

DISSERTATIONES RERUM OECONOMICARUM
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22

HELENA ROZEIK

Changes in ownership structures, their
determinants and role in the restructuring
of enterprises during transition:
evidence from Estonia



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THE LIST OF AUTHOR'S PUBLICATIONS AND CONFERENCE PRESENTATIONS

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3. Varblane, U., Männik, K., **Hannula, H.** The Autonomy of Managers by Business Functions in the Foreign Subsidiaries from Transition Countries. – Entrepreneurship in Estonia: Policies, Practices, Education and Research. Edited by T. Mets, J. Andrijevskaja, U. Venesaar and E. Kolbre. Tartu: Tartu University Press, 2006, pp. 172–193.
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INTRODUCTION

Motivation for the research

The issues of ownership¹ have always been fundamental to economic activity in the free market economy. Since Adam Smith wrote his book “*The Wealth of Nations*” (1776), political economists have argued that operations of a free market with private property would keep businesses and the individuals who control them from abusing their power and would promote the most efficient use of the productive resources they control (Blair 1995, p. 18). At that time it was common that those who owned property also managed and had control over it according to the size of their personal wealth. This situation changed dramatically by the beginning of 20th century, when a revolutionary work by two scholars, Berle and Means (1932), shed light on the remarkable changes in the functioning of American corporations. They noted that the dispersion of ownership of large corporations was so great that an identifiable individual or compact group of individuals held a majority of the equity in only 11 percent of the 200 largest industrial corporations. Their work is a starting point for ownership issues in corporate governance literature.

Until the end of the 1980’s, most of the research in corporate governance concentrated on analysing the governance issues in developed economies. An extensive research of corporate governance issues in Central and East European (CEE) countries started at the beginning of the 1990’s with the breakdown of socialist economies in Eastern Europe and the former Soviet Union. The privatisation of state-owned socialist enterprises and diversity of applied privatisation policies across countries gave rise to the emergence of new types of owners and resulted in an abundance of different ownership structures². In some countries, for example the voucher privatisation in Czech Republic, totally new approaches for privatisation were exerted that had not even been used before in western economies. In general, there was a lack of knowledge about the effects of privatisation and whether the newly emerged ownership structures would incur necessary restructuring and efficiency improvements needed for the successful transition³. Moreover, as privatisation was often led by bearing in mind the

¹ In this dissertation the terms ‘ownership’ and ‘shareholders’ are used interchangeably. Shareholder is defined as “an individual, institution, firm, or other entity that owns shares in a company” (Mallin 2004, p. 43).

² In this dissertation ownership structure is defined along two dimensions: “the concentration of ownership and the identity of shareholders” (Weimer and Pape 1999, p. 156). The concentration of ownership refers to the percentage of shares owned by majority shareholder(s). The identity of shareholders refers to the type of ownership. For example, state ownership, private ownership, managerial ownership, employee ownership, foreign ownership, institutional ownership, family ownership, etc.

³ Transition is defined as “a process leading from plan to market” (Lavigne 1999, p. 276) economy. In this dissertation transition refers to the departure from a socialist economy towards a free market economy, from 1991 till 2004 when Estonia joined with EU.

political interest, the imposed ownership structures were not always desirable from an economic point of view. The latter raise the expectations for the occurrence of post-privatisation ownership changes⁴, which will bring the ownership structures back to a ‘normal’ equilibrium (see Jones and Mygind 2005). These specific circumstances that accompanied the development of corporate governance systems in transition countries created the basis for, as it is known today, a new corporate governance research. The experience of transition countries provides a rather unique opportunity to understand these relationships.

Since the beginning of the 1990’s it is possible to find from transition literature many studies about the privatisation and initial ownership effects on enterprise restructuring and performance (for the literature review of these studies, see Djankov and Murrell 2002, Wright and Suhomlinova 2003). There is also growing empirical evidence on the dynamics of ownership structures in the post-privatisation period (see, for example, Blaszczyk *et al.* 2001; Estrin and Wright 1999; Filatotchev *et al.* 1999; Grosfeld and Hashi 2003; Jones *et al.* 2005; Jones and Mygind 1999, 2005; Kalmi 2003; Kocenda and Valachy 2001; Kozarzewski and Woodward 2001; Mygind *et al.* 2006; Simoneti *et al.* 2001). In turn, there are only a few exceptions that focus exclusively on the topic of determinants of ownership changes (see, for example, Jones *et al.* 2005, Jones and Mygind 1999). In addition, the area of economic effects of post-privatisation ownership changes is rather under-researched and the empirical evidence covering these issues quite limited (see, for example, Blaszczyk *et al.* 2001, Hanousek *et al.* 2007, Jones 1998, Simoneti *et al.* 2001). Therefore, several authors have pointed out the need for a further research in this field (see, for example, Blaszczyk *et al.* 2003, Jones 2004).

The main motivation behind the present research is to fill the gap in research on the relationships between post-privatisation ownership changes and enterprise restructuring. More specifically, it should focus on the changes in ownership structures in different time periods throughout the transition period and how these changes have influenced the restructuring and performance of enterprises. The interest also lies in identifying the specificity of ownership changes and determining the reasons behind these changes. In the recent research these developments have neither been captured in the frame of a longer time period, nor moreover through different time periods. This is purely because of the lack of data. Enterprise restructuring is presently treated in terms of the financial, technological and organisational changes. Performance is handled as the outcome of the restructuring. Overall, the area integrating the specific ownership changes and different types of restructuring is found to be relatively under-researched.

⁴ Post-privatisation ownership changes refer to ownership changes that have taken place in enterprises after their privatisation. Some authors refer to these changes as “secondary privatisation” (see, for example, Blaszczyk *et al.* 2001, Kočenda and Valachy 2001, Kozarzewski and Woodward 2001, Simoneti *et al.* 2001).

The specific context of the following research is related to the post-privatisation ownership structure developments in Estonia. Estonia is a small country with rather limited natural resources, whose success in international competitiveness is often determined by a stable and sustainable internal economic environment. In comparison to several other transition countries, Estonia is unique because of its quick and radical economic reforms at the beginning of the transition, and very open and fast-growing economic development in the later stage of transition, up to 2007. The privatisation in Estonia differed in many terms from other transition countries, though its main concept was similar to Hungary. Estonian privatisation was oriented to finding a core investor and no particular ownership type was favoured, apart from during the very early period, which consequently created rather varied ownership structures. Therefore, Estonia is a good case in with to explore the economic effects of different ownership structures. Moreover, as the privatisation concentrated on finding the core investors who usually aimed at also taking a strong control function, it is rather likely that ownership has a big impact on enterprise developments in Estonia. In addition, since re-independence the Estonian economy has gone through one economic recession in 1999 and has now entered into a second recession in 2008. Thus, more in-depth understanding of how ownership structures behave during different economic development periods is needed to predict the further developments and to implement supportive policy measures.

The aim and research tasks of the dissertation

The aim of the present dissertation is to identify the patterns of post-privatisation changes in ownership structures, their determinants and role in the restructuring of enterprises in Estonia. In terms of enterprise restructuring, particular interest will be given to financial, technological and organizational restructuring. To achieve the aim, the following research tasks are set up:

- 1) in order to understand the role of ownership in the firm from the theoretical perspective, the main corporate governance theories with a particular interest in ownership issues will be reviewed;
- 2) in order to learn more about the developments of ownership structures and their specificity in transition countries, the differences between national corporate governance systems such as Anglo-American, Continental Europe and new emerging transition economies corporate governance systems will be explored;
- 3) as the analysis of ownership changes and their role in the restructuring of firms will be carried out within Estonian enterprises the theoretical perspectives on the emerging ownership types, their determinants and dynamics as well as the restructuring of firms and the role of ownership in it in the context of transition economies will be discussed;

- 4) a framework for analysing the changes in ownership structures, their determinants and role in the restructuring of firms in transition economies will be developed both on the basis of theoretical perspectives and on discussions presented in the earlier parts of the dissertation and the results of previous empirical research about these topics;
- 5) for identifying the peculiarities of Estonia associated with the developments of ownership structures, the Estonian privatisation process and main corporate governance developments will be introduced;
- 6) formulation of the research propositions about the dynamics, determinants and effects of ownership changes on the restructuring of firms and description of the research methodology will be presented in the next part of the dissertation,
- 7) an analysis of the changes in ownership structures in terms of concentration and ownership identity and the determinants of ownership changes during transition in Estonian enterprises will be undertaken;
- 8) an analysis of ownership effects and the effects of post-privatisation ownership changes on the restructuring and performance of Estonian firms will follow;
- 9) finally, the research results about the changes in ownership structures, their determinants and the effects of post-privatisation ownership changes on the restructuring of Estonian firms will be synthesised, and in addition implications will be drawn.

The structure of the dissertation

The present dissertation consists of two major parts. In the first part, the theoretical basis for the analysis of ownership changes and restructuring of firms in transition economies is developed. First, the theories which explain the role of ownership and development of ownership structures within different national corporate governance systems are introduced. Then, a review of literature on ownership structure changes and enterprise restructuring in transition is provided. Finally, a framework for analysing the relationships between changes in ownership structures and enterprise restructuring is proposed. The second part of the dissertation consists of the identification of the peculiarities of Estonian privatisation and corporate governance processes, the development of the research propositions, introduction of the data and research methodology, and an analysis of ownership changes and the effects of post-privatisation ownership changes on the restructuring and performance of Estonian firms. The structure of the above-mentioned parts of this dissertation is illustrated by Figure 1.

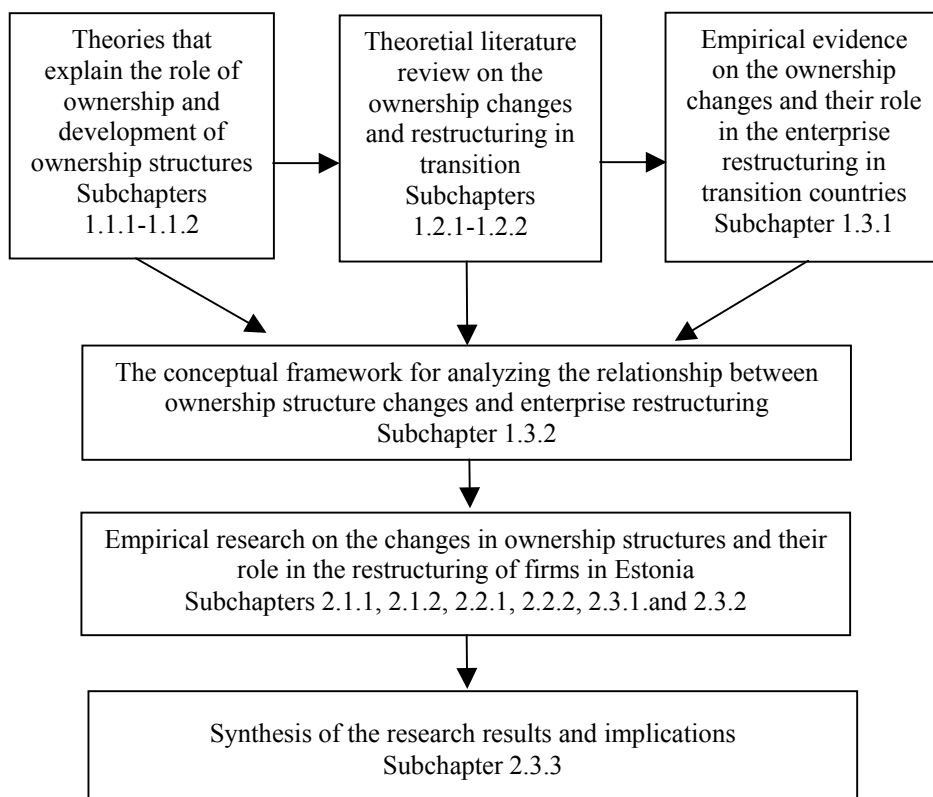


Figure 1. The structure of the dissertation.

The theoretical part of dissertation starts with a brief introduction to the essence of corporate governance, a description of main corporate governance theories and illustrating the role of ownership in a firm from the perspective of these theories (subchapter 1.1.1). As the development of corporate governance has been influenced by many disciplines, the theories that describe it are also rather varied. However, as this dissertation focuses on ownership issues only four theoretical perspectives of corporate governance will be introduced.

The first of them is agency theory, which explores the nature of interest of conflicts between owners (principals) and managers (agents) related to manager's opportunistic behaviour and describes the governance mechanisms that limit the manager's self-serving behaviour. The developers of this theory are Jensen and Meckling (1976), Fama (1980), and Fama and Jensen (1983). The second perspective is transaction cost economics which has been expounded by the work of Coase (1937) and Williamson (1975, 1984, 1985). This approach describes the firm as a governance structure. Whilst the agency theory and transaction cost economics can be used to explain what the role of

ownership in a firm is, they can not be used to explain why some governance structures are more efficient than others. Therefore, the ideas developed by the proponents of the resource-based view of the firm (see, for example, Barney 1986, 1991; Grant 1991), that results mainly from the growth theory of the firm proposed by Penrose (1959), become useful as they describe a firm as a set of different resources and capabilities. An important perspective of corporate governance issues in terms of ownership relationships is also the stakeholder approach, which is founded by Freeman (1984) and extended further by several researchers (see, for example, Blair 1995, Campell 1997, Donaldson and Preston 1995, Spurgin 2001). According to this approach the ownership status can be extended to all stakeholders associated with the firm.

Next, the different national corporate governance systems will be explored (subchapter 1.1.2). This is important for understanding the diversity of ownership structures around the world and to realise the specificity of corporate governance systems in CEE countries. Therefore, a brief overview of the 'evolution path' of ownership structures from the historical perspective is provided. Then, the main characteristics of Anglo-American, Continental Europe and some CEE countries corporate governance systems are discussed. In analysing the CEE corporate governance systems only countries in the first wave of EU enlargement will be explored as they have had a more similar economic and political development to Estonia than other CEE and South-East European transition countries. The corporate governance systems in South-America, Middle-East or Asia (apart from short description of Japanese corporate governance systems) will not be discussed as it will be assumed that due to historical and cultural reasons the corporate governance systems in CEE countries develop either towards the Anglo-American or Continental Europe governance systems.

Then, the dissertation continues with a deeper analysis of theoretical considerations about the determinants of ownership structures and their changes (subchapter 1.2.1), and enterprise restructuring and the role of ownership structures in it (subchapter 1.2.2) in the context of transition economies. First, the focus is on introducing the main ownership typologies according to their identity and distribution as a result of different privatisation policies applied in different transition countries. Based on the work of Mygind (2000/2001) a comparative overview of different ownership types from the perspective of their resources and interests will be provided as it helps to understand why efficiency arguments of different ownership types often diverge. In analysing the determinants of ownership structures and their changes, the contribution of several authors such as Demsetz and Lehn (1985), Earle and Estrin (1997), Himmelberg *et al.* (1999), Jones *et al.* (2005), Jones and Mygind (1999, 2005) and Qu (2004) will be discussed. In addition, a rather recent and new approach in corporate governance literature which explains the corporate governance developments over the firm's life-cycle stages will be discussed, according to the ideas of Filatotchev and Wright (2005) and Jones and Mygind (2005).

After that, a discussion about the role of ownership structure as a determinant of enterprise restructuring will follow. For this purpose the different dimensions and types of enterprise restructuring under transition will be analysed based on the work of Bonin (1998), Carlin and Landesmann (1997), Crum and Goldberg (1998), Ericson (1998), Grosfeld and Roland (1995), Lieberman (1990, 1994), and Linz and Krueger (1998). The role of ownership structure in the restructuring of enterprises is rather extensively analysed in many empirical works, which will be discussed based on two main reviews – Djankov and Murrell (2002) and Wright and Suhomlinova (2003).

Next, an overview of previous empirical research on the changes in ownership structures and their relationship with the restructuring of enterprises in transition is presented (subchapter 1.3.1). Finally, on the basis of theoretical discussions presented in the earlier parts of the dissertation and the results of previous empirical research, the framework for analysing the changes in ownership structures, their determinants and relationship with enterprise restructuring and performance will be proposed (subchapter 1.3.2).

The second part of the dissertation starts with an overview of privatisation and main corporate governance developments in Estonia (subchapter 2.1.1). This is followed by a description of the propositions and research methodology (subchapter 2.1.2). The empirical research of the current dissertation will be based on the two databases:

1. The first database comprises a broad range of Estonian enterprises annual economic figures of their balance sheets and income statements. This data has been collected for the purpose of statistics reviews and scientific research by the Estonian Statistical Office (ESO) since 1995 as a result of a bilateral agreement between ESO and the University of Tartu (UT). The data used in the present dissertation range from 1996 to 2004.
2. The second database involves ownership data for Estonian enterprises at three different time points: at the time of privatisation, 2000 and 2004. This dataset is the result of the trilateral cooperation between Copenhagen Business School (CBS), ESO and UT. For collecting ownership share data a special questionnaire was undertaken in spring 2004 by ESO. The sample included 758 enterprises. Regarding the aim and limits of the present dissertation, the following analysis will not capture the responses for the entire survey, but will predominantly focus on the distribution of ownership shares at the three different time periods.

Given that the aim of the present dissertation is to study the relationship between ownership changes and restructuring of enterprises, the two above-mentioned databases were merged. As a result of the merge, a new database was created with data on 555 enterprises over nine years from 1996 to 2004. A similar database has also been used among other researchers in previous empirical research (see, for example, Jones *et al.* 2005; Jones and Mygind 1999, 2005; Kalmi 2003). Nevertheless, the current database is unique as it captures a larger sample size and longer analysis period.

For analysing the changes in ownership structures, their determinants and role in the restructuring of enterprises, the following research methods will be used. First, a descriptive analysis of ownership changes in the post-privatisation period will be performed (subchapter 2.2.1). This is followed by binary and multinomial logit analysis for the determinants of ownership structures (identity of ownership) and their changes (subchapter 2.2.2). Thereafter, tests using univariate analysis of variance (ANOVA) will be performed in order to learn about the initial ownership effects' differences in terms of restructuring and performance between the enterprise groups with unchanged and changed ownership (subchapter 2.3.1). Then, ordinary least squares (OLS) regression models will be built and the relationships between ownership changes and enterprise restructuring and performance analysed (subchapter 2.3.2). Finally, a synthesis of research results as well as implications will be summarised (subchapter 2.3.3).

The novelty of this empirical research is the more accomplished approach in terms of time periods used, ownership change categories and restructuring dimensions. First, the differences between two time periods will be made: the changes in ownership and economic effects from privatisation to 2000 and from 2000 to 2004. This enables analysing the research results in line with economic developments during these periods in Estonia. Second, the ownership change groups according to five different ownership types will be created. These ownership types are: state, employee, manager, domestic outsider and foreign ownership. The ownership types have been formed according to the 'dominant owners' approach, where the enterprise is assigned to the ownership group holding more shares than any other group. Third, in analyzing the relationships between ownership changes and enterprise restructuring other dimensions of enterprise restructuring in addition to commonly used economic performance indicators will be included. In the following analysis three different restructuring dimensions will be examined: financial, technological and organizational restructuring.

In pointing out the strength of the selected sample and the research methods, first it must be acknowledged that the data are quite recent and compared to other transition countries have several advantages. First, the quality of the data is rather high as it has been collected by ESO which uses relatively good accounting standards according to the EU. Second, this empirical research does not suffer from a small sample size or short time period as many other empirical works in transition countries do. Instead, the analysis is based on a large and random sample of firms through nine years time period. Nevertheless, one possible weakness might be linked to the selection bias of the sample. Although it is a random sample, there is a relatively large share of medium-sized manufacturing enterprises. Similarly, at the time of selection of privatisation models, the performance of the companies influenced the ownership structure and vice versa. Thus, the analysis has to take into account that the initial breakdown of firms into different ownership groups is dependent on the initial differences in firms' performances.

Theoretical limitations

Corporate governance theories are used as a theoretical basis in the present dissertation for understanding the role of ownership in a firm and development of ownership structures within different national systems. In the literature, the theories of corporate governance are distinguished between those that propose a general model on a micro level but do not account for the specificities of the national systems and those that focus on the specificities to explain the differences in national systems' governance from a macro perspective (for a detailed comparison of these theories, see Charreaux 2004).

Due to the limited scope of the study, a mainly disciplinary approach of micro theories, that is, based on the contractual view of the firm, will be reviewed. The disciplinary view of corporate governance distinguishes between the shareholder view and stakeholder view. The shareholder model of governance is based on agency theory (see, for example, Jensen and Meckling 1976) and transaction cost theory (see Williamson 1984, 1985). Agency theory describes the firm as a nexus of contracts and transaction cost economics describes the firm as a governance structure. The stakeholder approach founded by Freeman (1984) and developed further by several researches such as Blair (1995), Campell (1997), Donaldson and Preston (1995), Spurgin (2001), defines the ownership relations by the allocation of residual rights.

The second approach of corporate governance micro theories concerns the knowledge-based perspective of the firm, which not only explains the boundaries of the firm in terms of transaction costs, but also in terms of learning, path dependence, technological opportunities, selection and complementarity of assets. The knowledge-based approach of corporate governance identifies three main perspectives: the behavioural perspective (see, for example, Cyert and March 1963, March and Simon 1958, Simon 1947); the neo-Schumpeterian evolutionary economic theory (see, for example, Nelson and Winter 1982); and strategy theories based on resources and capabilities (so-called Resource Based View – RBV) (see, for example, Penrose 1959). The behavioural perspective is left aside in this dissertation since it explains the firm as a political coalition and a cognitive institution that adapts itself through organizational learning, and does not address the issues of ownership in the development of firm. The neo-Schumpeterian evolutionary theory concentrates more on innovation as a basis of competitive advantage in a firm, which will be beyond the scope of current research. The resource-based view of the firm enables the distinction of firms based on their capabilities and resources, which is an important aspect in explaining the differences in ownership structures in transition economies. Thus, this will be the only knowledge-based perspective that will be addressed in this dissertation.

There are also several theories which explain the differences in national systems of corporate governance (for a detailed overview of these theories, see Charreaux 2004). From a financial and legal perspective, the financial system

plays a central role in explaining the economic growth and prosperity (see, for example, Beck *et al.* 2000, Levin 1997). Moreover, the efficiency depends on the protection of the financial investor's rights against attempts at expropriation by the managers or dominating shareholders. Thus, the capacity of law to ensure this protection constitutes an explanatory factor of the financial policy and the ownership structure of firms (see, for example, La Porta *et al.* 1998). The political perspective deals with the role of politics in the construction of financial institutions (see, for example, Roe 1990, 1994, 1997) and stresses the importance of powerful financial organisations. There are two other theories that provide different or complementary explanations of the legal-financial and political theories: the endowment theory (which focuses on geographic and health related differences – see, for example, Beck *et al.* 2001, 2003) and socio-cultural theory (see, for example, Beck *et al.* 2003, La Porta *et al.* 1997). However, due to the limitations of this study it is not possible to discuss the development of ownership structures in perspective of all these views. Therefore, the issues concerning the differences in corporate governance systems will be addressed at the country level introducing Anglo-American, Continental Europe and some CEE countries corporate governance systems.

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Naturally, all the mistakes and errors found in this dissertation are the sole responsibility of the author.

I. THEORETICAL BACKGROUND FOR THE ANALYSIS OF OWNERSHIP STRUCTURES AND ENTERPRISE RESTRUCTURING

I.1. Theories which explain the role of ownership and development of ownership structures in the corporate governance literature

I.1.1. The role of ownership in a firm from the perspective of corporate governance theories

The essence of corporate governance

The past twenty-five years have witnessed an ongoing research in the area of corporate governance. While the term ‘corporate governance’ is a new phenomena of the last twenty five years, the theories underlying the development of corporate governance and the areas it encompasses date from much earlier and are drawn from a variety of disciplines including finance, economics, accounting, law, management and organisational behaviour. Therefore, there is a rather wide range of different concepts and definitions about corporate governance. As Mallin states: “It must be remembered that the development of corporate governance is a global occurrence, and as such is a complex area including as it does legal, cultural, ownership and other structural differences” (Mallin 2004, p. 9). The purpose of this subchapter is to investigate how corporate governance theories help to explain the role of ownership in a firm⁵. It includes a brief introduction into the essence of corporate governance, description of main corporate governance theories with a particular interest in ownership issues and picturing the role of ownership in a firm from the perspective of these theories.

The term corporate governance is a subject of both narrow and broad definitions (see Appendix 1). The OECD provides the most authoritative functional definition of corporate governance: “Corporate governance is the system by which companies are directed and controlled. Corporate governance involves a set of relationships between a company’s management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined. Corporate governance is one key element in improving economic efficiency and growth as well as enhancing investor confidence” (OECD 2004, p. 11).

From different corporate governance definitions (see Appendix 1) it can be seen that corporate governance encompasses two important perspectives, the

⁵ In this dissertation, the terms ‘firm’, ‘enterprise’, ‘company’ and ‘corporation’ are used interchangeably to mean the same thing.

interest of shareholders and interest of stakeholders⁶, that is, whether the management should run the company in the interest of shareholders or whether it should take into account also other constituencies. Narrowly defined corporate governance mainly involves the relationship between managers, board of directors and shareholders and relationships between stakeholders and society. More broadly defined, corporate governance describes all the influences affecting the institutional processes. It encompasses the combination of laws, regulations, listing rules and voluntary private sector practices that enable the corporation to attract capital, perform efficiently, generate profit, and meet both legal obligations and general societal expectations. Farinha (2003, p. 4) has pointed out that numerous definitions of corporate governance all share, explicitly or implicitly, some common elements. They all refer to the existence of conflicts of interest between insiders and outsiders, with an emphasis on those arising from separation of ownership and control over the partition of wealth generated by a company.

As the development of corporate governance has been influenced by many disciplines, the theories that describe it are also rather diverse. Appendix 2 gives a summary of the theories which have been associated with or contributed to the development of corporate governance. However, as this dissertation focuses only on ownership issues, a detailed overview of all corporate governance theories will not be given. Here, the main attention will be given to the theories which expand upon the role and functions of ownership in a firm. As follows, the theories under consideration will be: agency theory, transaction cost theory, resource-based theory and stakeholder theory.

Agency theory

The antecedents of corporate governance can be traced back to Adam Smith's seminal book "*The Wealth of Nations*" (1776). Smith states that: "...being the managers rather of other people's money than of their own, it cannot well be expected that they should watch over it with the same anxious vigilance..." (Smith 1776, Book V, Ch. 1, Part 3, Article 1). Almost a century later, Berle and Means (1932) following Smith's concern initiated the discussion relating to the concerns of separation of ownership and control in large corporations. Here, they suggested that this problem made the corporation an untenable form of organization (Denis 2001, p. 192). However, their concerns and ideas are developed by Jensen and Meckling (1976) into the 'agency theory', which explains how the public corporation could exist given the assumption that managers are self-interested, and the context in which those managers do not bear the full wealth effects of their decision. As noted by Daily *et al.* (2003, p. 372), this was the first satisfactory explanation of the public corporation since Berle and Means pointed out some of the key problems inherent in the separation of ownership and control.

⁶ Stakeholders include employees, suppliers, customers, banks, other creditors, the government, various 'pressure' groups; indeed anyone on whom the activities of the company may have an impact (Mallin 2004, p. 44).

Agency theory suggests that a firm is a 'nexus of contracts' (Jensen and Meckling 1976). The particular focus of the theory is on agency relationship as a contract between a principal (the external owner of the firm) and an agent (the owner-manager, or entrepreneur) (Farinha 2003, p. 6). Jensen and Meckling (1976) state that utility-maximising agent has the incentive to appropriate a larger amount of the corporations' resources in the form of perquisites and to exert less than full effort in order to create value for shareholders. The principal can limit the effects of this divergence of interests by incurring monitoring costs to curb the agent's self-serving behaviour. In addition, it can pay the agent to expend resources to guarantee that he will not take certain actions which would harm the principal. The latter are referred to as the bonding costs. Further, the reduction in welfare of principal since the agent's decisions may be different from the principal's is also a cost of agency relationship. The monetary equivalent of such loss is classified as 'residual loss.' Thus, the agency costs are the sum of: 1) monitoring costs, 2) bonding expenditures and 3) the residual loss (Jensen and Meckling 1976, p. 6). At the most general level, principals and agents resolve agency problems through monitoring and bonding⁷ (Barney and Hesterly 1996, p. 125). Figure 2 illustrates the essence of agency problem.

Though Jensen and Meckling (1976) explore the nature of interest of conflicts between owners and managers related to the manager's opportunistic behaviour, and, for the purpose of controlling it, suggest the creation of monitoring system, they do not explain how to achieve or arrange efficient monitoring. Fama (1980, p. 292) continues this research by investigating to what extent the signals provided by the managerial labour market and the capital market, perhaps along with other market-induced mechanisms, can discipline managers. He sees a market for risk-bearing and management, and points out that these two functions within the firm are carried out by separate actors. He argues that the managers within the firm are disciplined by the markets for their services the same way as the firm is disciplined through competition. This means that the owners can take their capital elsewhere for a better return and managers who do well can be promoted.

⁷ Monitoring involves observing the behaviour and/or the performance of agents. Bonding refers to arrangements that penalize agents for acting in ways that violate the interests of principals or reward them for achieving principals' goals. (Barney and Hesterly 1996, p. 125)

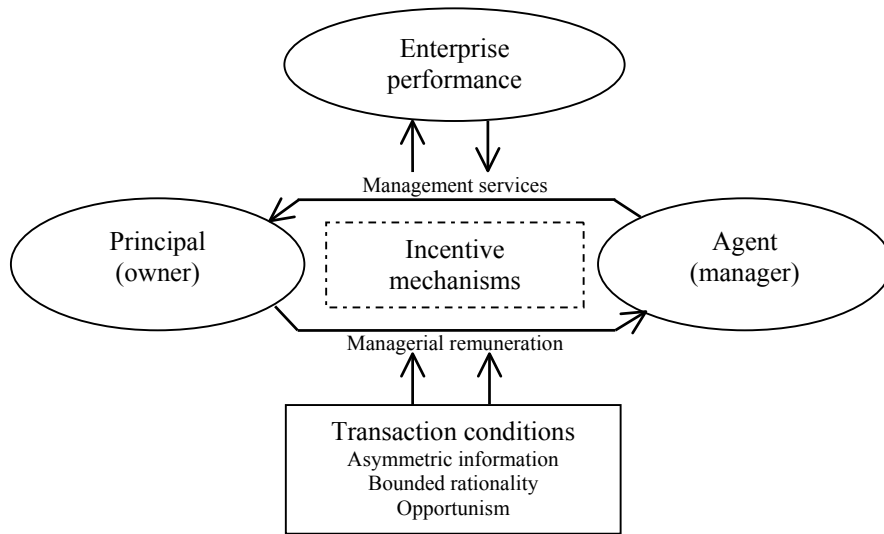


Figure 2. The essence of agency problem (adapted by the author from Mathiesen 2002, p.1)

Fama and Jensen (1983, p. 304) follow this research stream and argue that survival of an organisation characterised by separation of ownership and control relies on segregating the ratification and monitoring of decisions (decision control) from initiation and implementation of the decision (decision management)⁸. They argue that efficiency of such decision systems is buttressed by incentive structures that reward agents both for initiating and implementing decisions and for ratifying and monitoring the decision management of other agents (*Ibid.*, p. 322). For controlling the agency problem, the owners need to appoint a board of directors that ratifies and monitors important decisions and chooses, dismisses, and rewards important decision agents.

A broad field of studies on agency theory also concentrate on describing the different governance/control mechanisms⁹ that solve the agency problem or lessen the agency conflict (see, for example, Agrawal and Knoeber 1996; Agrawal and Mandelker 1987; Barney 1988; Core *et al.* 2003; Denis 2001; Denis and Denis 1995; Hermalin and Weisbach 2003; Himmelberg *et al.* 1999;

⁸ Ratification refers to the choice of the decision initiatives to be implemented, that is the choice of the proposal and the contract. Monitoring refers to the measurement of the performance of decision agents and the implementation of rewards. Initiation refers to the generation of proposals for resource utilization and the structuring of contracts. Implementation, the last term refers to the execution of ratified decisions, that is, physically carrying out the chosen proposal. (Fama and Jensen 1983, p. 303)

⁹ Four basic categories of individual corporate governance mechanisms are: legal and regulatory mechanisms, internal control mechanisms, external control mechanisms and product market competition (Jensen 1993).

Holderness 2003; Holmstrom and Milgrom 1991; Jensen 1993; La Porta *et al.* 1998, 2000; Mace 1972; McColgan 2001; Shleifer and Vishny 1986, 1997; Weisbach 1988). These studies cover the topics such as shareholdings of insiders, institutions, and large blockholders; corporate boards; use of outsider directors; debt policy; the managerial labour market; the market for corporate control etc. The research on identifying the situations in which the principal and agent are likely to have conflicting goals (as discussed above) and then describing the governance mechanisms that limit the agent's self-serving behaviour is called positivist agency theory (Eisenhardt 1989, p. 59). There is also another stream of agency research – principal-agent research – which is considered a general (normative) theory of the principal-agent relationship and can be applied to employer-employee, lawyer-client, buyer-supplier and other agency relationships (*Ibid.*, p. 60). In comparison with the positivist stream, principal-agent research is abstract and mathematical, and has a broader focus which is beyond the scope of this study.

In summary, agency theory suggests how to govern a modern corporation with large number of shareholders whose collective capital is controlled and directed by separate individuals. The theory provides many useful ways to examine the relationship between owners and managers. Moreover, it describes how the final objective of maximizing the owners' returns is achieved if the managers do not own the corporation's resources. Thus, from the perspective of agency theory, owners of corporations have to undertake strong monitoring function within the firm, bearing in mind that human beings (managers, employees, other stakeholders) are boundedly rational, self-interested and prone to opportunism.

Transaction cost economics

Transaction cost economics as expounded by the work of Williamson (1975, 1985) is often viewed as closely related to agency theory (Mallin 2004, p. 112). Whereas agency theory describes the firm as a nexus of contracts, transaction cost economics describes the firm as a governance structure. A basic argument of Williamson's transaction cost theory is that markets and hierarchies are alternative instruments for completing a set of transactions (Williamson 1975, p. 8). These alternative instruments are often also called 'governance mechanisms'. Barney and Hesterley (1996, p. 117) explain the logic of market and hierarchical forms of governance as follows. Market forms of governance rely on prices, competition, and contracts to keep all parties to an exchange informed of their rights and responsibilities. Hierarchical forms of governance bring parties to an exchange under the direct control of a third party (typically called 'the boss'). This third party attempts to keep all parties to an exchange informed of their rights and responsibilities. The choice of governance form depends on which form reduces any potential exchange problems created by bounded rationality and by the threat of opportunism at the lowest cost.

Thus, in addition to agency costs, firms also face exchange costs that are important to keep everybody informed of their rights and responsibilities within the firm. However, the agency theory stresses *ex ante* costs that are related to incentive alignment. By contrast, *ex post* costs are emphasized by transaction cost economics. These costs include: 1) maladaptation costs incurred when transactions drift out of alignment, 2) the haggling costs incurred if bilateral efforts are made to correct *ex post* misalignments, 3) the setup and running costs associated with the governance structures to which disputes are referred, and 4) the bonding costs of effecting secure commitments (Williamson 1985, p. 62). Williamson points out that it is most important to reduce the maladaptation costs as “reducing these costs through judicious choice of governance structure (market, hierarchy, or hybrid), rather than merely realigning incentives and pricing them out, is the distinctive transaction cost economics orientation” (Williamson 1988, p. 572).

Coase (1937) states that the reason organizations exist is that sometimes the cost of managing economic exchanges across markets is greater than the cost of managing economic exchanges within the boundaries of an organization (Barney and Hesterley 1996, p. 116). This means that in some point it is more beneficial to the firm to undertake transactions internally rather than externally. Grossmann and Hart (1986, p. 692) emphasize that contractual rights might be of two types: specific rights and residual rights. They argue that if it is too costly for one party to specify a long list of the particular rights it desires over another party’s assets, it might be optimal for that party to purchase all the rights except those specifically mentioned in the contract. In that case, the ownership is the purchase of these residual rights of control. Thus, for minimizing the transaction costs, it is important to write a contract which would allocate the residual rights between the parties efficiently.

Hart (1995, p. 679–680) explains more thoroughly the essence of transaction costs and the role of governance structures under assumptions that agency problems are present and contracts are incomplete. He points out three kinds of transaction costs that firms are facing while writing the contracts: a) the cost of thinking about all different eventualities that can occur during the course of the contractual relationship; b) the cost of negotiating with others about these plans and c) the cost of writing down the plans in such a way that they can be enforced by a third party. Then he states that given these transactions costs, the parties will write incomplete contracts and in the world of incomplete contracts (whereas agency problems are also present) governance structure does have a role. The governance structure¹⁰ can be seen as a mechanism for making

¹⁰ Hart (1995, p. 680) gives an example of three governance structures such as individual ownership of the firm, joint ownership and partnership. In case of individual ownership the owner has a right to make all unspecified decisions concerning firms’ (nonhuman) assets. In case of joint ownership, the parties must agree on a decision of firms’ assets. In the latter case, form of partnership, if each party have one third of an interest in firm, the decisions about the firm would be made by majority vote.

decisions that have not been specified in the initial contract, that is, it allocates residual rights of control over the firm's nonhuman assets¹¹.

