation (regular employment), comparing CMEs, LMEs and CEE economies (Riboud et al. 2002)

Figure 3.3 reveals that overall employment protection in transition economies is higher than in both typical LMEs and CMEs. One can still find legacies from the communist past in this area. The Slovenian figure, which captures the EPL after reforms, fits very well among the first group of CMEs. However, the Estonian index sits uneasily among the second cluster of LMEs. As stated above, a new legislation will most probably bring this value in line with typical LME-values.

Unemployment protection

To measure different degrees of UP, Estevez-Abe et al. (2001: 167-169) make use of net replacement rates, i.e. unemployment benefits as the percentage of previous income net of taxes. Furthermore, the share of GDP paid in unemployment benefits as a percentage of the share of unemployed in the total population is considered. As a third measure they construct an index, which expresses the discretion an unemployed person has in rejecting a job offer without losing eligibility for benefits. As in the case of EP from these three indicators an overall index of UP is calculated. For lack of exactly corresponding data, we content ourselves with indicators, from which analogous conclusions can be drawn. These are gross replacement rates, the share of GDP paid in unemployment benefits as a percentage of the share of unemployed in total labour force, and thirdly the maximum duration of unemployment benefits. These figures are presented in Table 3.4.

Table 3.4: Unemployment protection in the UK, Estonia, Germany and Slovenia, end of 1990s.

	Gross replacement rate (%) ^a	Share of GDP paid in unemployment benefits per percentage point of unemployment rates ^b	maximum duration of unemployment benefits (in months)
UK	36	0.17	12
Estonia	40 ^c	0.02	12
Germany	61	0.39	32
Slovenia	63	0.22	24

^a *Unemployment benefits as percentage of previous income.*

^b *share of unemployed in total labour force.*

^c *estimation for 2003 by Vodopivec et al. (2003); 50 % in the first 100 days of unemployment period.*

Sources: Riboud et al. (2002), Vodopivec et al. (2003)

The Slovenian replacement rate constitutes, with the exception of Hungary, the highest of the studied transitional economies (Riboud et al. 2002). It is well in line with the German rate. In addition, its expenditures are the highest, although lower than in Germany. This is most probably also conditioned by strained budgets in most transition countries. In Estonia a new legislation went into force in 2003. Before that replacement rate was 10 per cent of average income. Vodopivec et al. (2003) estimate a rate of 40 per cent of previous income (50 per cent in the first 100 days) for the new law. Still, it seems that it is too early to clearly evaluate the new legislation, because discussions about further reform go on (Leetmaa 2003). That means that the value for unemployment benefits (2 per cent) might be too small an estimate, too.

Still, all this goes to show that both countries coming from similar points of departure went into opposite directions. Slovenia built up a CME-like system with a generous replacement rate, relatively high overall expenditures, and long maximum duration of payments. Alternatively, Estonia stuck to a policy of very low replacement rates and expenditures similar to LMEs throughout the 1990s, only to raise them a little above the value for the UK. Duration of benefits is the same as in the UK.

3.2.5 Vocational training

The area of vocational training is a key element for VoC, because here appropriate skills are formed for distinct innovation strategies. In socialism vocational training was roughly the same in all CEE countries: large state-controlled firms cooperated with state-run technical schools. This led – very similarly to Germany – to firm-specific and industry-specific skill formation. Along with the collapse of many firms with the shock of system change schools lost the opportunity to train students appropriately (Roberts 2001: 317-320). Thus, a new way of vocational training eventually had to be found.

In Estonia the inherited Soviet-style training scheme was retained until 1998. In June the Law on Vocational Education Institutions (*Kutseoppeastuse seadus*) was enacted as the outcome of several amendments of previous legislations. Then curricula of high-school (secondary general) and vocational schools were brought closer to each other by splitting vocational education up into a secondary and a higher education branch. Also, the division into training connected to the different sectors was broken up. The explicit goal was to prepare apprentices to more general tasks, which could be applied more broadly. This meant a fundamental change of the system of education and vocational training, and at the same time a shift towards an emphasis on general skills (OECD 2001, chapter 4).

In contrast, in Slovenia, the struggling old system was put on a new basis by introducing a dual system of apprenticeships, very much like the German system. Apprentices are trained both at firms and in vocational schools, thereby acquiring both firm-specific and industry-specific skills. The latter is ensured by a common standardization and mutual recognition of degrees. A similar system had existed previously in Slovenia, but had been abolished in the beginning of the 1980s. The reintroduced dual system functions along a school-only training, but is expected to become the dominant form of vocational education (Gerzina et al. 2000: 51).

3.3 Emerging comparative institutional advantages

Beyond a classification of countries into respective baskets of LME or CME, VoC goes further to argue that the institutional configurations based on institutional complementarities can serve to explain economic structures. Although in their basic introduction into the concept (Hall and Soskice 2001) the authors merely tentatively touch on that topic, the underlying thought is far-reaching for internal economic structures, foreign direct investment and trade: the sectoral distributions should be highest in those economic activities in which countries have a comparative institutional advantage. Hence, one should be able to observe

specific trade patterns according to comparative institutional advantages of nations. More recently, due to ongoing liberalization of capital flows institutional configurations may lead to an “institutional arbitrage” in the sense that companies shift production to those countries which serve their institutional needs better, particularly regarding modes of innovation: “... companies may locate [...] activities in coordinated market economies in order to secure access to the quality control, skill levels, and capacities for incremental innovation that their institutional frameworks offer.” (Hall and Soskice 2001: 57). The reverse is true for activities which rely on radical innovations: here firms use greater openness on a global scale to move activities to liberal market economies. A clear-cut empirical investigation into the issue of comparative institutional advantages is still to come (cf. Taylor 2004).

In the present case of Estonia and Slovenia a first examination of trade patterns and foreign direct investment according to the identified economic systems will shed light on comparative institutional advantages.

2.1 Sectoral contributions to the trade balance

The contribution of specific sectors to the trade of nations is a first measure to identify possible comparative advantages. Freudenberg and Lemoine (1999) use trade data for Central and Eastern Europe for the period from 1993 to 1996. They apply an index developed by Lafay (1992) for the sectoral contribution to the trade balance. The index takes a negative value for comparative disadvantage and a positive for an advantage in a specific sector¹⁰. Their overall assessment of the specialization of transition economies in their trade with the EU reveals that comparative advantages can be predominantly found in resource- and/or labour-intensive industries as wood or textiles. This is mostly due to huge wage differentials to western economies. However, at the same time the authors identify a beginning trend of ‘despecialization’ in these very sectors. A detailed analysis of Estonia and Slovenia in this period reveals the following patterns: Estonia shows comparative advantages in areas such as wood, coke and textiles. Furthermore, comparative disadvantages in manufacturing sectors such as optics, motor vehicles or machinery and equipment increased in the period from 1993-1996. Slovenia also shows comparative advantages in similar sectors, such as wearing

10. The Lafay-indicator is defined as: $L_I = \frac{(X_I - M_I)}{Y} - \left[\frac{X_I + M_I}{X_T + M_T} \frac{X_T - M_T}{Y} \right]$, whereby subscript I denotes specific industries under study and T refers to total trade volumes, for exports X and imports M . Y stands for the country’s GDP. The first term of the indicator measures the trade balance for a single industry weighted with GDP. The second term attempts to eliminate variations caused by business cycles. It expresses a theoretical trade balance for the case that all industries contribute according to their share in total trade. Thus, a positive L for a given industry indicates that this industry contributes comparatively more than the ‘expected’ share. This is also the case for a trade deficit, which is smaller than the expected. For $L_I > 0$ a given industry therefore exhibits a comparative advantage, and for $L_I < 0$ an industry reveals a comparative disadvantage (Lafay 1992).

apparel and wood. Apart from that, it proves to have a comparatively large contribution to the trade balance in electrical machinery. In more advanced manufacturing sectors such as motor vehicles and chemicals the comparative disadvantage in the beginning of the period significantly decreased, especially in the motor vehicles sector. Also, a shift towards specialization, i.e. a move from a negative value of the index in 1993 to a positive one in 1996 occurred in the field of machineries.

To get further insights into the development of comparative advantages in both countries over the course of transition the Lafay-Index has been calculated for a subsequent period, from 2000-2003 using SITC Rev. 3 data from the UN COMTRADE database¹¹. It can be assumed that this reveals a clearer picture of comparative advantages in both countries as the catch-up process has carried on. To obtain a first impression in Figure 4 a selection of those sectors will be shown where both countries reveal a contrasting picture of one country showing a comparative advantage in those manufacturing sectors where the other enjoys a comparative disadvantage, and vice versa. What interests us most are manufacturing sectors to assess the shift from labour- and resource-intensive to more advanced industries.

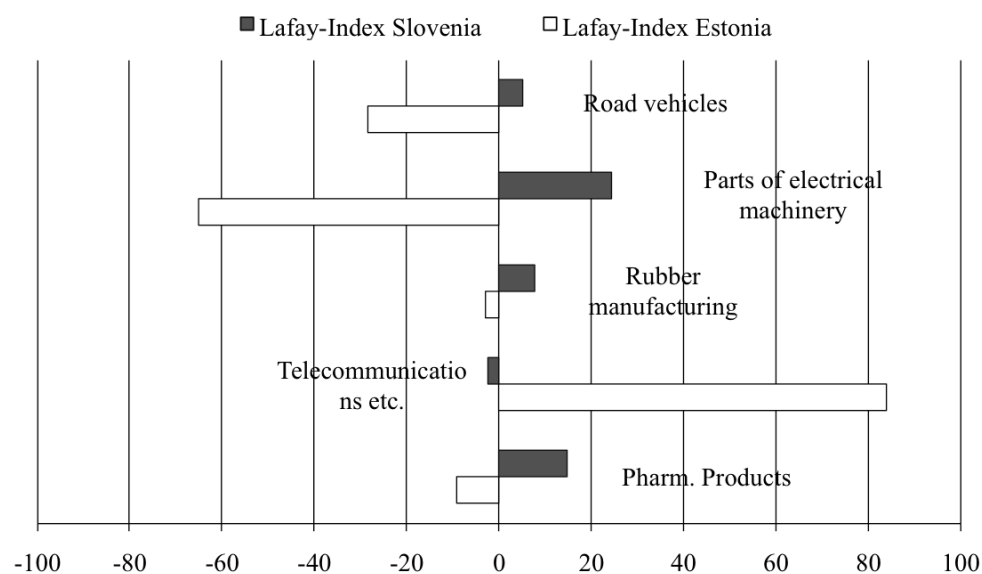


Figure 3.4: Contributions to the trade balance (Lafay-Index) in Estonia and Slovenia. Average 2000-2003, Source: UN COMTRADE Database, on SITC Rev. 3, two-digit levels.

11. Freudenberg and Lemoine (1999) use data according to the NACE classification system.

The analysis of trade patterns of both countries according to trade figures in the SITC classification has potential drawbacks. As this kind of trade data does not account for services potential comparative institutional advantages of LMEs will not be unearthed through them. In fact, the analysis seems to be suited best to analyze CMEs, which reveal comparative institutional advantage in manufacturing sectors captured by international trade data. However, some conclusion still can be drawn from the analysis of Lafay-Indexes of Estonia and Slovenia. First of all, from Figure 3.4 it follows that Slovenian trade figures reveal a comparative advantage in typical CME-sectors, such as road vehicles, electric machinery and rubber manufacturing. In these very sectors Estonia has a comparative disadvantage. Second, the trend predicted by Freudenberg and Lemoine (1999) in Slovenia can be confirmed. The top category of chemicals (SITC Nr. 5) reveals a positive index in 2003. The case of motor vehicles is most revealing in this respect. Until 1996 this figure was negative, since 2000 at least it shows positive figures. This points to a deep structural change in the economy. The third observation refers to the Estonian case: the telecommunications sector reveals a strong comparative advantage in Estonia.

Not only contributions to the trade balance can point to comparative institutional advantage of countries, but also movements of foreign direct investments. As argued above, firms should locate their activities, or parts of them, in those institutional settings, which fit them best. At the same time, activities in trade and foreign direct investments are interrelated as large sectoral inflows of foreign direct investment impact on trade performances. Consequently, in a next step patterns of FDI in Estonia and Slovenia will be analyzed.

2.2 Patterns of foreign direct investment

Foreign direct investment flows in Central and Eastern Europe are quite concentrated. The bulk of investments went to Central and Eastern Europe and the Baltic states while the CIS and South-Eastern Europe received a much smaller part. Regarding determinants of foreign direct investment Kinoshita and Campos (2003) find in a study of 25 transition countries that when controlling for 'traditional' determinants of foreign direct investment such as labour costs, quality of labour, natural resources, infrastructure, proximity to the home country and macroeconomic factors the most important drivers for FDI are agglomeration effects and institutions. Institutions are measured as the quality of bureaucracy and the rule of law. From a VoC-perspective one can argue now that apart from the quality of institutions also the *type* of institutions comprising a capitalist system should be important for FDI.

Table 3.5: Foreign direct investment stocks per selected activities as shares in total stocks. Sources: Bank of Estonia and Bank of Slovenia.

Sector (ISIC Rev.1 Class.):	2002		2003		2004	
	Estonia	Slovenia	Estonia	Slovenia	Estonia	Slovenia
Manufacturing (D)	18.8	44.1	16.9	47.7	16.7	45.6
Wholesale and retail trade (G)	13.5	16.3	14.8	14.1	10.0	13.6
Transport, storage & communication (I)	21.4	4.2	16.4	4.7	5.3	4.5
Financial intermediation (J)	28.0	18.9	26.2	16.1	31.5	19.0
Real Estate, renting and business act. (K)	9.5	14.3	10.3	11.4	22.7	11.7

Different institutional settings with different comparative institutional advantages should attract different kinds of industries. A rigorous quantitative analysis of this claim goes beyond the scope of this paper, however, a look at patterns of foreign direct investment for the country studies of Estonia and Slovenia gives first insights into the validity of this proposition.

Sectoral breakdowns of FDI in Estonia and Slovenia suffer from difficulties with comparability of data. The Bank of Estonia does not provide more detailed data under the top class in ISIC Rev. 1 classification due to confidentiality issues. Slovenian figures are more detailed, but not all sections are provided, because of the same reason. This leaves us with a rather rough picture of foreign direct investment stock in both countries in Table 3.5.

The figures in Table 5 elucidate the importance of FDI for different sectors of both economies. It can be seen that the manufacturing sector is the largest absorber of FDI in Slovenia. Within the sector the division of pharmaceuticals is the largest, corresponding to trade figures above. On the other hand, manufacturing plays a subordinate role for Estonia. There, financial intermediation investments have a dominant position followed by a growing stock of activities connected with real estate, renting and other business activities. Unsatisfactory data notwithstanding, a few conclusions can be drawn from these figures: firstly, manufacturing investors prefer Slovenia over Estonia, in fact, when comparing manufacturing stocks for all eight new EU members in 2000, Slovenia scores highest values of the share of manufacturing in total stocks together with the Czech Republic (UNCTAD WID, various country studies). Secondly, investment in Estonia predominantly goes into sectors with a stronger service character, financial intermediation and real estate.

Table 3.6: Foreign direct investment stocks by geographical origin as a share in total stocks.
Source: UNCTAD World Investment Directory.

	2002	2003	2004
in Estonia from:			
Sweden	41.0	41.4	45.4
Finland	27.3	26.7	23.8
USA	7.1	5.7	5.1
Netherlands	3.9	3.3	2.6
Norway	3.2	2.4	2.8
in Slovenia from:			
Austria	30.2	25.7	29.2
Germany	11.1	7.6	7.2
France	9.8	7.4	7.8
Italy	7.5	6.4	6.3
Croatia	2.1	6.0	5.3

Geographical origin serves as another indicator of emerging structures. From a VoC-perspective we would expect firms to shift activities where institutional settings and the prevailing variety of capitalism suits best. However, a few qualifications have to be taken into consideration. In the case of transition economies one must be careful, because large wage differentials were and still are drivers for investments in the region. In this case, firms also shift activities, which match institutional settings of both home and host country due to cost advantages. Also the distance of the country of origin plays a major role. Table 3.6 lists the most important countries of origin for Estonia and Slovenia measured as the stock originating from a country as a share in total foreign direct investment stocks.

Both cases show the strong influence of geographical proximity of home countries of FDI. For Estonia these are Sweden and Finland, for Slovenia Austria and to a certain extent Italy and Croatia. In the Estonian case large figures of FDI from the Nordic countries as origins of

large companies as Ericsson or Nokia on the one hand and trade in the telecommunications sector on the other attract attention. Högselius (2005) reports that telecommunications already before independence traditionally played a prominent role in Estonia. While in the beginning of the 1990s companies investing in this sector primarily regarded the country as a low-cost production site, now also innovative and service-related telecommunications industries are starting to grow in importance.

On the whole, European CME-countries are the dominant investors in both countries. However, the role of the USA is particularly telling, because here considerations of geographical distance are the same throughout Eastern Europe. When comparing FDI stocks from the US as a share of GDP in 2002 for all eight new EU members, Estonia reveals the highest share of all (UNCTAD WID). The fact that Estonia is most important for American investors can be explained by its variety of capitalist system, because firms seeking cost advantages find similar institutions like in their home country.

3.4 Conclusion

The preceding discussion has shown that Estonia and Slovenia can be seen as polar opposites regarding their capitalist systems. At the same time, both countries show a high degree of complementary institutions. The Slovenian case very much resembles coordinated market economies like Germany or Austria: it reveals corporatist-like labour relations with a large degree of wage-bargaining coverage and co-determination. Complementarily to this unemployment and employment protection are high. The vocational training system is capable of providing firm-specific and industry-specific skills. Quite on the contrary, in Estonia industrial relations are characterized by a dominance of firm-level relations and a little organized workforce. Employment protection is high, but there is evidence that this is a legacy from Soviet times and is likely to be reduced. The vocational training system has been reshaped towards general education of the workforce.

However, in the area of corporate governance deviations from the VoC-framework occur in both countries. On the one hand, the Estonian system cannot be described as a shareholder model as one would expect for an LME. Enterprise legislation is organized as in a stakeholder model, but it is circumvented in practice. More importantly, the comparably small stock-market cannot provide the same function as in an advanced LME. The possibility of a functional equivalent, which could provide similar disciplining measures as a stock-

market, provides opportunities of future research.

On the other hand, in Slovenia the influence of investment funds, partly state-owned, and employee-ownership of companies have been identified as deviant from representative CMEs. It has been argued that this could be a functional equivalent in the absence of proficient banks providing patient capital. Then, the fact that workers partly own their company can be seen as a transitional institutional complementarity. Thereby incentives to invest in a high degree of asset specificity can be established. One has to be cautious with this claim, because the efficiency criterion connected to the notion of institutional complementarities requires a thorough proof in order to be distinguished from mere clustering of institutions. As employee-ownership is common to other transition economies as well a comparative study could illuminate this claim further in future research.

All in all, while the present analysis did answer the question, what kind of capitalism is emerging in the two countries under study, many more questions have been raised. For instance, the divergent experience in the reformation of vocational training systems in both countries is remarkable. Coming from more or less the same starting points both countries moved into opposite directions. While Estonia accentuated a more general education perspective in its vocational training system, Slovenia aimed at firmly institutionalizing a scheme which is able to provide companies with apprentices endowed with a mix of firm-specific and industry-specific skills. This discrepancy makes a suitable case for studying the much debated issue of possible influences of institutional complementarities on the emergence of institutions (Crouch et al. 2005). Also, when studying emerging comparative institutional advantages of Eastern European countries it seems desirable to go beyond the illustrative data employed here and conduct a thorough analysis of a wider country sample.

4. Law, Politics and Culture: Lessons from Eastern Europe

Article 3

4.1 Introduction

What determines the emergence of institutions? This central economic question has gained considerable attention in recent years. The reasons for this interest are manifold. The works of Douglass North and others have drawn attention to the importance of laws and rules as incentive devices. Empirical studies show the potentially huge role of those *institutions* in explaining growth, development and the lack thereof. The collapse of socialism and larger integration of the world economy in recent decades have furthermore highlighted the divergent organization of market economic systems also in the rich Western World.

There are broadly three approaches to explain institutional emergence: first, a legal approach, which sees the main driver of institutions in the legal system of a country. It originated in the law and finance literature, in an attempt to explain divergent capacities of countries to investor protection and protection of creditor rights. The basic tenet that legal origins impact on the choice of institutions then spreads to other institutional areas, such as labour legislation and others. A recent overview is given by La Porta et al. (2008).

Second, a political economy perspective sees the specific type of institutions as a result of political processes and political economy-considerations. One line of literature starts from the observation that formal institutions are the product of the political preferences of societies and as such should be explained by those. For instance, left-wing political views translate into institutions that generate higher job-security as opposed to right-wing preferences, which tend to favor labor market flexibility. Secondly, it can be shown theoretically and empirically that different political institutions such as the voting system give rise to different political coalitions, which in turn lead to different institutions.

Third, and most recently, cultural explanations have been brought forward to explain institutional divergence. Proponents of this view put forward the claim that differences in cultural attitudes of nations are at the root of institutional differences observed today.

Equally important as the question of determinants of institutions is the question, which institutions to choose as outcomes. Econometrically speaking, while theories of the determinants of institutions provide the independent or right-hand side variables of the analysis, the question remains, which institutions to choose as dependent or left-hand side variables. In this paper, three institutional outcomes will be considered. First, the extent of

investor protection and labor market institutions are two institutional outcomes frequently chosen (Botero et al. 2004, Pagano and Volpin 2005) as pivotal economic institutions, which differ considerably across countries. Hence, in order to build on existing theoretical and empirical studies, in this paper measures of both will be used. A third institutional measure stems from a systemic approach to comparative institutional analysis. Comparative institutional analysis in the spirit of Aoki (2001) and Greif (2006) develops game-theoretic models, in which two or more institutional equilibria can exist. In addition to this, building on Williamsonian transaction costs economics, Hall and Soskice (2001) develop ideal types of liberal and coordinated market economies, which as systems can explain ongoing divergence of institutions across countries. Working with the notion of institutional systems warrants the employment of some sort of systemic variables. This is provided for Eastern European transition economies by Knell and Srholec (2007).

This paper attempts to further our understanding about the relative importance of these different approaches of determining institutions by analyzing the experience of Eastern European former communist countries. Twenty years after the beginning of the transition from plan to market, most countries have established both a market economic system and democracy. While the starting conditions as post-socialist countries were very similar for most countries, the outcomes show a considerable diversity of institutional outcomes. There will be two empirical strategies to gauge the relative importance of said political, legal and cultural theories. First, a sample of both transition and non-transition countries will be subjected to a number of cross-country regression of long-term average values. In order to allow transition countries to stand out, a host of interaction terms will be included. Second, a dynamic panel model including transition countries alone is estimated to shed further light on the relative importance of different approaches and to tackle endogeneity issues. On the whole, the analysis in this paper suggests that the type of institutions, which emerged in Central and Eastern European countries can be partly explained by political economy arguments. Specifically, an adjusted proportionality measure of the voting system, which takes into account the unusually high disproportionality of election outcomes in Eastern Europe can explain the choice of investor protection in a dynamic panel estimation. Legal origin and cultural dimensions play a smaller role in the panel regressions, but have some explanatory power when it comes to cross-country pooled samples including non-transition countries.

The contribution of the paper can be seen as twofold: on the one hand it attempts to further our understanding about processes taking place during the emergence of newly democratized countries. On the other hand, the unique experience in Central and Eastern Europe allows to subject competing theories, which by and large have been developed against the backdrop of

the experience of advanced OECD countries to a test. Stated differently, being able to establish which of the approaches is best suited to explain what actually happened in the “laboratory” of transition countries offers the opportunity to make inferences about their relative importance.

The analysis proceeds as follows: in section 2 the literature on the determinants of institutional configurations is briefly introduced. Hence, this section discusses relevant theoretical contributions, which determine the right-hand side variables. Section 3 then discusses in more detail the use of institutional measures as left-hand side variables. Special emphasis will be put on the discussion of systemic approaches to institutional divergence. Section 4 discusses the transition process and resulting post-communist peculiarities that have to be addressed. Section 5 introduces the data, methodologies and results of the estimations. Section 6 concludes.

4.2 The determinants of institutions

Broadly, three approaches can be distinguished, which see the main determinant of institutions in legal, political or cultural origins. They will be discussed in turn.

4.2.1 Legal origin

This approach has been expanded since the initial publication by La Porta et al. (1998) and has been recently summarized and synthesized in La Porta et al. (2008). Put in a nutshell, this literature posits that the type of economic institutions depends on the legal tradition of a country. Publications within this line of work are first and foremost a huge empirical task as a large number of indicators for an unprecedented large sample of countries is collected. Djankov et al. (2003) lay out the underlying framework, which serves as the (sometimes implicit) reference for most of the contributions. Empirical contributions then investigate shareholder and creditor protection (La Porta et al. 1998; Djankov et al. 2007; Djankov et al. 2008), corporate governance, with respect to ownership (La Porta et al. 1999) and capital markets (La Porta et al. 1997), labour market and social security legislation (Botero et al. 2004), the efficiency of judicial procedures (Djankov et al. 2003), the size and scope of government intervention as a whole (La Porta et al. 1999), the burden of regulation of setting up a business (Djankov et al. 2002) and government’s ownership of banks (La Porta et al. 2002), and the independence of the judiciary (La Porta et al. 2004).

In all of these studies countries are classified as having either a Common Law system, a

German or French civil law system, or belonging to the group of Scandinavian civil law. Some contributions also introduce countries from Central and Eastern Europe, their legal systems sometimes coded according to the pre-socialist legal heritage (Pistor 2000) or sometimes simply as 'socialist' (Botero et al. 2004). The unequivocal result is that in all areas under study, Common Law countries score best, followed by Scandinavian and German civil law countries, leaving the worst results to countries relying on the French Code Civil.

A more nuanced version of this is presented by Berkowitz et al. (2003), who point out the large importance of the way a legal system was established in a country. Those countries, which adapted a system out of a deliberate decision and/or were already well acquainted with its functioning beforehand, fare better than countries, to which the legal traditions were transplanted externally. The latter approach can be observed specifically with French colonizers (Merryman 1996).

In a vast number of publications, it can be empirically shown that investor protection is significantly better in countries of the English Common-Law origin than in French Civil-Law countries (Djankov et al. 2008). Also, looking at labour market institutions, it can be shown that countries with a French legal tradition have higher labour market rigidities than Common Law countries (Botero et al. 2004). As a result of these institutional differences both financial development and income measures show better results in Common Law countries than in Civil Law ones.

The difference in corporate governance institutions is explained to work through two channels, a political mechanism and an adaptability mechanism (Beck et al. 2003; Beck and Levine 2005). The political mechanism puts forward the claim that in Common Law countries the law traditionally works as a strong counterbalance against expropriation by the state and as such ensures better protection of private contracting rights. The judiciary tends to be more independent. This, in turn, facilitates better financial institutions and financial development. On the contrary, in Civil Law countries the law tends to side with the state rather than individuals. The adaptability mechanism argues that legal traditions differ in their formalism and therefore their ability to evolve with technological changes. It is argued that due to less legal formalism coupled with the widespread use of case law Common Law can adapt better and more efficiently to changing conditions than Civil Law (Priest 1977; Rubin 1977; Rubin 2005). Hence, to summarize, the political channel explains cross-country differences in financial development with cross-country differences in the independence of the judiciary (and hence private property rights), while the adaptability channel explains cross-country differences in financial development with cross-country differences in the flexibility of the law.

Several studies expand the approach to Eastern European countries. The Legal Origin literature in earlier publications includes some Central European countries coded as “socialist” law. In later studies, those countries become recoded as either their pre-war legal system or as the predominant code introduced in the 1990s. All in all, including those countries never changes the basic empirical message. Stated differently, Central and Eastern European countries as Civil Law countries fit neatly into the mold of the Common Law - Civil Law divide. Pistor et al. (2000) expand La Porta et al.’s (1998) Antidirector index to Eastern European countries finding that on average investor protection is better in those countries than in previously studied sample of advanced capitalist countries. Looking at the Eastern European sample, it should be noted that the countries under study belong to either a German or French legal origin, or cannot be classified at all. This means that the usual Common Law-Civil Law divide does not apply in this case. However, legal origin theory so far has consistently shown that within the group of Civil Law countries, there is a discernible difference between German and French origin. Specifically, in all empirical studies countries with German tradition come out better than French counterparts with respect to corporate governance institutions (Djankov et al. 2008) and show less labor market rigidity (Botero et al. 2004).

4.2.2 Political Economy

Political economy models the emergence of institutions as the result of political and constitutional institutions and policies. There are two broad approaches to be distinguished. A number of studies models the effect of political institutions such as the voting system on coalition building. As a result, different coalitions can push forward different policies (Pagano and Volpin 2005, Gourevitch and Shinn 2005). A second approach leaves out the modeling of intermediate stages between preferences and outcomes arguing a direct relationship between preferences and outcomes of policies, sometimes incorporating a historical component (Roe 2006). This second approach also incorporates outcomes of political power of groups, which can levy power over political decisions (Perotti and von Thadden 2006).

Characteristics of the political system are used to explain variants of market economy systems. Political economists both coming from an economics background and a political science background focus on voting systems to explain the emergence of economic institutions. Most prominently, economists Pagano and Volpin (2005) propose a model with managers, shareholders and workers. Managers prefer low investor protection, because that makes it possible for them to extract private benefits from the firm. To obtain the political

support of workers they have to make concessions to workers, which means that they limit themselves with regards to firing. Whether this agreement (which is a stylized description of a corporatist or coordinated market economy) can prevail, depends on the distribution of equity ownership and on the political process. Specifically, workers must have little or no equity stakes and/or the political system must support coalition governments (i.e. voting rules should be of *proportional representation*). Then, what can be observed is that low investor protection goes hand in hand with high job security. On the other hand, if workers themselves have considerable equity stakes and/or the political system is not in favor of coalition building (*majoritarian systems*), the model predicts high shareholder protection and low employee protection. In fact, looking at the proportionality of voting systems in OECD countries Pagano and Volpin (2005) confirm this correlation. While countries with majoritarian voting systems such as the United States and the United Kingdom have relatively higher investor protection and low labor market rigidity, most countries with some variant of a proportional system present the opposite picture. Hence, the crucial point of the voting system is the extent of coalition-building it allows. In general, proportional systems are associated with a larger number of veto-players, and hence, produce policies for a broader constituency. Majoritarian systems, on the other hand, as a rule have less veto points, and therefore policies can rapidly swing (Gourevitch and Shinn 2005, chapter 4).