Thus, both agency theory and transactions cost economics assume that human agents are subject to bounded rationality and are given to opportunism. Nevertheless, agency theory is predominantly concerned about diminishing the agency costs through contracts which realign incentives. In that case, the ownership is treated as a homogeneous firm attribute. At the same time, "transaction costs economics is more concerned with crafting *ex post* governance structures within which the integrity of contract is decided" (Williamson 1988, p. 570). Here the focus is on examining the alternative forms of economic organization which would be capable to minimize the costs in case of opportunism as well as bounded rationality. As a result, the ownership is viewed more as a heterogeneous firm attribute.

To conclude, one can argue that the role of ownership in a firm is determined by the choice of governance structures and their capacity to exchange information and distribute rights and responsibilities between different contract partners. In accordance with this statement, not only distribution of ownership between different contract parties but also the identities of different parties who are taking the ownership start to play an important role in creating the efficient governance structures. Therefore, the differences in governance structures in terms of their efficiency might be related to the resources and capabilities of contract parties (owners). This argument is in line with the resource-based view of the firm which describes the firm as a set of resources. The resource-based view of the firm builds on research in economics and organisation theory of firms and may help to explain why some governance structures are more efficient than others. This will be discussed further in the next section.

Resource-based view

The resource-based view of the firm results mainly from the theory of the growth of the firm proposed by Penrose (1959). The central concern in the resource-based view of the firm is why firms differ and how they achieve and sustain competitive advantage. According to resource-based view, the firm is a set of resources and an entity for accumulation of knowledge guided by the vision of managers and depending on the experience they have acquired (Charreaux 2004, p. 11). Relevant work on the resource-based view of the firm can be found in strategic management literature (see Barney 1986, Grant 1991, Rumelt 1984, Wernerfeldt 1984), but in the last decade, resource-based perspective of the firm has become an important topic also in corporate governance literature (see Castanias and Helfat 2001, Lockett and Thompson 2001, Mahoney 2001, Wright *et al.*, 2001, etc.). The fundamental question is: under what conditions can corporate governance be a source of sustained competitive advantage? Barney (2002, p. 216–218) states that the experience suggests that

¹¹ Nonhuman assets include machines, buildings, inventories, client lists, patents, copyrights, etc. (Hart, 1995, p. 680)

some firms are much more skilled in how they implement otherwise common governance devices than others, thus, these skills may be heterogeneously distributed across firms.

According to the resource-based view of the firm, firm resources include all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by the firm that enable it to conceive of and implement strategies (Barney 1991, p. 101). Table 1 describes the main resources in a firm. These resources do not develop by themselves over time, but rather are dependant upon the strategies employed to help them develop (coordination and cooperation). These are the capabilities of a firm – the capacity to deploy resources (Amit and Schoemaker 1993), or, put another way, how a firm organises its resources. The main assumptions of the theory are as follows: 1) resources and capabilities can vary significantly across firms (the assumption of firms heterogeneity), and 2) these differences can be stable (the assumption of resource immobility). Barney (1991) suggests that, in order for a firm’s resources and capabilities to be sources of superior performance, they must be valuable, rare among its current or potential competitors, costly to imitate and without close strategic substitutes.

Table 1. The main resources in a firm

Resource	Description
Financial	Size and type of capital – equity capital, debt capital, retained earnings
Physical	Location, factories, access to raw materials, transportation
Human	Personnel and management – experience, intelligence, training, judgment, and wisdom of individuals associated with a firm
Technological	Product and process-related, machines, other tangibles used by firm
Reputation	Image, brands, loyalty, trust, goodwill
Organisational	Management systems , teamwork, friendship

Source: compiled by the author based on Barney and Hesterley 1996, p. 133 and Grant 1991, p. 119.

Thus, following the resource-based view of the firm, the ownership can be an important source of resources, and thus, a unique firm attribute. For instance, ownership can be an important source of financial resources whilst some owners can provide more capital or have better access to capital than other owners. Also, treating the ownership as a group of different individuals allows seeing it as a source of human resources where each individual contributes to the firm through his/her experience, intelligence, knowledge and skills. Consequently, the identity of owners could also be used to explain the heterogeneity

across firms. That means different owners have different transaction costs for getting information (related to information asymmetries), motivating/bonding agents (incentives alignment) and creating the efficient governance structures (incomplete contracts).

In sum, agency theory, transaction costs economics and the resource-based view of the firm, are complements rather than substitutes. This means that owners can provide unique resources (assumption of the resource-based view of the firm) that will make firms different in their incentive mechanisms (important from the perspective of agency theory), and/or governance structures (important from the perspective of transaction cost theory). The provision of these resources enhances organizational functioning and survival.

Stakeholder approach

The last theoretical approach under consideration differs rather remarkably from the others that were discussed above. More precisely, it contradicts with the propositions of agency theory and transaction cost economics in which the maximization of the shareholder wealth is the main objective of the firm. Therefore, in conjunction, these theories form the 'shareholder model' of the firm. Stakeholder approach takes a broader view of the firm where the corporation is responsible to a wider constituency other than shareholders. This approach has been founded by Freeman (1984) and developed further by several researchers such as Blair (1995), Campell (1997), Donaldson and Preston (1995), Spurgin (2001), etc. Here the ownership is defined as much by the residual control rights as by the allocation of residual rights (Charreaux 2004, p. 8). This means that the ownership status can be extended to all the parties in the nexus of contracts. According to the 'stakeholder model' of the firm, various stakeholders can impact the behaviour and performance of the firm through contributing to firm-specific assets (Blair 1995).

Jones and Wicks (1999, p. 207) distinguish two broad categories in stakeholder research: 1) social science-based theory, including instrumental and descriptive/empirical variants, and 2) ethics-based theory focusing on normative issues. Social science-based instrumental theory is a contingent theory positing that certain outcomes will be obtained if certain behaviours are adopted. One form of instrumental stakeholder theory has been advanced by Jones (1995) who proposes that if firms contract (through their managers) with their stakeholders on the basis of mutual trust and cooperation, they will have a competitive advantage over the firms that do not. However, the central point of stakeholder theory is that the firms should attend to the interest of all stakeholders, not just their shareholders (Jones and Wicks 1999, p. 209). It follows that the performance of firms encompasses more than financial performance alone.

The stakeholder view of a firm considers that investors, employees, suppliers, customers and stakeholders generally both contribute and receive benefits from a firm (Turnbull 1997, p. 419). In addition, other parties may be involved in relationships such as communities, trade associations, government

and even political groups (Donaldson and Preston 1995, p. 69). Charkham (1992) divides stakeholders according to their contractual or non-contractual relationship between the firm and related stakeholder groups. Mallin (2004, p. 44) suggest that some stakeholders are directly related to the company, such as employees, providers of credit, suppliers and customers; others are more indirectly related to the company, such as the local communities, environmental groups and the government. This stays on the line of stakeholder division provided by Charkham (1992), that is directly related stakeholders have contractual relationship in the firm, thus, indirectly related stakeholders have non-contractual relationship in the firm (see Appendix 3).

Stakeholder theory does not specify the role of ownership very clearly, but it follows similar concerns as specified in the transaction cost theory. In principal, this view is a result of renewal of the analysis of property rights within theory about incomplete contracts (see Grossman and Hart 1986, Hart 1995). In that perspective, the contractual relationships between different stakeholders are of importance. Contracts between stakeholders are not obliged only to serve the interest of shareholders, but all other constituents related to firms and society in general. Hence, Mygind (forthcoming 2009) makes a distinction between the pure owner/shareholder who has no other interest than maximising the value of the shares, and other stakeholder-owners whose identity changes the goals of the company and the returns to other stakeholders. He points out three problem areas that can be extended to other stakeholders as an extension of Dow's (2003) analysis¹²: 1) commitment problem; 2) composition problem; and 3) commodification problem. The commitment problem refers to the ability to govern other stakeholders. It is important that the controlling stakeholder can promote other stakeholders' commitment to supply essential resources to the company. The composition of a given stakeholder group (the degree of homogeneity around their interest) is important for their role in the governance of the company. If the owner group is heterogeneous, the costs of decision making may be very high (see also Hansmann 1988). The commodification problem is related to the entry and exit of the controlling owners. This means that the stakeholders' role as owners depends on the degree to which they can trade ownership stakes smoothly. Thus, the identity of the dominant stakeholder owner plays an important role in solving these problems, whilst different stakeholders have different resources and capabilities to motivate and make contracts with other stakeholders.

In its essence, the objective to simultaneously follow the interests of shareholders and the interests of stakeholders is rather contradicting. However, Jensen (2001, p. 13) makes his point that stakeholder theory is consistent with value maximization if the firm (managers) pays attention to all constituencies that can affect the value of the firm. In other words, the firm cannot maximize its value if it ignores the interests of its stakeholders. Furthermore, he brings to

¹² Dow points out three areas where there are important asymmetries between capital and labour in relation to ownership (Dow 2003).

attention more crucial shortcoming of traditional stakeholder theory suggesting that it does not explain how to make the necessary tradeoffs among these competing interests. As a consequence, Jensen develops enlightened value maximization theory and states that “enlightened value maximization uses much of the structure of stakeholder theory, but accepts maximization of the long run value of the firm as the criterion for making the requisite tradeoffs among its stakeholders. In so doing, it solves the problems arising from the multiple objectives that accompany traditional stakeholder theory...” (Jensen 2001, p. 9). Mygind (forthcoming 2009) criticizes Jensen’s enlightened stakeholder theory and points out that often shareholder maximization does not lead to total stakeholder maximization. He states that this is the case for a zero-sum game where the value for the shareholder is increased by cutting the benefits of other stakeholders. For example, in case of price discrimination where some of the consumer surplus is transferred to the company, or in case of wage discrimination where shareholder can transfer part of the employee-benefits to profit.

Synthesis of the theories

In Figure 3, the corporate governance theories studied above are converged into the different circles. More precisely, the figure illustrates the position of owners in a firm and interaction of different relationships between the owners and other stakeholders together with unique and necessary resources provided by the owners and all stakeholders to make the firm different from their counterparts.

Binding up the above-studied approaches about the nature of the firm in perspective of corporate governance, it can be stated that the owners have a central motivating and controlling role in a firm with the right to make decisions about the rights and responsibilities of all other stakeholders in it. In Figure 3 each oval between the owners and other stakeholders refers to contracts which all together form the governance structure of the firm. The governance structure is created by owners through information exchange and with contracting to all contributing stakeholders. The efficiency of governance structures is influenced by and dependent on different resources¹³ and capabilities which owners can provide (for example, financial and physical resources), and stakeholders carry along with them (for example, human and organizational resources) into the firm. Interaction of all these different relationships and capability to exert right resources could enable to differentiate firms on the basis of their competitive advantage. In other words, the performance of the company depends on the identity of the owner/stakeholder.

¹³ In Figure 3, the resources are presented in four groups, where in Table 1 referred technological resource is treated as the part of physical resources and reputation as the part of organizational resources.

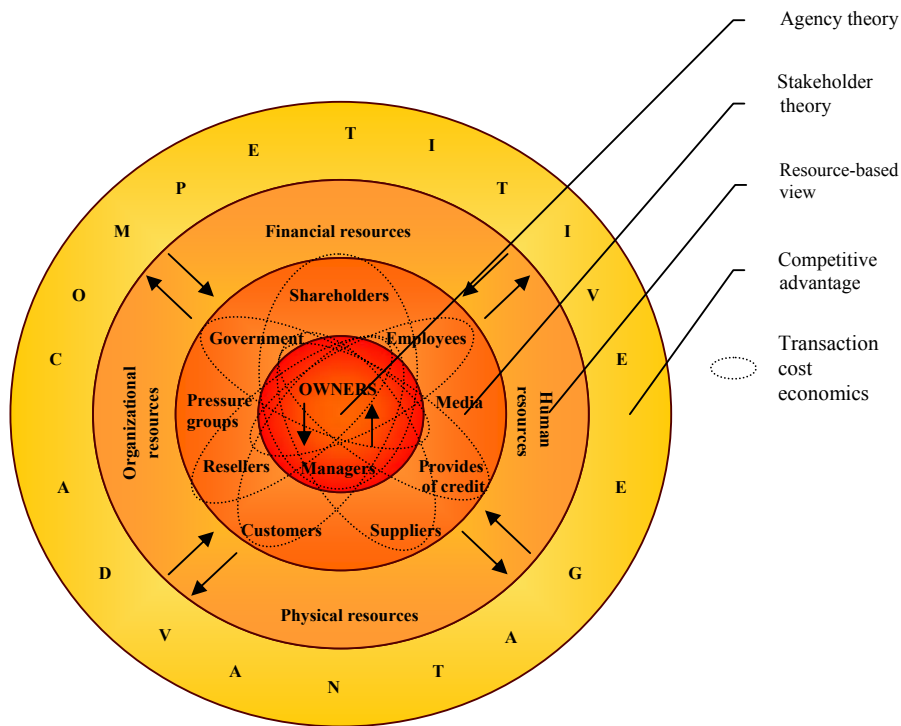


Figure 3. The role of ownership in a firm from the perspective of corporate governance theories (compiled by the author based on the discussion above)

Taken together, corporate governance theories studied in this subchapter explain the circumstances under which firms exist and outperform each other through interaction of different stakeholders within and outside the firm. It is clear that the role of ownership in a firm is influential and powerful. However, these theories mainly concentrate on firm-specific issues of ownership and do not take into account other factors which occur outside the firm and can also have an influence on the role of ownership in a firm. The theories discussed in this subchapter enable to describe governance problems. They provide necessary understanding about the different issues related to ownership. In practice, all these different aspects are solved in different ways in the different national corporate governance systems. In addition, the theories do not say very much about the ownership structure of the firm: does it make a difference if the firm has one single owner or many owners?; how the identity of owners influences the firm performance?; do changes in ownership structure take place over time and what drives these changes? Thus, there are still many questions needed to be answered. The following subchapters will try to explore these issues more thoroughly.

1.1.2. The development of ownership structures within different national corporate governance systems

Ownership structure and Anglo-American corporate governance system

The ownership structure and its relationship with other institutions that affect the firm development is one of the key topics in the literature of national corporate governance systems. The national corporate governance systems explain the differences between corporate governance systems across the countries or groups of countries. In addition to ownership structure of the firm, there are many other characteristics by which the systems of corporate governance differ across the countries. These characteristics encompass legal, institutional, cultural, historical and technological dimensions. The purpose of this subchapter is to explore the differences between corporate governance systems in three groups of countries, that is, Anglo-American corporate governance system, Continental Europe governance system and new emerging governance systems in transition countries. This includes description of origins and development of ownership structures, explaining the impact of other corporate governance systems' characteristics on the development of ownership structures, and highlighting the advantages and disadvantages of each system.

For understanding the development and differences in ownership structures, it is first useful to explain it from the historical perspective. In the literature, the history of ownership relations is illustrated through varieties of capitalism (see Table 2). Mathiesen (2008) explains the ownership history of the large enterprises in three stages. The first stage refers to 'entrepreneurial capitalism' in Western Europe in the early industrialization period since 1650. At that time, the corporations were controlled and owned by managers. The second period refers to 'managerial capitalism' in Western Europe and the USA in the late industrialization period starting in 1860. Then, corporations were controlled by managers but mainly owned by various non-managers. Finally, the third stage refers to 'institutional capitalism' in Western Europe, the USA and Japan in information age starting in 1980. Subsequently, the corporations are controlled by managers but mainly owned by financial institutions.

Berghe and Ridder (1999, p. 27–37) provide a similar sequence of ownership relations' development which they call corporate governance systems' 'evolution path'. Their sequence involves three more stages, such as 'banking capitalism', 'reference shareholding' and 'democratic system'. The phase of 'banking capitalism' reflects the period until the 1930's when (external) financiers had a major impact on business matters in the USA. 'Reference shareholding' is a model which is characteristic primarily of Latin countries, such as France, Italy and Belgium. In this system, shareholders have long(er)-term commitment and greater involvement and input into the strategic development of the firm. Finally, 'democratic system' states a revolutionary future model. In this case, the power in the knowledge society is partly shifted away from the shareholder towards the 'knowledge worker'. Thus, different varieties of capitalism reflect

different types of governance/ownership relations. Over time, the boundaries of the different varieties of capitalism have become increasingly blurred (no one variety dominates totally), which is reflected also by the fact that in different countries governance/ownership relations have become correspondingly blurred. Therefore these different governance/ ownership relations are also useful for explaining the differences in corporate governance systems across countries.

Table 2. The ownership history through the varieties of capitalism

Historical paradigm	Varieties of capitalism	Governance/ ownership relations	Key geographic area
Early industrialization (1650's)	Entrepreneurial capitalism	Controlled and owned by manager	Europe
Late industrialization (1860's)	Managerial capitalism	Controlled by managers, owned by non-managers	Europe and USA
Late 19th/early 20th century (until 1930's)	Banking capitalism	Banks play a dual role in financing	USA
Information age (1980's)	Institutional capitalism	Controlled by managers, owned by institutions	Europe and USA
Information age (late 1990's)	Referenced shareholding	Controlled and owned by long-term blockholders	Latin countries
Future knowledge-based society (?)	Democratic corporate model	Controlled by 'knowledge worker', owned by investors	?

Source: compiled by author based on Berghe and Ridder 1999, p. 27–37 and Mathiesen 2008.

Anglo-American corporate governance system presents mainly 'entrepreneurial', 'managerial' and 'institutional capitalism' patterns. Often this system is referred to also as 'shareholder model' (Maher and Andersson 1999, p. 6), 'market-oriented model' (Keenan and Aggestam 2001, p. 265), or 'outsider model' (Franks and Mayer 1995). This model describes corporate governance in the United States, the United Kingdom, Canada and Australia. According to the model, the objective of the firm is to maximise shareholders' value (Maher and Andersson 1999, p. 6) in a frame of free market operations (Berghe and Ridder 1999, p. 40). Shareholders are seen as owners who have the right to possess and use property or to transfer all or part of it in open markets (Rubach and Seborá 1998, p. 170). Thus, this model follows the agency theory and transaction cost economics roots.

The ownership structure in Anglo-American firms is relatively widely held, that is ownership concentration is low (Weimer and Pape 1999, p.156), and held by individuals and more recently by institutional investors (Aguilera 2003, p. 25). Barca and Becht (2001) analysis showed that the percentage of listed companies under majority control in the USA and the UK stayed between 1.5 to 2.5 percent compared to Austria, Belgium or Germany where it is over 60 percent. Rubach and Seborá (1998, p. 171) point out that individual shareholders are seen as dispersed, passive investors with a primary concern of financial returns. Institutional shareholders, as investors in equity securities and holders of other people's assets, have a primary interest in financial appreciation. However, institutions' power in influencing the firm policies is growing with increasing concentration of stock ownership.

Large part of shareholdings in Anglo-American countries takes place via stock exchange (Berghe and Ridder 1999, p. 41). Therefore the influence of capital markets, especially stock exchange, is significant on corporate ownership structure. The governance in Anglo-American system often includes hostile take-overs, proxy fights, mergers, and leveraged buyouts (Keenan and Aggestam 2001, p. 265). An active external market for corporate control, or often referred to as the takeover market, is one of the best known characteristics of Anglo-American governance system. Weimer and Pape (1999, p. 155) state that especially in the USA and the UK takeovers are regarded as a central function of stock markets. Hence, they point out also one rather important characteristic of this system – short-term economic relationships. This is because of quite unrestricted markets for capital, labour, goods and services that ensure rapid adjustment to changing circumstances.

In addition, legal traditions play an important role in the development of corporate governance systems including ownership structures' development. Anglo-American system is characterized by high investor protection and low employee protection.¹⁴ According to Franks and Mayer, "the rationale behind these rules and regulations is the promotion of securities market. Equal access to information and protection of small investors from exploitation by dominant shareholders is regarded as central to the process" (Franks and Mayer 1990, p. 209). Anglo-American legal system makes a distinction between commercial and investment banks; it also relies on severe antitrust regulations and considers interlocking directorates among competing companies to be an illegal practice (Aguilera 2003, p. 25). Further, the US corporate law restricts ownership relations between bank and industrial enterprises, and thus prevents banks from becoming more influential in industry (*Ibid.*). Shleifer and Vishny (1997)

¹⁴ In the USA, this protection is embodied in, among others, the Securities Exchange Act (1933), the Securities Investor Protection Act (1970), the Insider Trading Sanctions Act (1984), and the Private Securities Litigation Act (1995). Comparable legislation or codes, in the UK comprise the Companies Security Act (1985, revised in 1989), the City Code on Takeovers and Mergers and the Financial Services Act (1986). (Weimer and Pape 1999, p. 154)

consider the extent to which the legal system protects its investors and the extent to which there are large investors in the firm as the most fundamental determinants of how a firm's corporate governance system develops.

The main advantages of Anglo-American corporate governance systems are considered to be its unanimity, dynamism, well-developed takeover market, flexible labour relationships (Berghe and Ridder 1999, p. 41), liquidity of stocks and better risk diversification possibilities for investors (Maher and Andersson 1999, p. 18). Unanimity refers to the common understanding of the firms' objective, without need to find consensus between the various interest groups. Flexibility of capital and labour markets create greater dynamism, which is also achieved through performance related pay for the management. The main disadvantages are the short-term focus of the system, which disfavours stable and long-term relationships (Berghe and Ridder 1999, p. 41) and lack of managerial accountability, which is the consequence of diffused ownership, that is the interests and objectives of managers and shareholders diverge and incentives to monitor management are weak (Maher and Andersson 1999, p. 18).

Diversity in ownership structures within Continental Europe corporate governance system

Continental Europe corporate governance system is much more diversified in its nature. From the historical perspective, it presents the 'entrepreneurial capitalism', 'banking capitalism', 'institutional capitalism' or 'reference shareholding' patterns. Therefore, it is possible (or necessary) to distinguish within the whole system more specific systems of governance. In general, the corporate governance literature makes the distinction between Germanic model and Latin model of corporate governance (see Keenan and Aggestam 2001, Weimer and Pape 1999), but sometimes also the Dutch, French and Scandinavian models are pointed out separately (see Berghe and Ridder 1999, p. 42; Renneboog 1999). However, in the following discussion, the most commonly used approach will be followed in describing the corporate governance systems in Continental Europe, that is, studying the differences between Germanic model and Latin model of governance.

In the literature, the *Germanic model* is often referred to as 'stakeholder model' (Maher and Andersson 1999, p. 6), 'banking-based model' (Beck and Levin 2002, p. 148), 'network-oriented model' (Keenan and Aggestam 2001, p. 265), or 'insider model' (Franks and Mayer 1995). Germanic model describes the governance structures and processes in different countries, such as Germany, the Netherlands, Switzerland, Sweden, Austria, Denmark, Norway and Finland, but on different dimensions. For example, only few of these countries have bank ownership, but all have concentrated ownership. However, in this model the role of the firm is much broader than value maximisation for the shareholders (Berghe and Ridder 1999, p. 39); the firm is seen as the combination of various interest groups whose goals have to be coordinated in the national interests (Rubach and Seborá 1998, p. 175). Thus, it corresponds to the

principles of the stakeholder theory of the firm where much attention is paid to other stakeholders.

Contrary to Anglo-American governance system, Germanic model is typified by relatively strong concentration of ownership of large individual enterprises (Clarke 2007, p. 181). Banks, particularly the commercial banks, exert significant influence over corporate affairs through ownership and governance rights (Aguilera 2003, p. 25). Opposite to the USA governance system, there are no restrictions for the German banks to hold large blocks of shares of non-financial firms (Weimer and Paper 1999, p. 157). The banks in German model are salient influential stakeholders that are not only allowed to possess equity stakes, but they can also use proxy votes of (small) shareholders who deposit their bearer shares with the bank (Renneboog 1999). Banks can have direct and continuous influence over firms as they do have more voting power than their equity ownership would suggest (Denis and McConnell 2003, p. 15). Thus, the banks are strongly involved in the corporate network and can have long-term relationships with corporations. In addition to banks, the holding companies, other non-financial corporations and family firms are also dominant ownership types in Germanic model. Institutional investors, such as pension funds, mutual funds, and insurance companies, play much smaller role than in Anglo-American corporate governance system (Maher and Andersson 1999, p. 24).

Another feature of Germanic model is relatively small and undercapitalised stock markets (Rubach and Sebora 1998, p. 176). Therefore, the banks are main providers of debt capital and active external market for corporate control is weak. The Germanic model based on internal capital market and controlled by banks or bank-allied companies favours low-risk and long-term financing (Aguilera 2003, p. 25). The internal market controllers exercise the control of a company either by majority ownership of voting shares or by owning significant minority holdings and employing a combination of devices to increase their control over company (Clarke 2007, p. 171). The most commonly used devices are cross-shareholdings, pyramid structures¹⁵, dual-class shares, proxy votes and voting trusts (Maher and Andersson 1999, p. 24). Hostile takeovers are rare due to the significant ownership concentration that characterizes the equity market (Denis and McConnell 2003, p.27). This also explains the absence of strong corporate control market. Thus, it can be expected that large and stable shareholdings by banks and non-financial corporations allow for long-term and stable economic relationships.

Clarke (2007, p. 181) states another characteristic of the Germanic model, that is, weak rights for minority shareholders. The protection of investors is low and often the creditor rights are emphasized over shareholder rights. Furthermore, contrary to Anglo-American governance system, the employees have rights to be involved in firm decision-making and strategy development processes having the seats in supervisory board. For example, in Germany, representation of employees on the supervisory board termed co-determination

¹⁵ Pyramid structure allows an entrepreneur at the top of the pyramid to control a large set of assets (Clarke 2007, p. 186).

is mandatory (Denis and McConnell 2003, p. 8). One rather specific feature of the Germanic model is a two-tier board structure, that is, the board consists of supervisory board and executive board. German law requires that one-third to one-half of the supervisory board be elected by employees; the remaining members are elected by shareholders (Rubach and Sebora 1998, p. 176). This all is the reflection of cultural and social attitudes which are based on cooperation rather than individualism.

Maher and Andersson (1999, pp. 24–25) point out several advantages and disadvantages of Germanic governance model. The high level of ownership concentration can be regarded as an advantage of this system because controlling blockholders and majority shareholders have both the incentive and the power to monitor management. Also, it encourages more long-term relationships and commitment amongst stakeholders which provide incentives to make more investments into firm-specific assets. However, if ownership and voting power is concentrated, the possibility that large blockholders or majority shareholders collude with management at the expense of small shareholders might become the issue. This problem is very acute when small investors do not have enough legal rights. Thus, the main conflict in Germanic model arises between controlling shareholders (or blockholders) and outside minority shareholders, that is there is a strong antagonism – “strong voting blockholders, weak minority owners” or “weak managers, weak minority owners, strong majority owners”.

Latin countries’ model of corporate governance represents mainly ‘entrepreneurial capitalism’ and ‘referenced shareholding’ pattern which applies to socially corrected market model. Just like the Germanic model, this model stresses the stability and cooperation, and therefore, is also often referred to as ‘insider model’ (Franks and Mayer 1995) or ‘network-oriented model’ (Keenan and Aggestam 2001, p. 265). This model describes the corporate governance systems in France, Italy, Spain and Belgium. The concept of the firm in Latin model lies somewhere in between the instrumental, Anglo-American view and the institutional, Germanic view, but is closer to the latter (Weimer and Pape 1999, p. 158).

Similarly to Germanic model, the concentration of ownership in Latin countries is high. However, the shares by financial institutions are the smallest in Europe, that is, banks are not involved directly through large ownership (Clarke 2007, p. 158–186). In some extent, the banks shareholdings are important in France and Spain, but as in the USA, Italian banks are not allowed to hold securities on their own behalf, and also in Belgium there are legal requirements towards preventing it (Weimer and Pape 1999, p. 159). In the Latin model, the majority of shares are owned by non-financial enterprises, who own each other’s shares in a circular relationship. In general, this model is characterized by cross-shareholdings (very common in France) and pyramidal structures (widespread in Italy) (Clarke 2007, p. 185–186), but also government control (used both in France and Italy) and family control (widely in Italy, but also in Belgium) (Weimer and Pape 1999, p. 159) are presented.

The role of stock markets in the Latin countries is small and capital markets are poorly developed. Therefore, there is no active market for corporate control, which leaves to large investors or blockholders the power to monitor management, often, with ignoring the interests of minority shareholders (Clarke 2007, p. 173). One specific feature of French governance system is that they give *President Directeur-general* almost absolute power, which is more of the lines of French traditions of strong and centralised leadership (Rehman 2004, p. 9). This makes French system somewhat similar to Anglo-American system, where the power is concentrated to one person. Still, the shareholders in Latin model are more influential than in Germanic model since their sovereignty is viewed as an important concept, but their influence is not as decisive as in the Anglo-American system.

Altogether, it seems that long-term relationships are encouraged also in Latin model, just like in Germanic model. The advantages and disadvantages of this model are rather similar to Germanic model, as the system is characterised by high ownership concentration and prevailing power of blockholders. As referred by Clarke: “‘weak managers, strong blockholders and unprotected minority shareholders’ summarises the Italian (read: Latin) corporate reality” (Clarke 2007, p. 186).

Finally, a brief overview of *Japanese model* of corporate governance is given as it is usually described as a special case. Japanese model is most influenced by its culture, such as the sense of ‘family’ and the importance of ‘achieving consensus.’ The concept of the firm is institutional where the presence of inter-corporate networks prevails. The employees, shareholders and government are viewed as salient stakeholders who can affect corporate policy. However, their role is mostly cultural stating the tradition of familism, long-term commitment to the keiretsu¹⁶ and strong monitoring systems (Weimer and Pape 1999, p. 160–161). Thus, this model is especially oriented towards stakeholder approach.

Japanese model is characterized similarly to German model by concentrated ownership with strong cross-shareholdings and influence of banks typical to keiretsus. However, the level of ownership concentration is lower than in Germany. This is explained by well-developed Japanese financial markets, especially stock markets, which facilitate access to external sources of capital for firms. (Miguel *et al.* 2005, p. 79) Banks and other institutional investors usually play minor disciplinary role in providing debt financing, own equity, or placing bank executives in top management positions (Rubach and Sebora 1998, p. 174). Nevertheless, the market for corporate control is virtually absent in Japan due to the stability of inter-corporate shareholdings (Miguel *et al.* 2005, p. 80) and contradiction with their cultural tradition – consensus (Weimer and Pape 1999, p. 161). The main characteristics of corporate governance systems discussed above are summarised in Table 3.

¹⁶ *Keiretsus* are groups of Japanese firms tied together through reciprocal shareholdings, credit relations, trading relations, and interlocking directorships (Aguilera 2003, p. 27).

Table 3. Taxonomy of corporate governance systems

Model	Shareholder or outsider Market-oriented	Bank-oriented	Stakeholder or insider Network-oriented
Country group	Anglo-America	Germanic system	Latin system
Country(ies)	USA, UK, Canada, Australia	Germany, Netherlands, Switzerland, Sweden, Austria, Denmark, Norway, Finland	France, Italy, Spain, Belgium
Concept of firm	Instrumental, shareholder-oriented	Institutional	Institutional
Board system	One-tier (executive and non-executive board)	Two-tier (executive and supervisory board)	Optional (France), in general one-tier
Salient stakeholders	Shareholders	Industrial banks (Germany), employees, in general oligarchic group	Financial holdings, the government, families, in general oligarchic group
Importance of stock market in the national economy	High	Moderate/high	Moderate
Active external market for corporate control	Yes	No	No
Ownership concentration	Low	Moderate/high	High
Performance-dependant executive compensation	High	Low	Moderate
Time horizon of economic relationships	Short term	Long term	Long term
			Japan
			Japan system
			Board of directors, office of representative directors; office of auditors; <i>de facto</i> one-tier
			City banks, other financial institutions, employees, in general oligarchic group
			High
			No
			Low/moderate
			Low
			Long term

Source: adapted from Weimer and Pape 1999, p. 154.

To conclude, the governance problems in different corporate governance systems differ. The agency problem is the primary concern in Anglo-American corporate governance systems. In Continental European and Japanese corporate governance systems, the problems between block-holders and minority shareholders mainly need solving. Differences between ownership structures across countries are explained by several institutional factors. If financial markets are well-developed, the corporate control market is active and the legal system provides strong investors' protection, then the ownership structures tend to be highly dispersed. If the opposite is true, the ownership structures are mostly very concentrated. However, each system has its advantages and disadvantages, and one can not talk about the one and best corporate governance system.

New emerging ownership structures in Central and East European countries

Development of corporate governance systems in CEE¹⁷ countries has been rather different from western European governance systems discussed earlier. The countries in CEE have adapted remarkably different policies and followed different development strategies. During the last decade and a half, the rich body of literature¹⁸ studying the general and country specific features of corporate governance in CEE has evolved and grows substantially each year. Based on this literature, it is possible to point out some specific features of corporate governance systems only common to CEE economies. As follows below, the general description of these features and reasons behind such developments will be discussed.

The development of corporate governance systems in CEE has been affected as much as by historical, economic, legal and cultural factors also largely by political factors (see Appendix 4 for main privatisation objectives in CEE). Governments' different approaches to privatisation have created large differences in ownership structures. However, the countries had similar starting point as before 1989 the companies were mainly owned by state, although there were differences between the countries¹⁹. Prevailing state ownership meant that

¹⁷ In this dissertation CEE countries refer to the transition countries in the first wave of EU enlargement, that is Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovenia, and Slovakia.

¹⁸ For general studies on corporate governance in CEE, see, for example, Berglöf and Pajuste 2003, 2005; Berglöf and Thadden 1999; Crotty and Jobome 2004; Estrin and Wright 1999; Filatotchev *et al.* 2003; Gibson 2002; Hashi 2003; Jones 2004; McGee and Preobragenskaya 2004; Pučko 2005; Rosenbaum *et al.* 2000; Vliegenthart 2006. For country specific studies see, for example, Claessens *et al.* 1997; Gregorič *et al.* 2001; Grosfeld and Hashi 2003; McMaster 2001; Mygind 2000; Wright *et al.* 1997.

¹⁹ In Poland and Hungary, far-reaching property rights reforms had already taken place in the time before the start of the transition period. Firms had become more autonomous and employees (Poland) and managers (Hungary) had secured rights of decision making and co-determination. In Czech Republic, almost all enterprises were state-owned and coordinated through a system of strict central planning. (Süß 2000, p. 51) This was the case also in the Baltic countries. In the former Yugoslavia all economic activity was organized on the basis of direct self-management with high workers' participation since 1950 (Lavigne 1999, p. 7).

the key control rights remained within the economic administration and party structures which were in turn supervised by the Communist party structures (Mickiewicz 2005, p. 74). Thus, there was not any need for corporate governance whilst everything, that is companies' management, product and labour markets, was regulated and controlled by state authorities. Therefore, one of the most important and needed tasks for transition countries was to create effective corporate governance systems. This needed to be done from scratch starting with creation of a basic company law, elaborating the financial sector framework and implementing a market structure which allows good corporate governance. The first step towards it was to transfer assets of the state enterprises to the hands of new private owners, that is, the privatisation of former state-owned enterprises and development of institutional structures needed to be undertaken.

Central and East European countries used very different ways to privatise their enterprises. In general, there were used three privatisation methods: 1) direct sales of state property either to domestic or foreign investor, 2) management and employee buy-outs (MEBOs), and 3) free distribution through the voucher or a combination of these strategies. Each country used the mixture of these methods. However, it is possible to distinguish the dominant privatisation method in each country.

The Czech Republic used voucher privatisation as the most important approach and, at the later stage, also direct sales where insiders were favoured. The mechanism behind the voucher scheme was that for a fixed fee any citizen could purchase a voucher booklet and invest it in a maximum of ten firms or through Investment Privatisation Funds (McMaster 2001, p. 6–7).

Estonia²⁰ used the direct sales method for privatising companies. In the early stage of privatisation, enterprises were sold to former managers and employees of state-owned companies, but this policy was quickly changed and priority was given to strategic core investors, especially foreign investors (Jones and Mygind 1998, p. 16). Hungary's privatisation also relied upon sales rather than free distribution of state assets (Canning and Hare 1996, p. 5–6, 38). They used gradual case-by-case approach with special emphasis on large strategic foreign investors. However, for a short period, they put also domestic investors into the focus of privatisation which was a basis for MEBOs (Galgóczy 2001, p. 47).

In Latvia, similar to Estonia, the early years of privatisation gave some advantages for insiders, especially to employees (Jones and Mygind 1998, p. 26). The main method for selling the large enterprises was direct sales, but in Latvia most of this sale was to domestic outsiders and the role of foreign investors was not so extensive as in Hungary and Estonia. Lithuanian privatisation programme had very big emphasis on employee ownership (Jones and Mygind 1998, p. 34). They used voucher privatisation which made it possible for employees to obtain a considerable part of their ownership in large enterprises.

²⁰ A more detailed overview of Estonian privatisation will be given in subchapter 2.1.1

In Poland, two main privatisation methods were indirect privatisation through corporatisation and direct privatisation via liquidation (Baltowski and Mickiewicz 2000, p. 436–440). Indirect privatisation included two options where joint stock enterprises' shares were either sold to private investors (so-called capital method) or distributed among 15 National Investment Funds (mass privatisation programme). Direct privatisation involved the sales of small and medium-sized enterprises' assets either to its employees or domestic or foreign investors (MEBOs in reality). Slovak Republic started with voucher privatisation, but changed it later to the direct sales (McMaster 2001, p. 3).