The second group of political-economy views of institutional development models the relation between preferences and outcomes more directly. The formation of preferences can have different causes. For example, a high-skilled but financially constrained worker will prefer high job security and low investor protection, which is broadly the description of a Western European country that saw great financial destruction by hyper-inflation and wars (Perotti and von Thadden 2006). On the other hand, incumbent industrial interest groups with considerable market power oppose better investor protection. For them, monopoly rents are in danger if a better investor protection and ensuing financial development possibly breeds local competition driving down monopoly rents (Rajan and Zingales 2003). A similar argument is made by Roe (2003, 2006), where additionally the dispersion of ownership played a role. There it is argued that a more concentrated ownership helped European capital keep in check rising demand by labor for rent-sharing. Hence, in such a setting, capital did not have an interest in furthering investor protection and risking a higher dispersion of ownership. As a result of partly political-economy arguments and historical circumstance, different preferences emerge and find their manifestation in both partisan politics in an ideological left-right spectrum and ensuing emerging institutions.

While most transition countries introduced an electoral system of proportional representation, political scientists studying the area point at unusual outcomes in terms of the

disproportionality of election results. Disproportionality measures the difference between the share of votes a party receives and the share of parliamentary seats it receives. This tends to be larger for majoritarian systems, because in a first-past-the-post system the winner takes the seat practically discarding all votes not cast for the winning candidate. Roberts (2006) finds that unlike in older democracies in the West, Central and Eastern European countries, which have a proportional system still exhibit high disproportionality between votes and seats. The main explanation is that in nascent democracies of Eastern Europe typically for general elections a large number of small new parties runs for an election. Each gets too small a number of seats to jump the threshold of representation, but in total they receive a considerable number of seats. This, in turn, means that a *de jure* proportional system in such a case can have the *de facto* result of a majoritarian system. Stated differently, the degree of proportionality is reduced.

While the literature on political determinants is fairly novel, the theoretical predictions are nevertheless clearly to be formulated into predictions about newly emerging capitalist countries in Central and Eastern Europe. Controlling for possible disproportionality, a larger share of seats allotted according to proportional voting, the better investor protection and higher labor market rigidity is expected. In addition, political platforms corresponding to different ideologies can have an influence on institutional change: left-wing parties are expected to further labor market institutions making it harder to fire workers, possibly at the expense of greater investor protection. Right-wing platforms, on the other hand, are expected to be correlated with the opposite: better investor protection and less labor market rigidity.

4.2.3 Culture

A growing literature models the variety of institutions as the result of deeply rooted cultural differences between countries. In general, there are two ways to model the effect of culture on any economic outcome. Either in first step the effect of cultural attitudes on preferences and institutions is established, which in a second step can be shown to have an influence on some outcome. Or, as a short-cut, the direct effect of culture on outcomes is examined. For the present study, the second step is of less importance, because the focus is solely on establishing the type of institutions that emerge. The literature offers a broad range of economic outcomes under study. For instance, the level of trust between European countries as a result of cultural similarities is shown to have an impact on the magnitude of trade across countries (Guiso et al. 2009). Also, trustworthiness within an economy appears to foster entrepreneurship (Guiso et al. 2006). Several studies use religion to map cultural differences

across countries. McCleary and Barro (2006) find that an increase in religious beliefs increases income in a country; church membership alone does not have any positive effect, a result which is qualified recently by Bettendorf and Dijkgraaf (2010), who find that in high-income countries mere membership has a positive impact on income, while in low-income countries it does not.

More in line with this paper and being more specific about the term culture, Licht et al. (2005, 2007) incorporate indicators of cultural attitudes developed by Schwartz (1994) to explain divergent outcomes in corporate governance institutions and governance institutions of countries. The Schwartz data measure attitudes along three axes with two dimensions each. They are the outcomes of detailed surveys. The dimensions along the three axes refer to Embeddedness versus Autonomy, Hierarchy versus Egalitarianism and Mastery versus Harmony. For a detailed description of the content of each variable see Licht et al. (2005), Table 1A. They are able to show that cultural dimensions explain to a certain degree the extent of investor protection measured as La Porta et al's (1998) Antidirector index and creditor rights and more general governance variables such as the rule of law, anti-corruption institutions and accountability. Relatedly, but using religion as a proxy for culture, Stulz and Williamson (2003) look at the distinction between predominantly catholic and protestant countries to find that the former protect investor rights to a lesser extent the latter.

Close to the investigation in this paper, Schwartz (2007) tests his six cultural dimensions according to their correlation with a measure of institutional coordination by Hall and Gingerich (2004). The latter provides country values for corporate governance and labor market institutions. Schwartz finds that his cultural attitude values of Harmony, Egalitarianism and Autonomy have a significant positive correlation with a larger degree of coordination, i.e. non-market institutions. On the other hand, Mastery, Hierarchy and Embeddedness are correlated with lesser degrees of coordination, which means that they tend to be found in countries with more market-based corporate governance and higher labor market flexibility.

In a similar vein, but taking a systemic view of institutions, Pryor (2007) finds five country clusters on the basis of answers to a host of questions from the World Value Survey. In addition, the five country clusters align with five country clusters of institutional systems (Pryor 2005). Hence, Pryor can show that five distinct variants of market economic systems found in Anglo-Saxon, North European, West European and South European countries with Japan as the single member of a fifth group exhibit also distinct values systems. Examining each of the six dimensions developed by Schwartz (1994) and used by Licht et al. (2005, 2007), Pryor (2008) establishes that only two of the three pairs have partially significant explanatory power. Harmony and Hierarchy are related to the form of capitalist system with

Embeddedness and Autonomy having no discernible impact. Hierarchy is positively correlated with Anglo-Saxon variants of economic organization, while Harmony has a negative sign. Egalitarianism shows a positive correlation with less market-oriented systems in parts of the estimations.

4.3 Institutional diversity

Having discussed existing theories of institutional emergence, in a next step the outcome variable will be discussed. Stated differently, while the preceding chapter introduced the independent, or right-hand side variables, in this chapter the dependent, or left-hand side variables are covered.

Investor protection and labor market institutions are the most commonly applied outcome variables. Hence, for approaches discussed above, there exist already both theoretical and empirical results for non-transition countries, to which the results in the present study can be compared.

In addition to that I will test the impact of political, legal and cultural indicators on a more encompassing systemic institutional variable from Knell and Srholec (2007). This indicator captures institutional divergence along the dimensions of labour market regulations, business regulation and social security systems. It is based on the notion of institutional complementarities developed by Aoki (1994, 2001), which is utilized by the varieties-of-capitalism school (Hall and Soskice 2001) in order to compare different types of capitalist systems. Hence, the coordination index can be seen as a more encompassing indicator capturing the degree of corporatism in a country than individual indicators of specific domains such as labor market institutions.

Figure 4.1 shows scores for both non-transition countries in the upper part of the graph and transition countries in the lower part. Positive values of the indicator point to a higher degree of coordination in the economy, which means that there is more redistribution in the economy and less flexible labor markets. Negative values show that a country allows for more market relations, which means that there is less redistribution through the social security system and more flexible labor laws. Looking at the sample of countries in the upper part of the graph shows more or less expected classifications: Continental European countries such as France, Austria and Germany and some Scandinavian countries like Finland and Sweden exhibit more coordination, while Anglo-Saxon countries show less. For some countries, classification is different than in most of the varieties-of-capitalism literature; most notably, Belgium and Japan are usually classified also as more coordinated market economies. The lower part of the diagram introduces Central and Eastern European transition countries.

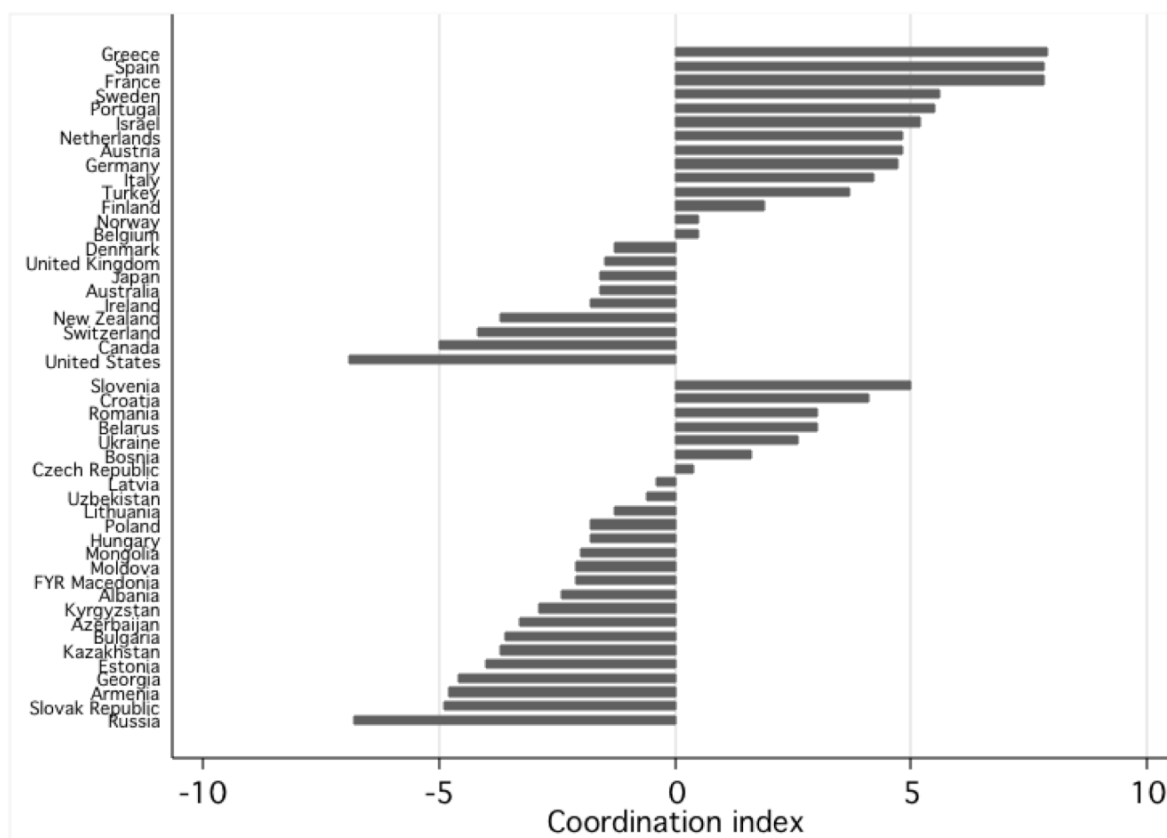


Figure 4.1: Coordination Index

Source: the coordination index used here is the sum of indices on redistribution and labour market institutions developed by Knell and Srholec (2007)

What catches the eye there is that by and large, most post-socialist countries are more market-oriented than coordinated; only seven out of 25 countries score a positive value on the coordination index. The scores in Figure 4.1 suggest that by including Central and Eastern European countries the group of more market-oriented countries has been enlarged to include countries, which do not have an Anglo-Saxon background. Stated differently, these are countries with a Continental background coming from Civil-law legal traditions, which nevertheless allow markets as dominant coordination device. Before turning to the analysis of the emergence of systems, salient features of the transition process, which are suspected to

influence the institutional outcomes will be discussed.

4.4 The transition from socialism to capitalism

A priori, a number of known peculiarities of Eastern European countries lead to additional control variables that should be included. These refer to the impact of privatization, the relative underdevelopment of the party system, external factors and in general the severity and length of the socialist period.

Soon after World War II all countries east to West Germany and Austria had introduced some variant of a socialist economic system. While the “socialist block” was by no means monolithic in the sense that market experiments were introduced to a certain degree in some countries in some periods of time, the unifying characteristic of all countries was that by and large private property of the “means of production” was greatly restricted. As a result, one of the main challenges for all countries was the privatization of state and collective property.

Three main privatization strategies can be distinguished, which are expected to have different impacts on the relative power of workers, managers and investors. Voucher or mass privatization put the emphasis on speed by giving out small shares in companies. As a result, ownership in the beginning was dispersed. However, over time in most countries the bulk of shares was being bought by investment funds and banks, which tended to increase concentration again. The second privatization method involved management and employee buy-outs (MEBO) of the firm. Thirdly, state-owned companies were sold directly to investors in direct sales (Roland 2000). Different countries used different strategies at different points in time, whereby in most cases a dominant privatization strategy can be identified. Table 4.1 gives an overview, which strategy transition countries predominantly chose.

The insider privatization with the management or employee-buyout option entrenches existing managers and workers with the firm. In terms of the Pagano-Volpin model discussed earlier this means that the political power position of managers and workers is greatly strengthened. Against this backdrop, it can be expected that the predominant use of insider privatization methods will foster political resistance to better investor protection and therefore *ceteris paribus* lead to worse scores on that variable.

Table 4.1: Predominant privatization strategies

Management-Employee Buyouts (MEBO)	Mass privatization	Direct sales
Albania	Czech Republic	Bulgaria
Armenia	Kazakhstan	Estonia
Belarus	Latvia	Hungary
Croatia	Lithuania	
FYR Macedonia	Moldova	
Georgia	Russia	
Kyrgyzstan	Slovak Republic	
Poland		
Romania		
Slovenia		
Ukraine		
Uzbekistan		

Note: a strategy is considered dominant if it is used in the largest number of years between 1990 and 2006.
Source: Gouret (2007) and EBRD (2006)

Mass privatization, on the other hand, is expected to enhance investor protection. Depending on the specific process, a large amount of the population receives vouchers of company shares, which can be traded. Although, for the most part the process did not lead to envisaged dispersed ownership (Buck 2003; Grosfeld and Hashi 2007), by and large, more individuals become equity owners under this privatization scheme than if other types are utilized. As a result, popular support for investor protection is expected to be large and should translate into better institutions. Unfortunately, data on ownership concentration as the intermediate step between privatization method and preferences towards investor protection is not available for a most transition countries.

Lastly, for direct sales it can be expected that the question of reverse causality is strongest for this type of strategy. In other words, a country planning to directly sale state-owned companies to outside investors, is aware of the fact that investor protection must be high for an investor to show an interest in the first place. Hence, the relation between direct sales of state-owned companies is expected to be positive without stating a causality.

A number of empirical investigations have shown that the speed of reforms in the initial transition stage is crucial for both further institutional and structural development, since it

sets a country on an early reform path leading into a virtuous cycle of reform. The longer a country waits with basic macroeconomic stabilization, the more sluggish the reform process proceeds (Havrylyshyn 2006; Aslund 2007). Also, it is widely held that both the prospect of EU membership has a positive influence on institutional reform effort. What is more, although the starting point of reform was similar to a large degree, initial conditions differed in the degree of macroeconomic distortion across countries, which is found to have an influence of reforms later on (de Melo et al. 2001; Di Tommaso et al. 2007).