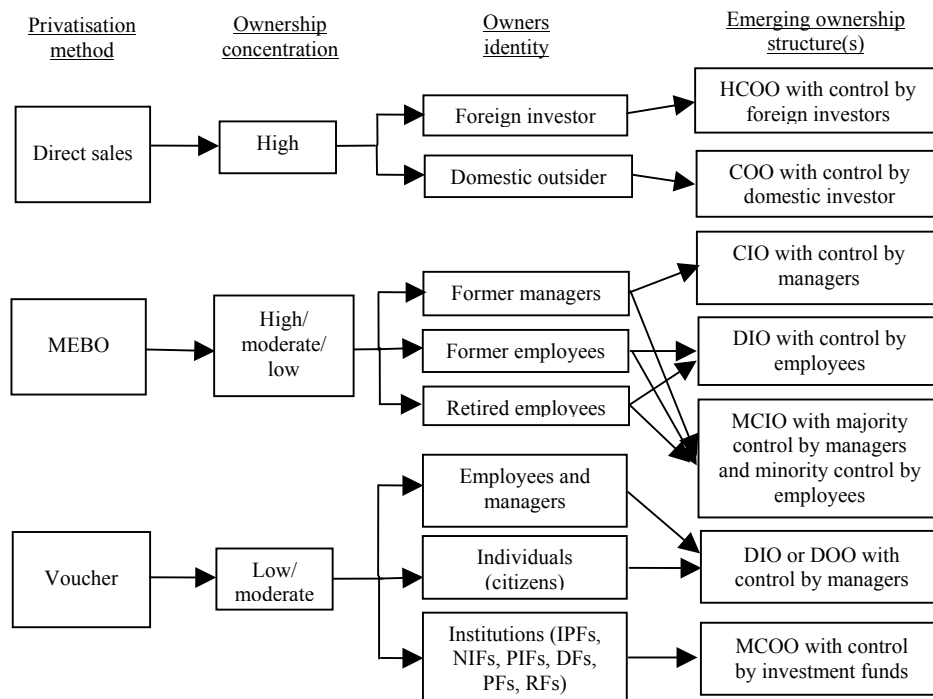
Finally, Slovenia applied a gradualist privatisation approach based on mass privatisation which led to privatisation investment funds, state funds (Development Fund, National Pension Fund, Restitution Fund) and insiders (workers, managers, retired employees, etc) being the largest shareholders of the companies (Gregorič *et al.* 2001, p. 2). For summary of primary and secondary methods applied by countries to privatise medium and large enterprises, see Appendix 5.

In terms of ownership concentration, these methods lead to different outcomes. Vliegenthart (2006, p. 6) states that direct sales gives rise to highly concentrated ownership, MEBOs can result either dispersed or concentrated ownership depending on to what extent employees are being turned into shareholders of their enterprises; and voucher (or often called also mass) privatisation leads to a dispersion of ownership. Still, it is important to mention that voucher privatisation can take a variety of forms. It can take a form of free grants of shares to workers or managers in their own enterprises (almost all countries). It can also take a form of the distribution of vouchers to the whole population with the subsequent exchange of these vouchers for shares in state enterprises or investment funds (Czech Republic, Lithuania and Russia). Finally, it may involve a direct allocation of shares to mutual funds which is followed by distribution of shares to the population (Poland) (Boycko *et al.* 1994). Thus, in general, voucher privatisation creates diffused ownership with the exception of state enterprises or investment funds, for example in the Czech Republic, which were concentrated.

According to discussion above, stated privatisation methods, with the exception of Estonia, Hungary and Latvia, produced rather dispersed ownership structures. As figures given by Andreff (2006, p. 26) indicate, by mid-1990s, only 13 percent of post-socialist economies enterprises had been privatised through direct assets sale, 43 percent through MEBOs, 24 percent through mass (voucher) privatisation and 20 per cent by other methods. Figure 4 summarizes the main types of ownership structures evolved from different privatisation strategies in transition economies.

In the words of Pučko (2005, p. 5), privatisation in CEE countries created many small private owners who acquired ownership by not paying the real market price for their shares. This did not make them feel like real owners. Hence, it can be expected that the shares of these small owners will be taken

over by larger, more strategic investors, thus, the concentration of ownership is likely to be taken place in CEE countries. Indeed, the study of 10 CEE countries by Berglöf and Pajuste (2003, p. 267) shows that the concentration of ownership in these countries is increasing; often exceeding continental European levels (see Appendix 6). A similar conclusion was arrived at Grosfeld and Hashi (2004) when studying the emergence of large shareholders in Poland and the Czech Republic



Notes: HCOO – highly concentrated outsider ownership, COO – concentrated outsider ownership, CIO – concentrated insider ownership, DIO – diffused insider ownership, DOO – diffused outsider ownership, MCIO – moderately concentrated insider ownership, MCOO – moderately concentrated outsider ownership, IPF – Investment Privatisation Fund, NIF – National Investment Fund, PIF – Privatisation Investment Fund, DF – Development Fund, PR – Pension Fund, RF –restitution Fund.

Figure 4. Emerging ownership structures after privatisation in CEE countries (compiled by the author based on the discussion above).

There are several reasons that can explain the increasing level of ownership concentration in CEE countries. In the beginning of transition, there existed prevalent institutional weaknesses and poorly functioning capital markets (Crotty and Jobome 2004, p. 15). Stock markets were established at different points of transition process and their market capitalization was relatively small on a world scale even in the largest stock exchanges (Berglöf and Pajuste 2003,

p. 272). Thus, market for corporate control is unlikely important in these countries. As pointed out by Shleifer and Vishny (1997, p. 756), hostile takeovers as corporate governance mechanism are common to produce dispersed shareholdings. However, takeovers require a liquid capital market. Similarly, the development of legal framework for corporate governance has not been as fast and effective as expected. Hashi (2003) concludes based on his study that although legal provisions are fairly good in CEE economies, the implementation of legal framework is only satisfactory, amongst what the rules to protect minority owners are not observed fully. Thus, the protection of investors (especially small investors) is still rather weak. Shleifer and Vishny state that “if legal protection does not give enough control rights to small investors to induce them to part with their money, then perhaps investors can get more effective control right by being large” (Shleifer and Vishny 1997, p. 753). Therefore, the main corporate governance problem in CEE economies, as stated by Berglöf and Pajuste (2003, p. 296), is the controlling shareholders and minority investors alike in Continental Europe systems. In the earlier study, Berglöf and Thadden (1999, p. 20) summarize this problem as “*Omnipotent Managers, Little Resistance*”, whilst most of the firms in CEE are still owner-managed.

Hence, could we talk about one single CEE model of corporate governance? The answer is probably no as it was seen from the discussion above, CEE have used very different strategies on their way to market economy. However, Andreff suggests that in the context of poorly developed capital markets the privatisation has generated four corporate governance models (Andreff 2006, p. 42–45):

1. First is the model of *foreign corporate control* or ‘Hungarian’ model. This is common for Hungary and Estonia where a great bulk of firms are governed by foreign outsiders. Such a corporate structure is typically strong and capitalist.
2. Second is the model of *banking and managerial control* or the ‘Czech’ model. Here the firms are monitored by their managers who are supervised by the privatisation funds’ managers. The managers of those banks, which have set up the former privatisation funds, supervise holdings’ managers, in turn. Since most of these banks have been privatised through take-overs and acquisitions by foreign banks, this model converges towards the previous foreign corporate control model. This model is similar to Germanic model, because of cross ownership, managerial entrenchment²¹ and caring of stakeholders’ interests.
3. Third is the model of *control by an outsider-insider coalition* or ‘oligarchic-managerial’ model. In this model, a great number of firms are under the inner control of insiders while others are integrated into 100–200 financial-

²¹ Managerial entrenchment is a situation where a manager who controls a substantial fraction of the firm’s equity may have enough voting power or influence to guarantee his employment with the firm at an attractive salary (Maher and Andersson 1999, p. 24).

industrial groups and holdings governed by new tycoons, financial oligarchs and banks. This model is typical in Russia and several Commonwealth of Independent States (CIS) countries.

4. Finally, fourth, mixed model based on an *'employee and start up' control* or the 'Polish' model. This model describes the Polish privatisation where mass privatisation was postponed in 1996 and the vacuum as a consequence of that will be soon filled by small privatisation and MEBOs in the form of 'capital privatisation' and 'liquidation privatisation'; both have enabled to create new start ups and an inner supervision of the firm by its employees.

Andreff then concludes that first, second and fourth model exhibit the convergence towards Central Eastern European model of corporate governance that is characterised by both an important foreign stake in the ownership of – and foreign control of – big businesses and by single bosses monitoring their own small and medium-sized enterprises. (Andreff 2006, p. 46)

In summary, even though the development of corporate governance systems in western countries is mainly affected by historical, economic, legal and cultural factors, the development of ownership structures in CEE countries have been most influenced by privatisation strategies applied by the governments. In addition, the slow institutional development, that is, poor capital markets and weak legal framework, have had a considerable impact on these developments. The changing level of ownership concentration indicates that ownership structures are dynamic and evolve over the period of time. Thus, the corporate ownership structures emerged after privatisation are largely initial and one might expect that secondary ownership change in the post-privatisation period will take place. The features of secondary ownership changes and determinants of these changes in CEE countries will be studied in more detail in the next chapters.

1.2. Contribution of the literature on ownership structure changes and enterprise restructuring in transition economies

1.2.1. The determinants of ownership structures and their dynamics

Ownership types and their characteristics in transition economies

From the previous subchapter, one could see that ownership structures in CEE countries can develop in many different ways depending on the applied privatisation method. However, often the choice of privatisation strategy followed rather the political than economic objectives of privatisation. Therefore, the imposed ownership structures after privatisation are not always desired from economic point of view and the further changes in ownership structures will take place. However, whilst the (post-privatisation) ownership structures are heterogeneous in their nature, the changes in ownership structures might not only be forced by external factors, but also by firm-specific, that is

endogenous, factors. This raises a question of the determinants of ownership structures and changes in CEE economies. The purpose of this subchapter is to find out what are the main ownership typologies, determinants of ownership structures and post-privatisation ownership structure changes in the countries that undergo the transition.

Emerging ownership structures from privatisation are rather complex, presented by several types of owners. As it was pointed out in the introduction of the dissertation, the ownership structures can be characterised by the concentration of ownership and the identity of shareholders. In the transition literature, first, the papers distinguishing the state and private ownership can be found (see, for example, Brown and Earle 2000, Earle 1998, Frydman *et al.* 1999, Jones 1998). Later, the difference between outsiders, insiders and state ownership is made. As pointed out by Djankov and Murrell (2002), the studies usually distinguish between foreigners, insiders and state (see, for example, Smith *et al.* 1997) or managers and outsiders (see, for example, Claessens and Djankov 1999). However, Frydman *et al.* (1999) examine foreigners, domestic financial firms, domestic non-financial firms, domestic individuals, the state (in privatised firms), the state (in non-privatised firms), managers and workers. This is considered by Djankov and Murrell (2002, p. 28) as an unusually comprehensive list of owners studied in one paper. Thus, in examining types of ownership, no uniform approach in the literature exists.

According to Jones and Mygind (1998), a major theme in the literature of the changes in ownership is whether enterprises are owned by insiders or by outsiders. They explain that insiders include all the people working in the enterprise where usually two groups of insiders are distinguished: managers and other employees. For outsiders, the key distinction is between state owners and others who may be divided into domestic private owners and foreign owners. The division of these ownership types is illustrated in Figure 5.

INSIDERS	Managers	
	Other employees	owners/non-owners, distribution
OUTSIDERS	Domestic private	persons
		institutions, companies
	Foreign	
	State	government local municipalities

Figure 5. Typology of owners (Source: Jones and Mygind 1998, p. 9)

As stated by Earle *et al.* (1996), ownership types can be distinguished also according to majority or dominant ownership stake. In the first case, the assumption is that if a group owns the majority of the equity, it will also

effectively control the company. However, according to Earle *et al.* (1996, p. 4), this might be misleading, as in practice the largest group of owners may have highly diversified holdings while minority interests may be highly concentrated, giving the latter effective control. This might happen when enterprises are classified as worker-owned, but may actually be controlled by managers. In the case of dominant ownership, stake group owns a larger part of the shares than other groups. Jones and Mygind (1998, p. 8) explain that with this approach one can not be sure that this dominant group in fact controls the company. This is because a dominant group might be rather small and it will be possible for other groups to form an alliance and effectively control the company. Therefore, they suggest that using dominant ownership as an ownership type will only be relevant if the number of groups in the analysis is rather low. They also state that it is rather likely that some certain groups will form alliances and then it will be useful to add these groups together. Doing it this way enables the division of groups accordingly into private or state-dominated, or to distinguish insiders' or outsiders' alliances (as it is shown in Figure 5). In turn, these alliances could be split according to which partners are dominating the alliance. Therefore, Jones and Mygind (*Ibid.*, p. 9) argue that majority ownership division might not always be the best solution, as in a large number of enterprises there might not be one group with a majority. Their typology for division in ownership groups is illustrated in Appendix 7.

Thus, the ownership structure can be seen also as a set of different ownership groups which is determined by their concentration and identity. From the perspective of resource dependence approach, this means that each ownership group has specific features and resources they contribute to the enterprise. Similarly, from the perspective of stakeholder approach, each ownership group can be seen as a stakeholder with its own interests and rights²². Therefore, before starting to study the factors which determine the changes in ownership, it is important to be aware of some specific features that are common to certain ownership types.

In the literature, one can find several comparative studies on performance differences between foreign-owned firms and domestically-owned firms, often studied as the role of foreign direct investments in transition enterprises (see, for example, Bellak 1998; Hunya 1998, 2000; McMillan 1993; Pfaffermayr and Bellak 2002). Rather extensive is also research on employee ownership and its different dimensions, whilst employee ownership was widespread in many transition countries after privatisation (see, for example, Beatty and Schachter 2002; Bogetic 1993; Buck *et al.* 1999; Kalmi 2000, 2003, 2004; Kruse and Blasi 1995; Logue *et al.* 1998; Mygind 1997). Management (or often referred to as managerial) ownership studies have received a bit less attention than employee ownership studies (see, for example, Claessens and Djankov 1997, Simoneti and Gregoric 2004). Research on institutional investors explores the

²² A more detailed description of resource dependence and stakeholder approach was given in subchapter 1.1.1.

experience of mass privatisation and banking (very often referred to as foreign) ownership efficiency (see, for example, Bonin *et al.* 2005, Gillan and Starks 2003, Rossi *et al.* 2004). Usually these studies are focused on efficiency aspects of different ownership types. It is difficult to find studies that would provide comparative overview of different ownership types from the perspective of their resources and interests which, on the other hand, might be helpful in understanding why efficiency arguments of different ownership types are often diverging.

Still, study by Mygind (2000/2001) provides rather detailed and comprehensive comparison of factors behind the governance structures by specifying which interests, resources, and market conditions and regulations favour ownership by specific stakeholders. In his study, Mygind (*Ibid.*, p. 323–331) explains under what conditions employees, managers, suppliers of capital (venture capitalists, portfolio capital and debt capital by banks), strategic investors (foreign investors) and government will aspire to ownership rights. Starting with employees and managers, he states that employees can have an interest in governing themselves when the risk of losing the job is high either because of high unemployment, low mobility of labour, low unemployment benefit or high specific human skills. Still, the takeover might realise only when capital requirements per worker are low as employees often have low savings and may face difficulties to obtain loans from banks. On the other hand, there can be strong tendency for employee ownership in profitable enterprise with core owners among a group of highly educated employees who have better understanding of the information about the enterprises. In the words of Hansmann (1988), it is important for governing the firm effectively that the group of employees is homogenous because then they have stronger position to define the strategy and monitor the managers. The case of manager ownership is very similar to employee ownership as managers also have some specific human capital, high desire for self-governance, limited access to capital and access to firm-specific information. However, the manager has stronger position in terms of governance skills. The development of manager ownership critically depends on the alternative possibilities for non-ownership market contracts that fulfil the interests of the manager and/or contracts giving outside or employee owners enough monitoring abilities.

Amongst the suppliers of capital, Mygind (2000/2001, p. 327–329) distinguishes between venture capitalists, portfolio capital and debt-capital. Venture capitalists are an important source of risk capital that are keen to invest into new and existing enterprises in need of fresh capital for restructuring or new projects. They have access to high risk capital and professional governance skills. The venture capitalists are dependent on transparent and effective equity markets where they can acquire information about prices and performance of enterprises and implement the actual takeover. Portfolio capital is usually in the form of minority shareholdings which is invested by individuals, pension funds or other investment funds. They are normally passive owners. However,

investments funds may sometimes own bigger shares and take a more active position. The share of portfolio capital depends on the general investment pattern of the population and state regulations of equity markets. Debt capital is also passive capital. However, sometimes banks may take over the assets given as collateral and in this way acquire direct ownership. Banks' ownership is an important feature of the Germanic corporate governance system (see subchapter 1.1.2). Strategic investors have also good access to risk capital and professional governance. In transition economies, they are usually foreign investors. Still, cultural differences between foreign managers and local employees may imply some governance problems at lower levels in the company. Finally, governments as the representatives of the peoples' interests may interfere with the enterprise when there are strong externalities that can not be internalised through contracting. State and local government usually do not face access to capital as a major barrier, although tight budget constraint may restrict it. Still, state ownership faces several problems such as weak incentives to monitor managers and governance problems between the manager of enterprises and the state bureaucracy as well as inside the bureaucracy. For comparative table of factors favouring ownership by different stakeholders see Appendix 8.

The determinants of ownership structures

There has not been given much attention on the determinants of ownership structures and their changes in the comparative economic literature. Based on existing literature, one can distinguish between two types of studies: (a) studies that try to find why certain firms have larger owners and others dispersed ownership structure, that is determinants of ownership concentration and (b) studies that try to explain what determines the changes in ownership structures and what are the specific factors influencing the choice of ownership structures. The studies on the determinants of ownership concentration mainly consider the US, the UK or other more developed countries starting with the work done by Demsetz and Lehn (1985), and followed by Himmelberg *et al.* (1999) and Qu (2004). The research on determinants of ownership changes in terms of expected pace of change in ownership patterns or the specific causes of variation in ownership structures is more prevalent in transition literature as a consequence of widespread privatisation taken place in CEE countries in 1990s (see Aghion and Blanchard 1998; Earle and Estrin 1997; Filatotchev *et al.* 1996a; Jones *et al.* 2005; Jones and Mygind 1999, 2005). Table 4 summarizes different firm-level and country-level determinants of ownership structures.

Demsetz and Lehn (1985, p. 1156–1162) were amongst first arguing that ownership concentration in a firm is endogenous depending on various firm-specific variables, such as value-maximizing size of the firm, profit potential from exercising more effective control, systematic regulation and amenity potential of firms. They propose that the structure of corporate ownership varies systematically in ways that are consistent with value maximization.

Table 4. Summary of the determinants of ownership structures

Determinants of ownership concentration	Determinants of ownership changes
<i>Firm-specific determinants</i>	
<ul style="list-style-type: none"> • Firm size (-) • Firm's rate of return (+)* • Instability of the firm's rate of return (-)* • Systematic industry regulation (-) • Firm-level investor protection (- if auditing is exogenous/+ -if auditing is endogenous) • Different forms of stock ownership (+ - if preferred stocks) • Cost of debt financing (+ - if low) 	<ul style="list-style-type: none"> • Firm size (I=>O; E=>M) • Firm's rate of return (O=>I) • Instability of the firm's rate of return (I=>O) • Financing requirements (I=>O) • Specificity of inputs (specific capital => O; specific human capital => E) • Industry effect (>I in stable, >O in unstable industries) • Large minority shareholdings (mO=>mI or mI=>mO) • Firm performance (I=>O or O=>I)
<i>Country-specific determinants</i>	
<ul style="list-style-type: none"> • Legal environment (- if investor protection is high) • Development of the stock market (- if markets are well developed) 	<ul style="list-style-type: none"> • Macroeconomic cycles (O=>I if recession, I=>O if high growth) • Legal environment (depends on specific barriers or advantages to different forms of ownership) • Development of the stock market and banking sector (banks as owners) • Social relations and culture (historical traditions, cultural values, preferences of the stakeholders)

Notes: + – positively related to ownership concentration, - – negatively related to ownership concentration, * – Demsetz and Lehn (1985) reported opposite relationships, I=>O or O =>I or E=>M – if the level of specific factor is high then the change from insider/outsider/employee to outsider/insider/manager ownership is expected, mO=>mI or mI=>mO – the change from majority outsider/insider ownership to majority insider/outsider ownership is expected.

Source: Demsetz and Lehn 1985, pp. 1156–1162; Earle and Estrin 1997; Jones *et al.* 2005, pp. 85–87; Jones and Mygind 1999, pp. 424–425; Jones and Mygind 2005, pp. 255–257; Qu 2004, pp. 225–227 (compiled by the author).

According to Demsetz and Lehn (1985), ownership concentration can be expected to decrease with firm size, that is the larger the firm, the larger the amount that has to be invested in the firm. Also, the instability of profit rate can determine the concentration of ownership. However, systematic regulation reduces ownership concentration more than profit instability as it restricts the options available to owners and provides some subsidized monitoring and disciplining of the management of regulated firms. On the other hand, firm-

specific risk increases the ownership concentration. Firm's control potential²³ can be directly associated with the noisiness of the environment which it operates. For example, the noisier a firm's environment, the greater the payoff to owners in maintaining tighter control.

Himmelberg *et al.* (1999, p. 353, 364–365) extend the study by Demsetz and Lehn (1985) and show that managerial ownership is explained by key variables in the contracting environment in ways consistent with the predictions for principal-agent models. They argue that the scope for discretionary spending and managerial risk aversion is also an important firm-specific determinant of managerial ownership. However, Qu (2004, p. 223) argues that it is critical to make a distinction between ownership concentration and managerial ownership. This is because ownership concentration measures how a firm's ownership is concentrated on its big shareholders, while managerial ownership is only an indicator of the interests of a potential subset of the controllers. Therefore, he follows Demsetz and Lehn (1985) and states that corporate ownership concentration is endogenized in ways that are consistent with both value maximization and predictions of the agency theory.

Qu (2004, p. 225) proposes that any variable that affects the marginal alignment effect²⁴ and/or the marginal risk-aversion effect will have an impact on corporate ownership concentration. If the marginal alignment effect increases relative to the marginal risk-aversion effect, then ownership concentration increases. He suggests that also firm-level investor protection, different forms of stock ownership and costs of debt financing might be important determinants of ownership concentration. For example, in firms under better auditing, the controllers are better monitored, and the need to align the controllers' interest becomes less important. However, this is valid only under the assumption that the firm's auditing practice is an exogenous variable. The issuance of preferred stocks might lead to high ownership concentration as it usually allows big holders of a common firm's stocks to maintain their control over the firm. Also, if debt financing is less costly for a firm, then the firm relies less on equity financing, thus, ownership becomes less diversified. Qu expands the conventional approach about the determinants of ownership structure within one country to the multi-country context by measuring also country characteristics. Some of his findings are in consistence with Demsetz and Lehn (1985), but some are not. For instance, the rate of return is found to be positively related to ownership concentration and instability of the profit rate had a negative relation with ownership concentration. Demsetz and Lehn reached opposite results. Thus, there is no consensus in the literature how ownership structure is endogenized in a firm.

²³ Control potential is the wealth gain achievable through more effective monitoring of managerial performance by a firm's owners (Demsetz and Lehn 1985, p. 1158).

²⁴ Managerial alignment effect is that the controllers' interests are now aligned to the firm value and this makes the controllers' interests consistent with other investors. This effect helps to protect investors from agency problem. (Qu 2004, p. 224)

According to Jones and Mygind (1999, p. 424), studies on the determinants of ownership structures and their changes can be divided into formal and informal. In the formal literature, Aghion and Blanchard (1998, p. 88) have argued that to undertake strategic restructuring, the concentrated ownership by outsiders is required. This is because they have ability to raise necessary amount of capital and pay for expertise. Still, the development of insider ownership after privatisation is more likely because of the political constraints. Therefore, the fear of unemployment by employee shareholders provides reason for the existence of substantial inertia in employee ownership (Jones and Mygind 1999, p. 424). Instead, informal literature considers specific factors influencing the choice of ownership and its changes. The determinants of ownership changes explain how particular firm characteristics may make certain firms more attractive to different types of investors. Many of these factors are similar to the determinants of ownership concentration discussed above. Moreover, these factors can also be divided into firm-specific and country-specific determinants.

Starting with firm level determinants, one of the predictions is that outsiders are more likely than insiders to invest in large firms, as are managers compared to employees and institutional investors compared to individual investors (Jones and Mygind 1999, p. 424). The larger the firm is, the higher the capital and investment requirements. For reasons of risk diversification, it is better to delegate ownership to risk neutral investors (Jones *et al.* 2005, p. 85). As stated by Jones *et al.* (2005, p. 86), when the size of the workforce increases, the employees would benefit from delegating ownership to a central monitor, that is higher employment levels favour managerial ownership over employee ownership. Likewise, the financial requirements of the firm set limits to owners who do not have an access to new capital. Thus, outsiders are more likely to invest in firms with large capital-labour ratios than insiders. In the words of Jones and Mygind (1999, p. 425), financial requirements play a role in triggering ownership changes, in particular, when insiders recognize that new financial capital is required. As pointed out by Filatotchev *et al.* (1996a), lacking the ability to borrow from banks, liquidity constrained insiders may have no resource but to issue new shares to outsider, thus producing a change in majority ownership.

In the same line of insiders' liquidity constraints as well as greater risk aversion, it is argued that insider ownership should be expected in firms and industries where business is more stable with reliable income flows and high profits (Jones *et al.* 2005, p. 86). This is because insiders might favour current consumption over risky future consumption, although they are expected to take a longer-term view and forego current profits in the expectation of higher profits in the future.

Jones and Mygind (2005, p. 255–256) state that specificity of different inputs that is closely related also to transactions costs for outsider investors can be considered relevant firm-specific assets for the choice of ownership structures. They point out that existence of specific capital means a higher dependence on other links in the value chain and the hold-up problem may lead

to a stronger connection to core suppliers or customers with quite concentrated strategic ownership of the company. Also, if human capital is highly specific, the employees have an incentive to take direct control and ownership to limit the risk of losing the job. In accordance with this argument, the new and unproven business ideas with complex human capital can make it very difficult and costly for external investors to receive reliable information about the company.

Finally, the quality of the firm is viewed as an important firm-specific determinant of ownership changes (see Earle and Estrin 1997). The quality of the firm is measured by the previous performance of the firm; including its competitiveness. The performance of the firm is important to all ownership types. Therefore the effect of performance on ownership is considered to be ambiguous.

So far, as the movement from insider to outsider ownership is concerned, Jones *et al.* (2005, p. 86) state that employees are more likely to get a good return by selling shares to outside investors than by selling them internally. In turn, outsider owners are more likely to be interested in well-performing firms, although, sometimes poorly performing firms may have to turn to investors in order to survive. Likewise, firm performance is also crucial in triggering the ownership changes from outsider to insider ownership. Here, Jones *et al.* (2005, p. 86) argue that employee buy-outs are related to underperformance (saving failing firms by making downward wage adjustments and saving their jobs and specific human capital), and management buy-outs to undervaluation of shares (share prices are lower than management's subjective valuation of the firm). However, they also stress the importance of Shleifer and Vishny (1986) block holder argument, which in their words applies to both types of ownership change. That is, the more shares a minority owner holds in a given firm, the less costly it is for that minority owner to take over the company.

There are also several country-specific factors which determine differences in ownership dynamics across countries. According to Jones and Mygind (2005, p. 256–257), at the country level, the change of ownership is influenced by the economic, institutional and cultural environment. They state that if economic performance of enterprises is found to influence the type of ownership, then macroeconomic cycles can also be expected to have an impact on the governance structure. Employee and management buy-outs are considered to be more frequent during recessions because the price of assets and other employment possibilities are low. At the boom periods on stock markets going public give companies a cheaper possibility for raising external finance. The institutional setting in relation to legislation may present specific barriers or provide advantages to different forms of ownership (see descriptions of legislation issues for Anglo-American and Continental European systems in subchapter 1.1.2). The degree of protection of minority owners through legislation and the liquidity and development of the stock markets can determine the diversification of ownership. Also, the development of the banking sector enhances the

possibility of financing through bank-loans and for the role of the banks as owners. Informal social relations and culture, defined as the historical traditions, cultural values, norms and preferences of the stakeholders, can also explain important differences in the governance structure between countries. The best example here is the Japanese corporate governance system (see subchapter 1.1.2).

Ownership dynamics in the context of the life-cycle of the firm and ownership structures' path dependency

Rather recent and new approach in corporate governance literature is to explain the corporate governance developments over the firms' life-cycle stages. For the overview of the recent theoretical and empirical research in this field the book "The Life Cycle of Corporate Governance" edited by Filatotchev and Wright (2005) can be used referred to. However, the research published in this book mainly deals with corporate governance and firm life cycle issues in the context of well developed market economies. The research upon the same issues in transition economies is nearly non-existent. Nevertheless, work done by Jones and Mygind (2005), which is also published in a book edited by Filatotchev and Wright (2005), could be considered as one of the first contributions about these issues in the transition corporate governance literature. For these reasons, this section is mainly based on ideas developed by Filatotchev and Wright (2005) and Jones and Mygind (2005).

As explained in the subchapter 1.1.1 and also pointed out by Filatotchev and Wright (2005, p. 2), from a resource-based perspective, a firms' corporate governance system per se may not be a source of sustained competitive advantage, but some firms may be much more skilled at implementing common governance devices and these skills may be heterogeneously distributed across firms. Therefore, it is important that firms would implement correct governance in a given situation as this may help them to realize the benefits of the resources they control. Bearing that in mind, Filatotchev and Wright state that corporate governance may need to be viewed as a dynamic system that may change as firms evolve over life-cycle stages. They suggest that firms' strategic dynamics and corporate governance changes are interlinked, and the firm's life cycle may go hand in hand with dramatic shifts in its governance system. They describe the changes in organizational development stages through the different combinations of resource diversity and accountability/transparency that define the strategic positioning of an individual firm with respect to its environment (see Appendix 9).

Jones and Mygind (2005) follow the same logic, but describe the stages in the typical life-cycle of a company in relation to the specific stages of the development in the ownership structure (see Appendix 10). In their words, most companies start-up as small entities with few employees, low capital, and low knowledge about the economic potential of the firm. Usually they are started by single proprietors and often owned by the entrepreneur, sometimes with

participation of close relatives and friends. The needed capital is in most cases covered by the founders and by loans with collateral in the entrepreneurs' personal assets. Many small entrepreneurial companies close down during start-up stage, but some of them continue at a stage of early growth. At this stage, company needs more capital investments, knowledge, networks and employees to facilitate further growth. As the company has already some kind of reputation and market experience, the interest of external investors such as banks and other financial institutions will grow. Also, the venture capitalist may supply the capital. The need for extra capital may be spread over several growth stages eventually leading to some diversification of ownership. The latter will happen usually at a later growth stage when the company has developed its potential. Then it may attract a strategic investor or go public. However, sooner or later many companies run into a stage of crisis. This makes new inputs necessary and company faces strong pressure to undertake some restructuring. For that, new external capital and expertise is needed that can only be facilitated through an ownership change. At this stage banks, venture capital and strategic investor again may play an important role.

Based on Jones' and Mygind's (2005) explanations about corporate ownership cycles, it can be argued that changes in ownership are related to several firm-specific factors. However, they also point out that – and the author agrees with them – changing conditions both from inside and outside the enterprise generates changes in ownership. For that reason, one can expect the evolution of specific governance/ownership cycles in firms in transition countries. According to them, to explain changes in ownership in transition firms, four special conditions should be taken into account (see Figure 6).

The first condition is the privatisation process. As also discussion on the different CEE countries' privatisation methods in the previous subchapter (see subchapter 1.1.2 and Figure 4) showed, the different privatisation methods favoured different types of owners. Therefore, the privatisation in transition countries can be seen as a state-governed process where the specific privatisation methods creating specific ownership structures which would not have developed in a market-based system for ownership adjustments. Such kind of developments can be explained by the path dependence evolution of ownership structures (see, for example, Vincensini 2000). However, Jones and Mygind (2005, p. 260) argue that path dependency may create a learning process and institutional development, which may lead to specific paths for subsequent developments in the governance structures. Hence, they expect the occurrence of post-privatisation adjustments which would bring the ownership structure back to a 'normal' equilibrium.

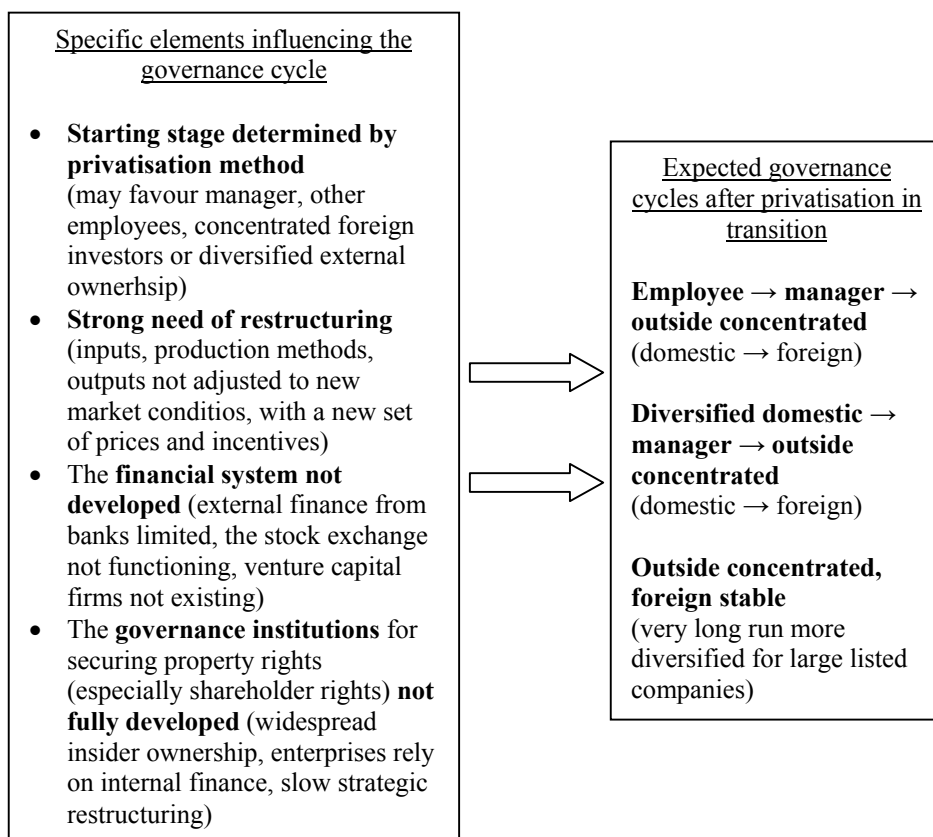


Figure 6. Specific conditions influencing the development of corporate ownership (governance) cycles in transition economies (Source: adapted by the author from Jones and Mygind 2005, p. 260 and p. 262).

A second condition is connected to strong pressure to restructure. Almost all former state-owned enterprises were in a situation of crisis with an acute need of capital, new skills and new networks. According to firms' life cycle approach discussed above, this would lead to a change in ownership, bringing new investors with necessary resources for restructuring.

The last two conditions are referred by Jones and Mygind (2005, p. 261) as the most important features of transition economies, that is the building up a well-functioning market economy and especially developing the necessary institutions required to facilitate the adjustment of governance structures. They explain that in the early stage of transition, the lack of developed institutions favours special types of ownership arrangements. For example, insiders have an advantage in relation to outside owners because the institutions supporting outside ownership such as credible auditing procedures and transparent capital markets are not developed.

Based on these four conditions and arguments about the path dependency of ownership, Jones and Mygind (2005, p. 261–262) develop some specific governance/ownership cycles for the countries in transition. From Figure 6, it can be seen that the first ownership cycle they develop evolves from employee ownership as a consequence of privatisation processes favouring employees. Second ownership cycle grows out from diversified domestic ownership which is the result of public offerings of shares (as well as mass privatisation). Finally, third ownership cycle is starting from concentrated outside ownership as the result of direct sales' privatisation strategy. This ownership cycle is considered to be the most stable cycle in the case of foreign investors' buy-outs.

In the case of two first ownership cycles, ownership is expected to change from employee or diversified domestic outsider to manager ownership. In the first case, it happens because of employees' lack of governance skills, their lack of capital and high risk aversion. In the beginning of transition, managers have strong advantage compared to external investors whilst the institutional development is slow and markets for company shares under developed. For the similar reason, it can be expected that also the initial diversified outside ownership changes to manager ownership. Here, diversified ownership often consisted of small external shareholders who were under strong wealth constraints. Thus, the stronger position of managers will allow taking companies over from diversified external owners. This will be accompanied by an increase in ownership concentration. When the institutional framework becomes more advanced it can be expected that external investors will be in a stronger position and shifts from insider to outsider ownership will occur.

As it was referred above, in some literature, the concept developed by Jones and Mygind (2005) is considered as the institutional path dependence of ownership structures (for developers of this concept see Arthur 1989 and David 1985, 1994). Several authors have used this concept in explaining the institutional change in transition economies and more specifically in the choice of privatisation strategies (see Campbell 1997; Campbell *et al.* 1991, 1996; Federowicz 1997; Hausner *et al.* 1995; North 1994, 1997; Stark 1992). As summarized by Vincensini (2000, p. 11), institutional path dependency is understood as a historical cumulative process of evolution constrained by legacies and influenced by strategic actions leading to possible locked-in but not necessarily inefficient situation. Vincensini (2000) sets up the question: is institutional path dependence a useful concept to analyse the evolution of ownership structures in Central Europe? As a result, she suggests that national ownership trajectories can be seen as the ongoing result of micro-level path dependent processes, having cognitive, political and systemic sources which all interact in this sequence. According to cognitive argument, institutional change in general and of ownership forms in particular displays sensitivity to initial conditions and increasing returns because it builds on existing institutions and knowledge. In terms of political arguments, first, the specific interest groups can contribute shaping the institutional evolution by influencing the elaboration of

formal rules concerning ownership structures. Second, political legacies, contribute also to the path dependent nature of the evolution of ownership structures. Finally, the argument about the coherent economic institutions suggests that the range of emerging ownership forms is constrained by the rest of the institutional framework and that feedback effects will probably appear from ownership structure to the other economic institutions.

Taken together, when studying the emerging ownership patterns and changes in ownership structures in transition countries, it is extremely important to take into account country-specific institutional processes and developments. As was seen already from the previous subchapter, differences in capital market developments and legal frameworks as well as privatisation processes make difference also in corporate ownership structures both in western and CEE countries. The institutional path dependence and path shaping nature of ownership structures helps to explain different ownership evolutions in transition countries not only in the beginning of transition but also in the later transition period. However, in explaining the evolution of initial ownership structures the institutional processes are of utmost importance. In the post-privatisation period when the secondary ownership changes are expected, and which will be strongly influenced by path dependency of ownership structures, the evolution of ownership structures can be determined also by the firm-specific factors accompanied with the interests and resources of different ownership types.

I.2.2. Enterprise restructuring in transition and the role of ownership structures in it

Definition and types of enterprise restructuring

The previous subchapter concentrated mainly on the issues of ownership structures and its changes in transition. In the introduction of the (present) dissertation, it is pointed out that there is also another important dimension to transition that is in the focus of this dissertation, namely the restructuring of enterprises. The aim of this subchapter is to examine the role of ownership structure in the restructuring of enterprises in transition. For that, first, the overview of definitions of enterprise restructuring is given. Then different approaches in determining the types of enterprise restructuring are introduced. Finally, based on the previous empirical research, the relationship between ownership and enterprise restructuring is investigated. Yet, the discussion in the previous subchapter showed that the firm-specific factors including the firm performance affect the changes in ownership structures. However, one can admit that in transition economies the changes in ownership structures, that is, in its concentration and identity, are of vital importance in determining the restructuring of enterprises, in order to improve the efficiency and competitive position of the firm.

In the transition literature, there can be found several studies that document the problems and inefficiencies of socialist model of organization (see Blanchard 1997, p. 45–46; Crum and Goldberg 1998, p. 339; Mickiewicz 2005, Ch. 1). The socialist state firms were too large and highly integrated. Incentives created by central planning and established in “the plan” did not consider the quality of the output or the cost of production. Capital intensity was high compared to firms in West, but technology was typically behind that of firms in the West. Also, there was considerable hoarding of inputs, including labour. Management and operating structures emerged from this model were not configured to operate effectively in a free market. For these reasons, if country desired to transform its economy into a free market system, the restructuring had to occur.

Blanchard (1997) has pointed out that for former state firms to survive not only changes in the structure of ownership, but also changes in the structures and the organisation of their production must take place. According to Brada (2004), the success of transition in East Europe depended to a large extent on the ability of the former state-owned firms in the region to increase the efficiency with which they employed resources and to conform to the dictates of the market. While it is true that macroeconomic stabilization including privatisation is a prerequisite for improved economic performance, the common understanding in the literature is that privatisation alone does not change much in enterprise performance (Ekedahl 1997, p. 366; Estrin *et al.* 1995, p. 152; Turk 2000, p. 160). For achieving the major improvements in the performance, the firms must restructure. Purju and Teder (1998, p. 37) have stated that the success of restructuring depends on when (year) and to whom (identity of owners) the enterprise has been privatised.

As a term, restructuring is rather complex and determined in many different ways. Literally, firms in all countries must continuously restructure to maintain profitability in the face of a changing economic environment, technological progress, and competition from other firms (Pohl *et al.* 1997, p. 1). This continual restructuring leads to higher productivity and economic growth. In the transition literature, restructuring of enterprises is directly related to the concept of transformation. Sharma (1997, p. 1) explains the difference between these two concepts as follows. Restructuring is a process that provides a new structure, that is, rebuilding or changing from within the already existing one. Instead, transformation means a movement from one point to another. Consequently, restructuring should be understood as a means that is necessary for undergoing this transformation.

According to Linz and Krueger (1998, p. 10), in its most general specification, the literature on transition economies describes restructuring as “the process that enables a firm to operate successfully in a market economy” (see Ernst *et al.* 1996, pp. 2–3). Djankov and Pohl (1998, p. 69) define restructuring “as the transformation process from a highly distorted economy with many loss-making firms to a normal economy in which the over-whelming

majority of the firms are profitable”. Crum and Goldberg (1998, p. 340) describe restructuring as “a set of discrete decisive measures taken in order to increase the competitiveness of the enterprise and thereby to enhance its value”. Hunya (1997, p. 275) provides slightly broader definition to restructuring: “Restructuring includes all policy measures and economic processes which increase the efficiency of an economy or of a company (including its international competitiveness)”.

Thus, the restructuring in transition economies can be characterized through three aspects: adjustment process; macroeconomic and institutional environment; economic efficiency and competitiveness. Hence, restructuring can be studied at three different levels: 1) country (or macro) level, looking at the changes in macroeconomic and institutional environment; 2) industry (or meso) level, analysing the changes across sectors of economy; and 3) individual firm (or micro) level, analysing the changes in firm resources and capabilities. Appendix 11 provides the illustrative picture of interaction between the different levels of restructuring in transition.

As follows below, only brief description about the macroeconomic and meso-level restructuring is given, whilst the main concern of this dissertation is the post-privatisation restructuring of enterprises. Nevertheless, it is important to bear in mind that successful macroeconomic restructuring is a precondition for satisfactory firm-level restructuring. Accordingly, restructuring at the macroeconomic level means that the government adopts such national policies which will cause structural changes in the way that enables implementation of market economy. It includes various measures, such as stabilization, price and trade liberalization, privatisation of state-owned enterprises, and institutional reforms. Macroeconomic restructuring should prepare the environment in transition economies for the functioning of the markets. Meso-level restructuring involves changes in the composition of industry structure. These changes include efforts to amend the size distribution of firms within the sector, and efforts to introduce new firms and lines of activity (Roe, 1984, p. 3). The purpose of meso-level restructuring is to raise allocative efficiency through better adjustment to changing preferences and utility structures (Schusselbauer, 1999). In addition, several institutional changes caused both by macro and meso-level restructuring allow the entry of new private, *de novo* firms and the exit of firms through bankruptcy or liquidation, which are also important elements in the restructuring process (see, for example, Balcerowicz *et al.* 1998, Bojnec and Xavier 2004, Estrin 2002, Roberts and Thompson 2003).

Turning to restructuring at individual firm level one can state that it is relatively broader concept than macroeconomic and meso-level restructuring encompassing many different dimensions. Crum and Goldberg (1998, p. 351–361) have drawn a detailed overview of characteristics that newly privatized company will need to succeed in the competitive marketplace. They state that four broad areas need to be examined to ensure that the company had adequate strength and capabilities to compete effectively: operations, marketing, finances

and organization. Operational considerations refer to the attributes of the production process and the resulting output of goods and services that are important to increase former state firms' value in the competitive marketplace. Marketing restructuring means the development of effective marketing function that was underdeveloped in ex-socialist countries. Because of soft budget constraints and the absence of rigid rules governing the flow between the company and the state the financial considerations of former state firms need to be evaluated. The changes in internal organization are considered to be the most critical ones, whilst they are the most needed to make successful transition to the competitive market economy. Figure 7 provides an overview of different dimensions and typologies of enterprise restructuring.

Borenstein (2000, p. 2) points out that the most important, so-called "key" elements in post-privatisation restructuring were the changes in corporate governance, management, labour and capital inputs, and outputs. The changes in corporate governance are most affected by method of privatisation that determines the new controllers of the enterprise and, in turn, the likelihood of its extensive restructuring. Here the firms' major policies about production, investment and the position of profit, as well as the selection, motivation, and monitoring of top managers is under consideration. In the restructuring of enterprise management, in many firms the number, hierarchy, and duties of managerial post was altered. In some enterprises, significant cuts in labour force occurred, because state-owned enterprises often were overstaffed. Here the wage differentials increased significantly to reflect the scarcity of labour services more closely. Restructuring the firm's capital stock often involved both subtractions and additions. However, the ability to improve or expand the capital stock was constrained by the lack of internal and external finance sources. Restructuring of output included changes in product mix, improvement of product quality, and strengthening marketing activities. Brada (2004, p. 60–61) concludes based on the case studies of firms in Czech Republic, Hungary and Poland that changes in output and employment were relatively common in the firms surveyed, in part because they were imposed by environmental factors. Nevertheless, he claims that there were differences in the speed and extent to which firms carried out these changes, and these differences had decisive effects on firms' long-term prospects. Firms which formulated and implemented strategies for long-term survival, undertook changes not only in the real and productive sphere, but also in their business sphere. This included changes in their internal organization, human resource management practices, in the mix of business activities, in their strategies to remain or become competitive, in the technologies they used to produce and distribute their products, and in the alliances they formed with other firms, financial institutions and government agencies.

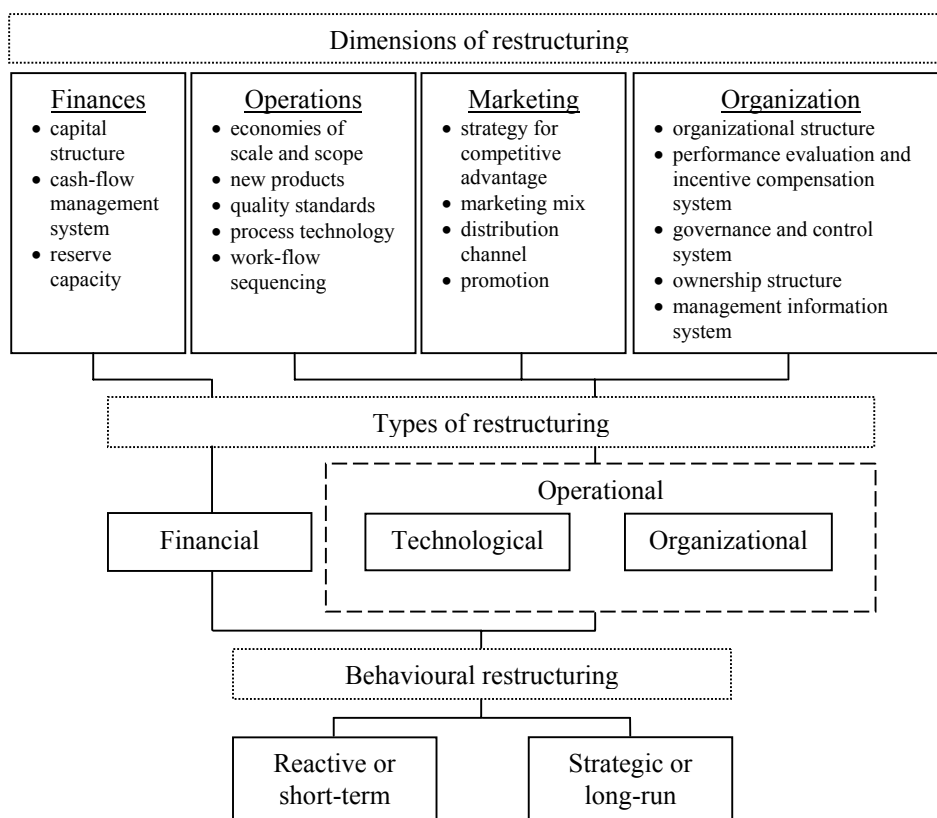


Figure 7. Dimensions and types of enterprise restructuring under transition (Source: compiled by the author based on Bonin 1998; Carlin and Landesmann 1997; Crum and Goldberg 1998; Ericson 1998; Grosfeld and Roland 1995; Lieberman 1990, 1994; Linz and Krueger 1998).

Brada (2004, p. 60–61) concludes based on the case studies of firms in Czech Republic, Hungary and Poland that changes in output and employment were relatively common in the firms surveyed, in part because they were imposed by environmental factors. Nevertheless, he claims that there were differences in the speed and extent to which firms carried out these changes, and these differences had decisive effects on firms’ long-term prospects. Firms which formulated and implemented strategies for long-term survival, undertook changes not only in the real and productive sphere, but also in their business sphere. This included changes in their internal organization, human resource management practices, in the mix of business activities, in their strategies to remain or become competitive, in the technologies they used to produce and distribute their products, and in the alliances they formed with other firms, financial institutions and government agencies.

In the transition literature, these above-mentioned dimensions of enterprise restructuring have often been classified under three broad categories: financial, technological (or physical) and organisational (or managerial restructuring) (see Bonin 1998; Lieberman 1990, 1994). Sometimes technological and organisational restructuring is referred also as operational restructuring (Bonin 1998, p.3).

The main reason for financial restructuring is that the capital structure of former state-owned enterprises is non-rational, and the debts and debt-equity ratio needs to be rearranged (Bonin 1998, p. 1). Additional objectives of financial restructuring are to eliminate subsidies and government resource transfers; to achieve financial autonomy, including the ability to borrow from commercial banks; to float shares and bonds; to enter into joint ventures with domestic and foreign investors; and finally, the creation of a heterogeneous capital mix suited to the financing needs of enterprise (Lieberman 1990, p. 19).

The financial aspects of restructuring have received very little attention in the empirical literature. For example, Estrin and Rosevear (1999b) assessed financial restructuring in the Ukraine using indices of financial restructuring and asset disposal and found no significant effect of either privatisation or ownership categories on these measures. In contrast, Djankov (1999a) showed that privatisation via management buyouts was positively associated with asset sales. The description of the sources of finance following privatisation revealed that the most prevalent were new shares issued to existing shareholders, letting of land, equipment or buildings, sale of surplus equipment, new bank loans, and revenue from new products.

The aim of technological or physical restructuring is to improve the production process and the quality of products. It encompasses replacement of obsolete plant and equipment, introduction of new technological processes, investments to improve capacity utilization and energy efficiency, including investment to improve workers' safety (Lieberman 1990, pp. 17–19; Lieberman 1994, p. 188). Instead, organizational or managerial restructuring includes all aspects related with management of an enterprise (Lieberman, 1990, p. 18). It involves measures to revise the organization, improve the capacities, and adjust human resources so as to guarantee production, marketing and financial gains. Compared with the other restructuring types, it is the most important component of enterprise restructuring in terms of created value.

Empirical studies on the operational restructuring range from studies that focus on a single type of change to all-inclusive analyses that encompass a broad bundle of restructuring activities (see for comprehensive review about these studies Wright and Suhomlinova 2003). The subject of operational restructuring is a fairly broad one, starting from the changes in management, training, recruitment of skilled managers and incentives, followed by changes in the size of work force, employee compensation, technology, organizational structure, etc. Herein, it is also possible to find studies on the assessments of the development of the marketing function, inter-enterprise relations, and enterprises relations with the state, international relations, strategy and governance.

All these different restructuring activities can be initiated by the firm either in “reactive”²⁵ or “strategic”²⁶ way (see Bonin 1998; Carlin and Landesmann 1997; Ericson 1998; Grosfeld and Roland 1995; Lieberman 1994). Restructuring which is undertaken to improve cost competitiveness without major investment into the plant and equipment, and includes labour shedding, wage cuttings, product decreases, changes in assortment and selling of assets and old inventory, is called reactive restructuring. In case of this restructuring mode, the changes in the organization and its scope are minimal. Some authors argue that such behaviour is proper for all enterprises at the beginning of transition (Carlin and Landesmann 1997, p. 1). Others claim that this happens in case of domestic-owned enterprises that do not have the necessary resources for strategic restructuring (Meyer 1998, p. 8; Schusselbauer 1999, p. 6).

Strategic restructuring involves a forward-looking strategic orientation – creation of a new product mix, changes in the organisation, accounting and control systems, improvements in the product quality, radical reorganisation of product lines and processes, investments into new technology, and research and development work (see Bonin 1998, p. 3; Carlin and Landesmann 1997, p. 1; Ericson 1998, p. 2; Grosfeld and Roland 1995, p. 6–7; Lieberman, 1994, p. 186; Linz and Krueger 1998, p. 10). In a similar way, it is believed that whilst strategic restructuring is a very capital consuming for its occurrence, the equity by foreign investors is needed and therefore foreign-owned firms are usually more actively engaged in it (Meyer 1998, pp. 8–9; Schusselbauer 1999, p. 6). However, in this dissertation these two restructuring types are treated as different stages rather than alternatives.

In the literature, it is possible to find also other terms for enterprise behaviour in the process of restructuring (see for an overview Linz and Krueger 1998, p. 10). The modes of enterprise restructuring have been described also such as pro-active and defensive (Ash and Hare 1994, Krueger 1995), positive and negative (Ellman 1994, Jeffries 1996), and short-term and long-run (Earle and Estrin 1996a). Nevertheless, these specifications usually cover or complement the reactive and strategic restructuring modes introduced above. Positive restructuring includes activities that ultimately result in resources going to their highest valued use, whereas negative restructuring occurs if manager exploits the firm’s assets for short-term gain. Short-term restructuring has been described as reductions in the labour, energy and material intensity of production to raise the overall efficiency of enterprise operations. This behaviour is similar to description of reactive restructuring. Long-run restructuring overlaps with the description of strategic restructuring as in that case, restructuring activities initiated by the firm are directed toward maximizing the long-run

²⁵ Also the terms defensive and passive restructuring are used (see Carlin and Landesmann 1997, p. 78; Ericson 1998, p. 104).

²⁶ Also the terms active and deep restructuring are used (see Carlin and Landesmann 1997, p. 78).

value of the firm. Thus, enterprise restructuring can be characterized also as a change in enterprise behaviour, particularly in levels of enterprise efficiency.

Empirical evidence on the behaviour of enterprises during transition is rather rich. The most intensive area of empirical research has been the examination how private ownership affects economic restructuring. However, also the effects of different types of owners, the role of managers, the importance of hardening budget constraints, the effects of competition (product market competition), and the role of institutions in the enterprise restructuring have found substantial attention (see, for example, Djankov and Murrell 2002). In the following section, more thorough analysis only on the effects of different types of owners on the enterprise restructuring will be provided, since examining the other determinants of enterprise restructuring are beyond the scope of this dissertation.

Ownership structure as a determinant of enterprise restructuring

Whilst the economic literature on market economies states that private ownership improves performance more than state ownership (see, for example, Megginson and Netter 2001, who provide analysis of privatisation studies around the world including Eastern Europe and the former Soviet Union), it is difficult to find a clear answer from the literature which type of owner is most advantageous for restructuring. As referred by Djankov and Murrell (2002, p. 27), according to Coase (1988) and Demsetz and Lehn (1985), if the transaction costs of taking value maximizing positions in firms are low, each firm would have the “right” ownership structure. Thus, there might not be a relationship between ownership structure and restructuring. Therefore, it is pointed out by many scholars that experience of transition countries has a vital contribution to study these relationships. The discussion in the previous sections showed that chosen privatisation policy and other administrative processes had a big influence on the development of ownership structures in every single transition country. Hence, at least the initial ownership structures were mainly exogenous rather than determined endogenously in markets with low transaction costs or by other firm-specific factors (see subchapter 1.2.1). As follows, the further discussion concentrates on determining the effects of ownership structures on the enterprise restructuring that is important to understand in analysing the effects of ownership changes in the later post-privatisation transition period.

Empirical literature of transition countries encompasses a large set of studies in examining the effects of ownership structures on the performance and restructuring of firms (see for a comprehensive overview of these studies Djankov and Murrell 2002, Wright and Suhomlinova 2003). Early studies mainly deal with the effects of privatisation on performance, comparing the performance of private and state-owned enterprises (see, for example, Carlin *et al.* 2000, Frydman *et al.* 1999). Then, the focus shifts towards issues of ownership concentration, dispersed versus concentrated ownership (see, for example, Claessens and Djankov 1999, Claessens *et al.* 1997). The next studies

look more deeply at the differences in performances between outsider and insider ownership (see, for example, Filatotchev *et al.* 1999, Linz and Krueger 1998, Smith *et al.* 1997). Thereafter, the particular groups of ownership have been studied, comparing the impact of employee, managerial, foreign ownership, domestic investors, and to a lesser extent institutional investors, on the restructuring of firms (see, for example, Claessens and Djankov 1999, Djankov 1999b, Frydman *et al.* 1999, Jones and Mygind 2002, Smith *et al.* 1997).

According to the studies which examine the effects of insider and outsider ownership on restructuring, the results are more than confusing. Earle *et al.* (1996) study showed that majority outsider control is superior to insider control, whereas insider ownership might be expected to be superior to state ownership. Aghion and Blanchard (1998) argue that restructuring requires ownership by outsiders for reasons that include better access to raising new capital and a better ability to pay for necessary expenditures. The meta-analyses by Djankov and Murrell (2002) support the findings of these studies indicating that privatisation to outsiders is associated with 50 per cent more restructuring than privatisation to insiders. At the same time, Frydman *et al.* (1999) did not find a significant difference between outsider and insider ownership in terms of cost performance, although their study showed that outsider-owned firms had significantly higher revenue growth than state or insider owned firms. Instead, Filatotchev *et al.* (1999) detected no effect of outside ownership on profits and return on capital. Here, Linz and Krueger (1998) and Smith *et al.* (1997) report that insider ownership positively affected value added and labour productivity.

The mixing picture of outsider and insider ownership effects on restructuring has resulted in numerous studies with the effects of specific ownership types. Some of them are already referred above and in the previous section when discussing the development of different ownership types in the transition countries. Herein, one will concentrate on the work done by Djankov and Murrell (2002), and Wright and Suhomlinova (2003) as they provide very detailed review of main empirical quantitative studies²⁷ analysing the process of enterprise restructuring in transition economies including the impact of different ownership types on it. In their survey, Djankov and Murrell (2002, p. 31–32) identify based on 24 studies on 20 countries eleven ownership categories²⁸ that recur consistently in a number of studies. They estimate relative sizes of the effects of different owners and test which owners have significantly different effects from others. According to their meta-analysis, the differences between

²⁷ As pointed out in both studies, there are still not enough qualitative studies which capture this field.

²⁸ Still, some of them partially overlap. These eleven categories are: traditional state ownership, the state in commercialized enterprises, insiders (worker and managers), outsiders (all non-employee, non-state owners), workers, managers, foreign owners, banks, investment funds, blockholders (outsider ownership concentrated in the hands of large individual owners), diffuse outsider (the residual outsider ownership category by individual owners each of whom owns a miniscule portion of any specific enterprise).

owners are of great economic importance (see Appendix 12). Their analysis showed that privatisation to workers is detrimental. They find that state ownership within traditional state firms is less productive than all other ownership types, except for worker owners. Instead, state ownership within partially-privatised firms is surprisingly productive, producing more restructuring than enterprise insiders and non-blockholders. At the same time, investment funds, foreigners and other blockholders produce more than ten times as much restructuring than diffuse individual ownership. Also, compared to insiders, respectively, privatisation to funds is five times more productive and privatisation to foreigners or block-holders is three times more productive. Foreigners were expected to make productive changes, but results indicated that investment funds are significantly better than foreigners, and that the banks and blockholders are close to foreigners. Their analysis showed clearly that concentrated shareholding produces larger effects than diffuse shareholding. They also analysed the effects of different owners across the regions and found that workers are better owners in Eastern Europe than in the CIS, while banks and concentrated individual ownership are significantly more effective in the CIS than elsewhere.

The review on empirical studies on enterprise restructuring that is done by Wright and Suhomlinova (2003) covers much broader ground than Djankov and Murrell (2002) study. They do not only focus on the determinants of enterprise restructuring and analyze the effects on the standard performance indicators, but provide analysis of all types of organizational changes and outcomes of restructuring. Their survey based on 110 studies in the period 1990–2002 enables to differentiate the effects of different ownership types according to different dimensions and types of restructuring. Table 5 provides a synthesis of the results of these studies distinguishing the effects of different ownership types between financial and operational restructuring in accordance with distribution of enterprise restructuring dimensions provided in the Figure 7. Wright and Suhomlinova (2003) provide also an overview of studies that analyze various intra- and inter-organisational relations; however, these aspects will not be reviewed here as they move beyond the scope of this dissertation.

From Table 5, it is seen that there is a big variation in findings of empirical studies on the effects of different owners on enterprise restructuring. It seems clear that foreign owned enterprises have higher level of investments and better access to finances. Also, they have more long-term growth orientation and they are more likely to undertake restructuring, invest into more advanced technology and develop new products. However, findings in terms of ownership effects on manager turnover, changes in labour force, wages, exporting activities, and governance issues are still rather mixed. Here it is important to bear in mind that restructuring involves different issues at different points in the transition process. This means that one can receive very different research outcomes when studying restructuring in the beginning of transition or at the end of the transition period. For instance, as referred earlier, in the beginning of

transition, the enterprises may undertake reactive restructuring which in the later transition period is followed by strategic restructuring. Thus, the differences in research results might be partly explained also by different survey periods.

Table 5. Synthesis of the results of the studies analysing the effects of different types of owners on the enterprise restructuring

Dimension	Ownership effect
Financial restructuring	
<ul style="list-style-type: none"> • index of financial restructuring and assets disposal • assets sales • access to finance 	<p>no specific effect of either privatisation or ownership (Estrin and Rosevear 1999b)</p> <p>positively associated with management buyouts (Djankov 1999a)</p> <p>level of investment was significantly higher for enterprises with a dominant foreign owner; these enterprises, together with domestically privately owned enterprises had easier access to finance (Kenway and Chlumsky 1997)</p>
Operational restructuring	
<ul style="list-style-type: none"> • manager turnover • changes in labour force* • wage • technology 	<p><i>mixed results</i>: some studies found no effect of ownership (Linz 1996); others found that increase in outsider control increased turnover (Filatotchev <i>et al.</i> 2001)</p> <p><i>mixed results</i>: some studies found that management ownership has positive effect on employment levels (Buck <i>et al.</i> 1999, Frydman <i>et al.</i> 1999), or positive at low levels of management stakes, but negative at high levels (Filatotchev <i>et al.</i> 2000), or no any effects (Barberis <i>et al.</i> 1996); some studies found that outside individual ownership has negative effect (Filatotchev <i>et al.</i> 2000) or no any effect (Barberis <i>et al.</i> 1996, Buck <i>et al.</i> 1999); the minor state ownership leads to lower employment level than full state ownership (Perevalov <i>et al.</i> 2000)</p> <p><i>mixed results</i>: some studies found no effect of ownership (Basu <i>et al.</i> 1997, Linz and Krueger 1996); others found that enterprises privatised through lease or employee ownership were more likely to increase real wages than enterprises privatised through majority employee acquisition (Filatotchev <i>et al.</i> 1996b)</p> <p>privatisation via management buy-out affected positively the probability of renovation (Djankov 1999a); foreign ownership increased the likelihood of renovation (while other ownership groups have no effect) (Djankov 1999b) and process innovation (Bonin and Abel 1998), and improved the access to a advanced technology (Kenway and Chlumsky 1997)</p>

Dimension	Ownership effect
<ul style="list-style-type: none"> • marketing 	SOEs, mixed state-private enterprises and private firms tended to adopt a defender orientation, offer products of average quality and engage in imitative new product development; firms with foreign ownership had more long-term and growth orientation than domestic firms, were more likely to develop new products, and to be export oriented (Hooley <i>et al.</i> 1996); some studies found not difference between state and private enterprises in terms of marketing orientation, though private firms were more likely to adopt market position priorities, develop new products, etc. (Shipley <i>et al.</i> 1998)
<ul style="list-style-type: none"> • organizational structure 	managerial ownership positively affected the probability of acquisitions, but increased outside control decreased the likelihood of acquisitions (Filatotchev <i>et al.</i> 2001)
<ul style="list-style-type: none"> • exports 	<i>mixed results</i> : some studies found that state-foreign joint ventures exporting the most and domestically owned enterprises exporting least (Hooley <i>et al.</i> 1996); the others found no effect on ownership (Filatotchev <i>et al.</i> 2001) or only the effect of managerial ownership had a significant effect on the likelihood of exporting (Buck <i>et al.</i> 2000)
<ul style="list-style-type: none"> • product strategy 	privatisation, and insider and dominant worker ownership significantly increased the extent of product restructuring compared to SOEs (quality, product mix, structure of sales, outlet) (Estrin and Rosevear 1999b)
<ul style="list-style-type: none"> • governance 	<i>mixed results</i> : some studies found that managers and the state exercised greater control than their ownership stake, but employees and private domestic owners to a lesser degree than their ownership, and other shareholder such as investment funds and banks had no control (Izyumov <i>et al.</i> 2000); other studies found that outsider exercised more control than their shareholders would suggest (Filatotchev <i>et al.</i> 2001)

Notes: * – According to some studies labour hoarding was widespread in all companies regardless of ownership in the beginning of transition, but by the end of the period only insider owned firms did not undertake significant downsizing

Source: compiled by the author based on Wright and Suhomlinova 2003, pp. 7–25.

As follows, Wright and Suhomlinova (2003) – the author of the dissertation is in concur with them – report that there is a need for further research on ownership effects. They make several suggestions as follows: (a) a need to account for the determinants of ownership change because privatisation choices are endogenous, (b) to embrace a more complex set of assumptions about the motives and opportunities of different players, (c) account for potential impact of environmental factors, such as industry conditions, (d) incorporate the pathways through which ownership configurations emerge, and (e) to take into account the influence of ownership changes over time. The latter issue has found bigger

attention among several researches in the last decade. Herein, the research focus has moved from the initial ownership effects as an outcome of privatisation towards the secondary ownership changes taken place in the post-privatisation period and their effects on the performance of firms. Some of these studies will be introduced in the following subchapter.

Finally, bearing in mind that the empirical research in this dissertation will be based on the Estonian enterprises, it is possible to point out three studies analysing the effects of different owners on the performance and restructuring of firms in Estonia. First two studies by Jones and Mygind (2000, 2002) explore the effects of different owners on the productivity of enterprises based on quantitative data. Both studies have similar research framework in estimating the production functions for different years, but differ slightly in their time framework and used estimation techniques.

In the first study (2000), they estimate ownership effects for 1993–1996, where in the second study (2002), the estimated time period is extended to 1993–1997. In the first study, they use simple cross-sectional OLS regressions, but in the second study they estimate various specifications of production functions using panel data fixed-effects method and instrumental variable method. In spite of different estimation techniques, they reach to very similar results in both studies. They find that private ownership is more productive than state ownership. In terms of various ownership forms, the results of the first study showed that outside (especially foreign) ownership is preferred to insider ownership (in both 1994 and 1995), whilst, in the second study insider ownership appeared to be amongst the most productive forms of private ownership. The second study showed that managerial ownership always has the biggest effects and ownership by domestic outsiders the smallest impact on productivity. Thus, their study indicated that foreign ownership does not always have the biggest impact on productivity and that employee ownership can also be ranked amongst the productive forms of private ownership.

In the third study, Mygind (2002) estimates the effects of different owners on restructuring of the Estonian enterprises based on manager survey. The survey is based on 212 interviews over the years 1997–1998 and follows descriptive estimation in reporting the survey results. In his study, Mygind (2002) finds that the most frequent changes in the number of departments are taking place in state enterprises as well as in foreign and domestic externally owned enterprises. Employee owned enterprises were reluctant to these types of restructuring. For all enterprises, the internal savings were the most important source of finance including foreign owned enterprises which ranked the extra capital from owners as the second source of finance. The changes in the sources of material inputs were small in all enterprises, except for domestic externally owned enterprises, where the small increase was taken place. The share of exports of turnover was the highest in foreign owned enterprises, but also in state enterprises. Instead, in employee owned enterprises the share of exports was falling. The utilization of plant and equipment had a substantial increase

only in state and employee owned enterprises while in management owned enterprises this was falling. The investment activity slowed down in state and employee owned enterprises while in foreign and external domestic owned enterprises the level of investments was increasing. Finally, in terms of changing products the foreign and insider owned enterprises showed the highest change in product composition while in general it happened in 80 per cent of enterprises.

To conclude, for transition economies, enterprise restructuring means transformation from socialist to market economy which encompasses changes in the firm's finances, operations, marketing and organization. The depth and speed of enterprise restructuring is largely affected by adopted economic policies and general economic situation in the beginning of transition. Privatisation of former state-owned enterprises has been the most important prerequisite for successful enterprise restructuring. Still, whilst different privatisation policies resulted in emergence of different ownership structures, its outcome has not been so univocal. Empirical evidence is rather mixed on the effects of different ownership types on the restructuring of firms. This indicates that there still exists strong need for further analysis on the relationship between ownership and enterprise restructuring.

I.3. Conceptual framework for the research on ownership structures and enterprise restructuring in transition economies

I.3.1. Previous empirical research on ownership structures and their relationship with the restructuring of enterprises

Empirical research on the changes in ownership structures

Previous chapters have mainly introduced theoretical arguments concerning the post-privatisation ownership structure changes and their impact on the restructuring of firms. The purpose of this subchapter is to provide an overview about the main empirical studies done on these topics. The first part of this subchapter reviews empirical studies on the ownership structure developments and introduces studies that test the determinants of ownership changes. In the second part of this subchapter, the empirical studies about the relationship between ownership changes and restructuring of enterprises will be explored. In both cases, also the overview of main variables and statistical methods used in these analyses will be drawn.

Similarly to theoretical considerations, also empirical studies that investigate the post-privatisation dynamics of ownership structures are rather rare. For comparative overview of these studies, see Appendix 13. The earliest studies analyze Russia and find strong prevalence of insider ownership after privatisation, especially employee ownership (see Blasi *et al.* 1997, Earle and

Estrin 1996b, Estrin and Wright 1999, Filatotchev *et al.* 1999). Comparative overview by Estrin and Wright (1999) of the studies on ownership in privatised Russian firms shows that between 1993–1997 insider ownership in Russia is falling and that among insiders there is a shift from employee ownership to manager ownership. Also, Filatotchev *et al.* (1999) analysis indicates a small reduction in insider's equity over time, albeit the changes are not so significant. Instead, the significant change has taken place among the other organisations including outside corporate investors. This is explained to have happened because of the further sell-offs of shares by the state.

Kočenda and Valachy (2001) analyse the changes in ownership structures in voucher-privatised Czech firms. They study relatively large representative sample of firms (1155 firms for 1996 and 853 firms for 1997) in 1996–1999. The results of their study show that ownership concentration of voucher-privatised firms generally increased. The highest average concentration increase was recorded in the case of investments funds (50 per cent increase) and portfolio companies (40 per cent increases) as the single largest owners. A negligible change was observed in the case of banks. On the other hand, the analysis showed that industrial companies are the most stable type of single largest owner, followed by individual owners. The least stable owner is the portfolio company.

Kozarzewski and Woodward (2001) investigate post-privatisation evolution of ownership structures in Polish firms privatised by employee buy-outs. They study the change of ownership structures in 110 firms between the time of privatisation and 1999. Their study shows that outside strategic investors and managers are steadily gaining ground and employees are losing it. However, they state that radical changes in the ownership structure had been rare and ownership structure seemed to be fairly inert. Instead, Blaszczyk *et al.* (2001) analyse evolution of ownership structures in the Polish firms privatised through National Investment Funds (NIF) and their portfolio companies. They investigate 512 companies privatised in National Investment Fund Program in the period 1995–2000 by looking at how many companies in the NIF's portfolio were sold to what type of investors. The findings of their study show that there have been significant shifts in the ownership of the funds. By 2000, over half of these companies had found new investors. The most numerous new owners were domestic strategic owners (large domestic companies), followed by foreign owners. The share of small investors (both individual and institutional) had declined remarkably – at the beginning of the programme, they had held 85 per cent of NIF's shares; by the beginning of 2001, their share had dropped to 41 per cent.

Grosfeld and Hashi (2003), too, analyze the evolution of ownership structures in the Czech and Polish firms privatised through mass privatisation. Their findings are similar to Blaszczyk *et al.* (2001) and Kočenda and Valachy (2001). According to Czech sample of 652 firms privatised through voucher scheme in between 1996–1999 the number of industrial companies, individuals

and investments funds increased. Also, they find that ownership of firms has become more concentrated. For instance, proportion of firms with majority control (more than 50 per cent) has strongly increased from 29 per cent in 1996 to 46 per cent in 1999. The emergence of individual entrepreneurs as the largest shareholders considered to be as an important outcome of this process. The process of ownership evolution in Poland has been similar to Czech Republic. Studying 512 firms included in the NIF programme in between 1996 and 2000, they find that 245 NIF companies have been transferred to strategic investors, with 20 per cent of them sold to foreign investors. Concerning the concentration of ownership stakes, the firms bought over by foreign investors considered to have highest shares in the firms' equity. Thus, in both cases there has been evolution away from initial diversified ownership structure towards concentrated domestic or strategic foreign outside ownership structure.

Simoneti *et al.* (2001) study the ownership changes in 183 Slovenian companies privatised under mass privatisation program from the time of privatisation to 1999. They find that ownership concentration was strengthened in all groups of companies, that is, public, internal and external²⁹, but most intensively in internal companies. Small shareholders, state and para-state funds had reduced their ownership stakes while managers and strategic investors have increased them. The results of their study also showed that quite few foreign investors had taken over dominant shares in Slovenian companies.