To summarize, there are three theoretical approaches at explaining the emergence of particular types of institutions or institutional systems. Political, legal and cultural variables are seen to influence the type of economies. Armed with theoretical predictions and having established special influencing variables in the case of post-communist countries, in a next step an empirical analysis will be carried out to evaluate evidence for those predictions.

4.5 The determinants of institutions in Central and Eastern Europe

The empirical analysis involves two strategies. First, a pooled dataset will be used to get a first impression of the relative importance of different factors. In this analysis, transition countries will be put together with other non-transition countries. In a second step, panel estimation of transition countries only will deepen the understanding. Data sources are discussed in the next section.

4.5.1 Dependent variables

Investor protection data come from Djankov et al. (2008) and from the World Bank Doing Business report World Bank (2009), as are indicators of labor market rigidity based on the methodology in Botero et al. (2004). For both, the year 2009 is used in the cross-sectional analysis. As a third variable a coordination index developed by Knell and Srholec (2007) will be included. As discussed above, while investor protection and labor market regulation measure institutions in particular spheres of an economy, this indicator attempts to map a system as a whole. As opposed to similar “corporatism” indicators from empirical political science and sociology (for an overview see Kenworthy 2003) this indicator includes broader information. In addition, it is available for all Eastern European countries.

In order to construct a panel dataset additional indicators for investor protection are needed. For investor protection the annually published transition indicator on securities legislation by

the European Bank for Reconstruction and Development (EBRD) of financial indicators is available for all countries since 1990. Obviously, the indicator is not equivalent to investor protection data coming from the Doing Business project. The EBRD measures the adherence of securities legislation to a benchmark developed by the EBRD. A large part of the indicator involves investor protection, and specifically minority investors protection. Unfortunately, employment protection legislation indicators do not exist for a sufficiently high number of countries and years.

Parts (ii) to (v) discuss the independent variables used in the estimation.

4.5.2 Legal variables

Most of CEE countries have a Civil-Law tradition, which dates back to German or French influences. The analysis follows Pistor et al.'s (2000) classification of countries in Central and Eastern Europe.

4.5.3 Political variables

In order to test hypotheses put forward by the political-economy view of institutional emergence, both the proportionality of the voting system and the political ideology of the executive will be measured. While both are included in the panel estimation in section 6, the cross-section analysis of section covers proportionality only. Both proportionality data and information of the ideological stance of the executive come from the World Bank data base on political institutions (Beck et al. 2001, in the most recent update including data for 2009). Following Pagano and Volpin (2005) the index of the proportionality of a voting system will be constructed such that it takes the value 3 if all seats are allocated through proportional voting, zero if none and numbers in between for intermediate values. Partisanship of the executive is coded as either left, right or center. Both proportionality and partisan variables enter the analysis as 4-year moving averages to capture the long-term effect those variables have.

As discussed above, Eastern European politics stand out in that the disproportionality of election results is exceptionally high (Roberts 2006). Disproportionality here is measured following the least squares index developed by Gallagher (1991). This index measures how many seats a party receives in an election compared to the number of votes it received. Traditionally, it is high in majoritarian systems and low in proportional systems (Lijphart 1984; Lijphart 1999). This distorting effect from unusual high disproportionality is captured in two ways. In the first pooled cross-section analysis the measure of disproportionality of

election results is introduced as a conditioning factor of the proportionality. In other words, in this analysis the difference between transition countries and non-transition countries will a function of the disproportionality. In the ensuing panel analysis an additional adjusted proportionality index is constructed. The adjustment weighs the proportionality on the books by the degree of disproportionality between votes and seats of election outcomes. Put simply, a perfectly proportional system with a comparatively high disproportional election outcome scores a smaller number than 3 in the adjusted proportionality index in order to measure the diversion from a proportional system that assigns 100% of seats proportionally. Calculation of the index follows Gallagher (1991). Most values are taken from Gallagher, for some countries the indices have been updated using information on most recent election results.

4.5.4 Cultural variables

In order to receive a workable indicator, I submitted four of Schwartz's cultural value data used by Licht et al. (2005, 2007) to a factor analysis, which generates weights to transform the four dimensions into one indicator variable. The factor loadings are shown in Table 4.2.

The factor loadings are then used to construct an indicator by weighting each of the four indicators. Table A1 in the appendix (page 93) lists the indicator for the available countries. Generally speaking, smaller values indicate that the cultural attitudes favor relatively more egalitarianism in society. It can be seen that Central and Eastern European countries show a wide range of values. While Russia, Bulgaria or Poland seem to exhibit similar cultural attitudes as Anglo-Saxon countries like the UK or USA, others are more similar to West European countries such as the Netherlands or Switzerland. Admittedly, merging four of the six indicators developed by Schwartz (1994) into one index means losing information on fine differences between different dimensions.

However, since cultural attitudes shall be included alongside other variables on political and legal indicators, concessions have to be made in order to save degrees of freedom. The four indicators used here present still some information on general attitudes towards an egalitarian and harmonious society. Dropping the variables on Embeddedness and Autonomy is further justified by Pryor's (2008) finding that both are the two variables with the least explanatory power when it comes to the correlation between cultural and economic systems.

Table 4.2: Factor loadings of cultural values dimensions

	Factor loading	Uniqueness
Hierarchy	0.8578	0.2812
Egalitarianism	-0.6505	0.5768
Mastery	0.6650	0.5578
Harmony	-0.7120	0.4930

4.5.5 Control variables

As control variables, I include GDP per capita (World Bank Statistical Office), the predominant privatization methods (Gouret 2007) and various EBRD (2006) and a dummy for transition countries. In addition to this, interaction terms for transition countries and the indicators on political, legal and cultural factors will be included. For all estimated models involving political variables, only those countries are included, which correspond to a Freedom House index of 5 and lower, hence, which are considered at least partly free (Freedom House 2009). For the cross section dataset this is found as an average over the period 1989 to 2004. In the panel analysis the preceding four years must have been considered partly free on average.

4.5.6 Cross-country dataset

As a first step, a simple cross-country model will be estimated. In this model, for each of the dependent and independent variables, averages over the entire period between 1989 and 2004 are used. This seems a justified simplification, because all indicators on the right-hand side, political, legal and cultural variables, are expected to develop over longer periods of time.

Although the predictive power of such a model is limited due to a relatively small number of observations it can provide a first step towards understanding the workings of institutional emergence in Eastern Europe. As discussed above, three institutional indicators measuring investor protection, labour regulation and a general system variable of coordination in the economy will be used as dependent variables. The baseline estimation equation is then the following:

$$y_i = \beta_1 + \beta_2 L_i + \beta_3 P_i + \beta_4 C_i + \beta x_i + \varepsilon \quad (1)$$

In this equation, L_i refers to the legal tradition of country i , P_i denotes various variables concerning the political system of a country, and C_i measures culture. The vector x denotes a set of control variables. The dependent variable y_i measures institutions of the outcomes in a particular country.

In order to keep the number of observations as high as possible, but still allow for different intercepts and slopes of coefficients for Central and Eastern European countries, I include both dummy variables for transition countries and interaction terms between the dummy variable and the respective institutional variables. This allows to gauge the distinctiveness of transition countries compared to non-transition countries.

Table 4.3 reports first results for the political variable of proportionality of the voting system. Columns 1 to 3 report results for the impact on investor protection, 4 to 6 shows results for labor market institutions, and the last 3 columns give estimation coefficients for a coordination index by Knell and Srholec (2007). The first column of each dependent variable (1, 4 and 7) show results for all non-transition countries. The respective second column (2, 5, 8) include transition countries including a dummy and interaction effect. Last, in columns 3, 6 and 9, the transition dummy is replaced by a measure of the average disproportionality of election results and a corresponding interaction effect. As discussed above, this reflects the tendency of elections in transition countries to exclude a large chunk of votes even if the electoral system is proportional.

First of all, the sign of proportionality is always as expected from theory: a more proportional voting system is associated with less investor protection, higher labor market rigidity and a higher coordination index.

It is also clear from these results that *ceteris paribus* more advanced countries in terms of GDP per capita have better investor protection, less rigid labor markets and exhibit overall less coordination. Transition countries, on the other hand, display the opposite behavior. The marginal effect of proportionality when the transition dummy takes the value one, however, is never significant. What is more, in the model of investor protection (column 2) it points in the opposite direction than theory predicts. This could lead one to conclude that in transition countries the type of the voting system does not have an influence on institutional outcomes as in “western” countries. However, as discussed above it is suspected that in transition countries during the period of study, this does not measure the “true” proportionality of the system. Introducing a measure of disproportionality in models 3, 6 and 9, by and large does not change coefficients on the other independent variables.

Table 4.3: Estimation results - Proportionality

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Investor protection			Labor market rigidity			Coordination index		
Proportionality	-0.14** (0.06)	-0.14*** (0.05)	-0.14*** (0.05)	0.28*** (0.07)	0.27*** (0.07)	0.29*** (0.07)	0.37*** (0.13)	0.39*** (0.13)	0.37*** (0.12)
Transition		-0.16** (0.07)			0.19* (0.10)			-0.02 (0.22)	
Prop. × Trans.		0.17* (0.10)			-0.19 (0.13)			-0.29 (0.20)	
Marg. effect if Transition=1		0.03 (0.08)			0.08 (0.11)			0.10 (0.15)	
log GDP p.c.	0.39* (0.22)	0.29 (0.18)	0.38** (0.19)	-0.61** (0.28)	-0.36 (0.25)	-0.57** (0.25)	-2.42* (1.28)	-0.11 (0.64)	-1.33* (0.77)
Disproportionality			-0.57*** (0.19)			0.33 (0.25)			0.04 (0.37)
Disprop. × Prop.			0.63** (0.28)			-0.40 (0.39)			-1.43** (0.53)
Constant	0.36* (0.19)	0.44*** (0.15)	0.36** (0.16)	0.75*** (0.23)	0.55** (0.21)	0.73*** (0.22)	2.58** (1.20)	0.43 (0.61)	1.56** (0.72)
Observations	41	62	56	41	62	56	23	44	38
R ²	0.18	0.21	0.29	0.33	0.26	0.32	0.39	0.30	0.37
F	4.22	3.73	5.23	9.18	5.05	5.99	6.50	4.23	4.76

OLS results. Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Plotting the marginal effect of the proportionality against different values of the disproportionality of the voting system shows that for small values of disproportionality, the sign of the marginal effect corresponds to what theory predicts (see Figure A1 in the appendix, page 95). Only as the disproportionality increases does the marginal effect change sign. In addition to that, it becomes less significant as one moves to the right. The interpretation is that if disproportionality is too large, the type of the voting system is not a good predictor of institutional emergence anymore. For small levels of disproportionality, however, there seems to be some predictive power, and it shows in the same direction as for advanced countries.

Table 4.4: Estimation results - Legal Origins

	(1)	(2)	(3)	(4)	(5)	(6)
	Investor Protection		Labor market rigidity		Coordination index	
German	-0.34*** (0.07)	-0.34*** (0.07)	0.21* (0.10)	0.20* (0.10)	0.23 (0.14)	0.22 (0.15)
French	-0.22*** (0.04)	-0.22*** (0.04)	0.33*** (0.06)	0.33*** (0.06)	0.46*** (0.13)	0.48*** (0.12)
Scandinavian	-0.22*** (0.07)	-0.22*** (0.07)	0.33*** (0.11)	0.32*** (0.10)	0.31* (0.15)	0.28* (0.15)
log GDP p.c.	0.60*** (0.15)	0.61*** (0.14)	-0.42* (0.23)	-0.36 (0.22)	-1.59 (1.44)	-0.67 (1.05)
Transition		-0.00 (0.05)		0.01 (0.07)		-0.54** (0.20)
German × Transition		0.13 (0.08)		0.12 (0.13)		0.34* (0.19)
Marginal effect of German if Transition = 1		-0.21*** (0.07)		0.32*** (0.10)		0.56*** (0.17)
Constant	0.24* (0.13)	0.24** (0.12)	0.55*** (0.19)	0.50*** (0.18)	1.80 (1.35)	0.94 (0.98)
Observations	47	64	47	64	23	40
R ²	0.55	0.54	0.47	0.46	0.52	0.42
F	12.74	11.33	9.25	7.94	4.85	3.92

OLS results. Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

What can the legal origin of transition countries tell us about their role in shaping institutions? Table 4.4 provides some results. As before, three institutional measures are used, investor protection in columns 1 and 2, labour market institutions in 3 and 4 and finally, Knell and Srholec's coordination index. As before, two models are estimated: a model excluding any transition countries and one including transition countries with interaction terms. Interpretation has to be cautious, because transition countries are confined to being of German or French legal origin only. Hence, the model for a transition country of German legal origin is found by setting both the transition dummy and German dummy equal to one. The German transition countries hence are measured against their French origin transition counterparts and at the same time against all non-German and non-transition countries. Results in Table 4.4 show that the legal origin does matter for overall investor protection.

However, for German transition countries this effect is markedly less pronounced than for non-transition countries: compared to the Common-Law tradition Eastern European countries exhibit less worse investor protection than Western countries. When it comes to labor market institutions (columns 3 and 4) and the overall degree of coordination (columns 5 and 6), the effect of a German heritage is more pronounced in transition countries. As can be seen the interaction term is positive when transition countries are introduced and the joint effect is significant. Hence, a German legal origin transition country shows more rigid labour market institutions and a greater degree of coordination than other German origin countries.

Results for cultural attitudes as explanatory variables are shown in Table 4.5. First, the results correspond what is usually found. The cultural variable has a positive sign on investor protection and is negatively associated with labor market rigidity and coordination. Hence, the cultural attitude towards more egalitarianism is correlated with lower investor protection, higher labor market rigidity and coordination levels. The inclusion of transition countries with interaction terms between a transition dummy and cultural variable leads to the conclusion that for investor protection the cultural attitude is irrelevant. The marginal effect is lower than for non-transition countries, and what is more, it is not significantly different from zero. This changes for labor market rigidity and coordination: here the effect is found to be larger in transition countries than non-transition countries. Needless to mention, the number of observations becomes worryingly low for cultural variables, which warrants cautious interpretation of the results.

In a last step, fuller models including variables from all three possible determinants of the emergence of institutions are estimated. The results can be found in Table 4.6. For each of the dependent variables a model including jointly proportionality and the legal origin with respective interaction terms (models 1, 3 and 5), and a second model with all three independent variables, proportionality, legal origin and culture (remaining models 2, 4 and 6). Focusing on the marginal effects for transition countries it can be observed that the proportionality has a significant effect on labor market rigidity (model 3), which is lost if the cultural variable is introduced (model 4).