The ownership changes in Slovenian companies as well as Russian companies are studied also by Mygind *et al.* (2006). They analyse 150 Slovenian non-financial joint-stock companies in the period 1998–2003 and 152 Russian firms for the period 1995–2003. Their findings show that in spite of important differences in institutional development, concerning the privatisation process and the speed of the development of corporate governance institutions, the ownership dynamics is rather similar in both countries. Employee ownership is rapidly changing, but while both changes to manager and non-financial domestic outsider ownership are typical to Russia, manager ownership seems not to be widespread in Slovenia. Instead, change to financial outsiders in the form of Privatisation Investment Funds is quite frequent in Slovenia. Foreign ownership is stable and very rare in Russia, but has rapidly increased in Slovenia.

The same tendency is found for Estonia by Jones *et al.* (2005), Jones and Mygind (1999, 2005) and Kalmi (2003). Jones and Mygind (1999) examine the evolution of majority ownership in 666 firms in Estonia for 1995–1997. They find that during this period majority ownership has not much changed. However, when the change occurred, then it happened to be in enterprises with

²⁹ Public companies refer to companies quoted on the stock exchange. Non-public internal companies refer to companies not quoted on the stock exchange with employees holding majority stakes. Non-public external companies refer to companies not quoted on the stock exchange with employees and funds holding comparably large shareholdings. (Simoneti *et al.* 2001)

majority employee ownership. Also, they note that the number of firms with employee ownership is decreasing and in most of these cases the majority employee ownership switches to majority manager ownership. Jones *et al.* (2005) use the same dataset, but classify enterprises according to dominant ownership groups. Hence, the database involves 500 firms for Estonia for 1995–1999. They also report about the rapid decrease of firms with employee ownership. In contrast, they document the sharp increase in firms with manager ownership. According to their analysis, the ownership by foreigners and domestic outsiders has remained relatively stable during this period. They conclude that most changes are happening among the insider-owned firms, where ownership is moving away from employees to managers.

Kalmi's (2003) study extends the Jones and Mygind (1999) analysis for Estonia, using the same data with slightly different definitions. He includes additionally enterprises with former employee ownership and studies also the changes in dominant ownership. Nevertheless, the observation period is now longer starting with the time of privatisation and finishing at the beginning of 2001. From his study, it can be seen that the decline in employee ownership is continuing and the number of firms in manager ownership extensively increases. In this analysis, the number of firms with domestic outsiders has showed slightly bigger decline compared to previous ones. Foreign ownership has stayed the most stable ownership form. Instead, the number of firms with former employee ownership has increased. Here he makes an interesting note that when firms with employees, managers and former employees are classified as 'insiders' and firms owned by foreign or domestic outsider investors as 'outsider', then, surprisingly, insider ownership has increased in Estonia during the transition.

Jones and Mygind's (2005) latest study uses the same data as Jones *et al.* (2005) and Kalmi (2003), however, the datasets covers the changes in dominant ownership for Estonia since the time of privatisation until 2002. The results of this study have the same characteristics than above-mentioned ones. There is still very high movement away from employee ownership to manager ownership and the most stable ownership type has been foreign investors. Here they conclude that the most frequent ownership cycle according to their sample has been employee → manager → domestic outsider. Jones and Mygind (2005) also study ownership dynamics in Latvia and Lithuania. In Latvia for 915 firms for 1995–1999, the change away from employee ownership has happened on the same magnitude as in Estonia. Unlikely to Estonia, the level of ownership concentration is lower in Latvia. The results for 330 Lithuanian firms show the same pattern as in Estonia and Latvia. From the time of privatisation until the year 2000, there is the change away from employee ownership to manager ownership, albeit, it is lower than in Estonia. Foreign owned firms again are the most stable, although they are not significantly more stable than domestic outsider owners.

Thus, in general, the changes in ownership structures in transition economies have had very similar features across different countries. In principal, in all above-mentioned countries the change away from employee ownership has taken place. Even in those countries where privatisation process has favoured employee owners (for example, Russia, Poland and Estonia in the beginning of transition), in the post-privatisation period the number of firms with employee ownership has considerably decreased. Firms with manager ownership are taking bigger ground and managerial ownership is becoming more concentrated. The level of concentration is increasing also in firms with outsider ownership. Also, in case of mass privatisations, initial diversified ownership structures have developed into concentrated ownership structures. This shows that ownership diversifications to employees and to diversified external investors in privatisation process can not be considered as the best practice as their survival rates have been very low. Yet, the changes in ownership structures are path dependent and there is a need to take into account the specific conditions for every single country.

Empirical research on the determinants of ownership

Empirical studies on the determinants of ownership and its changes are even rarer than studies on ownership dynamics. As it was pointed out in the subchapter 1.2.1 (see also Table 4) about the determinants of ownership structures, there are two types of studies: a) studies that try to find out what are the determinants of ownership concentration, and b) studies that evaluate the determinants of ownership changes. Empirical research on the determinants of ownership concentration in transition economies is very poor. The small list of studies in this issue includes Grosfeld (2006) and Grosfeld and Hashi (2003). However, as it is stated in the introduction, the aim of this dissertation is to identify the patterns of ownership changes and their determinants and relationship with enterprise restructuring, thus, the following overview concentrates only on the studies that analyse the determinants of ownership changes. Here, the biggest attention will be given to works done by Jones *et al.* (2005) and Jones and Mygind (1999) as these studies are considered to be the most relevant for the current dissertation.

Jones and Mygind (1999) analyze in their paper, in addition to ownership dynamics, also the determinants of ownership changes. In particular, first they estimate separate two-limit Tobit models for the extent or degree of each forms of ownership, and then estimate multinomial logits to explain the probability of the joint occurrence of a particular initial ownership structure and an ownership configuration in 1997. The results of their Tobit analysis show that firms with high capital-labour ratio would expect to have lower employee and manager ownership share, but higher foreign, domestic outsider and state ownership share. Also that the bigger is the enterprise the lower is the share of employee and manager ownership and the higher the share of domestic outsider ownership. Still, the effects of firm size on foreign ownership are not statistically

significant. They did not find very strong relationship between performance, measured by labour productivity, and ownership changes, albeit, if performance is measured by average wage the relationship becomes stronger. Here, they find partial support for proposition that the state has a special interest in firms in certain strategic sectors (for instance heavy industry and utilities) and that foreigners are especially interested in building up ownership in particular sectors (for instance hotels and finance).

Their multinomial logit analysis results show that large and highly capital-intensive firms are much more likely to be owned initially by outsiders and also much more likely to remain owned by outsiders. Similarly, when either outsiders or insiders have a large minority ownership position, the probability that minority position becomes to majority position is increasing more if it is outsiders which obtained the large minority stake. Finally, they report that economic performance does not influence ownership structures or their dynamics. Hence, they conclude that the results of this study do not confirm the view that there is a rapid movement toward efficient ownership structures that underlines much conventional theory of privatisation.

Jones *et al.* (2005) in their study analyse the determinants of ownership structures and ownership changes in a more detailed framework with a special focus on determining whether ownership changes are related to economic performance. Important is to mention that this analysis includes both privatised and new (*de novo*) enterprises. Thus, they do not test only determinants of ownership structures in the post-privatisation period, but in transition period in general. They estimate the determinants of initial ownership, determinants of ownership changes in 1995–1999, and determinants of ownership in 1999. They use two types of models – binary logit and multinomial logit models.

The results of their analysis do not support the hypothesis that the determinants of initial ownership were completely random. Lower equity investment is always found to predict insider ownership. It becomes clear that insufficient wealth to invest in equity limits the possibilities to establish employee-owned firms, albeit, unusual circumstances created by the privatisation process have helped employees to temporarily overcome this obstacle. The results indicate that outsiders take over larger insider-owned firms. Also, they found that managerially-owned firms are associated with significantly higher volatility than employee-owned firms, suggesting that managerial control becomes especially valuable in risky firms. Similarly the findings show that firms that are initially insider-owned are more likely taken over by outsiders when they are less risky. But among firms that are initially owned by outsiders, insiders also take over less risky firms. The results concerning the effects of performance, capital intensity or investment were mainly insignificant and did not show any clear patterns. However, a key finding emerging from their research is that it is often the inactivity in the market for shares – or indeed the absence of any market – more than active trading of shares that shapes the ownership relations.

Taken together, the firms owned by outsiders are bigger than the firms owned by insiders. Similarly, the firms owned by outsiders are more capital intensive than the firms owned by insiders. The effects of performance on the ownership structures are not clear. However, it seems that high profitability increases the likelihood of employee ownership.

Empirical studies about the impact of post-privatisation ownership changes on the enterprise restructuring

In turn, in this section, the empirical evidence on the relationship between post-privatisation ownership changes and enterprises restructuring will be examined. In the previous subchapter, only the empirical studies on the effects of ownership on the restructuring were introduced. However, as it is seen from previous sections above the changes in ownership have taken place also in the post-privatisation period. Thus, many enterprises have undergone also secondary ownership changes. Hereafter, the intention is to learn whether the restructuring of the enterprises by initial owners and the new owners has brought any different effects on the performance and is there any particular group of new owners who have achieved better results in terms of restructuring the enterprise. It must be mentioned that the empirical research on these relationships is still extremely poor and one could find only four studies that capture these issues. As follows, the studies by Blaszczyk *et al.* (2001), Hanousek *et al.* (2007), Jones (1998) and Simoneti *et al.* (2001) will be reviewed. Table 6 provides a summary of these studies.

Jones (1998) studies the changes in and the effects of ownership and control that have occurred since privatisation for 1992–1996 for a sample of 111 firms in Russia (St. Petersburg). His study data enable to make a distinction between five different ownership types: managers, employees, state, banks, and outside individuals. For estimating the ownership change effects, he distributes firms into different groups according to whether dominant ownership has remained the same during the study period or dominant ownership has changed from formerly state or employee ownership to employee, manager, bank or outside individual ownership. The findings of his study show that in the firms where employees remained dominant owners during the period, the annual employment grew 6.7 per cent faster than in firms where state remained the dominant owner. Also, in these firms, labour productivity fell at annual rate of at least 17 per cent compared to state firms. At the same time, in firms where managers remained as the dominant ownership group the cost per unit sales fell by almost 39 per cent per annum (and this despite a stronger growth of employment than in firms owned by employees). However, his findings suggest that among the forms of outside ownership, bank ownership is much more effective in improving economic performance than is ownership by individuals. Among the forms of insider ownership, firms that remain employee owned perform much more poorly than firms where managers continued as dominant owners. However, both types of firms which became owned by managers during the

period did very badly, and especially in firms which were formerly owned by the state. Therefore, he concludes that in many Russian firms the changes in economic policies, including privatisation, have often produced disappointing economic consequences.

Blaszczyk *et al.* (2001) study that was already reviewed in previous section involves also analysis of financial situation of NIF companies that had undergone secondary ownership changes in Poland. They divide firms into groups by the type of new owners emerging as a result of secondary ownership changes: domestic and foreign strategic investors, private individuals, employees, dispersed ownership and companies in which NIFs continues to be the main owner. They measure the performance of these companies using ratio of average sales revenues in 1999 to sales revenues in 1995. Their findings show that the drop in sales had been sharpest (ranging from 30 to 60 per cent) in companies sold to domestic individuals and employees. A significant decline was also experienced by companies which had not been sold by the NIFs (that is, where the largest block of shares still belonged to the leading NIF) and by most companies which were publicly traded. Both types of companies continued to lack a strong outside investor who could bring them capital, know-how, etc. The best results were found in companies sold to domestic corporations and foreign investors relatively early. They conclude that efficiently organised privatisation and secondary privatisation help enterprises to maintain or improve their economic and market standing. Based on their findings, they suggest that rapid privatisation is better than no privatisation, and having a strong private owner is better than state or public ownership or listing on the stock exchange.

Similarly, Simoneti *et al.* (2001) study that was also reviewed in the previous section, involves the analysis of company performance and ownership changes after mass privatisation in Slovenian firms. However, in examining the relationship between ownership and performance, they use a database containing financial and ownership information on 426 mass-privatized companies for the period 1995–1999. They divide companies into groups depending on whether they were publicly traded, owned primarily by internal owners (management and employees), or owned primarily by external owners (for the most part, state and investment funds), and whether they had switched from one of these categories to another in the period under consideration. Their data enable to make a distinction between what they call the “owner effects” (the performance effects of staying in one ownership category) and “agent/seller effects” (the performance effects of moving from one ownership category to another). Their findings show that the secondary privatisation in Slovenia has had practically no positive effect either on economic efficiency or on financial performance in the 1995–99 periods. On the basis of their analysis, they conclude that the major problems with the post-privatisation ownership consolidation had been the quality and transparency of the process and not its slowness.

Table 6. Summary of the empirical studies that analyse the effects of secondary ownership changes on the enterprise performance

Study	Country	Dependent variable	Method and period	Main results
Jones (1998)	Russia (St.Petersburg)	Sales, revenues, labour productivity, employment, costs	OLS regressions, 1992–1996	The sales and labour productivity fell (rise) and costs per unit sales rise (fell) in firms where ownership changed from state or employee to manager (bank). The level of employment decreased in firms where ownership changed from state to individuals (no increase in labour productivity or in lowering the costs). The results were better for change from employee to individuals.
Blaszczyk, Gorzynski, Kaminski and Paczoski (2001)	Poland	Sales revenues	Descriptive statistics on average sales revenues, change between 1995 and 1999	The sales decreased (increased) in enterprises sold to domestic individuals (domestic corporations) and employees (foreign investors).
Simoneti, Böhm, Rems, Rojec, Damijan, and Majcen (2001)	Slovenia	Total factor productivity growth, operating profit increased by depreaction to sales ratio and profits to sales ratio	Comparison of weighted means, panel data OLS regressions, fixed-effects and random-effects models, 1995–1999	No positive effects of changed ownership on economic efficiency and financial performance of internally and externally privatised companies.
Hanousek, Kocenda and Svejnar (2007)	Czech Republic	Sales revenue, labour costs, operating profit on sales, return on assets	Panel data fixed-effects models and instrumental variables, 1996–1999	Higher labour costs in enterprises acquired by investments funds. Diminishing return on assets in enterprises acquired by banks or portfolio companies.

Source: compiled by the author based on Blaszczyk *et al.* 2001, Hanousek *et al.* 2007, Jones 1998, and Simoneti *et al.* 2001.

Hanousek *et al.* (2007) analyse the effects of different types of ownership, ownership changes and concentration of ownership on corporate performance in the Czech firms after mass privatisation. The dataset they use consists of 1,371–1,540 medium and large firms from all economic sectors during the period 1996–1999. Their database enables to make distinction between two set of ownership measures: first, they estimate performance effects according to six single largest owners, that is industrial companies, banks, investment funds, individuals, portfolio companies and state; and b) second, they assign all owners into three categories – state, domestic private and foreign ownership. Also, differently from other studies reviewed above, they estimate effects of ownership in three different specifications: initial ownership, subsequent ownership and ownership change. The estimates of their study show that in the first four years after privatisation the performance effects of different types of ownership are surprisingly limited and that many types of ownership do not generate effects that are different from state ownership. The estimates of performance effects after 1996 are similar to initial ownership effect, but also some new patterns emerge. For example, firms acquired after 1996 by investment funds and portfolio companies experience the reduction in sales; foreign industrial owners increase not only sales but also labour costs and they no longer have positive effect on profitability; bank ownership has a positive effect on profit/sales and return on assets; and non-industrial foreign ownership has a negative effect on profit/sales. The effects associated with ownership change considered to be short-term. Here results showed only three significant changes: higher labour costs for firm's acquired by investments funds, negative effect on return on assets for firm's acquired by banks and portfolio companies.

Thus, it is seen that the results of studies on the effects of secondary ownership changes on the enterprise restructuring are as mixed as they were also in case of initial ownership effect analyses. The variety of research results can be explained by different variables and research methods as well as time periods used in these analyses. As the reviews of initial and secondary ownership effects studies show most frequently, the effect of ownership on enterprise restructuring is measured by economic performance indicators as the direct outcome of restructuring. In the studies of initial ownership effects, the most common indicators for measuring the restructuring are productivity (Lee 1999, Smith *et al.* 1997), or profitability (Claessens and Djankov 1999, Estrin and Rosevear 1999a), but sales or revenue have also been used extensively (for example, Frydman *et al.* 1999, Jones 1998). In some studies, the measurement of restructuring focuses directly on enterprise decisions, for example, changes in the structure of corporate governance and management (Estrin and Rosevear 1999a) or factory renovations (Djankov 1999a), or investment rates (Grosfeld and Nivet 1999). In addition to these, also performance indicators such as average wage, the level of employment (Carlin and Aghion 1996), the share of export in revenues, total factor productivity, profitability, and capital intensity (Pohl *et al.* 1996) are used. From Table 6, it is seen that in the studies of

secondary ownership effects the same variables are taken into consideration. Still, these studies mainly concentrate on economic efficiency and financial performance indicators; the changes in enterprise decisions (operations) and organisation have not yet been under consideration.

To conclude, as the overview of empirical research shows, there is still not complete consensus regarding many issues under consideration. Moreover, the discussion on the relationship between ownership and enterprise performance runs towards the arguments that ownership should not be considered only as exogenous in relation to performance, but often the changes in ownership are determined endogenously by different firm- or country-specific factors. However, it seems that there are at least two points where the results of almost all empirical research coincide: 1) the finding that there is a positive relationship between foreign investors' ownership and performance; and 2) the finding that the role of employees as owners is neutral or negative³⁰. Rather common is also the finding that in terms of insider ownership the managers perform much better than employees. Nevertheless, there have been several studies which do not confirm this statement. The empirical evidence of the studies shows that there are still mixed or inconclusive results regards the contribution of different owners and the impact of secondary ownership changes to restructuring and improvement of company performance.

1.3.2. Framework for analysing the changes in ownership structures, their determinants and role in enterprise restructuring

In the previous subchapters, the several concepts in relation to ownership structure developments, their determinants and role in the restructuring of enterprises were discussed. These concepts concern both the narrower view on the different roles of ownership in a firm (see subchapter 1.1.1) and the broader view on the development of ownership structures within different national corporate governance systems (see subchapter 1.1.2). In general, the development of ownership structures is influenced by several historical, economic, legal and cultural factors. However, due to the transition-specific developmental issues, the development of ownership structures in transition economies has been influenced by some additional factors, such as political factors. Here the biggest influence is given by the choice of privatisation method. Hence, the development of ownership structures in transition countries is dependent also on the identity of new owners which, according to their interests and resources, determine the subsequent ownership structures (see subchapter 1.2.1 and 1.3.1). On the other hand, the identity of new owners causes the differences in the progress of the restructuring of firms and their performance. This relies on the argument

³⁰ Still, Jones and Mygind (2002) study showed that foreign ownership does not always have the biggest impact on productivity and employee ownership can also be ranked amongst the effective forms of private ownership.

that different owners have different resources and capabilities to motivate and make a contract with other stakeholders. That means their transaction costs of getting information, motivating/bonding managers and creating efficient governance structures differ. The transaction costs are expected to be high if the markets are distorted. The latter is especially common for countries in transition. Thus, some owners might have difficulties to undertake necessary restructuring, which is needed for a successful transition to market economy (see subchapter 1.2.2 and 1.3.1).

In the following discussion, the elements of several factors that influence the development of ownership structures and their relationship with the different dimensions of enterprise restructuring are combined into a framework which creates the basis for analysing the ownership changes, their determinants and role in the restructuring of enterprises in transition economies. The framework concentrates on three aspects concerning the developments of ownership structures. First, the specificity of ownership structures in transition economies will be taken into consideration. Then, the factors that influence the development of ownership structures and their subsequent changes will be discussed. Finally, the relational aspects between the ownership and enterprises restructuring and performance will be explained.

The corporate governance theories explain the essence of governance problems between the owners, managers and related stakeholders. They provide understanding about the different issues related to ownership in a firm. It is important to stress that the ownership structure of the firm is an important element of its governance. The owners have a central motivating and controlling role in a firm. The efficiency of governance is much influenced by owners' resources and capabilities to exchange information and make a contract with all contributing stakeholders. Thus, the development of ownership structures can be described through several related aspects, such as firm's internal and external markets, resources and stakeholders' interests (see also Figure 3 for the interrelation of these aspects).

In practice, these governance problems are solved through different national corporate governance systems, which explain the essence of governance problems derived from legal, institutional, cultural, historical and technological differences between the countries or groups of countries (see Table 3 for overview of main corporate governance systems). In a classical market economy, the development of ownership structures is influenced by state regulations and open markets. For example, the influence of capital markets, especially the stock exchange is significant on corporate ownership structures. As stated by Berghe and Ridder (1999), a large part of shareholdings in Anglo-American countries takes place via stock exchange. Also, an active market of corporate control or takeover market is an important characteristic of this system (Weimer and Pape 1999). At the same time, in Continental Europe, especially in Germanic countries, the stock exchange markets are relatively small and undercapitalised (Aquilera 2003). Therefore, the banks exert

significant influence over corporate affairs through ownership and active external markets for corporate control is weak. In addition, in Germanic countries, the employees have rights to be involved in firm governance (Clarke 2007). Equally, the legal system plays an important role in the development of ownership structures. Shleifer and Vishny (1997) have stated that the extent to which the legal system protects its investors and the extent to which there are large investors in the firm are the most fundamental determinants of how a firm's corporate governance system develops.

In analysing the development of ownership structures in CEE countries, some additional aspects are important to take into account. Whilst during the socialist economic system, the companies' management, labour and product markets were regulated and controlled by state authorities, the ownership structure of socialist firm did not function the same way as in a firm in the classical market economy system. As stated by Jones and Mygind (2005), the development of ownership structures in CEE is very much determined by the privatisation process as well as by strong need to restructure the production, under-developed financial system and not fully developed governance institutions.

In general, privatisation created three different types of ownership structures. The direct sales of enterprises to strategic core-investors provided highly concentrated outsider ownership structures. The privatisation to former managers and employees created either concentrated or diffused insider ownership structures. The result of voucher or mass privatisation was diffused insider or outsider ownership structure unless the vouchers were concentrated in investment funds (like in Czech Republic) (see also Figure 4 for a more specific overview about the emergence of ownership structures after privatisation). However, as the privatisation in transition countries was state-governed, then often these created ownership structures through specific privatisation methods were not optimal and would not have developed in a market-based system. The path dependent evolution of ownership structures explains such kind of developments (Vincencini 2000). This means that path dependency may create a learning process and institutional development, which may lead to specific paths for subsequent developments in the governance structures (Jones and Mygind 2005). Hence, there is the expectation for the occurrence of post-privatisation adjustments which will bring the ownership structures back to a 'normal' equilibrium.

Thus, the ownership structures at the time of privatisation can be regarded as initial and one might expect secondary ownership changes in the post-privatisation period. Taking into account the starting conditions and the development of external conditions, one might expect the change away from employee ownership as employees might not have the necessary resources and capabilities to manage the firm. Manager ownership might suffer from the shortage of financial resources, but they have stronger management skills, although the experience of managing socialist firms is different from managing the market-based company. The direct sale to outsiders, as a privatisation method, is

expected to create the most stable ownership structures. Foreign investors have better access to necessary financial resources and the experience to manage enterprises in the market economy.

Diversified ownership structures might also turn into more concentrated ownership structures as the development of capital markets takes long time during transition. Pučko (2005) suggests that, as a result of voucher privatisation, many small private owners appeared who gained ownership by not paying the real market price for their shares. Whilst this did not make them feel like 'true' owners, it is expected that the shares of these small owners will be taken over by larger, more strategic investors. Also, as stated by Shleifer and Vishny: "if legal protection does not give enough control rights to small investors to induce them to part with their money, then perhaps investors can get more effective control right by being large" (Shleifer and Vishny 1997, p. 753).

The starting conditions and the changes in external conditions are extremely important aspects, but not the only aspects influencing the development of ownership structures. The ownership structure in a firm is considered to be endogenous depending on various firm-specific factors (Demsetz and Lehn 1985, Himmelberg 1999, Jones and Mygind 2005, Qu 2004). Moreover, the dynamic changes within the firm influence the changes in ownership structures. Filatotchev and Wright (2005) suggest that firms' strategic dynamics and corporate governance changes are interlinked, and the firm's life cycle may go hand in hand with dramatic shifts in its governance system.

As a consequence of privatisation, the possibility for certain investors to buy the enterprises was given. However, the choice of buying the enterprise is made by the new owner according to his/her resources and interest. For example, outsiders are more likely than insiders to invest in large firms, as are managers compared to employees. This is because the larger the firm is, the higher the capital and investment requirements are. The financial requirements of the firm set limits to owners who do not have an access to new capital. Insiders are expected to buy the firms with reliable income flows and high profits as they are more risk-averse. The existence of specific capital might cause a higher dependence on other links and this may lead to a stronger connection to core suppliers with concentrated strategic ownership. Similarly, if human capital is highly specific, the employees have an incentive to take direct control. The quality of the firm is also an important determinant of ownership structures. This is crucial to all types of investors. Thus, in analysing the determinants of ownership structures, several firm-specific factors should be taken into account as follows: the firm size, rate of return, financing requirements, specificity of inputs, industry effect and firm performance.

In addition to firm-specific factors, the changes in country-specific factors also play an important role in the development of ownership structures. For example, during the economic recessions, the employee and management buy-outs are more frequent as the price of assets and other employment possibilities are low. Instead, at the boom period, going public gives companies a cheaper

possibility for raising external finance. From an institutional point of view, the changes in the legal environment, such as the stronger enforcement of minority owners' protection, and the development of the capital market, especially stock exchange markets, enhances the probability that ownership structures become less concentrated (see also Table 4 for summary of the determinants of ownership structures).

The creation of private ownership and the subsequent changes in ownership structures can be considered as extremely important aspects for CEE countries transition to market economy as the ownership is a key building block in the development of the capitalist socio-economic system. However, to succeed in the competitive marketplace, new owners have to undertake several restructuring actions to increase the efficiency and competitiveness of enterprises. As pointed out by Blanchard (1997), for former state firms to survive not only changes in the structure of ownership, but also changes in the structures and the organisation of their production must take place.

There are four broad dimensions that new owners need to examine to ensure that a company has adequate strength and capabilities to compete effectively: finances, operations, marketing and organization (Crum and Goldberg 1998). These dimensions can be re-grouped into three more specific areas: financial, technological and organisational restructuring (Bonin 1998; Lieberman 1990, 1994) (see also figure 7 for different dimensions and types of enterprise restructuring). The financial restructuring is needed for rationalising the capital structure of former state-owned enterprises as well as for rearranging the debts and debt-equity ratios. Technological restructuring involves improvements in production processes and quality of products through replacement of obsolete equipment, introduction of new technological processes, investments to improve capacity utilization and energy efficiency. Organizational restructuring includes the revision of an organization, improvement of capacities and adjustment of human resources so as to guarantee production, marketing and financial gains.

At the beginning of the transition, most of the firms undertake reactive restructuring which is followed in the later transition period by more strategic approaches to firms' development. Reactive restructuring involves minimal changes in the organization. Here the owners place large pressure on improving cost competitiveness. Usually, this involves labour shedding, wage cuttings, product decreases, changes in assortment and selling of assets and old inventory. This behaviour is proper for all enterprises at the beginning of transition (Carlin and Landesmann 1997). However, it might last longer in domestic-owned enterprises as they do not have necessary resources for strategic restructuring (Meyer 1998, Schusselbauer 1999). As follows, strategic restructuring encompasses the creation of a new product mix, changes in the organisation, accounting and control systems, improvements in the product quality, investments into new technology, and research and development work. The faster application of this strategy is predominantly expected by foreign investors.

The influence of specific ownership types on the different restructuring activities is still rather unclear. A clear distinction is between enterprises with foreign ownership and domestic ownership, whilst among the domestic ownership enterprises (employee, manager or domestic outsider enterprises) no clear pattern has emerged. The foreign-owned enterprises expect to have a higher level of investments and better access to finances. Also, they seem to have a more long-term growth orientation and are more prone to undertake restructuring as well as investments into advanced technology and product development. However, findings in terms of ownership effects on manager turnover, changes in labour force, wages, exporting activities, and governance issues are still rather mixed (see also Table 5 for the effects of different ownership types on the enterprise restructuring). This might be explained by the different measurements, survey periods and methods used in the previous studies. In analysing enterprise restructuring in transition economies it is important to take into account the time-related issues, as restructuring means different things at different time points.

Moreover, an outcome of restructuring is supposed to be the higher performance of enterprises. The differences between owners are of great economic importance in terms of firm performance (Djankov and Murrell 2002). Foreign ownership is expected to have a positive relationship with firm performance, whilst employee ownership is expected to have a neutral or negative relationship. The relationships between other ownership types are more mixed. Similarly, there is no clear understanding about the relationship between secondary ownership changes and enterprise performance. One can assume that if initial ownership structures do not provide expected outcomes because of the mismatch between starting conditions and institutional settings, a secondary change in ownership structure will take place. Then, the relationship between these specific ownership changes and enterprise performance is expected to be positive if changes in the institutional environment also occur. However, it is important to bear in mind that the influence of specific ownership types is related to their resources and interests. Thus, the changes in institutional environment might provide more equal access to resources, but the interests of different owners/stakeholders are not so prone to change.

The connections of all these aspects discussed above are depicted in Figure 8. This shows how specific starting as well as firm- and country-specific factors influence the changes in ownership structures. In addition, how specific ownership changes are related to different types of restructuring and changes in enterprise performance are of importance. Figure 8 provides a framework for analyzing the changes in ownership structures, their determinants and role in enterprise restructuring in the countries that undergo or aim to undertake the transition to a market economy. Due to the limitations of the dissertation and data, only the relationships marked in the figure in black and white will be analysed in the empirical chapters. The relationships that are depicted in grey will mainly be used as background information.

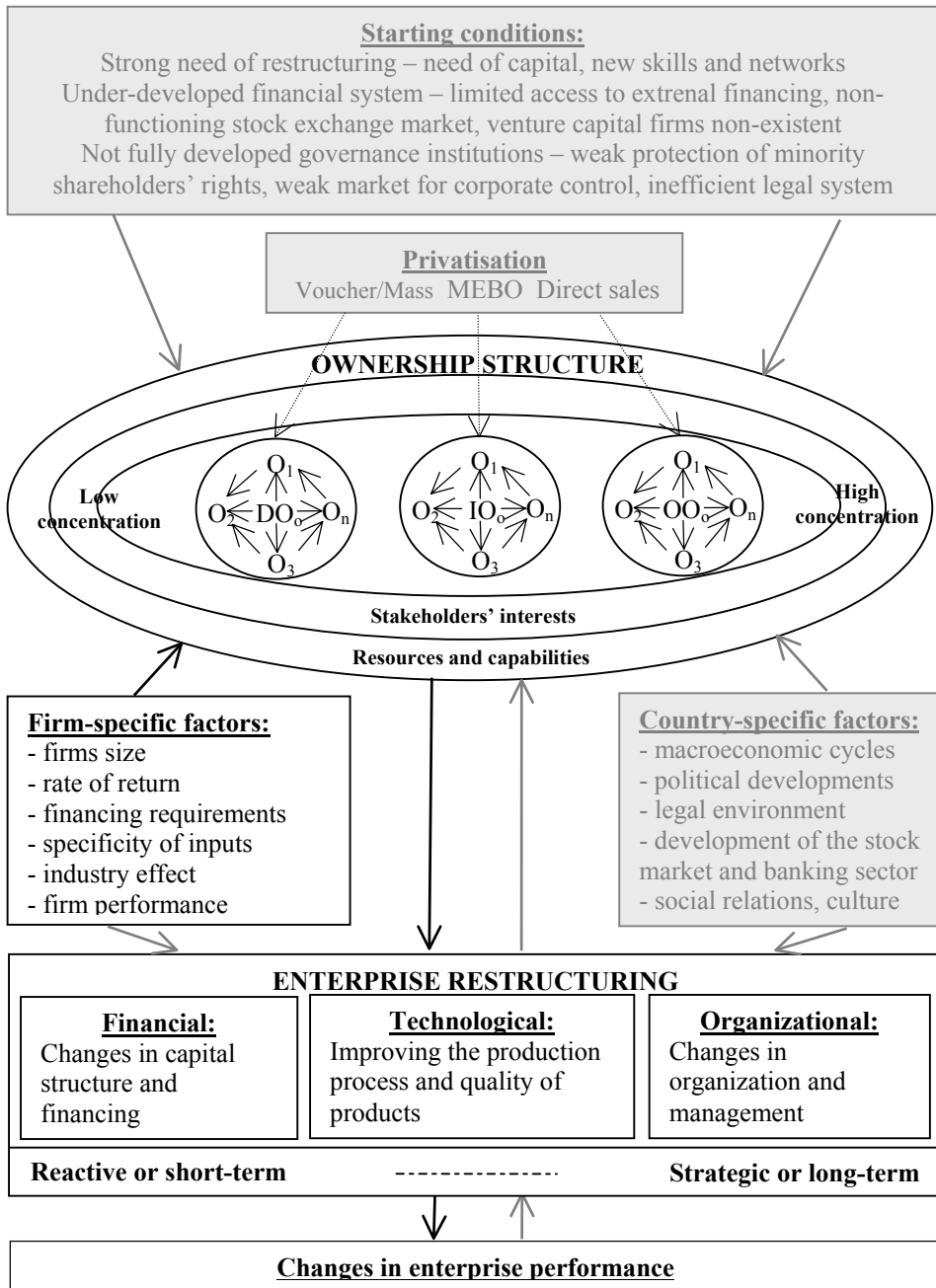


Figure 8. Framework for analysing the changes in ownership structures, their determinants and role in enterprise restructuring during transition (compiled by the author, DO_o – initial diffused ownership, IO_o – initial insider ownership, OO_o – initial outsider ownership, O_1, O_2, O_3, O_n – secondary ownership changes).

The above discussion leads to the conclusion that in analysing the changes in ownership structures, their determinants and role in the restructuring of enterprises in transition economies, several aspects have to be taken into account. In analysing the changes in ownership structures, it is important to take into account the initial conditions, especially the privatisation process and other external conditions. Due to these initial and changing external conditions, the secondary ownership changes are expected. The development of initial and secondary ownership structures is influenced by several firm-specific and country-specific factors. Besides this, the changes in ownership structures are dependent on the interest and resources of owners. The effects of ownership and subsequent ownership changes on the restructuring of enterprises are also dependent on the owners' interest and resources. However, firm-specific and country-specific factors might also influence this relationship. As follows, the next part of this dissertation concentrates on analysing the post-privatisation changes in ownership structures and the influence of firm-specific factors on these changes in the Estonian enterprises. Also, the effects of ownership and secondary ownership changes on the restructuring and performance of firms will be analysed.

2. EMPIRICAL RESEARCH ON THE CHANGES IN OWNERSHIP, THEIR DETERMINANTS AND ROLE IN THE RESTRUCTURING OF ESTONIAN ENTERPRISES

2.1. The Estonian specificity for analysing the changes in ownership structures and description of research propositions and methodology

2.1.1. An overview of privatisation and institutions related to corporate governance in Estonia

Before turning to the development of research propositions and introduction of research methodology, the overview of privatisation process and institutions related to corporate governance in Estonia will be provided. The political and economic context of Estonian privatisation process has been addressed by several researchers. In the following analysis, only the most important aspects of this process are briefly discussed as it is the starting point for analyzing the development of ownership structures. As it was discussed in the conceptual framework developed in the first part of the dissertation, the development of ownership structures in transition economies is dependent also on several economic and institutional aspects. Therefore, also the issues concerning the institutional developments that are related to the development of ownership structures in Estonia will be discussed. Extensive analysis about the privatisation process and corporate governance related issues in Estonia has been carried out, for example, by Gillies *et al.* (2002), Mygind (2000), Purju (1996), Tafel *et al.* (2006), Terk (1996, 2000).

The first stage of privatisation, so-called early privatisation, started in Estonia already before re-independence in the 1980s. After Gorbachov's rise to power, semi-private enterprises were allowed to set up under name 'modern cooperatives' and 'leased-based contracting' (Terk 1996, p. 97). The first transformations of state ownership were in the form of 'small state-owned enterprises', which were independent production units established as spin-offs from large state owned enterprises. The early reform programme promoted also the transformation of state enterprises into so-called 'people's enterprises', that meant that state property should be transferred to the work collective of the enterprises without any charge. However, the idea of 'people's enterprises' lost its popularity rather quickly and the number of enterprises established this way remained unspecified.

The law on 'small privatisation' was adopted in December 1990. This early law stipulated that the enterprise's employees have the pre-emptive rights to buy the place in which they work and preferential treatment in the form of reduced prices. The latter meant that they can buy the shares at "initial price"

which in most cases was much below the market value of the assets. The dominant method of small privatisation was the buy-out of a café, a hairdresser and the like. With the change of political climate after the re-independence, in May 1992, the law was changed and pre-emptive rights to employees were formally taken away. Also, the preferential right to buy at the initial price was abolished. This increased the circle of objects on sale to all other branches in addition to service, trade and catering. The new version of privatisation law “Privatisation Act” was adopted in June 1993, which legally equalized small-scale and large-scale privatisation. It is important to stress that the new version of the law did not contain any direct, indirect or potential preferences for enterprise’s employees and managers, former property users or other ‘insiders’. In this sense, the new Act was different from privatisation schemes of some other countries (Lithuania, Poland, Russia, Slovenia, etc.) where allocation of shares to and preferential privatisation by ‘own people’ was obligatory (Terk 2000, p. 76). The control of the privatisation process was taken over by the Estonian Privatisation Agency (EPA). However, in 1993, small privatisation was already approaching its final stage (see also Table 7).