Table 4.5: Estimation results - Culture

	(1)	(2)	(3)	(4)	(5)	(6)
	Investor protection		Labor market rigidity		Coordination index	
Culture	0.52*** (0.13)	0.48*** (0.12)	-0.75*** (0.18)	-0.68*** (0.18)	-0.93*** (0.27)	-0.78*** (0.27)
Transition		0.02 (0.06)		0.05 (0.09)		-0.41** (0.15)
Culture × Transition		-0.13 (0.35)		-0.72 (0.52)		-1.32* (0.69)
Marginal effect if Transition=1		0.35 (0.35)		-1.40*** (0.52)		-2.10*** (0.69)
log GDP p.c.	1.35*** (0.31)	1.21*** (0.29)	-1.85*** (0.43)	-1.59*** (0.43)	-4.73*** (1.36)	-2.94** (1.14)
Constant	-0.61** (0.28)	-0.48* (0.26)	2.06*** (0.39)	1.82*** (0.38)	4.93*** (1.26)	3.28*** (1.06)
Observations	33	42	33	42	22	31
R ²	0.42	0.37	0.42	0.36	0.47	0.47
F	10.87	5.38	10.85	5.23	8.27	5.80

OLS results. Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The effect on investor protection in model 1 is positive and significant in model 1, but not significant anymore in model 2. However, the limited predictive power of proportionality in transition countries due to large disproportionality of election results has been documented above (see results in Table 4.3). Next, the German legal origin dummy is significant for transition countries in both models 1 and 2 on investor protection, but does not appear significantly different from zero in all other models. Cultural attitudes retain their significance for the explanation of labor market institutions in transition countries, as can be seen in model 4. It can be noted that the coordination index is not well explained by any of the right-hand side variables except the French origin dummy variable.

Table 4.6: Estimation results - Law, Politics and Culture

	(1)	(2)	(3)	(4)	(5)	(6)
	Investor protection		Labor market rigidity		Coordination index	
Proportionality	-0.05 (0.04)	-0.10* (0.06)	0.16*** (0.06)	0.20** (0.08)	0.22 (0.15)	0.24 (0.15)
Transition	-0.13* (0.07)	-0.21 (0.19)	0.06 (0.08)	-0.00 (0.27)	-0.29 (0.25)	-0.35 (0.41)
Prop. × Trans.	0.25*** (0.08)	0.46 (0.28)	0.10 (0.12)	0.41 (0.40)	-0.26 (0.34)	-0.45 (0.58)
Marginal effect of Prop. if Transition = 1	0.20*** (0.06)	0.36 (0.27)	0.26*** (0.11)	0.60 (0.39)	-0.04 (0.31)	-0.11 (0.56)
German	-0.33*** (0.09)	-0.30*** (0.07)	0.16** (0.07)	0.18* (0.10)	0.16 (0.16)	0.13 (0.16)
French	-0.22*** (0.04)	-0.22*** (0.07)	0.27*** (0.06)	0.36*** (0.10)	0.39** (0.17)	0.38** (0.18)
Scandinavian	-0.18*** (0.05)	-0.12 (0.09)	0.21* (0.12)	0.21 (0.12)	0.13 (0.18)	0.07 (0.20)
German × Trans.	0.03 (0.09)	-0.05 (0.19)	-0.08 (0.12)	-0.28 (0.26)	0.30 (0.30)	0.51 (0.38)
Marginal effect of German if Transition = 1	-0.30*** (0.06)	-0.34* (0.18)	0.08 (0.10)	-0.10 (0.26)	0.46 (0.29)	0.64 (0.39)
Culture		0.10 (0.14)		-0.03 (0.20)		-0.14 (0.36)
Culture × Trans.		-0.10 (0.34)		-0.91* (0.48)		-0.99 (0.73)
Marginal effect of Culture if Transition = 1		0.00 (0.33)		-0.94** (0.47)		-1.13 (0.73)
log GPD p.c	0.49*** (0.16)	0.60* (0.34)	-0.49* (0.26)	-0.37 (0.48)	-0.35 (1.12)	-0.58 (1.57)
Constant	0.37*** (0.13)	0.28 (0.32)	0.57** (0.23)	0.42 (0.46)	0.57 (1.06)	0.80 (1.51)
Observations	56	38	56	38	38	30
R ²	0.61	0.68	0.54	0.70	0.45	0.67
F	9.08***	5.82***	6.99***	6.43***	3.01***	3.81***

OLS results. Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

It cannot be emphasized enough that the cross-sectional results in this section should be taken with a grain of salt. In particular, models using the coordination index as dependent variable

and cultural attitudes as independent variable are plagued by too small numbers of observation. Also, including a number of interaction terms always risks the danger of multicollinearity. That said, these results are illustrative. Before drawing further conclusions, in a next step, panel data of transition countries alone are used for a more in-depth analysis of investor protection.

4.5.7 Panel estimation

Exploiting variations in the data across countries and over time, a panel estimation can further insights about the comparative importance of different determinants. A set of summary statistics are reported in Table A2 in the appendix (page 94). The reform process in general and the construction of the indicator specifically involves path dependencies to a large degree, which warrants the use of dynamic panel models. Furthermore, modern dynamic panel estimations are capable of dealing with endogeneity in explanatory variables. Specifically, an Arellano-Bover/Blundell-Bond system-GMM model will be estimated (Roodman 2009; Wawro 2002).

Due to lacking data on labor market institutions for a sufficient number of countries and years, the panel estimation is confined to the analysis of investor protection. The EBRD transition indicator on securities legislation, which includes investor protection, is used as the dependent variable.

The base model is given by

$$y_{it} = \alpha y_{i,t-1} + \beta X_{i,t} + \nu_i + \varepsilon_{it} \text{ where } i = 1, \dots, N; t = 1, \dots, T \quad (2)$$

In equation (2), y_{it} refers to the investor protection score in country i in year t , $X_{i,t}$ represents the matrix of explanatory variables of the political, legal and cultural spheres of countries, GDP measures and additional control variables. The vectors α and β are to be estimated. The lagged dependent variable $y_{i,t-1}$ is expected to have a significant positive effect on the left-hand side y_{it} , since it attempts to measure how investor protection converges towards market economy institutions. This means that a great deal of path dependency is to be expected.

As can be seen in (2), with the term ν_i the model includes an unobserved country-specific effect, which is constant across time within countries. Since it is constant, it is removed by first-differencing (2). The estimation strategy of system-GMM models involves using “internal” instruments to purge the remaining correlation between the explanatory variables and the error term. These instruments can be dubbed internal, because they are provided by

the panel structure of the data as lagged endogenous and exogenous variables. Both instruments available after first-differencing and instruments from estimated level equations will be used.

The analysis involves both endogenous and exogenous variables on the right-hand side of the estimation equation. Clearly, the legal origin and cultural attitudes are slow-moving institutions, which had been already in place before transition started. Other variables, notably the outcome of political elections, the choice of the electoral system and the choice of privatization methods must be expected to be endogenous. The great advantage of the system-GMM estimation employed here is that it allows to include all exogenous and endogenous variables as explanatory variables while still recognizing their potential endogeneity and using both exogenous and lagged endogenous variables as potential instruments. One-step estimators are used here, because they prove to be more reliant in smaller samples (see Wawro 2002: 35).

Results are given in Table 4.7. Model 1 shows results for a model excluding culture. The legal origin German is assumed to be strictly exogenous, while all other explanatory enter as being endogenous. Adjusted proportionality has the expected negative sign and is shown to be significant. The partisan variables Left, Right, Center are not as expected and furthermore not significant. The coefficient on direct sales as predominant privatization strategy is positive and significant: a privatization according to direct sales goes together with better investor protection, while MEBOs show negative impact. In the remaining columns, the cultural variable is introduced, which unfortunately decreases sample size considerably.

The coefficient on adjusted proportionality retains the sign, but misses the conventional significance levels in model 3. It should be noted that the coefficient on the legal origin is never significantly different from zero, while the coefficient on the cultural indicator does show a significant impact in model 4. Direct sales prove to be significantly positively connected to better investor protection in models 2 and 3, too.

Table 4.7: Results of dynamic panel estimation

	(1)	(2)	(3)	(4)
Lagged Investor protection	0.602*** (0.099)	0.766*** (0.091)	0.802*** (0.089)	0.615*** (0.138)
Adjusted Proportionality	-0.096* (0.056)	-0.139* (0.070)	-0.098 (0.074)	-0.133* (0.072)
German	0.058 (0.039)		-0.056 (0.047)	-0.025 (0.064)
log GDP p.c.	-0.025 (0.327)	0.536** (0.243)	0.666*** (0.251)	0.876*** (0.298)
Left	0.025 (0.022)			0.065* (0.033)
Right	-0.021 (0.025)			0.033 (0.033)
Center	-0.029 (0.071)			
MEBO	-0.017 (0.055)	0.011 (0.035)	-0.000 (0.034)	0.044 (0.056)
Sales	0.066* (0.040)	0.045* (0.027)	0.052** (0.026)	0.061 (0.047)
Culture		0.022 (0.032)	0.016 (0.029)	0.085* (0.049)
Constant	0.283 (0.252)	-0.229 (0.177)	-0.347* (0.193)	-0.495** (0.228)
Observations	111	75	75	66
Countries	15	9	9	8
AR(1)	0.0127	0.0432	0.0024	0.063
AR(2)	0.527	0.739	0.796	0.323
Sargan	0.534	0.983	0.998	0.145
No. of instruments	64	57	58	56

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Note: includes all countries for which the Freedom House index scores a 5 and lower for a moving average of 4 years. All models include year dummy variables. In all models instruments are collapsed into linear combinations. One-step estimations. Variables are between 0 and 1.

Table 4.7 also reports Arellano-Bond tests for autoregression in first differences of first- and second-order. The result does not lead to reject the models, in fact, first order-autoregression is expected in dynamic panel models. In addition, *p*-values of Sargan tests of overidentifying restrictions reported in Table 4.7 do not lead us to reject their validity.

In a related test, the sample will be split. Table 4.8 reports results for a model including only EU member states in columns 1 and 2. It can be seen that the coefficient on adjusted proportionality is negative as expected and retains significance when the German legal dummy is introduced in column 2. Estimating the impact for countries that are not members of the European Union does not produce the same results. Quite on the contrary, the sign on adjusted proportionality switches and becomes insignificant. We see an insignificant coefficient on both German and French legal origin, with no Western legal tradition as the reference category. It should be noted, however, that specifically the results of the model in column 3 should be interpreted cautiously, because the number of countries, 9, is small. A tentative explanation for the lack of significance and change of sign is that countries, which have not become part of the European Union suffer the most from oligarchic structures. It can be expected that oligarchs controlling specific industries such as natural resources have little interest in increasing transparency as a whole and investor protection specifically. In such setting, the proposed coalitions in favor of less investor protection can very well change. A proportional system would have precisely the opposite effect by giving voice to more societal groups opposing the oligarchs' dominant position. Obviously, much better data on the degree of oligarchic structures would be needed to investigate such a conjecture.

Table 4.8: Estimation results - EU member states and non-EU members states

	(1)	(2)	(3)
	EU member states	EU member states	non-EU member states
Lagged Investor protection	0.451** (0.217)	0.423* (0.222)	0.863*** (0.233)
Adjusted Proportionality	-0.519* (0.306)	-0.502* (0.277)	0.187 (0.132)
German		0.053 (0.075)	0.133 (0.136)
log GDP p.c.	2.230 (1.349)	1.995 (1.440)	-0.572 (0.635)
French			0.057 (0.052)
Constant	-1.241 (1.039)	-1.054 (1.139)	0.414 (0.474)
Observations	124	124	73
Countries	10	10	9
AR(1)	0.0462	0.0426	0.139
AR(2)	0.888	0.858	0.460
Sargan	0.527	0.491	0.192
No. of instruments	31	32	32

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Note: Models 1 and 2 include only EU member states, while model 3 includes only those, which are not member of the EU. Both have to fulfil the requirement that the Freedom House score is 5 or lower for a moving average of 4 years. All models include year dummy variables. In all models instruments are collapsed into linear combinations. One-step estimations. Variables are between 0 and 1.

4.6 Conclusion

Cautious interpretation of the evidence presented in this paper leads us to conclude that the proportionality of an electoral system has an impact on chosen institutions in the areas of corporate governance and labor market institutions. When corrected for unusually high disproportionality of election results in Central and Eastern Europe, which stems mostly from typical features of emerging democracies such as a large number of small parties, it could be shown that the more seats are allotted according to proportional representation, the lower is

the observed investor protection and the higher are labor market rigidities. It can be stated that a more proportional electoral system has produced more corporatist countries in Central and Eastern Europe.

While the legal origin in Central and Eastern European countries does show some impact, it loses the explanatory power when a more detailed dynamic panel model is estimated. Cultural differences most likely have an impact, too, but a larger sample of countries in Central and Eastern Europe, for which comparable data on cultural issues exist, would be desirable. It should be kept in mind, however, that other than most empirical papers using legal origin as explanatory variable, in this paper there are no Common Law countries. Hence, the commonly evoked divide between Common Law and Civil Law cannot be addressed here. However, it is interesting to note that using the latest investor protection data on the whole German legal origin countries do somewhat worse than their French counterparts, which goes against the standard result in the Legal origin literature. Looking at Central and Eastern European countries the picture changes again: here, German origin countries seem to score better on those indicators.

Cultural attitudes as measured in this paper have an influence on the choice of institutions, but the inferences are weakest due to lack of data for a larger group of countries. A larger sample of countries for which quantified measure of attitudes towards economic institutions and outcomes are available would clearly strengthen the entire analysis, because it would make the instruments more reliable.

Apart from political, cultural or legal issues, the concrete policy choice of privatization method appears to have an influence on the degree of investor protection. While further theoretical and empirical research is needed, this suggests that there is a form of complementarity between privatization methods and investor protection. The inference is hard to pin down, but certainly it could be the case that a business-friendly government simultaneously chooses both direct sales as a privatization method and high investor protection.

What are lessons learnt for the discussion of competing explanations of institutional differences? Most certainly, the analysis has bolstered the case of political economists, who argue for political root causes of institutional emergence and change. While the Legal Origin-view has always stood on theoretically thin grounds, the encompassing empirical results have been their strength. Whether the effect is a direct one from legal traditions to the type of economic institutions is put into question by the analysis in this paper.

Appendix

Table A1: Cultural Index

Country	Value	Country	Value
Italy	-1.32	New Zealand	.06687
Norway	-1.1515	Ireland	.1161
Austria	-.9191	Mexico	.2992
Finland	-.8174	Hungary	.308
Germany	-.8146	Australia	.3517
Spain	-.7867	Slovak Republic	.38178
France	-.7643	Bulgaria	.4602
Sweden	-.7585	United Kingdom	.57676
Portugal	-.6735	Venezuela	.6475
Denmark	-.6408	United States	.7356
Slovenia	-.6183	Russia	.8365
Switzerland	-.4782	Japan	.8989
Greece	-.4199	Poland	.9176
Argentina	-.3179	Georgia	.9316
Canada	-.2254	Philippines	1.0885
Netherlands	-.1957	Turkey	1.1397
Estonia	-.1816	Singapore	1.2503
Chile	-.1648	Israel	1.291
Czech Republic	-.0675	Brazil	1.2978
		Indonesia	1.623
		Hong Kong	1.644
		India	2.089

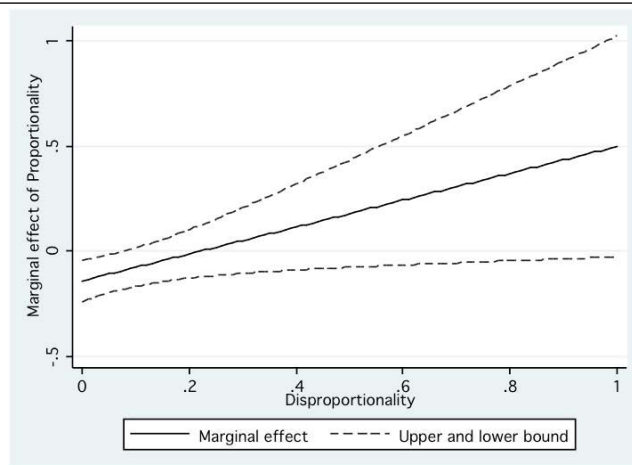
Note: Index derived from a principal component analysis of four cultural values according to Licht et al. (2005, 2007). See explanation in text.

Table A2: Summary statistics of panel dataset

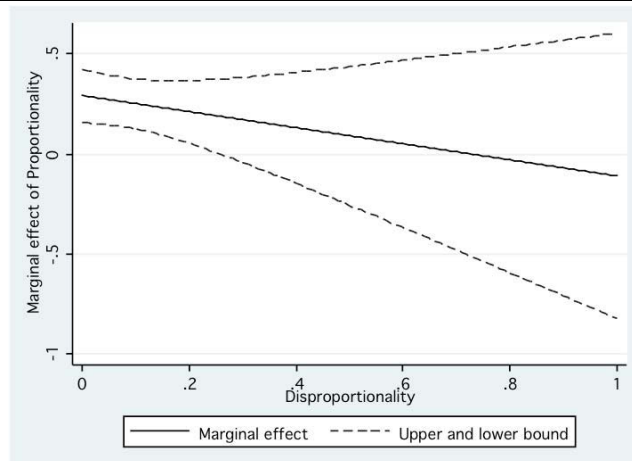
Variable		Mean	Std. Dev.	Min	Max	Observations
Proportionality (adjusted)	overall	1.855852	.858151	0	2.889522	N = 197
	between		.8489603	0	2.800338	n = 19
	within		.1489752	.9798972	2.339313	T = 10.3684
MEBO	overall	.345283	.4384661	0	1	N = 212
	between		.4235953	0	1	n = 21
	within		.1607669	-.1975741	.9816467	T = 10.0952
Mass priv.	overall	.3509434	.4339274	0	1	N = 212
	between		.3873154	0	1	n = 21
	within		.1990365	-.3763293	.922372	T = 10.0952
Sales	overall	.2339623	.3985487	0	1	N = 212
	between		.3491013	0	1	n = 21
	within		.1905117	-.4024014	.961235	T = 10.0952
Left	overall	.3448529	.4059193	0	1	N = 272
	between		.3512313	0	1	n = 23
	within		.244368	-.2926471	1.073424	T-bar = 11.8261
Right	overall	.2036765	.3368857	0	1	N = 272
	between		.2859071	0	1	n = 23
	within		.21903	-.3347851	.8959842	T-bar = 11.8261
Center	overall	.1007353	.2611347	0	1	N = 272
	between		.2247089	0	.8333333	n = 23
	within		.1355714	-.532598	.7468891	T-bar = 11.8261
log GDP p.c.	overall	7.826282	1.08671	4.967031	10.20981	N = 302
	between		.9792533	5.741639	9.329758	n = 23
	within		.531822	6.278096	9.296004	T = 13.1304

Figure A1

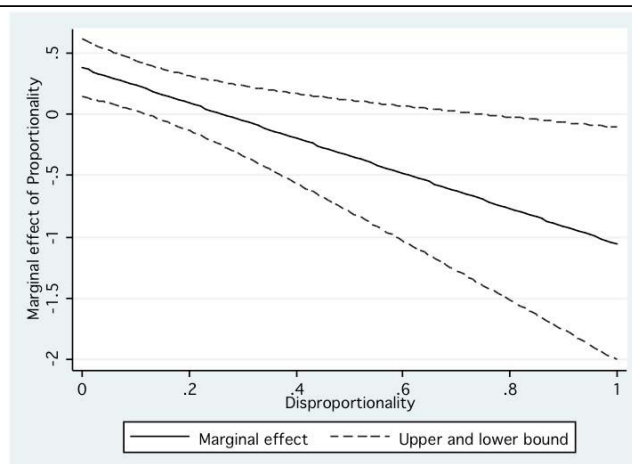
Marginal effect of proportionality on investor protection for different values of disproportionality



Marginal effect of proportionality on labour market institutions for different values of disproportionality



Marginal effect of proportionality on coordination index for different values of disproportionality



5. Conclusion

This thesis investigated structural effects of institutional diversity and, in more detail, the emergence of institutions in Central and Eastern European transition countries. Concerning the former, it presented evidence that companies are guided by institutional differences in their investment decisions abroad. Employing sectoral outward FDI data by German companies and a number of different measures of possible comparative institutional advantage, German firms tend to invest more in a sector with a comparative institutional advantage depending on the size of the sector. This suggests that the institutional advantage is only present in sufficiently large sectors, which can be seen as a proxy for a general capacity of a sector in terms of skills or networks. Naturally, there are a number of ways in which the analysis could be developed further. First of all, a sample of sectoral FDI on a bilateral country-to-country basis would clearly bolster the case in favor of an institutional argument of FDI. The sectoral breakdown would have to be as precise as with the Bundesbank data used in this thesis. Second, more detailed information on the activity of affiliates in host countries would allow us to estimate more precise models, which could disentangle horizontal and vertical FDI. Third, extended analysis of panel data on FDI could attempt to trace changes in advantages of nations over time.

Possible shortcomings of the data aside, the possibility of an international institutional arbitrage between nations reasons against premature claims of institutional convergence across countries. The literature on comparative economic systems puts forward the claim that different ways to organize business result in different economic structures; it can also be shown that different systems can reach high income levels by making use of comparative strengths. One could argue that due to lower barriers to trade and movement of input factors, what is commonly known as “globalization”, institutional systems must become alike, because companies are easier able to vote with their feet. But, assuming that there are comparative institutional advantages on the basis not of quality but the type of institutions, business voting with their feet just reinforce the differences by moving production to those locations, which offer the “right” institutional mix for a given activity. The evidence found in the first paper of the thesis corroborates just that.

The country study of Estonia and Slovenia has shown that there is diversity across Central and Eastern European transition countries. Although both have successfully negotiated and reformed their way into European Union, the institutional set-up has proven to be almost diametrically opposed. Tying in with the evidence of the first paper opening up trade and

factor markets has not made Eastern European countries all equal.

Thirdly, the thesis took a stab at analyzing the broader experience in Central and Eastern European countries. Specifically, the goal was to learn from those countries about the relative importance of existing theories of the determinants of institutions. While this is always a challenging task due to endogeneity issues and general data problems in cross-country comparisons, some conclusions can safely be drawn. Apparently, political determinants of electoral systems matter for the emergence of institutions in transition countries, but partisan variables do not seem to matter so much. The last observation somewhat resonates with political science literature, which observes an ideological spectrum along other dimensions than the traditional left-right in Central and Eastern Europe. The observed high disproportionality deserves further investigation. As democracies mature with party systems stabilizing further institutional changes can be expected as the “right” constituencies will be better represented. Special attention should be paid to the future development of countries in Central Asia; they stand out in that they exhibit the purest majoritarian systems in the region, but have been mostly excluded from this analysis due to a lack of political freedom and civic societies. The issue of oligarchic structures in some countries, which could lead to a reverse prediction with respect to the effect of a proportionality on investor protection would also require a more detailed look. Specifically, its development over time with some countries solving the problem earlier than others and across countries with different degrees of state capture could offer new insights.

Cultural influences of institutions warrant further analysis. There are at least two alternatives for future research. The Schwartz (1994) data, which offer a well-grounded set of indices of cultural values can be expanded to include more countries. This would mean a comparable set of indices. Alternatively, a workable and founded alternative indicator available for a large number of countries could be developed further. The World Value Survey and possibly the Eurobarometer surveys come to mind.

The overall finding that the legal origin of countries in Central and Eastern Europe is of less importance highlights the need for a more meaningful and useful distinction of legal systems, lest it becomes a mere historical description of the emergence of French and English Law only. Since authors in the Legal Origin tradition emphasize the long-lasting influence of legal tradition on institutions today, there is little reason to believe it should not play a role in Central and Eastern European countries. In fact, recent publications code the transition countries according to their pre-war heritage. There are a number of attempts to find criteria of a classifications of legal systems, which are grounded in the concept of institutional complementarities. Pistor (2005) and Milhaupt and Pistor (2008) make a step into this direction by pointing out possible feedback effects between substantive and procedural rules

on both company strategy and other economic institutions. Such a view could offer a rich insight into the interplay between institutions of the legal system and rules governing the economy. The experience of Central and Eastern Europe could offer a real-life experiment for this, too.

References

- Acemoglu, D. & Johnson, S. (2005) Unbundling Institutions. *Journal of Political Economy*, **113**, 949-995.
- Acemoglu, D., Johnson, S. & Robinson, J.A. (2001) The Colonial Origins of Comparative Development. *American Economic Review*, **91**, 1369-1401.
- Allen, M. (2006) *The Varieties of Capitalism Paradigm: Explaining Germany's Comparative Advantage?* Palgrave Macmillan, Houndmills.
- Allen, M., Funk, L. & Tüselmann, H. (2006) Can Variation in Public Policies Account for Differences in Comparative Advantage? *Journal of Public Policy*, **26**, 1-19.
- Amable, B. (2000) Institutional complementarity and diversity of social systems of production and innovation. *Review of International Political Economy*, **7**, 645-687.
- Amable, B. (2003) *The Diversity of Modern Capitalism*. Oxford University Press, Oxford.
- Aoki, M. (1994) The Contingent Governance of Teams: Analysis of Institutional Complementarity. *International Economic Review*, **35**, 657-676.
- Aoki, M. (2001) *Toward a Comparative Institutional Analysis*. The MIT Press, Cambridge, Massachusetts.
- Aron, J. (2000) Growth and Institutions: A Review of the Evidence. *The World Bank Research Observer*, **15**, 99-135.
- Arrow, K.J. (1979) The Property Rights Doctrine and Demand Revelation under Incomplete Information. In *Economic and Human Welfare*, (Ed, Boskin, M.) Academic Press, New York, pp. 23-39.
- Arrow, K.J. & Debreu, G. (1954) Existence of an Equilibrium for a Competitive Economy. *Econometrica*, **22**, 265-290.
- Aslund, A. (2007) *How Capitalism Was Built: The Transformation of Central and Eastern Europe, Russia, and Central Asia*. Cambridge University Press, Cambridge.
- Austen-Smith, D. (2000) Redistributing Income under Proportional Representation. *Journal of Political Economy*, **108**, 1235-1269.
- Baldwin, R.E. (1989) Exporting the capital markets: comparative advantage and capital market imperfections. In *The Convergence of International and Domestic Markets*, (Eds, Audretsch, D., Sleuwaegen, L. & Yamawaki, H.) North-Holland, Amsterdam, pp. 135-152.
- Barba Navaretti, G. & Venables, A.J. (2004) *Multinational Firms in the World Economy*. Princeton University Press, Princeton.
- Bardhan, P.K. & Kletzer, K. (1987) Credit markets and patterns of international trade. *Journal of Development Economics*, **27**, 57-70.
- Barro, R.J. (1991) Economic Growth in a Cross Section of Countries. *The Quarterly Journal of Economics*, **106**, 407-443.

- Beck, T., Clarke, G., Groff, A., Keefer, P. & Walsh, P. (2001) New Tools in Comparative Political Economy: The Database of Political Institutions. *The World Bank Economic Review*, **15**, 165-176.
- Beck, T., Demirgüç-Kunt, A. & Levine, R. (2003) Law and finance: why does legal origin matter? *Journal of Comparative Economics*, **31**, 653-675.
- Beck, T. & Levine, R. (2005) Legal Institutions and Financial Development. In *Handbook of New Institutional Economics*, (Eds, Ménard, C. & Shirley, M.M.) Springer, Dordrecht, pp. 251-278.
- Bellocc, M. (2006) Institutions and International Trade: A Reconsideration of Comparative Advantage. *Journal of Economic Surveys*, **20**, 3-26.
- Bénassy-Quéré, A., Coupet, M. & Mayer, T. (2007) Institutional Determinants of Foreign Direct Investment. *World Economy*, **30**, 764-782.
- Berglöf, E. & Pajuste, A. (2003) Emerging Owners, Eclipsing Markets? Corporate Governance in Central and Eastern Europe. In *Corporate Governance and Capital Flows in a Global Economy*, (Eds, Cornelius, P.K. & Kogut, B.) Oxford University Press, Oxford,
- Berkowitz, D., Pistor, K. & Richard, J.-F. (2003) Economic development, legality, and the transplant effect. *European Economic Review*, **47**(1), 165-195.
- Bettendorf, L. & Dijkgraaf, E. (2010) Religion and income: Heterogeneity between countries. *Journal of Economic Behavior and Organization*, **74**, 12-29.
- Beyer, J. (2006) Verfestigte institutionelle Vielfalt? Die komparativen Vorteile koordinierter Ökonomien und die Internationalisierung von Unternehmen. *Forschungsbericht aus dem MPIfG*, **2**,
- Blair, M.M. (1999) Firm-Specific Human Capital and Theories of the Firm. In *Employees and Corporate Governance*, (Eds, Blair, M.M. & Roe, M.) Brookings Institution Press, Washington D.C, pp. 58-90.
- Blaug, M. (1997) Ugly Currents in Modern Economics. *Policy Options*, **18**, 3-8.
- Boeri, T. & Terrell, K. (2002) Institutional Determinants of Labor Reallocation in Transition. *Journal of Economic Perspectives*, **16**, 51-76.
- Bohinc, R. & Bainbridge, S.M. (2001) Corporate Governance in Post-Privatized Slovenia. *The American Journal of Comparative Law*, **49**, 49-77.
- Botero, J.C., Djankov, S., La Porta, R., Lopez-de-Silanes, F. & Shleifer, A. (2004) The Regulation of Labor. *The Quarterly Journal of Economics*, **119**, 1339-1382.
- Bowles, S. (2004) *Microeconomics: Behavior, Institutions, and Evolution*. Oxford University Press, New Delhi.
- Brunetti, A., Kisunko, G. & Weder, B. (1998) How Firms in 72 Countries Rate Their Institutional Environment. A Survey-Based Dataset Measuring Political Institutions. *WWZ Discussion Paper*, **9811**, Basel.
- Buchanan, J.M. & Tullock, G. (1962) *The Calculus of Consent: Logical Foundations of Constitutional Democracy*. University of Michigan Press, Ann Arbor.