Table 7. The overview of small privatisation in Estonia

	1991	1992	1993	1994	1995	1996	1997	1998	Total
No. of objects	211 ¹	556 ¹	252	126	120	84	64	20	1433
Price (million EEK)	1.7 ¹	42 ¹	128	68	80	149	161	287	917
Average price (th EEK)	8 ¹	76 ¹	508	540	666	1774	2516	14350	678
Average price (th 1995 EEK)	312	276	970	697	666	1442	1838	3689	659

Notes: ¹ - 1991 and 1992 data from Purju 1996, other years from EPA. 1991 price was 19 million Roubles. EPA estimates the total number of object 1991–98 to 1367 for a total price of 893 million EEK.

Source: Mygind 2000, p. 51.

From Table 7, it can be seen that small-scale privatisation in Estonia was relatively successful. The small privatisation was very fast in the early years when the assets were sold at very low prices. During 1991–1992, more than half of the buy-out cases of small service, trade and catering establishments took place from which more than 80 per cent of the total number of units fell into the category of employee buy-outs (Terk 1996, p. 109). It is estimated that at that

time 80 percent of the entities were sold at initial price, in 10 per cent of the cases, a real auction took place, 9 per cent of the entities were sold on the basis of business ideas and only four larger enterprises were privatized by the sale of shares (Purju 1996, p. 16). However, no precise data exists about the proportion of employees participating in the buy-out or what percentage of the shares of the joint-stock company buying the unit was possessed solely by the manager. In the later years, the increase is caused by the fact that another type of objects, spin-offs of fixed assets from enterprises in large privatisation, were sold (Mygind 2000, p. 9). In 1991, more than 90 per cent of enterprise in the trade and service sectors belonged to the state and municipalities. In 1994, 83 per cent of the activities in the service sector, 90 per cent of wholesale and 94 per cent of retail sale were private (Purju 1996, p. 18).

The large-scale privatisation programme was introduced in August 1992. The strategy for privatising large enterprises followed the German *Treuhand* model. Large privatisation was launched in the form of international tenders giving equal access to all bidders, including foreign investors. The offered price was only one of the criteria for choosing the buyer. Also, the proposed business plans and guarantees for investments and employment played an important role. In this model, the main idea was to find a core investor/real owner.

The start of privatisation of large enterprises was delayed because of political reasons. However, by the beginning of the process, the strong community of new entrepreneurs was developed that managed to accumulate a certain amount of capital in the early 1990s. Thus, the interest for buying the large enterprises was big both from domestic and foreign investors' side. Still, due to large numbers of objects offered for sale, Estonian privatisation remained largely domestic business³¹ (see Terk 2000, p. 152). Moreover, the domestic capital suppliers were allowed to buy on instalments and it was also possible to use vouchers as a part of the payment from summer 1994. The same rules were extended to foreign capital from spring 1996 (Mygind 2000, p. 9). Nevertheless, the role of vouchers in Estonian privatisation was mainly political and they were used for privatising dwelling rooms or unlawfully expropriated property. Similarly, the role of investment funds and banks remained modest acting more as the investors and guarantors than owners.

From Table 8, it can be seen that the largest number of privatisation contracts for large enterprises was made in 1994. As stated by Terk, between 1993 and 1995, in a period of one and half year, more than 50 per cent of all state-owned large enterprises were sold (Terk 2000, p. 160). This phase is often called as the period of mass sales. By the end of 1995, most large enterprises had been privatized. From 1996 onward only semi-infrastructure and truly infrastructure enterprises had remained to privatise (for example, Estonian Air, Estonian

³¹ According to Purju, in 1993, the share of the contracts concluded with foreign investors was around 25 per cent, in 1994 and 1995 it dropped below 10 per cent, in 1996 there was upward trend due to putting on sale large enterprises which were of interest for foreign investors (Terk 2000, p. 152).

Shipping Company, fuel dealer “Esoil”, etc.). As it is seen also from Table 8, after 1996 the number of sales of large enterprises has fallen; at the same time the average price has gone up being much higher than earlier years. At this phase, the majority of offers that were accepted came from foreign investors who could pay higher prices and brought, along with their money, critical management and marketing skills. By 2000, over 80 per cent of Estonian state-owned enterprises had been privatised and it is estimated that 80 per cent of all business revenues were generated in the private sector (Gillies *et al.* 2002, p. 181).

Table 8. The overview of large privatisation in Estonia

	1993	1994	1995	1996	1997	1998	Total
No. of enterprises	54	215	142	43	17	12	483
Price (million EEK)	353	1329	937	474	1295	318	4707
Average price (th EEK)	6.5	6.2	6.6	11.0	76.2	26.5	9.7
Total paid by vouchers (th EEK)	0	294	443	134	298 ¹	76	1245
Percent paid by vouchers (%)	0	22	47	28	23	24	26
Debt taken over (million EEK)	196	700	618	230	416	8	2168
Average debt (th EEK)	3.6	3.3	4.4	5.3	24.5	0.7	4.5
Invest. guarantees (million EEK)	237	858	1021	489	1715	281	4601
Average (th EEK)	4.4	4.0	7.2	11.3	100.9	23.4	9.5
Job guarantees	9099	25573	17279	127423	2929	72	56226
Average	169	119	122	0	172	6	116

Notes: ¹ – 50% paid by vouchers, except the shipping company sold for 700 million EEK to Norwegian company.

Source: Mygind 2000, p. 51.

Thus, Estonia managed to transform the former state enterprises into the private enterprises within a rather short time period. The overview of EBRD privatisation scores show that large-scale privatisation in Estonia together with Czech Republic and Hungary reached the score 4³² already in 1995 (Czech Republic

³² The transition indicator scores reflect the judgment of the EBRD’s Office of the Chief Economist about country-specific progress in transition; 1 = little private ownership, 4+ = standards and performance typical of advanced industrial economies: more than 75 per cent of enterprise assets in private ownership with effective corporate governance.

1994). As stated by Wolfe (1996), four factors seem to be critical to the success of privatisation process implemented in Estonia: (1) the timing of privatisation was right, (2) the government chose the right model and introduced the right modifications, (3) the privatisation legislation gave to EPA the power and independence to choose appropriate new owners for a majority of enterprises, and (4) the monetary policy was correct. Gillies *et al.* (2002) suggest that also the fact that privatized state enterprises, especially those with foreign investors, were able to take advantage of the high quality, low-cost, Estonian labour supply, which existed during most of 1990s, should not be overlooked.

As follows, the overview of developments of the main institutions that are important for the functioning and development of the governance/ownership structures will be provided. The first most important general act concerning the property and property rights was the Ownership Act adopted in summer 1990. The legislation on bankruptcy procedures was launched in 1992. The law was strictly enforced and, by 1995, more than 1000 bankruptcies had already been implemented (Mygind 2006). Therefore, the takeovers of liquidated assets have had an important role in the ownership dynamics in Estonia. Since 2003, the bankruptcy and insolvency is governed in Estonia by Bankruptcy Act. According to EBRD 2003–2004's Sector Assessment Survey, this law scored 'medium compliance' (EBRD. Commercial..., 2006). In EBRD's assessment the law has still much room for improvements. Furthermore, EBRD 2004 Legal Indicator Survey on Insolvency which examined how the law works in practice revealed that Estonian insolvency regime is much more 'creditor-friendly' at the expense of allowing debtors to restructure.

The EBRD's score for enterprise restructuring and corporate governance reflects also faster and tougher implementation of bankruptcy rules (see Table 9). By 1995, in addition to Estonia, only four more transition countries had reached the score 3: Czech Republic, Hungary, Poland and Slovakia. Moreover, by 2007, the score has reached 3.7. However, the EBRD's 2004 Corporate Governance Sector Assessment, which assessed corporate governance, related 'laws on the books' rate Estonia as having achieved 'medium compliance' when compared to the OECD Principles of Corporate Governance (EBRD. Commercial..., 2006). Shortcomings were found in the 'responsibilities of the board' and 'disclosure and transparency'. The legal environment to corporate governance is set by the Commercial Code, large part of which were amended lately and entered into force on 1 January 2007. Also, it is important to mention that "Corporate Governance Recommendations" issued by Financial Supervisory Authority in cooperation with the Tallinn Stock Exchange entered into force on 1st of January 2007. Estonia was one of the few transition countries where corporate governance code did not exist until 2006. In most countries the corporate governance code existed before 2003 (EBRD. Corporate..., 2004).

Table 9. Overview of institutions related to corporate governance in Estonia

	1995	2000	2004	2007
Bankruptcy system	Strict legislation since 92, tough enforcement			
Insolvency law EBRD 2004	Medium compliance			
Governance				
Enterprise restructuring and corporate governance*	3.0	3.0	3.3	3.7
Competition policy*	2.0	2.7	3.3	3.7
Governance law EBRD 2004	Medium compliance			
Bank market				
Number of banks (foreign)	19(5)	7(4)	9(6)	14(12) ¹
Assets share of state owned banks (%)	9.7	0.0	0.0	0.0 ¹
Assets share of foreign owned banks (%)	1.8	97.4	98.0	99.1 ¹
Domestic credit to private sectors (% of GDP)	13.3	23.3	40.9	78.4 ¹
Non-performing loans (% of total loans)	2.4	1.3	0.3	0.2 ¹
EBRD score: banking*	3.0	3.7	4.0	4.0
Bank regulation	Strict already in 1992			
Stock market – started May 1996				
Listed firms	16 ²	23	14	16 ¹
Capitalization (% of GDP)	21.0 ²	31.5	48.5	34.6 ¹
Trading volume (% of capitalization)	13.0 ²	18.9	17.5	21.2 ¹
EBRD-score: non-banking*	1.7	3.0	3.3	3.7

Notes: * - EBRD score, 1=none, 4+=full; ¹ – 2006 indicator, 2007 n.a; ² – 1996 indicator.

Source: compiled by the author on the basis of EBRD Economic Statistics and Forecasts 2008; EBRD Transition Report 2005; Mygind 2006, presentation slides; Sander 2007, p. 16.

In 2005, the EBRD launched a survey for testing the effectiveness of corporate governance legislation according to four variables: complexity, speed, enforceability and institutional environment (EBRD. Commercial..., 2006). The survey revealed that actions available to minority shareholders with less than 25 per cent shareholding are limited and in general not very effective. The survey found that minority shareholders can call a general meeting to request information from the management, but that they cannot adopt any decisions unless their action is backed by other shareholders representing the majority at the meeting. Also, when considering redress, actions available to minority shareholders are limited, although much more effective. In Estonia, obtaining an executable judgement can take more than 24 months if the dispute goes before

the Supreme Court and it is considered easy for the defendant to delay the proceedings. Still, the institutional environment is considered sound as courts are deemed impartial and generally experienced and competent in corporate law cases, corporate information is reliable and statutory auditors are deemed fairly independent from the controlling shareholder.

The Estonian banking sector development has been rather fast. As it is seen from Table 9, in 1995, only 9.7 per cent of banking assets belonged to state. After the monetary reform in 1992, the two-tier banking system was established with a Central Bank and a number of commercial banks. The figures in Table 9 show that the number of commercial banks in the early transition period was rather high, but the further development of banking sector shows a strong consolidation with a falling number of banks. The other feature of banking sector development is the increasing share of foreign banks where, by 2000, already 97.4 per cent of banking assets belonged to foreign, mainly Scandinavian companies. The share of non-performing loans has been low already since the beginning of transition and has continued falling in the later period. At the same time, remarkable increase in the share of domestic credits to private sector has taken place, indicating that the private companies' possibilities for loans have continuously improved. However, it is important to distinguish between the period up to 2000 and from 2000 to 2004; in the latter period, the share of credits to private sector is higher.

The Estonian stock market development has been slower than banking market development. Tallinn Stock Exchange was founded in 1995 and is the only regulated secondary securities market in Estonia. The actual trading in the stock exchange market started in May 1996. Tallinn Stock Exchange has been characterised by a small number of listed companies, but in comparison with transition countries, with relatively high capitalization³³. Still, the trading volume of the market is low – 21.2 per cent in 2006. The number of listed companies grew rapidly after trading started 1996, but the stock market crash in autumn 1997 caused a serious slowdown. As a result, the number of listed companies in 2007 is still lower than in 2000. The small size of the Estonian stock market poses the problem of illiquidity. Rather low liquidity may also be the result of high ownership concentration. More than half of the listed companies have an explicit majority shareholder who owns over 50 per cent of shares (Sander 2007). However, according to EBRD Securities Market Legislation Assessment conducted in 2005, Estonia was found to be in 'high compliance' (almost reaching 'very high compliance') with the Objectives and Principles of Securities Regulation published in IOSCO³⁴ (EBRD. Commercial..., 2006).

The development of non-banking financial institutions belongs to the last stage of transition. It is seen also from Table 9 that EBRD's non-banking

³³ For example, in 1996, only Poland and Slovenia had higher stock market capitalization than Estonia.

³⁴ IOSCO – International Organization of Securities Commissions

financial institutions score in 1995 was only 1.7. Insurance companies are getting more consolidated and investment funds, venture capital funds, private equity are in their early stage. Private pension funds and life insurance companies are beginning to accumulate pools of households' savings, but absolute volume is still low. The pension funds are still in an early stage, but it can be forecasted that institutional investors related to these funds will have a strong role in the future like it is the case in most developed economies (Mygind 2006).

Turning to the general economic development of Estonia during transition, two development periods can be distinguished: the volatile economic development period hit both by the growth and recession until 1999, and stable economic growth period after 2000 (see Appendix 14). In the beginning of transition, the Estonian economy was in deep recession with extremely high inflation. There was a significant imbalance between the supply of money and the quantity of goods produced. In response, in June 1992, the Estonian government introduced its own currency – Estonian Kroon. Whilst the Kroon was still undervalued, the inflation continued at a high rate. However, since 1993, inflation started to decrease and since 1995, the economy entered into four years' growth period. However, in 1999, as a consequence of stock market crash and Russian financial crises, the economic growth turned into recession. This short-term economic recession had rather influential impact on the ownership dynamics. The stock exchange crash caused many enterprises big liquidity problems. In addition, the export to Russian market was blocked. Many enterprises had difficulties to finance their activities. The only way out was to find external financing source as getting loan from domestic banks was still limited. Thus, during the economic recession, many enterprises were taken over by foreign investors. Instead, the period 2000–2007 has been characterized by high and stable economic growth.

To conclude, the Estonian ownership relations and corporate governance developments include the variety and dynamism of the initial ownership structures. The Estonian privatisation process has been one of the quickest among the countries in transition. Two distinguishing characteristics of this process have been orientation on mass sales and finding the core investor/real owner. Although some pre-emptive rights and preferences were used to strengthen domestic capital in the privatisation process, Estonian privatisation has not limited the inflow of foreign capital. Thus, all ownership groups have equally played an important role in the development of ownership structures. Insiders have had a quite strong role in initial ownership in small enterprises and outsiders in large enterprises. The enforcement of corporate governance legislation has been strict and efficient. However, it protects mainly creditors as it follows the roots of German law. Also, similarly to German corporate governance system, the protection of minority shareholders in Estonia is weak. The development of banking sector has been fast, however, the banks have remained mainly in the role of financiers and guarantors. The development of

stock market has been slow and has not yet started to play significant role in influencing the ownership relations. In sum, based on Tafel *et al.* (2006), one can point out the following features that distinguish Estonian enterprises governance/ownership structure developments from other transition countries: somewhat faster emergence of core owners, higher significance of foreign owners, rapid development of commercial banks, larger significance of outsider owners compared to insider owners, small significance of privatisation funds, and the domination of the German model as the basis of general legislation.

2.1.2. Introduction of research propositions, data and methodology

Propositions for empirical analysis

In the first part of the dissertation, the conceptual framework was developed (see Figure 8). This framework is based on both theoretical and empirical research on the current topic and is applicable to any country which aims to undertake transition. Whilst the empirical part of this dissertation relies only on Estonian enterprises, in developing the research propositions, the specific features of Estonian privatisation process and developments of economic and institutional environment will also be taken into account. Based on the conceptual framework, the propositions developed in this subchapter will be divided into three groups. The first group concentrates on analyzing the level of ownership concentration and changes in ownership in terms of owners' identity, the second group on analyzing how firm-specific factors determine the specific ownership structures and ownership changes, and the third group analyses how specific ownership types and ownership changes influence the different types of restructuring and enterprise performance.

As one could see from the conceptual framework, the development of initial ownership structures in CEE is very much influenced by specific starting conditions, including privatisation, need of restructuring and weakly developed institutions. The overview of Estonian privatisation in the previous subchapter showed that privatisation in Estonia did not favour the development of any particular ownership structures. Although in the early stage of privatisation, some pre-emptive rights and preferences for buying enterprises at reduced initial price were given to enterprise's employees, these preferences were abolished later, in the active stage of privatisation. The main orientation was to find a core investor (or real owner) as in Hungary, but not to distribute the shares of enterprises to the wider constituency as in the Czech Republic.

Moreover, it is rather likely that initial ownership structures (especially in employee owned enterprises) created by the selling of enterprises below their initial price in the later stage of transition were taken over by larger and more strategic owners. This argument is also supported by Pučko (2005), who claims that the creation of many small owners through selling the enterprises under their initial price does not create real owners. In addition, the experience of well

developed market economies shows that the development of capital markets, especially the stock exchange markets, enhances the probability that ownership structures become less concentrated (see subchapter 1.1.2). Also, changes in the legal environment, such as the stronger enforcement of minority owner's protection, might influence the development of more dispersed ownership structures. Shleifer and Vishny (1997) argue that if legal protection does not give enough control rights to small investors, then investors can get more effective control rights by being large. The previous subchapter indicated that whilst the development of the Estonian banking sector has been rather fast, the efficient functioning of the stock exchange market has taken longer and the trading volume in the stock exchange is still very low. Similarly, the insolvency legislation in Estonia is more on the creditors' side and corporate governance legislation does not provide enough protection to minority investors. Previous empirical research also indicates that the increasing ownership concentration has become as a trend in transition economies in spite of differences in institutional developments (see subchapter 1.3.1). The level of ownership concentration has increased in all groups of enterprises, but the most intensively in enterprises with domestic and strategic foreign outside ownership. Taking all these aspects into account, it is reasonable to assume that in Estonian enterprises:

P1a: The level of ownership concentration is rather high due to the applied privatisation strategy and it is increasing over time due to weak protection of minority investors and small stock exchange market

P1b: The level of ownership concentration is highest in foreign and domestic outsider owned enterprises and lowest in employee owned enterprises

The variety of new ownership types is considered to be an extremely important characteristic of CEE ownership structures (see subchapter 1.2.1). As was stated above, the initial ownership structures can develop in many different ways depending on the applied privatisation strategy. Still, as the privatisation in transition countries often followed political rather than economic interest, the deviation of created ownership structures from so-called 'optimal ownership structures' could be expected. In that case, it is reasonable to assume that in terms of some ownership structures the high intensity of ownership change will take place in the post-privatisation period. The latter may be caused by certain starting conditions (such as need of restructuring) and the level of institutional development (such as limited access to capital) that does not support survival of these ownership structures. This argument is supported also by Jones and Mygind (2005) who expect that the post-privatisation adjustment of ownership structures will bring the ownership structures back to a 'normal' equilibrium. Previous empirical research indicates that most intensive has been the change away from employee ownership and the most stable ownership type has been

the foreign ownership (see subchapter 1.3.1). The discussion above can be applied also to Estonian enterprises as in the privatisation process some preemptive rights and preferences were given for domestic investors (such as reduced price for employees in the early privatisation and payment in instalments until 1995). Therefore, the following proposition is set up:

P1c: The intensity of ownership changes is highest in enterprises with initial employee ownership, followed then by enterprises with initial manager, domestic outsider and foreign ownership

In addition to starting conditions and institutional settings, the changes in ownership structures can also be related to macroeconomic changes in the economy. A similar argument is also presented by Jones and Mygind (2005) who claim that macroeconomic cycles and institutional settings can also be expected to have an impact on governance structures. Taking into account the specificity of transition countries which are characterised by unstable economic environments because of several economic reforms and slow institutional developments, it can be expected that the changes in ownership structures are more intensive in the earlier transition period. Subchapter 2.1.1 indicated that Estonian economic development was rather unstable in the 1990's and during this period important changes in several institutions related to corporate governance took place. The period 2000–2004 is characterized by stable economic growth. Therefore, it can be expected that:

P1d: The changes in ownership are more frequent in the earlier transition period than later transition period due to the unstable economic and slow institutional development

The following group of propositions concerns the firm-specific determinants of ownership structures and their changes in Estonian enterprises. Taking into account both the transaction costs and resource-based view of the firm, it could be assumed that ownership structures are influenced by firm-specific factors (see subchapter 1.1.1). The firm's ownership structure is considered to be endogenous and thus influenced by various firm-specific factors (Demsetz and Lehn 1985, Himmelberg 1999, Jones and Mygind 2005, Qu 2004). These firm-specific factors are: firm size, rate of return, financing requirements, specificity of inputs, industry sector and initial performance (see subchapter 1.2.1). In the context of transition, when enterprises are privatised, these different factors may influence the attractiveness of firms toward various types of investors and determine their choice in acquiring certain types of firms. However, it is important to bear in mind that this choice is influenced also by starting conditions and institutional settings. Therefore, the interests and resources of a new owner also play an important role in the development of initial ownership structures (see, for example, Mygind 2000/2001).

In the literature, the outsider owners are expected to buy larger and well-performing firms with higher capital and investment requirements rather than insiders. This is because the financial requirements of the firm set limits to owners who do not have an access to new capital. Insiders are expected to buy the firms with reliable income flows and high profits as they are more risk adverse. (See subchapter 1.2.1) Previous empirical research suggests that development of initial ownership structures have not been totally random and that certain ownership types can be characterized by certain firm-specific factors (see, for example, Jones *et al.* 2005, Jones and Mygind 1999). The overview of the privatisation process in Estonia (see subchapter 2.2.1) also indicated that smaller enterprises were sold to insider owners and larger enterprises to outsider owners. Thus, it can be suggested that:

P2a: Enterprises with a large firm size, high financing requirements and high productivity are more likely owned by outsider owners and enterprises with a small firm size, low financing requirements and high profitability are more likely owned by insider owners

Similarly, if firm-specific factors (and institutional settings) influence the development of initial ownership, the changes in firm-specific factors (and institutional environment) are expected to influence the changes in ownership. This argument goes in line with Filatotchev and Wright's (2005) suggestion that a firm's strategic dynamics and corporate governance changes are interlinked and are accompanied by different combinations of resource diversity and accountability/transparency with respect to the firm environment. Due to starting conditions and institutional settings, it is likely that predominantly changes from insider to outsider ownership structures will take place in the post-privatisation period as the institutional environment supports more survival of such kind of ownership structures. However, these ownership changes might also be promoted by the changes in firm-specific factors. For example, Jones *et al.* (2005) suggest that when the firm size increases in terms of its employees, then the employees would benefit from delegating ownership to a central monitor. Increasing firm size also makes the decision-making among employees more complicated (Hansmann 1988). Thus, it might promote the change in ownership to outsiders. Filatotchev *et al.* (1996a) point out that if the ability to borrow from banks is absent, liquidity constrained insiders may have no resource but to issue new shares to outsiders. The effects of firm performance on ownership changes are still not clear (see subchapter 1.3.1) and considered to be ambiguous. In general, outsider owners are more interested in well-performing firms, but sometimes poorly performing firms may have to turn to outsider investors to survive (Jones *et al.* 2005). The ownership changes from outsider to insider are not so well documented in the literature. Still, insider buy-outs are expected to be related to underperformance and undervaluation of shares (*Ibid.* 2005). Therefore, the following proposition is set up:

P2b: Increasing firm size, financing requirements and productivity lead to ownership changes from insider to outsider and a decreasing firm size, financing requirements and profitability lead to ownership changes from outsider to insider

As was seen from previous subchapter, some ownership structures mainly started because of favourable treatment (for example, employee ownership). It can be expected that this mismatch in the post-privatisation period weakens as further adjustments in ownership occur. Thus, it can be assumed that firm-specific factors that determine the initial ownership structures might differ from those that determine the ownership structures in the later transition period. It can also be expected to happen due to the changes in firm-specific factors and the economic and institutional environment. This means that the economic environment becomes more stable, the financial markets start to function properly and the efficiency of legislation improves. Thus, the external conditions will be more equal and the differences between firms in terms of access to resources should become less noticeable. Subchapter 2.2.1 indicated that Estonian economic development after 2000 has been stable. Also, that the development of financial markets has been fast and the efficiency of corporate governance legislation has improved considerably. Therefore, it can be expected that:

P2c: Firm-specific factors play a different role over time in determining the ownership structures due to the changes in institutional environment

The third group of propositions will be set up to analyse the relationships between ownership and enterprise restructuring and performance. It is suggested that if the transaction costs of taking value maximizing positions in firms are low, each firm would have the 'right' ownership structure (Coase 1988, Demsetz and Lehn 1985). However, previous research in transition economies has shown that differences between ownership types are extremely important in terms of firms' economic performance (see, for example, Djankov and Murrell 2002 and subchapter 1.2.2). From the point of the resource-based view of the firm and stakeholder approach, these differences can be explained by different resources and interest of different owners/stakeholders (see subchapter 1.1.1 and 1.2.1). As pointed out by Aghion and Blanchard (1998), outsiders have better access to capital which is necessary for undertaking restructuring. Still, it can be expected that the differences in access to several resources such as financial, human and technological is more relevant in the earlier transition period when the capital markets and institutions supporting the human capital and technological development are still under-developed. Due to the catching-up process, it can be expected that in the later transition period the markets and institutions are starting to work properly according to the standards of well developed economies. Thus, the differences in access to resources should

weaken. However, in terms of different interests of owners, the differences might still remain depending for instances on whether the aim of the firm is to maximize the value of its shareholders (large pressure on improving the financial performance) or stakeholders (performance encompasses more than just financial performance). Nevertheless, in both cases, it is expected that the transaction costs for maximising the firms' value is lower in the later transition period. Therefore, the following proposition is set up:

P3a: Performance differences between different ownership types are expected to weaken in the later transition period due to the changes in institutional environment

As already pointed out above, privatisation was not always carried out following its economic rational and often preferences to some ownership forms were given. Due to that, it is argued that certain ownership structures deviated from optimal ownership structures that would have developed in a market-based system and thus further ownership adjustments can be expected. The early privatisation in Estonia also gave some preferences to certain owners. Therefore, it can be expected that the secondary ownership changes mainly take place in enterprises where the initial owners did not have experience how to manage the enterprise and/or did not have enough financial capital that is necessary to undertake the restructuring. Thus, it can be expected that:

P3b: Secondary ownership changes are expected in lower performing enterprises

The last set of propositions can be considered experimental as previous research about the relationship between secondary ownership changes and enterprise restructuring and performance has been rather poor. Thus, it is not possible to set up strong propositions based on theoretical arguments. As it is expected that the changes in ownership take place in lower performing enterprises, it is assumed that all new owners will undertake necessary restructuring and improve the performance of these enterprises for increasing their competitiveness. Still, it is important to take into account that the new owners are different in terms of their resources and interests (especially in the course of transition) which are also determined by institutional developments. Thus, it is rather likely that some owners bring along faster changes in different types of restructuring and enterprise performance than others.

As the previous research on the relationships between ownership changes and different types of restructuring is very poor, it is assumed that the effects of specific ownership types on enterprises restructuring are applicable also on the specific changes of ownership to these specific ownership types. Previous research on enterprises' restructuring indicates that privatisation to outsiders is associated with more restructuring than insiders (see Djankov and Murrell

2002). Foreign-owned enterprises are expected to have a higher level of investments and better access to finances. The studies also show that foreign owners are more involved into process innovation and have better access to advanced technology. The relationship between ownership and employment changes is more mixed, but it is expected that insider ownership has a positive effect on employment level and foreign ownership a negative. This is because there was considerable hoarding of labour in former socialist firms. The level of wages is expected to be higher in foreign owned enterprises, for example, due to the better access to financial resources and scale effects, which they then use to compete for a better labour force. The relationship between ownership and export activities is also mixed, but it is expected that foreign owned enterprises export more than domestic capital enterprises, as the former have better access to global value chains, whilst the latter are more oriented towards local market (see also subchapter 1.2.2 and Table 5). As a result of this discussion, the following relationships are set up:

P3c: Ownership change from insider to foreign is expected to lead to faster increase in the use of external financing, that is, to faster financial restructuring

P3d: Ownership change from insider to foreign is expected to lead to faster growth in investments and capital intensity, that is, to faster technological restructuring

P3e: Ownership change from insider to foreign is expected to lead to faster reductions in employment and growth of real wages and exports

Previous research on the relationship between ownership changes and enterprise performance is also rather poor and mixed (see subchapter 1.3.1 and Table 6). Still, some studies show that if ownership changes to outsiders, it is accompanied with an increase in labour productivity, and if it changes to insiders, there is a decrease in labour productivity (see Jones 1998). In terms of profitability, no clear relationship is found. There are studies that report the negative relationship between return on assets and banks or portfolio enterprises (see Hanousek *et al.* 2007). However, as the research on determinants of ownership structures indicates, the insiders are more interested in buying the firms with reliable income flows and high profits because they are more risk adverse (see subchapter 1.2.1). Thus, it is expected that insiders as new owners bring along a faster increase in profitability than foreign owners. Therefore, the following relationship is set up:

P3f: Ownership change from insider to foreign is expected to lead to a faster increase in labour productivity and a slower increase in profitability

The propositions developed above will be addressed in the subsequent parts of the dissertation. The general logic of research propositions is summarized in

Figure 9. The first group of propositions (propositions P1a–P1d) explores the specificity of ownership structures and their changes. The second group of propositions (propositions P2a–P2c) explains how the firm-specific factors determine the ownership structures and their changes. The last group of propositions studies the relationship between the ownership changes and enterprise restructuring and performance (propositions P3a–P3f).

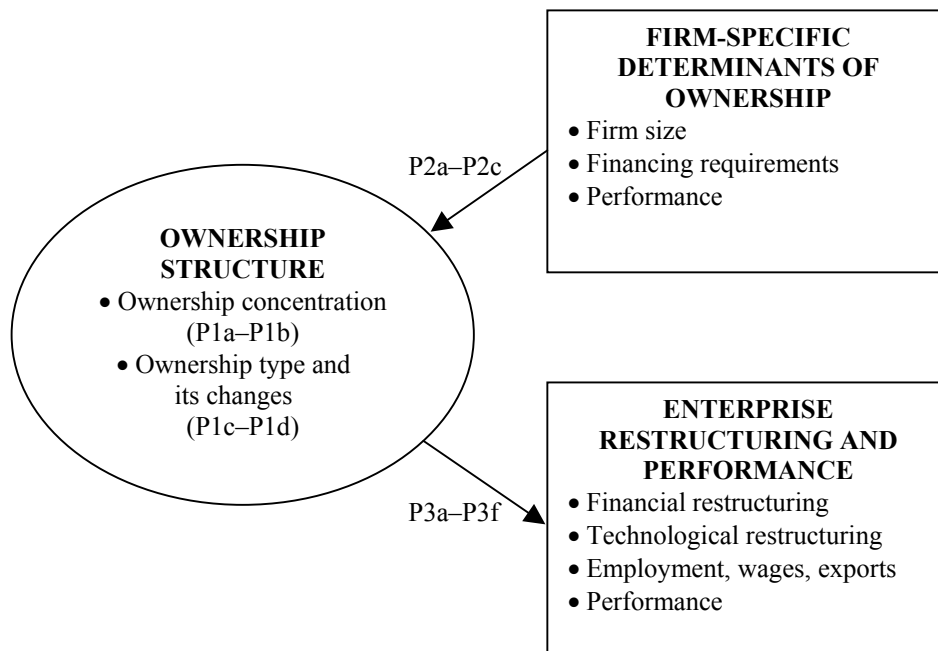


Figure 9. The general logic of research propositions (compiled by the author).

Data and sample description

The following analysis will be based on the database (later called as research database) created on the basis of two datasets. First dataset comprises broad range of Estonian enterprises’ balance sheets and income statements data (later called as financial database). These data are collected in purpose of statistics reviews and scientific research by ESO since 1995 as a result of bilateral agreement between ESO and UT. The data used in present dissertation range from 1996 to 2004. The data from year 2005 were not included whereas the

method of data collection³⁵ was slightly different and these data are not fully comparable to the following years.

Second dataset involves data on distribution of ownership shares³⁶ (later called as ownership database) in Estonian enterprises at three different time points: at the time of privatisation, 2000 and 2004. This dataset is the result of the trilateral cooperation between CBS, ESO and UT. For collecting ownership share data, the special questionnaire was undertaken by ESO in spring 2004. The sample included 758 enterprises. The aim of the questionnaire was to examine the distribution of ownership shares, the number of owners and concentration of ownership in Estonian enterprises. Regarding the aim and limits of the present dissertation, the following analysis will not capture the responses for the entire survey, but will predominantly focus on the distribution of ownership shares at three different time points.

In the ownership questionnaire, enterprises were asked to distinguish the ownership shares according to the following ownership categories: state owned enterprises, municipal enterprises, enterprise employees (of which management or other employees), Estonian persons not employed by the enterprises, Estonian private enterprises (of which financial institutions), foreign persons and enterprises (of which financial institutions), and shares in public distribution. In the following analysis, some of these ownership categories are grouped together leaving under consideration five ownership groups: state ownership, employee ownership, manager ownership, domestic outsider ownership and foreign ownership³⁷. The reasons for such regrouping are as follows. Firstly, some of these ownership categories are not strongly represented in the sample³⁸ which means grouping them together would raise the number of observations and improve the significance of the results. Secondly, bearing in mind the possibility to compare the present dissertation research results to other similar surveys, the above used approach for distinguishing ownership categories according to these five groups would make it easier.

³⁵ In 1995, only large enterprises with more than 50 employees were included into the sample. In the following years, since 1996, also enterprises with 20 or more employees were attached to the sample.

³⁶ Distribution of ownership share is measured by nominal capital.

³⁷ These five ownership groups have created by merging following ownership forms: state ownership incorporates the shares of state owned enterprises and municipal enterprises; employee ownership incorporates the shares of employees in enterprise; manager ownership incorporates the shares of managers in enterprise; domestic outsider ownership incorporates the shares of Estonian persons not employed by the enterprises and Estonian private enterprises; and foreign ownership incorporates the shares of foreign persons and enterprises. The enterprises with the shares in public distributions are included only in the ownership change analysis, but excluded from all other analyses because the number of enterprises for this group of owners is very small.

³⁸ For instance, ownership forms such as municipal enterprises, Estonian persons not employed by the enterprises, and shares in public distribution.

In addition, five ownership groups are formed according to the ‘dominant owners’ approach where the enterprise is assigned to the ownership group holding more shares than any other group (see subchapter 1.2.1). These enterprises where the shares have been distributed equally between owners have been excluded from the sample. The dominant owners’ approach enables to gather more enterprises into the survey compared to majority³⁹ or dominant majority⁴⁰ approach as often enterprises do not have majority ownership.

Considering the aim of the present dissertation, these two datasets, financial database and ownership database, were merged. First, for merging two databases, one had to drop out 192 enterprises from ownership database whilst they were enterprises not presented in the financial database. Therefore, the number of enterprises in ownership database fell to 566. Then, the ownership data of these enterprises were matched with the same enterprises’ financial data in the financial database. The number of enterprises in the merged database fell down by 11 more enterprises as enterprises without dominant ownership and observations where ownership and financial data did not match were excluded. Finally, as a result of the merge, a new database was created with data on 555 enterprises over nine years from 1996 to 2004. This is an unbalanced sample and describes enterprises that have been active in economy throughout the whole survey period. In the database, the financial data are for each year and ownership data for three time points – time of privatisation, 2000 and 2004.

Appendices 15–20 describe the characteristics of the sample. By industry (see Appendix 15), the majority of enterprises represented in the sample are manufacturing enterprises – 67.7 per cent. Among manufacturing enterprises, the biggest share is in food, beverages and tobacco products (15.4 per cent) followed by manufacture of wood and wood products (11.3 per cent), manufacture of wearing apparel, dressing and dyeing of fur (9.6 per cent), and manufacture of basic metals and fabricated metal products (9.0 per cent). The share of service enterprises in the sample is 27.2 per cent, of which the biggest share is in wholesale and retail trade (8.2 per cent), followed by real estate, renting and business activities (6.2 per cent), transport, storage and communication (4.8 per cent), and construction (4.3 per cent). The share of agriculture, fishing and mining enterprises in the sample is 5.2 per cent.

Thus, the sample is strongly biased towards manufacturing enterprises. The majority of these manufacturing enterprises are producing low-technology products (64 per cent of total manufacturing enterprises in the sample; see Appendix 16). Only 5 per cent of manufacturing enterprises are producing high-technology products.

Regarding the number of employees, the majority of the sample represents medium-sized enterprises with 50–249 employees (see Appendix 17). This is

³⁹ Majority ownership approach – enterprise is assigned to the ownership group holding dominant group within majority group

⁴⁰ Dominant majority approach – enterprise is assigned to the ownership group holding strictly larger than 50 per cent share

the reflection of manufacturing enterprises as they are usually larger than service or agriculture enterprises. Nevertheless, the sample includes also micro (14 per cent of the sample enterprises have up to 19 employees), small (19 per cent have 20–49 employees) and large (11 per cent have 250 or more employees) enterprises. Furthermore, 5 per cent of the sample enterprises were privatised before 1991, 80 per cent of enterprises during 1991–1995 and 15 per cent of enterprises 1996 and later (see Appendix 18). This has to be taken into account in testing the propositions as the time of privatisation might reflect when the restructuring of enterprise was undertaken.

By ownership form, the sample includes the most domestic outsider owned enterprises (accordingly at the time of privatisation 37 per cent of the sample, in 2000, 38 per cent, and in 2004, 39 per cent; see Appendix 19), followed by manager-owned enterprises (accordingly 21 per cent, 30 per cent, and 32 per cent), foreign-owned enterprises (accordingly 23 per cent, 26 per cent, and 25 per cent), and employee-owned enterprises (accordingly 15 per cent, 5 per cent, and 3 per cent). The share of state-owned enterprises has diminished to zero in 2004, but was at the time of privatisation 3 per cent of the sample. Since the time of privatisation until 2004, the ownership has changed in 35.1 per cent of sample enterprises and remained unchanged in 64.9 per cent of sample enterprises (see Appendix 20). Thus, in analysing the role of ownership changes in the restructuring enterprises, only one third of sample enterprises are taken under consideration.

In addition, there are 26 different ownership groups in the sample according to change in ownership between the time of privatisation, 2000 and 2004 (see Appendix 20). These ownership groups describe the dynamics of ownership in the sample enterprises. In the following analysis, only 17 of these ownership groups will be studied as in some of them the number of observations is too small. At this point, it is important to bear in mind that created ownership change groups do not reflect the exact time of ownership change, but the changes in ownership until the certain time point.

Finally, Table 10 concerns the representativeness of the present sample. It collects data about the number of enterprises, the number of employees, sales and exports figures in the whole Estonian economy according to ESO annual statistics database. These figures have been compared to the present survey sample.

Table 10 indicates that compared to ESO sample, the present sample is strongly over-represented by manufacturing enterprises and under-represented by service enterprises. Within manufacturing enterprises the stronger over-representation is among the food, beverages and tobacco, and textiles and wearing apparel enterprises. At the same time, the enterprises in manufacture of wood and wood products, basic metals and fabricated metal products, and manufacture of transport equipment remain under-represented. The sample represents rather well enterprises in manufacture of furniture (see Appendix 21). The share of primary sector enterprises (agriculture, etc.) is slightly larger in the present sample than in ESO sample, but according to the number of employees, sales and exports figures, it remains under-represented.

Although, the present sample describes only 1.2 per cent of total ESO sample enterprises, these enterprises represent 15.6 per cent of the total number of employees, 12.5 per cent of total sales of enterprises and 21.8 per cent of total exports of enterprises. Furthermore, the manufacturing enterprises in the present sample are rather well represented forming 7.3 per cent of the total ESO number of manufacturing enterprises, employing 42.2 per cent of manufacturing enterprises employees, and producing 44.7 per cent of manufacturing enterprises sales and 47.3 per cent of manufacturing enterprises exports. In terms of size distribution, the present sample is strongly over-represented by medium-sized enterprises. In the present sample, enterprises with 50–249 employees form 56 per cent. By contrast, in ESO sample the share of enterprises with 50–249 employees is 3.2 per cent. In sum, the present sample is biased towards medium-sized enterprises and describes above all the economic behaviour of manufacturing enterprises. The latter is important to take into account when the results of empirical analysis are discussed.

Table 10. Representativeness of the sample, 2004 (in the brackets the share of total, %)

NACE	No. of enterprises (share of total)		No. of employees (share of total)		Sales (million EEK) (share of total)		Exports (million EEK) (share of total)	
	ESO	SS	ESO	SS	ESO	SS	ESO	SS
A-C	1,476 (3.8)	26 (5.5)	22,810 (5.5)	1,526 (2.3)	13,013 (3.1)	442 (0.8)	2,754 (1.7)	63 (0.3)
D	4,994 (12.6)	327 (69.3)	129,020 (30.9)	54,616 (83.7)	86,519 (20.7)	38,688 (74.2)	43,416 (41.7)	20,539 (90.4)
E-Q	33,153 (83.6)	119 (25.2)	265,484 (63.6)	9,138 (14.0)	317,662 (76.2)	13,038 (25.0)	57,924 (56.6)	2,114 (9.3)
Total	39,623 (100)	472 (100)	417,314 (100)	65,280 (100)	417,194 (100)	52,167 (100)	104,095 (100)	22,716 (100)
		(1.2)*		(15.6)*		(12.5)*		(21.8)*

Notes: NACE classification: A–C – includes agriculture, hunting, forestry, fishing and mining; D – manufacturing; E–Q – electricity, gas and water supply, construction, wholesale and retail trade, hotels and restaurants, transport, storage and communication, financial intermediation, real estate, renting and business activities, public administration and defence, education, health and social work, etc. ESO – Estonian Statistical Office sample, SS – survey sample. * – calculates the total share of present survey sample to ESO sample.

Source: author's calculations on the basis of ESO annual statistics database "Financial statistics of enterprises" (http://pub.stat.ee/px-web.2001/I_Databas/Economy/Economy.asp, 02.07.2007) and research database.

Research methodology

The empirical analysis will be carried out in four sub-phases in terms of analytical methodology. The research database enables to use for analysis the statistical methods that are applicable for cross-sectional datasets. Figure 10 exhibits the stages of the current empirical research with the statistical methods used in the subsequent parts of the dissertation and the methods by which the developed propositions will be tested. The statistical analysis in this dissertation will be carried out using the statistical software Stata 8.0.

For analyzing the level of ownership concentration and changes in ownership, the descriptive analysis method will be used. First, the level of ownership concentration will be measured at the level of single largest owner and at the level of dominant ownership group. The level of ownership concentration will be examined also within each dominant ownership group. Then, the changes in ownership will be illustrated using ownership transformation matrices. Due to the available ownership database, the changes in ownership can be analysed between two different periods: since privatisation until 2000 and from 2000 to 2004 (see subchapter 2.2.1).

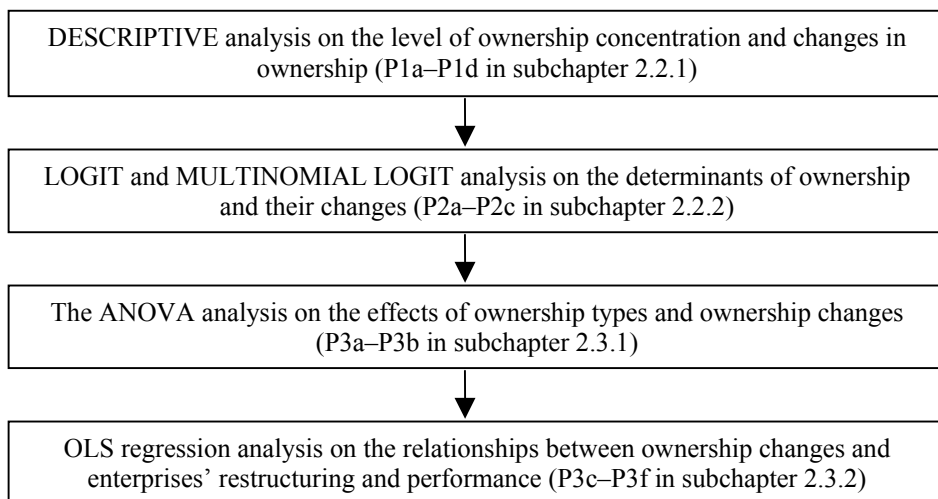


Figure 10. The components of the research methodology (compiled by the author).

This is followed by the binary and multinomial logit analysis which will be used to analyse the determinants of ownership and its changes. Logit regression analysis enables to test the change in probability that firm is owned by certain ownership type if marginal change in the independent variable takes place. Binary logit analysis will be used to test the probability that firm is owned by outsiders and is modelled as a function of its characteristics. For analyzing the

determinants of certain ownership types, such as employee ownership, manager, domestic outsider and foreign ownership, the multinomial logit analysis will be used. The multinomial logit analysis is appropriate for situations where the dependent variable has more than two categories and the categories are unordered. The model contrasts the categories in pairs. Both, binary and multinomial logit analysis will be carried out at two different time points: at the beginning of the survey period, 1996, and at the end of the survey period, 2004.

The determinants of ownership changes over time will be evaluated by using only binary logit regressions. Here the ownership data will be divided into two groups. In the first group, the firms under initial insider ownership are used in estimating the determinants of the change from insider to outsider ownership. In the second group, the firms under initial outsider ownership are used in estimating the determinants of the change from outsider to insider. In addition, this will be estimated separately for two different time periods: ownership change since privatisation to 2000 and ownership change since 2000 to 2004 (see subchapter 2.2.2).

Then, the effects of ownership and ownership changes will be estimated using the ANOVA analysis. The ANOVA analysis enables to identify the differences between firms with specific ownership types and specific ownership changes groups. Unlike t-test analysis, the use of ANOVA analysis is more suitable as the comparison of performance and restructuring indicators will be tested across more than two ownership groups. The ANOVA analysis will be carried out in three subsequent stages. First, the differences between two groups of enterprises, that are enterprises where ownership has not changed and enterprises where ownership has changed, will be identified. Second, the differences between four ownership groups where ownership has not changed such as employee, manager, domestic outsider and foreign, will be evaluated. Finally, the differences between 13 ownership change groups will be tested. The ANOVA analysis will be carried out for three different time periods: 1996–1999, 2000–2004 and 1996–2004. This is done to see the difference of ownership effects across different time periods (see subchapter 2.3.1).

Finally, in the last sub-phase of empirical research, the relationship between secondary ownership changes and enterprise restructuring will be examined using the OLS regression models. This model is used as it enables to estimate the impact of eight specific ownership change categories (independent dummy variables) on the different dimensions of restructuring and enterprise performance (dependent continuous variables). For each restructuring and performance variable, the model with different control variables will be estimated. The control variables which will be included into the model are firm size, industry sector, initial owner and privatisation time. All control variables are dummy variables. The OLS models will be carried out for the whole survey period. An alternative would have been to use fixed- and random-effects models. However, due to the limitations of ownership data (data are available only at three different time points) the OLS regression models are more appropriate. Moreover, all OLS model estimates will be tested with robust

standard errors, as OLS regressions assume constant error variance (homoscedasticity), which is often not fulfilled in the case of cross-sectional estimates (heteroscedasticity problem) (see subchapter 2.3.2).

The research method of the present work differs from previous studies by its more accomplished approach on both ownership structures and enterprise restructuring. The novelty of the method particularly lies in the more multifarious view on secondary ownership changes and the impact on restructuring. First, the distinction between secondary ownership changes will be made in eight ownership change categories. Secondly, the impact on the restructuring of firms will be viewed over three different restructuring dimensions: financial, technological and organizational. Altogether eight different restructuring variables will be measured. Moreover, the distinction between enterprise restructuring and performance variables will be made. The performance of enterprises will be treated as the outcome of enterprise restructuring, thus, characterized only by productivity and profitability variables. In addition, the reasonably long survey period (9 years) enables to make a distinction between different time periods and adds the dynamic dimension into the analysis of ownership changes.

2.2. Research results: changes in ownership structures and their determinants in Estonian enterprises

2.2.1. The analysis of ownership changes

The aim of the present chapter is to analyze the changes in ownership structures and their determinants in Estonian enterprises. Thus, this chapter provides an answer for the following propositions: P1a–P1d that specify the increasing level of ownership concentration and the intensity of ownership changes by specific ownership types; and P2a–P2c, that specify how firm-specific determinants influence the ownership structures and their changes. A start is made to describe the level of ownership concentration distinguishing ownership shares by single largest owner and dominant ownership groups. Then, the changes in ownership structures in terms of owners' identity is analysed. The latter explains ownership transformations within the enterprises in the post-privatisation period. This is followed by testing how firm-specific determinants influence the ownership structures and their changes.

Getting the evidence on the propositions P1a and P1b, the analysis of ownership concentration levels and its dynamics will be performed. Figure 11 presents the distribution of firms according to the single largest owner (a) and dominant ownership group (b) in 2004. From figure 11(a) it is seen that approximately in 40 per cent of enterprises, 91 to 100 per cent of ownership shares are owned by a single owner. Moreover, in more than two thirds of enterprises, the single largest owner has the majority⁴¹ ownership. At the same

⁴¹ One single owner acquires more than 50 per cent of ownership shares.

time, in five per cent of enterprises, the single largest owner acquires less than 20 per cent of ownership shares. The level of ownership concentration becomes even larger when ownership shares are measured by dominant ownership group (see Figure 11(b)). This could be expected especially in the case of employee ownership. However, according to dominant ownership group, in more than 60 per cent of enterprises, the average ownership concentration remains between 91 to 100 per cent. In the other 40 per cent of enterprises the average ownership concentration remains between 31 to 90 per cent.

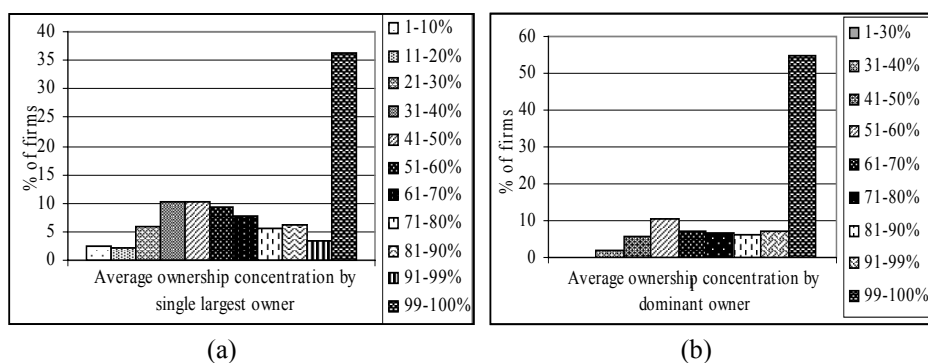


Figure 11. Distribution of firms according to average ownership concentration (measured by nominal capital) by single largest owner (a) and dominant owner (b) in 2004 (compiled by the author on the basis of research database).

Appendices 22–25 illustrate the average ownership concentration in enterprises according to different dominant ownership groups. From Appendix 22, it is seen that in more than 70 per cent of enterprises with dominant foreign ownership the ownership shares reach 99–100 per cent. In 25 per cent of enterprises with dominant foreign ownership, the average concentration remains between 51 to 98 per cent. This shows that if foreign investors buy enterprises in Estonia, they like to take a full or at least majority ownership and control over the enterprise activities.

Similar to the dominant foreign ownership group, the average ownership concentration in enterprises with dominant domestic outsider ownership is rather high (see Appendix 23). Herein, the average ownership concentration is 99–100 per cent in over 60 per cent of enterprises. This is slightly smaller than in enterprises with dominant foreign ownership. Still, there is rather high share of enterprises where average ownership concentration remains between 91–98 per cent. In general, the level of average ownership concentration is more dispersed in enterprises with dominant domestic outsider ownership than in enterprises with dominant foreign ownership.

The distribution of enterprises with dominant manager ownership, according to average ownership concentration, is much more diffused than in case of enterprises with foreign and domestic outsider ownership. It is seen from Appendix 24 that only in 37 per cent of firms, the average ownership concentration remains between 99–100 per cent. In more than half of enterprises, it remains between 31 to 90 per cent. The level of average concentration in enterprises with dominant employee ownership is even lower (see Appendix 25). In contrast to three other groups analysed above, there is no enterprise with dominant employee ownership where average ownership concentration reaches 99–100 per cent. In 78 per cent of enterprises with dominant employee ownership, the average concentration remains between 41 and 60 per cent. Thus, the analysis of ownership concentration indicates that in general the concentration level in Estonian enterprises is rather high. It is especially high in enterprises with foreign ownership and domestic outsider ownership. However, as expected, the average concentration in enterprises with dominant manager and employee ownership remains lower, especially in latter ownership group.

Table 11 provides an overview about the ownership transformations between the time of privatisation and 2004 with the changes in average ownership concentration. It is seen that the level of ownership concentration was high in Estonian enterprises already in the time of privatisation, which is likely connected to applied privatisation strategy that was oriented to finding the core investors. However, although the development of financial markets, especially banking sector development, has been rather fast in Estonia and one could expect that the level of concentration would decrease as enterprises are becoming the public enterprises, the latter has not been the case for Estonia. The level of ownership concentration has increased both in enterprises where ownership has not changed and where it has changed during the survey period. Still, for exemptions are the enterprises which have remained to employee ownership or moved to employee ownership. The average ownership concentration has also decreased in enterprises with initial domestic outsider ownership and initial employee ownership which have moved to manager ownership. It is difficult to explain why ownership concentration after shift to manager ownership has decreased, but it might indicate that after the changes in dominant ownership both domestic outsiders and employees have kept some shares.

The results of this analysis support the findings from previous studies, which have indicated that the level of ownership concentration in CEE countries, including Estonia, is increasing (see Berglöf and Pajuste 2003, Grosfeld and Hashi 2004, Jones and Mygind 2005, and Appendix 6). Also, that the level of ownership concentration in Estonian enterprise is higher than other CEE countries. Study by Berglöf and Pajuste (2003, p. 36) indicated that ownership stakes by the largest owner remained under 50 percent in Poland (respectively 40 per cent), Hungary (approximately 43 per cent), Slovakia (46 per cent) and Lithuania (50 per cent). In Latvia, the level of ownership concentration is higher than 50 per cent, but still lower than in Estonia (see Jones and Mygind

2005). It could be expected that in case of high ownership concentration, the owners of Estonian enterprises are not only in the role of capital providers, but are likely to be active in the enterprise' everyday activities. The ownership concentration level is also high, probably because of weak protection of minority investors and low role of stock exchange market in Estonian economy. In the perspective of corporate governance theories, this indicates that the governance problems between large and small shareholders are more prevailing in Estonian enterprises than between owners and managers. However, this statement would need a further analysis.

Table 11. Estonian enterprises ownership transition matrix with average concentration on dominant ownership group between the time of privatisation and 2004 (no. of enterprises)

Ownership at the time of privatisation \ Ownership in 2004	Foreign	Domestic outsider	Manager	Employee	Public distribution	Total (start)
State	7 (60/98)*	7 (77/89)	3 (83/95)	0	1 (73/100)	18 (71/94)
Foreign	111 (86/92)	11 (67/79)	7 (79/86)	1 (75/54)	0	130 (84/90)
Domestic outsider	15 (84/91)	147 (91/93)	39 (81/76)	1 (56/48)	3 (70/97)	205 (88/90)
Manager	7 (92/78)	21 (77/80)	88 (84/85)	2 (79/57)	0	118 (83/83)
Employee	2 (55/94)	29 (74/77)	38 (73/69)	14 (68/55)	1 (45/100)	84 (72/71)
Public distribution	0	0	0	0	2 (50/100)	2 (50/100)
Total (end)	142 (85/91)	215 (85/89)	175 (81/80)	18 (69/55)	7 (61/99)	557 (83/86)

Notes: * – Average concentration (%) of the dominant ownership group (start/end) in parenthesis.

Source: authors calculations on the basis of the research database.

In sum, the analysis above clearly indicated that in general the level of ownership concentration in Estonian enterprises has been high since privatisation and it is increasing over time. **Thus, the proposition P1a about the high and increasing level of ownership concentration in Estonian enterprises has been confirmed.** However, if the proposition had been specified in the level of certain ownership type changes, then it would not have found confirmation in

case of enterprises where ownership has remained to employee or moved to employee ownership. Also, in case of enterprises where ownership has moved from initial domestic outsider and initial employee ownership to manager ownership. However, the analysis shows that the highest average ownership concentration in Estonian enterprises is in the enterprises with dominant foreign ownership and domestic outsider ownership. The level of ownership concentration remains moderate in case of dominant manager ownership and is low in case of dominant employee ownership. **Thus, also the proposition P1b which specified that the level of ownership concentration is highest in foreign and domestic outsider owned enterprises and lowest in employee owned enterprises has been confirmed.** It is important to bear in mind that when, in case of dominant ownership group, the level of ownership concentration is low, then the other non-dominant ownership groups can have a stronger influence on enterprises' decision-making process than in enterprises where dominant ownership concentration level is high. In the current research, this might apply to the group of enterprise with the dominant employee ownership. The latter is important to bear in mind when the results of the ownership effects analysis are discussed.

Ownership changes since the time of privatisation until 2000

As the overview of the distribution of the sample by ownership type (see Appendix 19) showed, the largest share of Estonian ownership structure in terms of dominant ownership type is formed by domestic outsiders (39 per cent in 2004), followed by manager ownership (respectively 32 per cent), foreign ownership (25 per cent) and employee ownership (3 per cent). Since privatisation, the share of foreign ownership and domestic outsider ownership has increased marginally — in both cases, 2 percentage points. In contrast, the share of manager ownership has increased more than 10 percentage points. As a result of this, manager ownership has become the second largest ownership form in 2004. At the time of privatisation, this position belonged to foreign ownership form. However, the share of employee ownership has diminished remarkably, nearly 12 percentage points. Thus, the general movements in Estonian enterprises' ownership structures have been rather similar to the previous findings in other CEE countries (see subchapter 1.3.1 and Appendix 13). The share of employee ownership is continuously decreasing and managers are taking larger ground.

From Appendix 26, it is seen that the largest changes in ownership structures in terms of dominant ownership type have occurred in primary sector. The share of domestic outsider ownership has increased 19 percentage points and the share of employee ownership has decreased 31 percentage points. Still, one can not make very strong conclusions about these movements as the number of observations in this group is rather small. The ownership in manufacturing sector has not changed much, only the share of manager ownership has increased slightly and employee ownership decreased. In the tertiary sector, the changes have been similar to the

primary sector. Thus, it can be seen that considerable decrease in employee ownership has occurred mainly in primary and tertiary sector. This might indicate that initial employee ownership is likely to change faster in these industry sectors than in manufacturing sector. Additionally, as the share of manager ownership has shown larger growth in these two sectors, it might mean that the managers have taken over enterprises from the employees as they are considered to have better knowledge about managing the enterprise.

For getting more precise overview about how the changes in enterprises' ownership structures have occurred, the analysis of ownership transition matrices will be performed. As learnt from the theoretical part of this dissertation, the privatisation in transition countries often followed political rather than economic interest and therefore the post-privatisation adjustment of ownership structures could be expected. The following analysis is determined to find the evidence to propositions P1c and P1d which specified that the intensity of ownership changes is highest in enterprises with initial employee ownership, followed then by initial manager, domestic outsider and foreign ownership, and that the changes in ownership are more frequent in the earlier transition period.

Firstly, the ownership transition between the time of privatisation and 2000 will be analysed. It is seen from the Table 12 that the number of enterprises with manager ownership has increased most, followed then by the enterprises with foreign and domestic outsider ownership. As expected, the managers have taken over or bought out enterprises with employee ownership which has found confirmation also in previous research (see Estrin and Wright 1999; Jones *et al.* 2005; Jones and Mygind 1999, 2005; Kalmi 2003; Mygind *et al.* 2006).

Table 12. Estonian enterprises ownership transition matrix between the time of privatisation and 2000 (no. of enterprises)

Ownership at the time of privatisation \ Ownership in 2000	State	Foreign	Domestic outsider	Manager	Employee	Public distribution	Total (start)	Change ¹	Change in %
State	1	7	6	2	0	0	16	-15	-93.8
Foreign	0	109	7	6	0	0	122	17	13.9
Domestic outsider	0	12	146	31	1	1	191	11	5.8
Manager	0	8	13	91	4	0	116	45	38.8
Employee	0	3	28	29	24	0	84	-55	-65.5
Public distribution	0	0	2	2	0	1	5	-3	-60.0
Total (end)	1	139	202	161	29	2	534	162 ²	30.3

Notes: ¹ – Change in the number of enterprises between two time periods calculated as number of enterprises in 2000 minus number of enterprises at the time of privatisation.

² – Number of enterprises where ownership has changed since privatisation until 2000.

Source: authors calculations on the basis of the research database.

However, unexpectedly, also the movements from initial employee ownership to domestic outsider ownership have been equally active (see Table 13). Thus, based on the results of this study, one could not specify that there is a certain ownership cycle from employee to manager, followed then by domestic outsider (as stated in Jones and Mygind 2005). According to the current research, the movement away from employee ownership might occur in both directions, towards manager or domestic outsider ownership. In addition, the shift from initial domestic outsider ownership to manager ownership has been rather large as one could expect larger movements in opposite direction. This might show either emergence of strong manager-owners or could be related to the economic recession taken place in Estonia in 1999. In the latter case, it is expected that managers (as well as employee) buyouts are more frequent as the price of assets and other employment possibilities are low (see also subchapter 1.2.1). Still, both of these statements would require additional analysis.

Table 13. Ownership changes between time of privatisation and 2000

No. of firms in which ownership changed	Ownership changes and their shares of total changes	
Foreign 13/122 (11%)	Foreign to domestic outsider	7 (54%)
	Foreign to manager	6 (46%)
Manager 25/116 (22%)	Manager to domestic outsider	13 (52%)
	Manager to foreign	8 (32%)
	Manager to employee	4 (16%)
Domestic outsider 45/191 (24%)	Domestic outsider to manager	31 (69%)
	Domestic outsider to foreign	12 (27%)
	Domestic outsider to employee	1 (2%)
	No answer	1 (2%)
Employee 60/84 (71%)	Employee to manager	29 (48%)
	Employee to domestic outsider	28 (47%)
	Employee to foreign	3 (5%)

Source: author's calculations on the basis of the research database.

Table 13 indicates that overall changes in ownership after privatisation, apart from employee ownership, have not been considerable. Still, as expected, the employee ownership has been the most unstable ownership type in the post-privatisation period. Only 29 per cent of total enterprises with initial employee ownership remained employee-owned also in 2000. However, surprisingly, the intensity of ownership changes in enterprises with manager ownership and domestic outsider ownership has been rather similar and much lower than in enterprises with employee ownership. Moreover, the intensity of ownership changes in enterprise with manager ownership is slightly smaller than in enterprises with domestic outsider ownership, still, the difference is marginal. As

reported also by several previous studies and found in the current analysis, the most stable ownership type is foreign ownership. In nearly 89 per cent of enterprises with initial foreign ownership the ownership remained the same by 2000. Thus, the privatisation policy adopted in Estonia was rather successful considering the ratio of survival ownership types. Most likely, the economic and institutional developments at the time of privatisation were not appropriate for survival of employee ownership. This justifies the changes taken in Estonian privatisation policy after regaining independence where the strategy giving the pre-emptive rights to employees was no longer in favour.

From analysis given above, it is seen that since privatisation, several ownership transitions have taken place. It is possible to point out the following specific movements. The most considerable and the fastest movement has been the change away from employee ownership, either to manager ownership or domestic outsider ownership. Much moderate have been the changes from initial manager ownership to domestic outsider ownership or foreign ownership. Similarly, the changes from initial domestic outsider ownership to manager or foreign ownership have been less intensive. The least intensive movements have taken place in enterprises with initial foreign ownership. However, in case it has happened, the movement either to domestic outsider or manager ownership has taken place. Hence, based on the current analysis, it is difficult to draw one single ownership cycle with certain start and end ownership. Still, the analysis indicates that after privatisation, the further adjustments in ownership structures have taken place. **The proposition P1c, which specified that the intensity of ownership changes is highest in enterprises with initial ownership, followed then by enterprises with initial manager, domestic outsider and foreign ownership, has been only partially confirmed.** Although the intensity of ownership changes is highest in enterprise with employee ownership and lowest in enterprises with foreign ownership, the sequence specified in the proposition about the enterprises with manager and domestic outsider ownership is not confirmed by the current analysis. This analysis indicates that the intensity of ownership changes is slightly smaller in enterprises with manager ownership than domestic outsider ownership. Moreover, it is difficult to present the clear sequence here as the differences in intensities between these two ownership groups are very small.

Ownership changes between 2000 and 2004

As follows, Table 14 and 15 show the ownership transition of enterprises between 2000 and 2004. It is seen that during this period, changes in ownership have been rather marginal (apart from enterprises with initial employee ownership) compared with the period until 2000. This might mean that adjustment of the initial ownership in the post-privatisation period has mainly taken place until 2000. After 2000, only minor changes in ownership have occurred. For example, the number of enterprises with foreign ownership has decreased during this period contrary to the period until 2000. More

interestingly, it is seen that the first time the employee owner has taken over the foreign-owned enterprise. Since privatisation until 2000, no such movements were recorded. This might be considered the start of a new stage in ownership changes where ownership starts to move back from foreign ownership to domestic outsiders and insiders. Similarly to the first transition matrix (see Table 12), the manager ownership continuously is increasing and employee ownership is decreasing. Thus, the strong change away from employee ownership has lasted during the whole transition period. **The proposition P1d, that the changes in ownership are more frequent in the earlier transition period than later transition period due to the unstable economic and slow institutional development, has been confirmed.** It is rather likely that the lower intensity of ownership changes in the later period is supported also by the more stable economic environment and institutional developments during 2000–2004.

Table 14. Estonian enterprises ownership transition matrix between 2000 and 2004 (no. of enterprises)

Ownership in 2004 \ Ownership in 2000	Foreign	Domestic outsider	Manager	Employee	Public distribution	Total (start)	Change ¹	Change in %
State	0	1	0	0	0	1	-1	-100
Foreign	123	7	4	1	3	138	-4	-2.9
Domestic outsider	9	167	24	1	2	203	1	0.5
Manager	2	21	135	2	0	160	10	6.3
Employee	0	8	7	14	0	29	-11	-37.9
Public distribution	0	0	0	0	2	2	5	250
Total (end)	134	204	170	18	7	533	122 ²	22.9

Notes: ¹ – Change in the number of enterprises between two time periods calculated as number of enterprises in 2004 minus number of enterprises in 2000. ² – Number of enterprises where ownership has changed between 2000 and 2004.

Source: authors calculations on the basis of the research database.

Table 15 indicates that after 2000, the intensity of ownership changes has slowed down in all ownership groups apart from foreign ownership where it has been anyway low. It provides further confirmation that the intensity of ownership changes in enterprises with manager ownership is lower than in enterprises with domestic outsider ownership. The figures also show that the intensity of foreign investors' take-overs from both manager and domestic outsider ownership has slowed down. This is a rather interesting result and

could be considered together with ownership shifts from domestic outsider to manager ownership as the specificities of Estonian ownership developments. In the literature, it is expected that ownership changes from employees to manager and from managers to domestic outsiders or foreign investors (see Jones and Mygind 2005 and Figure 6). However, the results of this analysis provide evidence also about rather strong movements from domestic outsiders to manager ownership.

Table 15. Ownership changes between 2000 and 2004

No. of firms in which ownership changed	Ownership changes and their shares of total changes
Foreign 15/138 (11%)	Foreign to domestic outsider 7 (47%) Foreign to manager 4 (27%) Foreign to employee 1 (6%) No answer 3 (20%)
Manager 25/160 (16%)	Manager to domestic outsider 21 (84%) Manager to foreign 2 (8%) Manager to employee 2 (8%)
Domestic outsider 36/203 (18%)	Domestic outsider to manager 24 (66%) Domestic outsider to foreign 9 (25%) Domestic outsider to employee 1 (3%) No answer 2 (6%)
Employee 15/29 (52%)	Employee to manager 7 (46%) Employee to domestic outsider 8 (53%)

Source: author's calculations on the basis of the research database.

To summarize, the analysis above indicates that during the whole transition period, the share of outsider ownership in the Estonian enterprises has remained high. Still, there is continuous increase in manager ownership and sharp decrease in employee ownership. It is possible to identify two different stages in terms of ownership developments since privatisation to 2004. The main characteristics of the first stage of ownership change, that is, from the time of privatisation until 2000, are a high share of foreign ownership and increasing share of manager ownership with a remarkable downsizing of employee-ownership. The second stage of ownership change, that is, from 2000 to 2004, is characterised by its stability and reversible changes as there can be seen a few first signs about the ownership movements from enterprises with foreign ownership to domestic outsider ownership or insider ownership. Nevertheless, it is still too early to make strong conclusions about whether the latter tendency will last also in the future.

2.2.2. The determinants of ownership and their changes

The present subchapter concentrates on analyzing the determinants of ownership and their changes. The following analysis will be performed to find evidence on the propositions P2a–P2c. Proposition P2a specified that enterprises with outsider owners are with a large firm size, high financing requirements and high productivity and enterprises with insider owners with a small firm size, low financing requirements and high profit margin. Similarly, proposition P2b specified that increasing firm size, financing requirements and productivity lead to ownership changes from insider to outsider and decreasing firm size, financing requirements and productivity lead to ownership change from outsider to insider. The proposition P2c argues that because of the changes in institutional environment, these firm-specific factors play a different role over time. As follows, the aim of this subchapter is to find out: (1) what are the motives of different owners; (2) do the motives of owners change over time; and (3) do firm-specific factors influence the changes in ownership.

In analyzing the determinants of ownership and their changes, first the distinction between two ownership groups, insiders and outsiders, will be made. Then, these groups will be divided into four smaller ownership groups: foreign, domestic outsider, manager and employee. Enterprises with state ownership will not be included into the analysis because in 2000, there was only one enterprise and in 2004, no enterprise in state ownership. As was pointed out in the theoretical part, the determinants of ownership structures can be divided into firm-specific and country-specific factors (see Table 4, in subchapter 1.2.1). In this analysis, only firm-specific determinants will be taken into consideration. The firm size is measured by the average number of employees, which is taken in its logarithmic form (denoted as $\ln EMP96$). Capital intensity as a financing requirement indicator is measured by the logarithm of the ratio of fixed assets to the number of employees ($\ln FIXEEMP96$). Wage level as a proxy for the level of human capital is measured by log of the wage to the number of employees ($\ln WAGEEMP96$), which shows how highly the employees are valued and motivated in the enterprise. This is expected to be higher in enterprises with foreign ownership. The analysis also includes equity capital per employee indicator ($EQUITYEMP96$), which presents the owner's equity investments to the firm. This is expected to be lower in insider-owned firms than in outsider-owned firms as insiders have more limited access to finances. For testing the firm performance, two proxies are used: labour productivity measured as the log of net sales per employee ($\ln SALESEMP96$) and profit margin measured as the ratio of operating profit per net sales ($OPROFIT96$). The data enable to measure labour productivity also in terms of value added per employee, but as the regressions include also wage level indicator that is highly correlated with value added (might cause multicollinearity problem), it is measured in terms of net sales per employee. The analysis also includes control

variables for privatisation time (PRIVTIME) and industry sector. For precise definitions of all variables, see Appendix 27.

In the analysis of determinants of ownership changes, also time-dependent variables are included. This enables to analyse the impact of changes in independent variables on ownership and to see what motivates subsequent ownership changes. Thus, the analysis includes also variables measuring the growth in: employment (EMPCH00_96), capital intensity (FIXEEMP00_96), wage level (realWAGEEMP00_96), equity capital investments (EQUITYEMP00_96), labour productivity (SALESEMP00_96) and profit margin (OPROFIT00_96). All the measures are changes over the period of time.

In testing the determinants of ownership and their changes, simple binary logit and multinomial logit regression analysis is used. The binary and multinomial logit analysis enables to estimate the change in probability of ownership and ownership change if marginal change in tested independent variable takes place. The empirical strategy of this analysis is quite similar to the work of Jones *et al.* (2005). However, the time period used in this analysis is later. While the database starts with 1996 data, it is not possible to analyze the determinants of initial (privatisation time) ownership as done by Jones *et al.* Hence, the analysis of determinants of ownership will be performed for the beginning of the period (1996) and for the end of the period (2004). This enables to find out whether the motives of different owners are similar or have changed in comparison of different time points. It is expected that in the early transition period, the mismatch between actual ownership structure and firm-specific factors is existing, and in the later period, this weakens due to changes in economic and institutional environment. Still, as the research database includes ownership data only for three time points, in analyzing the determinants of 1996, the ownership groups had to be formed according to enterprises' privatisation time ownership category. Thus, there is the assumption that enterprises have remained under their initial ownership at least until 1996. However, it can provide some biased results, especially concerning the enterprises with initial employee ownership. More precisely, one can not exclude that some enterprises with initial employee ownership have already changed to management or domestic outsider ownership. As the analysis of ownership changes indicated, the intensity of ownership changes in enterprises with initial employee ownership is the highest.

Determinants of ownership

Appendices 28–29 present summary statistics for variables that are used in the determinants of ownership analysis. Due to the discrepancy in some of the data the outliers were excluded. It is seen that in 1996, the outsider owned enterprises are bigger, more capital intensive and with higher wage and equity capital investments level than insider owned enterprises. The same differences are still present also in 2004. This is in the line with the arguments from previous studies (see, for example, Jones *et al.* 2005, Jones and Mygind 1999).

Rather unexpected is that in 1996, the labour productivity in outsider owned enterprises is lower than in insider owned enterprises. This might indicate that insiders have had possibility to acquire enterprises with better performance, which is rather likely considering the privatisation conditions at that time. In the early privatisation, employees were given pre-emptive rights and until 1996, the domestic enterprises had a preference to buy enterprises in instalments. However, according to 2004 data, the outsiders are much more productive than insiders. The profit margin has been higher in insider owned enterprises compared to outsider owned enterprises in both time points, 1996 and 2004. This might show that enterprises in insider ownership might favour current consumption over risky future consumption (Jones and Mygind 2005). Moreover, insiders would stress high profit margins as it is directly related to their earnings as owners. Still, it might confirm that insiders were in position to buy enterprises with higher performance or they are found in sectors with high profit margin.