- Buck, T. (2003) Modern Russian corporate governance: convergent forces or product of Russia's history. *Journal of World Business*, **38**, 299-313.
- Carlin, W. & Mayer, C. (2003) Finance, investment, and growth. *Journal of Financial Economics*, **69**, 191-226.
- Carter, R. & Hodgson, G.M. (2006) The impact of empirical tests of transaction cost economics on the debate on the nature of the firm. *Strategic Management Journal*, **27**, 461-476.
- Chandler, A.D. (1990) *Scale and Scope: The Dynamics of Industrial Capitalism*. Harvard University Press, Cambridge, Mass.
- Coase, R.H. (1937) The nature of the firm. *Economica*, **4**, 386-405.
- Coase, R.H. (1960) The Problem of Social Cost. *The Journal of Law and Economics*, **3**, 1-44.
- Coase, R.H. (2005) The Institutional Structure of Production. In *Handbook of New Institutional Economics*, (Eds, Mènard, C. & Shirley, M.M.) Springer, Dordrecht, pp. 31-39.
- Costinot, A. (2009) On the Origins of Comparative Advantage. *Journal of International Economics*, **77**, 255-264.
- Crouch, C., Streeck, W., Boyer, R., Amable, B., Hall, P.A. & Jackson, G. (2005) Dialogue on 'Institutional complementarity and political economy'. *Socio-Economic Review*, **3**, 359-381.
- Czaban, L., Hocevar, M., Jaklic, M. & Whitley, R. (2003) Path Dependence and Contractual Relations in Emergent Capitalism: Contrasting State Socialist Legacies and Inter-firm Cooperation in Hungary and Slovenia. *Organization Studies*, **24**, 7-28.
- Damijan, J.P., Gregoric, A. & Prasnikar, J. (2004) Ownership Concentration and Firm Performance in Slovenia. *LICOS Discussion Paper*, **142**, Leuven.
- David, R.J. & Han, S.-K. (2004) A Systematic Assessment of the Empirical Support for Transaction Cost Economics. *Strategic Management Journal*, **25**, 39-58.
- de Melo, M., Denizer, C., Gelb, A. & Tenev, S. (2001) Circumstance and Choice: The Role of Initial Conditions and Policies in Transition Economies. *The World Bank Economic Review*, **15**, 1-31.
- Demsetz, H. (1968) The cost of transacting. *The Quarterly Journal of Economics*, **82**, 33-53.
- Di Tommaso, M.L., Raiser, M. & Weeks, M. (2007) Home Grown or Imported? Initial Conditions, External Anchors and the Determinants of Institutional Reform in the Transition Economies. *The Economic Journal*, **117**, 858-881.
- Djankov, S., Glaeser, E., La Porta, R., Lopez-de-Silanes, F. & Shleifer, A. (2003) The new comparative economics. *Journal of Comparative Economics*, **31**, 595-619.
- Djankov, S., La Porta, R., Lopez-de-Silanes, F. & Shleifer, A. (2002) The Regulation of Entry. *The Quarterly Journal of Economics*, **117**, 1-37.
- Djankov, S., La Porta, R., Lopez-de-Silanes, F. & Shleifer, A. (2003) Courts. *The Quarterly Journal of Economics*, **118**, 453-517.

- Djankov, S., La Porta, R., Lopez-de-Silanes, F. & Shleifer, A. (2008) The Law and Economics of Self-Dealing. *Journal of Financial Economics*, **88**, 430-465.
- Djankov, S., McLiesh, C. & Shleifer, A. (2007) Private credit in 129 countries. *Journal of Financial Economics*, **84**, 299-329.
- Djankov, S. & Murrell, P. (2002) Enterprise Restructuring in Transition: A Quantitative Survey. *Journal of Economic Literature*, **40**, 739-792.
- Du, J., Lu, Y. & Tao, Z. (2008) Economic institutions and FDI location choice: Evidence from US multinationals in China. *Journal of Comparative Economics*, **36**, 412-429.
- Eaton, J. & Tamura, A. (1994) Bilateralism and Regionalism in Japan and U.S. Trade and Direct Foreign Investment Patterns. *Journal of the Japanese and International Economies*, **8**, 478-510.
- EBRD. (2006) *Transition Report 2006*. European Bank for Reconstruction and Development, London.
- Ericson, R.E. (1991) The Classical Soviet-Type Economy: Nature of the System and Implications for Reform. *Journal of Economic Perspectives*, **5**, 11-27.
- Estevez-Abe, M., Iversen, T. & Soskice, D. (2001) Social Protection and the Formation of Skills: A Reinterpretation of the Welfare State. In *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, (Eds, Hall, P.A. & Soskice, D.) Oxford University Press, Oxford, pp. 145-183.
- Farrell, J. (1987) Information and the Coase theorem. *Journal of Economic Perspectives*, **1**, 112-129.
- Feldmann, M. (2006) Emerging Varieties of Capitalism in Transition Countries: The Case of Wage Bargaining in Estonia and Slovenia. *Comparative Political Studies*, **39**, 829-854.
- Franzese, R.J. & Mosher, J.M. (2002) Comparative Institutional and Policy Advantage: The Scope for Divergence within European Economic Integration. *European Union Politics*, **3**, 177-203.
- Freedom House. (2009) *Freedom in the World 2009: The Annual Survey of Political Rights and Civil Liberties*. Rowman & Littlefield, Lanham.
- Freudenberg, M. & Lemoine, F. (1999) Central and Eastern European Countries in the International Division of Labour in Europe. *CEPII Discussion Paper*, **99-05**, Paris.
- Furubotn, E.G. & Richter, R. (2005) *Institutions & Economic Theory: The Contribution of the New Institutional Economics*. University of Michigan Press, Ann Arbor.
- Gallagher, M. (1991) Proportionality, Disproportionality and Electoral Systems. *Electoral Studies*, **10**, 33-51.
- Garibaldi, P., Mora, N., Sahay, R. & Zettelmeyer, J. (2002) What Moves Capital to Transition Economies? *IMF Working Paper*, **02/64**,
- Gerndorf, K., Elenurm, T. & Terk, E. (1999) Corporate Governance in Estonia. *OECD Seminar Papers*, Vilnius.

- Gerzina, S., Vranjes, P. & Cek, M. (2000) Modernisation of Vocational Education and Training in Slovenia 1999.
- Ghemawat, P. (2003) The Forgotten Strategy. *Harvard Business Review*, **81**, 76-84.
- Gibbons, R. (2005) Four (formalizable) theories of the firm? *Journal of Economic Behavior and Organization*, **58**, 200-245.
- Glaeser, E. & Shleifer, A. (2002) Legal Origins. *The Quarterly Journal of Economics*, **117**, 1193-1229.
- Glaeser, E. & Shleifer, A. (2003) The Rise of the Regulatory State. *Journal of Economic Literature*, **41**, 401-425.
- Goodin, R.E. (2003) Choose your Capitalism? *Comparative European Politics*, **1**, 203-213.
- Götting, U. (1998) *Transformation der Wohlfahrtsstaaten in Mittel- und Osteuropa – eine Zwischenbilanz*. Leske + Budrich, Opladen.
- Gouret, F. (2007) Privatization and output behavior during the transition: Methods matter!. *Journal of Comparative Economics*, **35**, 3-34.
- Gourevitch, P.A. & Shinn, J. (2005) *Political Power & Corporate Control: The new global politics of corporate governance*. Princeton University Press, Princeton.
- Gregoric, A. (2003) *Corporate Governance in Slovenia: An International Perspective*. Ph.D. thesis, University of Ljubljana.
- Greif, A. (2006) *Institutions and the Path to the Modern Economy: Lessons from Medieval Trade*. Cambridge University Press, Cambridge.
- Grosfeld, I. & Hashi, I. (2007) Changes in Ownership Concentration in Mass Privatised Firms: evidence from Poland and the Czech Republic. *Corporate Governance: An International Perspective*, **15**, 520-534.
- Guiso, L., Sapienza, P. & Zingales, L. (2006) Does Culture Affect Economic Outcomes? *Journal of Economic Perspectives*, **20**, 23-48.
- Guiso, L., Sapienza, P. & Zingales, L. (2009) Cultural Biases in Economic Exchange? *The Quarterly Journal of Economics*, **124**, 1095-1131.
- Habib, M. & Zurawicki, L. (2002) Corruption and Foreign Direct Investment. *Journal of International Business Studies*, **33**, 291-307.
- Hall, P.A. (1999) The Political Economy of Europe in an Era of Interdependence. In *Continuity and Change in Contemporary Capitalism*, (Eds, Kitschelt, H., Lange, P., Marks, G. & Stephens, J.D.) pp. 135-163.
- Hall, P.A. & Gingerich, D.W. (2004) Varieties of Capitalism and Institutional Complementarities in the Macroeconomy: An Empirical Analysis. *MPIfG Discussion Paper*, **04/5**,
- Hall, P.A. & Soskice, D. (2001) An Introduction to Varieties of Capitalism. In *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, (Eds, Hall, P.A. & Soskice, D.) Oxford University Press, Oxford, pp. 1-68.

Hall, P.A. & Soskice, D. (2003) Varieties of Capitalism and Institutional Change: A Response to Three Critics. *Comparative European Politics*, **1**, 241-250.

Hall, R.E. & Jones, C.I. (1999) Why do some countries produce so much more output per worker than others? *The Quarterly Journal of Economics*, **114**, 83-116.

Hancké, B., Rhodes, M. & Thatcher, M. (2007) Introduction: Beyond Varieties of Capitalism. In *Beyond Varieties of Capitalism: Conflict, Contradiction, and Complementarities in the European Economy*, (Eds, Hancké, B., Rhodes, M. & Thatcher, M.) Oxford University Press, Oxford, pp. 3-38.

Hart, O. (1995) *Firms, Contracts, and Financial Structure*. Clarendon Press, Oxford.

Hart, O. & Moore, J. (1990) Property Rights and the Nature of the Firm. *Journal of Political Economy*, **98**, 1119-1158.

Havrylyshyn, O. (2006) *Divergent Paths in Post-communist Transformation: Capitalism for All or Capitalism for the Few?* Palgrave, Houndmills.

Hayek, F. (1945) The Use of Knowledge in Society. *American Economic Review*, **35**, 519-530.

Högselius, P. (2005) *The Dynamics of Innovation in Eastern Europe: Lessons from Estonia*. Edward Elgar, Cheltenham.

Hollingsworth, J.R. & Streeck, W. (1994) Countries and Sectors: Concluding Remarks on Performance, Convergence, and Competitiveness. In *Governing Capitalist Economies: Performance and Control of Economic Sectors*, (Eds, Hollingsworth, J.R., Schmitter, P.C. & Streeck, W.) Oxford University Press, Oxford, pp. 270-300.

Höpner, M. (2005) What connects industrial relations and corporate governance? Explaining institutional complementarity. *Socio-Economic Review*, **3**, 331-357.

Hoskisson, R.E., Yiu, D. & Kim, H. (2004) Corporate governance systems: Effects of capital and labor market congruency on corporate innovation and global competitiveness. *Journal of High Technology Management Research*, **15**, 293-315.

Iversen, T. & Soskice, D. (2006) Electoral Systems and the Politics of Coalitions: Why Some Democracies Redistribute More Than Others. *American Political Science Review*, **2006**, 165-181.

Jones, D.C. & Mygind, N. (2005) Corporate Governance Cycles during transition: theory and evidence from the Baltics. In *The Life Cycle of Corporate Governance*, (Eds, Filatotchev, I. & Wright, M.) Edward Elgar, Cheltenham, pp. 253-286.

Kalmi, P. (2003) The Rise and Fall of Employee Ownership in Estonia. 1987-2001. *Europe-Asia Studies*, **55**, 1213-1239.

Kenworthy, L. (2003) Quantitative Indicators of Corporatism. *International Journal of Sociology*, **33**, 10-44.

Kinoshita, Y. & Campos, N.F. (2003) Why does FDI go where it goes? New Evidence from the transition economies. *William Davidson Institute Working Paper*, **573**,

- Knack, S. & Keefer, P. (1995) Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Measures. *Economics and Politics*, **7**, 207-227.
- Knell, M. & Srholec, M. (2007) Diverging Pathways in Central and Eastern Europe. In *Varieties of Capitalism in Post-Communist Countries*, (Eds, Lane, D. & Myant, M.) Palgrave Macmillan, Houndmills, New York, pp. 40-62.
- Knight, F. (1922) *Risk, Uncertainty, and Profit*. Harper, New York.
- Kornai, J. (1992) *The socialist system: the political economy of communism*. Oxford University Press, Oxford.
- Kreps, D.M. (1990) *A Course in Microeconomics Theory*. Harvester Wheatsheaf, New York.
- La Porta, R., López-de-Silanes, F., Pop-Eleches, C. & Shleifer, A. (2004) Judicial Checks and Balances. *Journal of Political Economy*, **112**, 445-470.
- La Porta, R., Lopez-de-Silanes, F. & Shleifer, A. (1999) Corporate Ownership around the World. *The Journal of Finance*, **54**, 471-517.
- La Porta, R., Lopez-de-Silanes, F. & Shleifer, A. (2002) Government Ownership of Banks. *The Journal of Finance*, **57**, 265-301.
- La Porta, R., Lopez-de-Silanes, F. & Shleifer, A. (2008) The Economic Consequences of Legal Origins. *Journal of Economic Literature*, **46**, 285-332.
- La Porta, R., López-de-Silanes, F., Shleifer, A. & Vishny, R.W. (1997) Legal Determinants of External Finance. *The Journal of Finance*, **52**, 1131-1150.
- La Porta, R., López-de-Silanes, F., Shleifer, A. & Vishny, R.W. (1998) Law and Finance. *Journal of Political Economy*, **106**, 1113-1155.
- La Porta, R., López-de-Silanes, F., Shleifer, A. & Vishny, R.W. (1999) The Quality of Government. *Journal of Law, Economics and Organization*, **15**, 222-279.
- Ladó, M. (2002) Industrial Relations in the Candidate Countries. *European Industrial Relations Observatory*, <www.eiro.eurofound.ie>.
- Lafay, G. (1992) The measurement of revealed comparative advantages. In *International Trade Modelling*, (Eds, Dagenais, M.G. & Muet, P.A.) pp. 209-234.
- Lange, O. (1936) On The Economic Theory of Socialism. *The Review of Economic Studies*, **1/2**, 53-71/123-142.
- Lazonick, W. (1991) *Business Organization and the myth of the market economy*. Cambridge University Press, Cambridge.
- Leetma, R. (2003) *Discussions about the unemployment insurance system*. Praxis, Tallinn.
- Lerner, A. (1934) The Concept of Monopoly and the Measurement of Monopoly Power. *Review of Economic Studies*, **1**, 157-175.
- Levchenko, A. (2007) Institutional Quality and International Trade. *Review of Economic Studies*, **74**, 791-819.

- Licht, A.N., Goldschmidt, C. & Schwartz, S.H. (2005) Culture, Law, and Corporate Governance. *International Review of Law and Economics*, **25**, 229-255.
- Licht, A.N., Goldschmidt, C. & Schwartz, S.H. (2007) Culture rules: The foundations of the rule of law and other norms of governance. *Journal of Comparative Economics*, **35**, 659-688.
- Lijphart, A. (1984) *Democracies: Patterns of Majoritarian and Consensus Government in Twenty-One Countries*. Yale University Press, New Haven.
- Lijphart, A. (1999) *Patterns of Democracy: Government Forms and Performance in Thirty-Six Countries*. Yale University Press, New Haven.
- Lipponer, A. (2003) A 'new' Micro Database for German FDI. In *Foreign Direct Investment in the Real and Financial Sector of Industrial Countries*, (Eds, Herrmann, H. & Lipsey, R.E.) Springer, Berlin, pp. 215-244.
- Luksic, I. (2003) Corporatism packaged in pluralist ideology: the case of Slovenia. *Communist and Post-Communist Studies*, **36**, 509-525.
- Markusen, J.R. & Maskus, K.E. (2002) Discriminating Among Alternative Theories of the Multinational Enterprise. *Review of International Economics*, **10**, 694-707.
- Mauro, P. (1995) Corruption and Growth. *The Quarterly Journal of Economics*, **110**, 681-712.
- Mayer, T. & Zignagno, S. (2006) *Notes on CEPII's distance measures*. Centre D'Etudes Prospectives et d'Informations Internationales, Paris.
- McCleary, R.M. & Barro, R.J. (2006) Religion and Economy. *Journal of Economic Perspectives*, **20**, 49-72.
- Mencinger, J. (2004) Transition to a National and Market Economy: A Gradualist Approach. In *Slovenia: From Yugoslavia to the European Union*, (Eds, Mrak, M., Rojec, M. & Silva-Juregui, C.) World Bank, Washington D.C,
- Merryman, J.H. (1996) The French Deviation. *The American Journal of Comparative Law*, **44**, 109-119.
- Molina, Ó. & Rhodes, M. (2007) The Political Economy of Adjustment in Mixed Market Economies: A Study of Spain and Italy. In *Beyond Varieties of Capitalism: Conflict, Contradiction, and Complementarities in the European Economy*, (Eds, Hancké, B., Rhodes, M. & Thatcher, M.) Oxford University Press, Oxford, pp. 223-252.
- Mulligan, C.B. & Shleifer, A. (2005) Conscriptation as Regulation. *American Law and Economics Review*, **7**, 85-111.
- Mygind, N. (1997) A Comparative Analysis of the Economic Transition in the Baltic Countries - Barriers, Strategies, Perspectives. In *The Transition to a Market Economy: Transformation and Reform in the Baltic States*, (Ed, Haavisto, T.) Edward Elgar, Cheltenham, pp. 17-65.
- Mykhenko, V. (2007) Strengths and Weaknesses of 'Weak' Coordination: Economic Institutions, Revealed Comparative Advantages, and Socio-Economic Performance of Mixed Market Economies in Poland and Ukraine. In *Beyond Varieties of Capitalism: Conflict, Contradiction, and Complementarities in the European Economy*, (Eds, Hancké, B., Rhodes,

M. & Thatcher, M.) Oxford University Press, Oxford, pp. 351-378.

North, D.C. (1990) *Institutions, Institutional Change and Economic Performance*. Cambridge University Press, Cambridge.

Nunn, N. (2007) Relationship-Specificity, Incomplete Contracts, and the Pattern of Trade. *The Quarterly Journal of Economics*, **122**, 569-600.

Nuti, D.M. (1997) Employeeism: corporate governance and employee share ownership in transition economies. In *Macroeconomic Stabilization in Transition Economies*, (Eds, Bléjer, M. & Skreb, M.) Cambridge University Press, Cambridge, pp. 126-154.

OECD. (1999) *Employment Outlook 1999*. OECD, Paris.

OECD. (2001) *Reviews for National Policies for Education: Estonia*. OECD, Paris.

Oxley, J.E. (1999) Institutional environment and the mechanisms of governance: the impact of intellectual property protection on the structure of inter-firm alliances. *Journal of Economic Behavior and Organization*, **38**, 283-309.

Pagano, U. & Volpin, P.F. (2005) The Political Economy of Corporate Governance. *American Economic Review*, **95**, 1005-1030.

Pahor, M., Prasnikar, J. & Ferligoj, A. (2004) Building a Corporate Network in a Transition Economy: The Case of Slovenia. *Post-Communist Economies*, **16**, 307-331.

Panulescu, M. & Schneider, M. (2004) Wettbewerbsfähigkeit und Dynamik institutioneller Standortbedingungen: Ein empirischer Test des „Varieties-of-Capitalism“-Ansatzes. *Schmollers Jahrbuch*, **124**, 31-59.

Perotti, E.C. & von Thadden, E.-L. (2006) The Political Economy of Corporate Control and Labor Rents. *Journal of Political Economy*, **114**, 145-174.

Persson, T., Roland, G. & Tabellini, G. (2000) Comparative Politics and Public Finance. *Journal of Political Economy*, **108**, 1121-1161.

Persson, T. & Tabellini, G. (2000) *Political Economics: Explaining Economic Policy*. MIT Press, Cambridge, Mass.

Persson, T. & Tabellini, G. (2004) Constitutions and Economic Policy. *Journal of Economic Perspectives*, **18**, 75-98.

Philips, K. & Eamets, R. (2003a) Collective Bargaining Examined. *European Industrial Relations Observatory*, <www.eiro.eurofound.ie>.

Philips, K. & Eamets, R. (2003b) Social partners discuss new Employment Contracts Act. *European Industrial Relations Observatory*, <www.eiro.eurofound.ie>.

Philips, K. & Eamets, R. (2004) Government presents labour and social policy plans. *European Industrial Relations Observatory*, <www.eiro.eurofound.ie>.

Pistor, K. (2000) Patterns of legal change: shareholder and creditor rights in transition economies. *EBRD Working Paper*, **49**,

- Pistor, K., Raiser, M. & Gelfer, S. (2000) Law and finance in transition economies. *Economics of Transition*, **8**, 325-368.
- Porter, M.E. (1990) *The Competitive Advantage of Nations*. Free Press, New York.
- Porter, M.E. (1996) Competitive advantage, agglomeration economies, and regional policy. *International Regional Science Review*, **19**, 85-90.
- Porter, M.E., Schwab, K. & Sala-i-Martin, A.L.-C. (2004) *Global Competitiveness Report 2004-2005*. Palgrave Macmillan, Houndmills.
- Prasnikar, J. & Gregoric, A. (2002) The Influence of Workers' Participation on the Power of Management in transitional countries: the case of Slovenia. *Annals of Public and Cooperative Economics*, **73**, 269-297.
- Priest, G.L. (1977) The Common Law Process and the Selection of Efficient Rules. *Journal of Legal Studies*, **6**, 65-82.
- Pryor, F.L. (2005) Market economic systems. *Journal of Comparative Economics*, **33**, 25-46.
- Pryor, F.L. (2007) Culture and Economic Systems. *American Journal of Economics and Sociology*, **66**, 817-855.
- Pryor, F.L. (2008) Culture rules: A note on economic systems and values. *Journal of Comparative Economics*, **36**, 510-515.
- Qian, Y. (2003) How Reform Worked in China? In *In Search of Prosperity: Analytical Narratives on Economic Growth*, (Ed, Rodrik, D.) pp. 297-333.
- Rajan, R.G. & Zingales, L. (2003) The great reversals: the politics of financial development in the twentieth century. *Journal of Financial Economics*, **69**, 5-50.
- Resmini, L. (2000) The determinants of foreign direct investment in the CEECs: New Evidence from sectoral patterns. *Economics of Transition*, **8**, 665-689.
- Riboud, M., Sánchez-Páramo, C. & Silva-Jàuregui (2002) Does Eurosclerosis Matter? Institutional Reform and Labor Market Performance in Central and Eastern European Countries in the 1990s. In *Labor, Employment, and Social Policies in the EU Enlargement Process: Changing Perspectives and Policy Options*, (Eds, Funck, B. & Pizzati, L.) World Bank, Washington, pp. 243-311.
- Roberts, A. (2006) What Kind of Democracy Is Emerging in Eastern Europe? *Post-Soviet Affairs*, **22**, 37-64.
- Roberts, K. (2001) The New East European Model of Education, Training and Youth Employment. *Journal of Education and Work*, **14**, 315-328.
- Roe, M.J. (2003) *Political Determinants of Corporate Governance: Political Context, Corporate Impact*. Oxford University Press, Oxford.
- Roe, M.J. (2006) Legal Origin, Politics, and Modern Stock Markets. *Harvard Law Review*, **120**, 460-527.
- Roland, G. (2000) *Transition and Economics: Politics Markets, and Firms*. The MIT Press, Cambridge, Massachusetts.

- Roodman, D. (2009) How to do xtabond2: An introduction to difference and system GMM in Stata. *The Stata Journal*, **9**, 86-136.
- Rubin, P.H. (1977) Why is the Common Law efficient? *Journal of Legal Studies*, **6**, 51-63.
- Rubin, P.H. (2005) Legal Systems as Frameworks for Market Exchanges. In *Handbook of New Institutional Economics*, (Eds, Mènard, C. & Shirley, M.M.) Springer, Dordrecht, pp. 205-228.
- Samuelson, P.A. (1957) Wages and interest: a modern dissection of Marxian economic models. *American Economic Review*, **47**, 884-912.
- Schmitter, P. & Lehmbruch, G. (1979) *Trends towards corporatist intermediation*. Sage, Beverly Hills.
- Schwartz, S.H. (1994) Beyond Individualism/Collectivism: New Cultural Dimensions of Values. In *Individualism and Collectivism: Theory, Method, and Applications*, (Eds, Kim, U., Triandis, H.C., Kagitcibasi, C., Choi, S.-C. & Yoon, G.) Sage, Thousand Oaks, pp. 85-99.
- Schwartz, S.H. (2007) Cultural and Individual Value Correlates of Capitalism: A Comparative Analysis. *Psychological Inquiry*, **18**, 52-57.
- Shelanski, H.A. & Klein, P.G. (1995) Empirical Research in Transaction Cost Economics. *Journal of Law, Economics and Organization*, **11**, 335-361.
- Shonfield, A. (1965) *Modern Capitalism: The Changing Balance of Public and Private Power*. Oxford University Press, London, New York, Toronto.
- Simon, H. (1947) *Administrative Behavior*. Macmillan, New York.
- Simon, H. (1955) A Behavioral Model of Rational Choice. *The Quarterly Journal of Economics*, **69**, 99-118.
- Simon, H. (1957) *Model of Man*. Wiley, New York.
- Skledar, S. (2005) Draft Law on Collective Agreements Still under Discussion. *European Industrial Relations Observatory*, <www.eiro.eurofound.ie>.
- Smith, D. (2001) *Estonia: Independence and European Integration*. Routledge, London.
- Soskice, D. (1999) Divergent Production Regimes: Coordinated and Uncoordinated Market Economies in the 1980s and 1990s. In *Continuity and Change in Contemporary Capitalism*, (Eds, Kitschelt, H., Lange, P., Marks, G. & Stephens, J.D.) Cambridge, Cambridge University Press, pp. 101-134.
- Stanojevic, M. (2000) Slovenian Trade Unions: The Birth of Labour Organizations in Post-Communism. *Journal of Social Sciences Studies*, **16**, 87-100.
- Stanojevic, M. (2001) Industrial Relations in 'Post-Communism': Workplace Co-operation in Hungary and Slovenia. *Journal for East European Management Studies*, **6**, 400-420.
- Stanojevic, M. (2003) Workers' Power in Transition Economies: The Cases of Serbia and Slovenia. *European Journal of Industrial Relations*, **9**, 283-301.

- Stigler, G. (1972) The Law and Economics of Public Policy: A Plea to Scholars. *Journal of Legal Studies*, **1**, 1-12.
- Stigler, G.J. (1968) Competition. *International Encyclopedia of Social Sciences*, **3**, 181-182.
- Streeck, W. (1991) On the Institutional Conditions of Diversified Quality Production. In *Beyond Keynesianism: The Socio-Economics of Production and Full Employment*, (Eds, Matzner, E. & Streeck, W.) Elgar, Aldershot, pp. 21-61.
- Streeck, W. & Yamamura, K. (2001) *The origin of Nonliberal Capitalism: Germany and Japan in Comparison*. Cornell University Press, Ithaca.
- Stulz, R.M. & Williamson, R. (2003) Culture, openness, and finance. *Journal of Financial Economics*, **70**, 313-349.
- Svaleryd, H. & Vlachos, J. (2005) Financial markets, the pattern of industrial specialization and comparative advantage: Evidence from OECD countries. *European Economic Review*, **49**, 113-144.
- Taylor, M.Z. (2004) Empirical Evidence Against Varieties of Capitalism's Theory of Technological Innovation. *International Organization*, **58**, 601-631.
- Thelen, K. (2001) Varieties of Labor Politics in the Developed Democracies. In *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, (Eds, Hall, P.A. & Soskice, D.) Oxford University Press, Oxford, pp. 71-103.
- UNCTAD. (2006) *World Investment Report 2006: FDI from Developing and Transition Economies*. UNCTAD, Geneva.
- Vitols, S. (2001) Varieties of Corporate Governance: Comparing Germany and the UK. In *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, (Eds, Hall, P.A. & Soskice, D.) Oxford University Press, Oxford, pp. 337-360.
- Vitols, S. (2004) Changes in Germany's Bank-Based Financial System: A Varieties of Capitalism Perspective. *WZB Working Paper*,
- Vodopivec, M., Wörgötter, A. & Raju, D. (2003) Unemployment Benefit System in Central and Eastern Europe: A Review of the 1990s. *Social Protection Discussion Paper*, **310**, World Bank.
- Watson, M. (2003) Ricardian Political Economy and the 'Varieties of Capitalism' Approach: Specialization, Trade and Comparative Institutional Advantage. *Comparative European Politics*, **1**, 227-240.
- Wawro, G. (2002) Estimating Dynamic Panel Data Models in Political Science. *Political Analysis*, **10**, 25-48.
- Wei, S.J. (2000) Local corruption and global capital flows. *Brookings Papers on Economic Activity*, **2**, 303-354.
- Wielgohs, J. (2001) Coping with Privatization and Employment Decline: Three Short Stories of Success. In *Successful Transition: Political Factors of Socio-Economic Progress in Postsocialist Countries*, (Eds, Jürgen, B., Wielgohs, J. & Wiesenthal, H.) pp. 153-175.

Williamson, O.E. (1975) *Markets and Hierarchies: Analysis and Antitrust Implications*. Free Press, New York.

Williamson, O.E. (1985) *The Economic Institutions of Capitalism*. Free Press, New York.

Williamson, O.E. (1991) Comparative Economic Organization: The Analysis of Discrete Structural Alternatives. *Administrative Science Quarterly*, **36**, 269-296.

Williamson, O.E. (2000) Economic Institutions and Development: A View from the Bottom. In *A Not-so-Dismal Science: A Broader View of Economics and Society*, (Eds, Olson, M. & Kähkönen, S.) pp. 92-118.

Williamson, O.E. (2000) The new institutional economics: Taking stock, looking ahead. *Journal of Economic Literature*, **38**, 595-613.

World Bank. (2005) *World Development Indicators*. World Bank, Washington D.C.

World Bank. (2007) *Doing Business 2007*. World Bank, Washington D.C.

World Bank. (2009) *Doing Business 2009*. World Bank, Washington D.C.

Young, C. (2005) The politics, mathematics and morality of economics: a review essay on Robert Nelson's Economics as Religion. *Socio-Economic Review*, **3**, 161-172.

Zhang, K.H. & Markusen, J.R. (1999) Vertical Multinationals and Host-Country Characteristics. *Journal of Development Economics*, **59**, 233-252.