Thus, in general, the sample is in line with the arguments about the motives of insider and outsider owners pointed out in the previous studies. Comparing the statistics between specific four ownership groups, it is seen that in 1996, the domestic outsider enterprises are the biggest, followed then by foreign, employee and manager owned enterprises. However, in 2004, the size of foreign owned enterprises has overcome the size of domestic outsider enterprises. The small size for manager owned firms might reflect that managers initially need employees to participate in financing through ownership shares when taking over larger firms. It is seen that in 2004, the average number of employees in manager owned enterprises is slightly bigger than in 1996. This might also explain the high profit margin in manager owned enterprises as managers wage might be connected to profits and this has a high weight in small firms. Still, in 2004, the profit margin is the highest in employee owned enterprises. Examining the capital intensity and the level of equity capital investments, it is seen that it is the highest in foreign owned and domestic outsider enterprises. However, both indicators are much higher in manager owned enterprises in 2004 than in 1996. This might show that manager owned enterprises were in earlier transition period financially more constrained than others, but this has probably changed due to the improving financing possibilities in the later transition period. The low level of equity capital investments in 1996 might indicate that the price for buying enterprises was set relatively low for managers. The study by Jones *et al.* (2005) showed the similar results. Thus, preliminary examination indicates that in terms of specific ownership types, some firm-specific factors differ in different time points. Only differences in wage levels have remained unchanged between ownership types, being, as expected, the highest in foreign owned enterprises.

The Table 16 shows the results of binary logit analysis of determinants of ownership in 1996 and 2004 for outsider ownership. It is seen that several of the parameter coefficients are significant in both time points. Marginal probability

effects are reported only for statistically significant coefficients. The results show that one percent increase in wage level increases the probability that enterprise is in outsider ownership 21 per cent in 1996, and 24.7 per cent in 2004. In other words, if wage level increases 10 per cent, then the probability that enterprise is in outsider ownership increases respectively $10\% \times 21\% = 2.1\%$ and $10\% \times 24.7\% = 2.47\%$. This shows either that outsiders are capable to employ people with higher qualifications because of the better access to capital or that their production process or provided services require higher quality human capital. It is also the case that higher capital intensity and equity capital investments level increases the probability that the enterprise is in outsider ownership. Still, the coefficients for equity investment level are rather low, but significant. This is supported also by Jones *et al.* (2005) study indicating that insiders have made smaller investments in equity capital than outsiders or have been able to buy firms at a lower price.

According to 1996 data, contrary to expectations, the higher labour productivity decreases probability that the enterprise is in outsider ownership. It is difficult to explain why the labour productivity is lower in outsider than insider owned enterprises at that time point. According to 2004 data, the coefficient of this relationship is positive, although it is insignificant. However, as expected, the coefficients of the relationship between profit margin and the probability of outsider ownership are negative in both time points. This might show that insiders have had a possibility to buy enterprises with better performance or that they have favoured current consumption over risky future consumption. In the line of earlier discussion, larger number of employees increases the probability that the enterprise is in outsider ownership. Nevertheless, this coefficient is significant only in 2004.

It is seen from Table 16 that the coefficients of time-dependent variables are all significant. Still, it is difficult to explain the strength of these relationships as the marginal probability effects of change variables are all very small. This might be related to the measurement of these changes that is the change in per cent. Thus, only the negative or positive relationship can be reported. It is seen that the larger increase in employment, wage level, capital intensity and equity capital investments decreases the probability that the enterprise is in outsider ownership. At the same time, the larger increase in labour productivity and profit margin increases the probability that enterprise is in outsider ownership. Some of these findings are same as in Jones *et al.* (2005) study where they analysed the determinants of ownership in 1999. Their findings indicated that increase in employment and decrease in labour productivity increases the probability that enterprise is in insider ownership.

Table 16. Determinants of ownership in 1996 and 2004: binary logit

	1996		2004	
	Outsider vs insider ownership	Marginal effects	Outsider vs insider ownership	Marginal effects
Constant	-2.924 (1.71)*	P: 0.696	-6.505 (3.32)***	P: 0.724
lnEMP96 ¹	0.151 (0.99)		0.251 (1.92)*	0.050
lnWAGEEMP96	0.993 (2.92)***	0.210	1.240 (2.77)***	0.247
lnFIXEDEMP96	0.276 (2.40)**	0.058	0.328 (2.24)**	0.065
lnSALESEMP96	-0.396 (2.51)**	-0.084	0.172 (0.66)	
EQUITYEMP96	0.004 (1.83)*	0.001	0.000 (1.77)*	0.000
OPROFIT96	-0.047 (3.01)***	-0.010	-0.083 (4.25)***	-0.016
EMPCH04_96			-0.002 (4.49)***	-0.000
realWAGEEMP04_96			-0.007 (3.15)***	-0.001
FIXEDEMP04_96			-0.000 (2.04)**	-0.000
LABPROD04_96			0.002 (2.33)**	.0000
EQITYEMP04_96			-0.001 (2.01)**	-0.000
OPROFIT04_96			0.054 (4.03)***	0.011
PRIVTIME	0.424 (1.24)		0.251 (0.79)	
Industry controls	Yes		Yes**	-0.153
Observations	289		326	
Wald statistics	46.50 (0.0000)***		64.84 (0.0000)***	
Pseudo R-square	0.1912		0.2160	

Notes: * significant at 10%; ** significant at 5%; *** significant at 1%. Robust z statistics in parentheses. Marginal effects are reported only for statistically significant coefficients. P – baseline probability. ¹ – For the period 2004 the variables used were for the year 2004, not 1996.

Source: author's calculations on the basis of research database.

However, the increase in capital investment was negatively related to probability of insider ownership. Thus, it might indicate that the increase in equity capital investments is a predictor of insider ownership after 1999 when the economic and institutional environment stabilised with enabling to enhance the firm's financial capacity.

Additional insights concerning the determinants of ownership in 1996 and 2004 will emerge from multinomial logit analysis (see Table 17 and 18). In multinomial logit analysis, outsider owned firms are divided into foreign and domestic outsider owned firms and insider owned firms into manager and employee owned firms. The marginal probability effects for statistically significant coefficients are reported in Appendix 30.

Table 17. Determinants of ownership in 1996: multinomial logit

	F vs E	D vs E	M vs E	D vs F	M vs F	M vs D
Constant	-7.563 (2.63)***	1.229 (0.45)	1.911 (0.70)	9.203 (4.19)***	9.626 (3.75)***	0.352 (0.15)
lnEMP96	-0.136 (0.51)	0.025 (0.12)	-0.321 (1.50)	0.183 (1.11)	-0.098 (0.52)	-0.309 (1.63)
lnWAGEEMP96	1.149 (1.96)*	0.045 (0.09)	-0.908 (1.92)*	-1.203 (3.28)***	-2.169 (4.67)***	-0.837 (1.88)*
lnFIXEDEMP96	0.587 (3.62)***	0.341 (2.23)**	0.241 (1.60)	-0.258 (1.83)*	-0.367 (2.37)**	-0.122 (0.80)
lnSALESEMP96	-0.160 (0.72)	-0.519 (2.28)**	-0.014 (0.06)	-0.386 (2.19)**	0.154 (0.75)	0.505 (2.31)**
EQUITYEMP96	0.001 (0.56)	0.002 (0.97)	-0.004 (1.17)	0.001 (1.27)	-0.005 (1.58)	-0.006 (1.49)
OPROFIT96	-0.032 (1.26)	-0.016 (0.66)	0.041 (1.75)*	0.015 (0.89)	0.072 (3.38)***	0.048 (2.62)***
PRIVTIME	1.299 (3.01)***	0.463 (1.25)	0.536 (1.45)	-0.819 (2.12)**	-0.718 (1.62)	0.137 (0.35)
Industry controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	289	289	289	249	249	174
Wald statistics	90.75 (0.0000)***			70.32 (0.0000)***		27.95 (0.0005) ***
Pseudo R-square	0.1532			0.1854		0.1837

Notes: * significant at 10%; ** significant at 5%; *** significant at 1%; Robust z statistics in parentheses. Explanations for column labels: F=foreign ownership, D=domestic outsider ownership, M=manager ownership, E=employee ownership.

Source: author's calculations on the basis of research database.

The first three columns in Table 17 and 18 contrast employee owned firms to other ownership groups. The results suggest that if employee ownership is contrasted to foreign ownership, then the higher wage and capital intensity are important predictors of foreign ownership. However, this is true only for 1996.

When employee ownership is contrasted to foreign ownership in 2004, then the only significant predictor of ownership is profit margin. In that case, the higher profit margin decreases the probability that the enterprise is in foreign ownership. This finding is true also when contrasting the employee ownership to domestic outsider ownership. Another interesting finding when contrasting the employee ownership to domestic outsider ownership is that high labour productivity level is the predictor of employee ownership not domestic outsider ownership in 1996. In the later period, 2004, this relationship is turned to be positive, although insignificant. In comparison with manager and employee owned enterprises, it is seen that in 1996, the higher wage level decreases the probability that the enterprise is owned by managers. At the same time, the higher profit margin is the predictor of manager ownership not employee ownership. However, both these relationships are not significant in 2004. Instead, in 2004, the difference in terms of firm size becomes significant. In that case, the higher employment level decreases the probability that the enterprise is in manager ownership. In comparison with Jones *et al.* (2005) results about the determinants of initial ownership structures (1993), some findings of current analysis are different. This analysis does not indicate that high labour productivity is a predictor of foreign ownership. Also, that high equity investment is the predictor of domestic outsider ownership and that employee owned firms are more profitable than manager owned firms.

In the next two columns, the foreign owned firms are contrasted to domestic outsider and manager owned firms. It is seen that the higher wage level, capital intensity and labour productivity are important predictors of foreign ownership rather than domestic outsider ownership in 1996. However, in 2004, the differences in capital intensity (turned to be positively related to domestic outsider ownership) and labour productivity are insignificant, and only differences in wage levels have remained significant. At the same time, the differences in the level of employment have emerged indicating that the higher employment level is the predictor of foreign ownership. The results are similar when foreign ownership is contrasted to manager ownership. Herein, the higher profit margin increases the probability that the enterprise is in manager ownership rather than foreign ownership. Jones *et al.* (2005) study about the initial determinants of ownership (1993) reported similar results in terms of higher capital intensity as the predictor of foreign ownership rather than domestic outsider or manager ownership. Their results also indicated that higher equity investment is the predictor of foreign ownership. In the current analysis, this found confirmation only when foreign ownership is contrasted to manager ownership in 2004. According to their study, the higher employment level predicted the domestic outsider rather than foreign ownership. In the current analysis, these findings are confirmed only by 1996 analysis, though the difference is insignificant.

Table 18. Determinants of ownership in 2004: multinomial logit

	F vs E	D vs E	M vs E	D vs F	M vs F	M vs D
Constant	-7.176 (2.13)**	2.545 (0.82)	6.573 (2.28)**	9.476 (3.51)***	13.273 (4.75)***	3.525 (1.51)
lnEMP04	0.169 (0.73)	-0.144 (0.66)	-0.393 (1.78)*	-0.300 (1.76)*	-0.540 (2.99)***	-0.278 (1.55)
lnWAGEEMP04	0.644 (0.50)	-1.011 (0.80)	-1.689 (1.36)	-1.566 (2.28)**	-2.197 (3.33)***	-0.516 (0.86)
lnFIXEDEMP04	-0.080 (0.27)	0.003 (0.01)	-0.420 (1.45)	0.083 (0.49)	-0.327 (1.74)*	-0.487 (2.72)***
lnSALESEMP04	0.715 (0.84)	0.720 (0.87)	0.587 (0.71)	-0.023 (0.07)	-0.166 (0.48)	-0.231 (0.68)
EQUITYEMP04	0.003 (1.63)	0.002 (1.41)	0.002 (1.24)	-0.000 (1.57)	-0.001 (2.34)**	-0.000 (1.73)*
OPROFIT04	-0.076 (2.35)**	-0.077 (2.57)**	0.004 (0.13)	-0.001 (0.04)	0.076 (2.97)***	0.099 (4.04)***
EMPCH04_96	0.005 (0.96)	0.001 (0.12)	0.006 (1.19)	-0.005 (2.64)***	0.001 (2.77)***	0.006 (2.91)***
realWAGEEMP 04_96	-0.007 (1.30)	0.001 (0.22)	0.005 (1.07)	0.008 (2.01)**	0.012 (3.03)***	0.004 (1.45)
FIXEDEMP 04_96	-0.001 (1.96)**	0.000 (0.40)	0.000 (1.19)	0.001 (2.23)**	0.001 (2.54)**	0.000 (1.47)
SALESEMP 04_96	0.003 (1.12)	0.003 (1.12)	0.001 (0.38)	-0.000 (0.03)	-0.002 (2.00)**	-0.002 (1.46)
EQUITYEMP 04_96	-0.000 (0.45)	-0.000 (1.76)*	0.000 (0.77)	-0.000 (1.27)	0.000 (1.29)	0.001 (3.36)***
OPROFIT04_96	0.065 (1.96)*	0.083 (2.52)**	0.024 (0.75)	0.017 (1.18)	-0.039 (2.40)**	-0.067 (3.92)***
PRIVTIME	0.444 (0.64)	0.097 (0.14)	-0.126 (0.19)	-0.358 (0.89)	-0.558 (1.35)	-0.079 (0.19)
Industry controls	Yes	Yes	Yes	Yes	Yes*	Yes***
Observations	326	326	326	316	316	221
Wald statistics	129.64 (0.0000)***			102.01 (0.0000)***		48.80 (0.0000) ***
Pseudo R-square	0.2247			0.2343		0.2420

Notes: * significant at 10%; ** significant at 5%; *** significant at 1%; Robust z statistics in parentheses. Explanations for column labels: E=employee ownership, F=foreign ownership, D=domestic outsider ownership, M=manager ownership.

Source: author's calculations on the basis of research database

In the last column, domestic outsider firms are contrasted to manager owned firms. It is seen that the higher labour productivity and profit margin increases the probability that the enterprise is in manager ownership rather than domestic outsider ownership according to 1996 data. The differences in profit margins have remained the same also in 2004. At the same time, the higher wage level is the predictor of domestic outsider ownership rather than manager ownership. In

2004, some new results emerge, indicating that the higher capital intensity and equity investment level decreases the probability that the enterprise is in manager ownership. Jones *et al.* (2005) did find fewer differences between initial determinants of ownership (1993) for firms owned by domestic outsider and managers. Their results also showed that higher level of equity capital is the predictor of domestic outsider rather than manager ownership.

The multinomial logit analysis for 2004 provides many statistically significant relationships also for time-dependent variables. From Table 18, it is seen that the increase in employment level is negatively related to domestic outsider ownership rather than foreign ownership. At the same time, it is positively related to manager ownership rather than foreign or domestic outsider ownership. The change in capital intensity is negatively related to foreign ownership rather than employee ownership. Similarly, the change in equity investment is negatively related to domestic outsider ownership rather than employee ownership or manager ownership. The larger increase in profit margin is the predictor of both foreign and domestic outsider ownership rather than employee ownership. Still, in comparison with manager and foreign ownership, the increase in profit margin predicts first of all manager ownership. However, it is not possible to make very strong conclusion for these changes, whilst the marginal probability effects for all these relationships remain close to zero. The latter is probably related to the measurements of variables that are reported in percentage change.

To conclude, the findings based on binary logit and multinomial logit analysis confirms that certain ownership types can be characterized by certain firm-specific determinants. However, some of these determinants change over the time. **Proposition P2a specifying that enterprises with a large firm size, high financial requirements and high productivity are more likely owned by outsider owners, and enterprises with a small firm size, low financial requirements and high profitability are more likely owned by insiders found confirmation apart from the case of high labour productivity as a predictor of outsider ownership.** In the case of high labour productivity, the results were mixed. According to 1996 data, the high labour productivity turned to be the predictor of insider ownership. This might reflect the fact that the preferences given to employees in the early privatisation and possible insider information for managers enabled to buy enterprises with better performance. However, the analysis clearly shows that the larger firm size is the predictor of outsider ownership. Also, that the higher capital intensity and equity capital investment is positively related to outsider ownership. The higher profit margin is first of all the predictor of insider ownership. In terms of more specific ownership types, it is possible to point out the following. First, the enterprises with a large firm size are more likely owned by foreign owners rather than domestic outsider or manager owners in the later transition period. Second, the enterprises with high capital intensity are more likely owned by foreign rather than domestic outsider, manager or employee owners in the early transition

period, but that might not be the case in the later transition period. The third, the enterprises with high profit margin are more likely owned by manager owners than foreign or domestic outsider owners throughout the transition period.

The comparison of the results of ownership determinants analysis in 1996 and 2004 indicated that some of the differences between ownership types that were identified in the early period (1996) have remained also in the later period (2004). At the same time, the new results in 2004 analysis indicated that some of these differences have disappeared. None of the differences between ownership types in terms of firm size were significant in the early period. However, rather unexpected, though insignificant, result was that larger firm size is a predictor of employee rather than foreign ownership, although the overview of early privatisation showed that small enterprises were mainly acquired by employees (as well as managers). This reflects the fact that until 1996, foreign owners did not buy larger enterprises than other owners, but were active in buying large infrastructure enterprises which sale started after 1996. The higher capital intensity in the early period was clearly the predictor of foreign ownership rather than domestic outsider or employee ownership, but in the later period these differences were not anymore significant. Moreover, they indicate that the higher capital intensity could also be a predictor of domestic outsider or employee ownership rather than foreign ownership. This might reflect the change in institutional environment, for example, better possibilities to bank loans. Similarly in the early period, the higher labour productivity was the predictor of employee or manager ownership rather than domestic outsider ownership. In the later period, this difference has turned to be another way around, though insignificant. Still, it might reflect that employees or managers might have been in a position to buy enterprises with higher labour productivity. **Thus, proposition P2c which specified that the firm-specific factors play a different role over time in determining the ownership structures due to the changes in institutional environment has been confirmed.** Rather probably, it is related to a mismatch of actual ownership structure and firm-specific factors in the early period.

Determinants of ownership changes

In this section, the determinants of ownership changes will be examined. The interest is to see how the initial performance and changes in particular firm characteristics have boosted the changes in ownership. Thus, the following analysis will be performed to find evidence on the proposition P2b which specified that increasing firm size, financing requirements and productivity lead to ownership changes from insider to outsider and decreasing firm size, financing requirements and productivity lead to ownership change from outsider to insider. The original idea was to analyse the motives of subsequent ownership across four ownership groups: ownership change from foreign to domestic, from domestic to manager, from employee to manager, etc. However, due to the small number of enterprises in those particular ownership change groups, the

results of estimated models were not significant. Therefore the enterprises were merged into two bigger groups – outsiders and insiders. Hence, the focus is on analysing the ownership changes from insider to outsider and outsider to insider. In the previous research, the similar analysis has been done also by Jones *et al.* (2005).

Due to the specificity of ownership data, which enable to determine the enterprises' ownership in three different time points, the analysis of determinants of ownership changes are divided into two stages. First, the influences on ownership changes are analysed in enterprises where ownership has changed since privatisation to 2000. Then, the influences are analysed in enterprises where ownership has changed from 2000 to 2004. This also enables to see whether the determinants of ownership changes remain the same in different time periods or change. As already was presented in previous chapter, the changes in ownership occurred more seldom in the later, 2000–2004, transition period. Thus, one might expect that the determinants of ownership changes in different time periods might differ.

In analysing the determinants of ownership changes, the same indicators that were used in analysing the determinants of ownership are used. However, in addition, the time-dependent variables such as change in employment, wage, capital intensity, labour productivity, equity investment and profit margin will be included. The changes in these variables are measured prior to the final ownership. That means when estimating the influence on ownership changes between time of privatisation and 2000, the changes in explanatory variables are measured during 1996 to 2000. Due to the ownership data limitations, it is not possible to measure the changes in variables prior to ownership change (as done by Jones *et al.* 2005). Thus, the changes in explanatory variables in this analysis might not always indicate the impact on the ownership changes but the influence of ownership changes on the explanatory variable.

Appendix 31 presents the summary statistics for variables that are used in the determinants of ownership change analysis since privatisation to 2000. It is seen that since privatisation to 2000, the ownership has moved from insider to outsider in 51 enterprises and from outsider to insider in 37 enterprises. Starting with enterprises that have been initially in insider ownership, it is seen that the ownership has changed to outsiders in those enterprises which have had a bigger number of employees, slightly higher wage level and equity capital investments, but lower capital intensity, labour productivity and profit margin. This indicates that initially less-productive insider owned enterprises have been taken over by outsiders. It might reflect the fact that in 1999, Estonian economy was in recession. At that time, many enterprises faced big financial difficulties and were taken over by banks.

Looking at the time-dependent variables, it is seen that the changes in employment have been marginal in enterprises where ownership has moved to outsiders. This is slightly unexpected result as it is expected that the increasing firm size leads to ownership change from insider to outsider. It also shows that

outsider owners have not induced the increase in employment, which might reflect the fact that they already have taken over bigger enterprises. As expected, the increase in capital intensity, labour productivity and profit margin has been faster in enterprises with changed ownership, although this is largely because their initial level was lower. The summary statistics for enterprises which were initially in outsider ownership and moved to insider ownership reflect the results of enterprises which were initially in insider ownership and moved to outsider ownership. Still, expectably, the initial capital intensity and labour productivity have been higher in enterprises which remained in outsider ownership. However, it must be noted that such summary statistics do not control for variation in industry and other firm-specific factors, and thus, not very strict conclusions can be made.

Table 19 presents the results of binary logit analysis for the determinants of ownership changes for both periods: from privatisation to 2000 and from 2000 to 2004. The results for the period since privatisation to 2000 indicate that insider owned enterprises that have been initially with large firm size and with low labour productivity have been taken over by outsider owners. Thus, it is rather likely that outsiders have been taken over by somewhat problematic firms. Contrary to expectations, the results show, though insignificant, that increasing firm size decreases the probability that ownership changes from insider to outsider. This supports the earlier argument and might indicate that enterprises taken over by outsiders might have been too big and inefficient. Jones *et al.* (2005) analysis showed the same results. However, the increase in capital intensity is positively related to ownership change from insider to outsider and this result is significant. The effects of performance on ownership changes is not so clear. While the initial labour productivity is negatively and significantly related to ownership change from insider to outsider, the coefficient for productivity growth is positive. Also, these results are different from Jones *et al.* (2005) findings. Still, the coefficients for profit margin increase are negative, though insignificant as in Jones *et al.* (2005) study.

The results for the determinants of ownership changes in enterprises which have been initially in outsider ownership show negative and significant coefficient for the employment and positive and significant coefficient for the profit margin. Thus, the analysis clearly supports the arguments that enterprises with small firm size and high profit margin are more likely taken over by insider owners. The negative and significant coefficient of employment growth confirms this statement. Thus, decreasing firm size leads more likely to ownership change from outsider to insider. The same is true also for decreasing capital intensity and labour productivity, however, these results are insignificant. The negative relationship with privatisation time indicates that the later a firm is privatized, the smaller is the probability that it will be taken over by insiders, which is rather expected result.

Table 19. Determinants of ownership changes from privatisation to 2000 and from 2000 to 2004: binary logit

Variable ¹	From privatisation to 2000			From 2000 to 2004		
	Change: I=>O	ME	Change: O=>I	ME	Change: I=>O	ME
Constant	-4.396 (1.28)	P: 0.227	5.947 (1.97)**	P: 0.059	-1.324 (0.31)	5.343 (1.69)*
lnEMP96	0.708 (2.49)**	0.124	-0.662 (2.61)***	-0.037	-0.258 (0.72)	-0.477 (1.43)
lnWAGEEMP96	1.297 (1.39)		-1.108 (1.52)		-0.102 (0.11)	-1.054 (1.52)
lnFIXEEMP96	0.337 (0.94)		-0.376 (1.25)		0.244 (0.56)	-0.047 (0.17)
lnSALESEEMP96	-1.234 (2.44)**	-0.216	0.172 (0.47)		0.432 (0.83)	-0.252 (0.73)
EQUITYEMP96	0.002 (0.61)		-0.004 (1.45)		-0.000 (0.11)	-0.001 (0.87)
OPROFIT96	-0.002 (0.05)		0.053 (2.43)**	0.003	-0.047 (0.83)	0.028 (1.31)
EMPCH00_96	-0.005 (1.05)		-0.008 (2.22)**	-0.000	-0.013 (1.40)	0.000 (0.11)
realWAGEEMP00_96	0.007 (1.10)		0.001 (0.31)		-0.000 (0.01)	0.005 (0.72)
FIXEEMP00_96	0.002 (1.89)*	0.000	-0.002 (1.37)		0.001 (1.15)	0.001 (1.81)*
SALESEEMP00_96	0.001 (0.43)		-0.001 (0.46)		0.002 (1.11)	-0.002 (1.00)
EQUITYEMP00_96	-0.000 (0.27)		-0.000 (0.83)		0.000 (0.06)	0.000 (0.21)
OPROFIT00_96	-0.005 (0.14)		0.000 (0.00)		-0.031 (1.23)	0.018 (1.29)
PRIVTIME	-0.230 (0.41)		-1.192 (3.14)***	-0.066	-0.457 (0.64)	-0.849 (1.77)*
Industry controls	Yes	Yes**	Yes**	Yes	Yes	Yes
Observations	125	208	208	137	137	276
Wald statistics	28.98(0.0105)**		26.17 (0.0246)**		16.04 (0.3110)	37.47(0.0006)***
Pseudo R2	0.2215		0.2466		0.0902	0.1972

Notes: Robust z statistics in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%. ¹ – For the period 2000 to 2004 the variables used were for the year 2000, not 1996, and for the changes between 2000 and 2004, not 1996 and 2000. ME – marginal effects are reported only for statistically significant coefficients. P – baseline probability. Source: author's calculations on the basis of research database.

The results of this analysis provide some new results that were not captured by Jones *et al.* (2005) analysis. They did not find evidence that employment or employment changes affect the likelihood of the adoption of insider ownership. Also, that privatisation time influences ownership change. However, similarly to their analysis, these findings do not support the hypothesis that changes to insider ownership are driven by relative underperformance.

In turning to analysis of determinants of ownership changes in the enterprises where ownership has changed from 2000 to 2004, it is seen from Appendix 32 that in both directions from insider to outsider and from outsider to insider, the ownership has changed in 30 enterprises. As the analysis of ownership changes in subchapter 2.2.1 showed, most of the changes at that period occurred between manager and domestic outsider owned firms. Thus, the results of this analysis reflect predominantly the changes between these two ownership groups.

Summary statistics in Appendix 32 show that in the later period, 2000–2004, the outsiders have taken over from insiders the enterprises with smaller size (contrary to expectations), lower wage level, higher capital intensity, higher labour productivity and lower equity capital investments. This is opposite to the results that were obtained from the analysis of the earlier period, from privatisation to 2000. In addition, the number of employees in these enterprises has been falling. Thus, it seems like outsiders have taken over small enterprises with falling employment. At the same time, the wages, capital intensity, labour productivity and equity capital investments have increased faster than in enterprises which have remained into insiders' hands. Still, when analysing the summary statistics of outsider owned firms, the results are the same as in the earlier period. It is seen that all of variable means, apart from profit margin, are lower than in enterprises which remained in outsider ownership. The latter might indicate that insiders might have some insider information to identify more profitable firms. Still, one can not make very strong conclusions as this summary statistics does not control for variation in industry. It might be that insiders are in industries with higher profit margin.

The results of the binary logit analysis for the determinants of ownership changes from 2000 and 2004 in the insider owned firms are not statistically significant (see Table 19). Hence, it is not possible to conclude on the basis of this analysis that there is any relationship between firm-specific determinants and ownership changes from insider to outsider. However, the results of binary logit analysis for outsider owned firms indicates one rather interesting result, which is also statistically significant. Contrary to expectations, the increasing capital intensity increases the probability that ownership changes from outsider to insider ownership. This is opposite to the findings from earlier period where such a change was positively and significantly related only to ownership change from insider to outsider. This might indicate that if the economic situation is stable and institutions are more developed (better loan possibilities), then the increasing capital intensity does not determine only the changes from insider to

outsider but equally changes from insider to outsider. Thus, it might reflect the fact that not only changes in firm-specific factors, but also changes in economic and institutional environment are equally important in determining the development of ownership structures.

In sum, the analysis of determinants of ownership changes provides rather mixed results. It is clear that in the earlier period, outsiders have taken over larger firms than insiders, but in both cases, the employment in these enterprises has been falling. This might reflect the economic situation, which was rather unstable at the end of the 1990's, and thus, the take-overs were mainly related to raise the productivity. Decreasing capital intensity might determine the ownership changes from outsider to insider ownership in the earlier period, but it is not true for the later period when probably more stable economic environment and better possibilities for bank loans do not restrict, at least financially, the takeovers also from outsiders to insiders. The effects of performance on ownership changes remain unclear. Although the analysis indicates that increasing productivity leads to ownership change from insider to outsider and decreasing productivity from outsider to insider, these results are statistically insignificant. At the same time, the increasing profit margin is negatively related to ownership change from insider to outsider and positively related to ownership change from outsider to insider, though again the results are insignificant. **Thus, proposition P2b found confirmation that increasing capital intensity leads to the change in ownership from insider to outsider and decreasing firms size leads to the change from outsider to insiders. However, this is true only for the earlier period, until 2000. Proposition P2b did not find confirmation concerning the arguments that increasing firm size and productivity leads to ownership change from insider to outsider and that decreasing capital intensity and productivity leads to ownership change from outsider to insider.**

To conclude, the analysis of determinants of ownership and its changes shows that different owners have different motives and these motives change over time. The main reason for change is probably a mismatch of actual ownership structure and firm-specific factors in the early period. In the early period, some ownership structures might have been developed either because of favourable treatment (for example, employee or manager ownership) or because of under-developed institutions (undeveloped financial markets) which did not provide equal possibilities to all owners (limited access to bank loans for domestic enterprises). This mismatch explains also higher intensity of ownership changes in the earlier period as it was identified in the subchapter 2.2.1. In the later transition period, the changes in ownership are determined by the changes in firm-specific factors (for example, growth in size) and in the changes in external country environment (for example, better possibilities for bank loans).

2.3. Research results: the effects of ownership and the role of ownership changes in the restructuring of Estonian enterprises

2.3.1. The effects of ownership types and ownership changes

The previous chapter 2.2 showed that ownership structures formed after privatisation are often initial and further ownership adjustments will take place in the post-privatisation period. Also, it indicated that there are certain firm-specific factors which affect the changes in ownership and make some owners to fit better to firms with certain characteristics. In the current chapter 2.3 the focus is on analyzing the effects of ownership types and the role of ownership changes in enterprises' restructuring and performance. For that first, in this subchapter, the differences between enterprises with unchanged and changed ownership will be analysed. Then, the heterogeneity of enterprises across different ownership types will be examined. On the basis of this analysis, the evidence for the propositions P3a and P3b will be found. Proposition P3a specified that performance differences between different ownership types are expected to weaken in the later transition period due to the changes in institutional environment. Proposition P3b specified that secondary ownership changes are expected in lower performing enterprises. Finally, in the subchapter 2.3.2, the analysis of ownership change effects on the restructuring and performance of enterprises will be performed. The results of this analysis will be used to confirm the propositions P3c–P3f.

The following analysis will be divided into three sections. In the first section, the economic performance of two groups of enterprises, such as enterprises with changed and enterprises with unchanged ownership will be compared. The comparison of enterprise groups is underlying on the selection of economic performance indicators which usually are used for describing the restructuring progress in enterprises (see subchapter 1.3.1). These indicators are: average number of employees (denoted as EMP), labour costs per employee (STAFCOSEMP), labour productivity (measured both in terms of value-added per employee (VALPROD) and sales per employee (SALESEMP)), export share in net sales (EXPSH), export per employee (EXPEMP), fixed assets per employee (FIXEDEMP) and profit margin (measured as operating profit to sales ratio, OPROFIT). For explanations of these variables, see Appendix 27. Furthermore, the period of analysis is divided into two periods: 1996–1999 and 2000–2004. This enables to analyse the research results in the line of economic developments in Estonia during these periods. During 1996–1999, the Estonian economic development was unstable (see subchapter 2.1.1) and as the analysis of ownership changes indicated (see subchapter 2.2.1), the changes in ownership were more widespread before 2000 than after 2000. Moreover, during the first period, business activities basically focused on short-term interests — earning a profit and attaining success. However, in 2000–2004, attention turned to long-term investments (see Kooskora 2006). Thus, it is

expected that analysing these two periods separately will provide better understanding of the relationship between ownership effects and enterprises' performance.

In the second section, the same set of indicators will be compared only between enterprises where ownership has not changed. Here the enterprises will be divided into four groups according to their dominant ownership involvement: foreign, domestic outsider, manager and employee owned enterprises. The aim of this section is to find out if heterogeneity across ownership types weakens during transition period due to the changes in institutional environment.

Finally, the third section will be dedicated to the comparison of enterprises where ownership has changed. In the research sample, the ownership has changed in one-third of enterprises and from these enterprises it is possible to create 13 groups of enterprises with different ownership transformations. The aim of this section is to find out whether there are any distinctive ownership change group(s) which differs significantly from other ownership change groups.

In comparing the ownership and ownership change groups, the ANOVA analysis is performed. The ANOVA analysis enables to look at differences between more than two groups of enterprises and in these cases, the simple t-tests are inappropriate. In the following analysis, several comparisons are performed between more than two enterprise groups. Thus, even if the analysis is performed between two groups of enterprises, the ANOVA analysis is used as it is easier to follow the analysis when only one method is used. It is expected that the differences between different ownership groups are bigger in the first period than in the second period. Moreover, it is expected that in the first period, enterprises behaviour is more similar to reactive restructuring (reductions in employment, high profit margins, less investments into plant and equipment, etc.; see also subchapter 1.2.2), especially in enterprises with domestic ownership. This is expected to change in the second period towards more strategic behaviour in all ownership groups (higher labour productivity, bigger export orientation, more investments into plant and equipment, etc.).

ANOVA results for enterprises with unchanged and changed ownership

Appendix 33 provides summary statistics for variables in the ownership effects analysis by two enterprise groups where ownership has not changed throughout the survey period (since privatisation to 2004) and where ownership has changed during the survey period. Table 20 shows the results of ANOVA analysis for these variables by two different periods and total period. It is important to note that in both first and second period, the results are provided for enterprises where ownership has or has not changed during the total survey period. It is seen that the differences between these two groups are statistically significant in terms of five analysed variables. Labour productivity both in terms of value added per employee and sales per employee is higher in enterprises with unchanged ownership in both periods. Moreover, these differences have not changed much in

the second period, and, in terms of sales per employee indicator even increased. Still, it is seen from summary statistics that higher sales per employee in enterprises with unchanged ownership might be affected by a few outliers as the standard deviation of the mean is rather high.

Table 20. The results of the ANOVA test for variables in the ownership effects analysis by enterprise groups with unchanged and changed ownership

Variables	Statistics	UCHO vs CHO		
		I	II	Total
EMP	F-stat:	2.67	0.08	0.13
	p-value:	0.1025	0.7786	0.7138
	sig.diff.:			
LABCOSEMP	F-stat:	7.88	7.00	7.62
	p-value:	0.0052	0.0084	0.0060
	sig.diff.:	UCHO>CHO	UCHO>CHO	UCHO>CHO
VALPROD	F-stat:	8.70	5.86	7.22
	p-value:	0.0033	0.0158	0.0074
	sig.diff.:	UCHO>CHO	UCHO>CHO	UCHO>CHO
SALESEMP	F-stat:	6.74	6.43	7.51
	p-value:	0.0097	0.0115	0.0063
	sig.diff.:	UCHO>CHO	UCHO>CHO	UCHO>CHO
EXPSH	F-stat:	10.27	11.67	9.80
	p-value:	0.0014	0.0007	0.0018
	sig.diff.:	UCHO>CHO	UCHO>CHO	UCHO>CHO
EXPEMP	F-stat:	7.58	5.03	5.08
	p-value:	0.0061	0.0253	0.0246
	sig.diff.:	UCHO>CHO	UCHO>CHO	UCHO>CHO
FIXEDEMP	F-stat:	0.22	1.73	1.65
	p-value:	0.6419	0.1885	0.1992
	sig.diff.:			
OPROFIT	F-stat:	1.03	1.46	1.82
	p-value:	0.3109	0.2274	0.1775
	sig.diff.:			

Notes: UCHO=ownership has not changed between privatisation and 2004; CHO=ownership has changed after privatisation; I=period 1996–1999; II=period 2000–2004; Total=period 1996–2004.

Source: author's calculations on the basis of research database.

Labour costs per employee are also slightly higher in enterprises with unchanged ownership than in enterprises with changed ownership. This might indicate that the quality of human capital is higher in these enterprises, though it might reflect the fact that as they are more productive they can afford to pay higher wages. It is clear that enterprises where ownership has not changed are

more export-oriented and the difference between two enterprise groups have increased further in the second period. Thus, these enterprises might be internationally more competitive or they are more interested in doing international business.

The results for differences in average number of employees, fixed assets per employee and profit margins are all insignificant between these two groups. Still, it is seen from summary statistics that in the first period, the average number of employees is much higher in enterprises with changed ownership. However, this might be affected by a few outliers which is reflected in a high standard deviation for mean variable. In the second period, the average number of employees in enterprises with changed ownership is lower than in enterprises with unchanged ownership. This might indicate that they have been going through reactive restructuring stage. Regarding the differences in capital intensity, it is seen that in the first period, the fixed assets per employee indicator is slightly higher in enterprises with unchanged ownership and this difference has increased even more in the second period. However, again it is seen that the standard deviation for the second period mean variable is rather high, thus it might be affected by a few outliers. Differences in profit margins have remained similar in both periods and it is higher in enterprises with unchanged ownership. **Thus, proposition P3b which specified that secondary ownership changes are expected in lower performing enterprise has been confirmed. The analysis clearly indicates that enterprises where ownership has changed either during the first or second period seem to be problematic enterprises.**

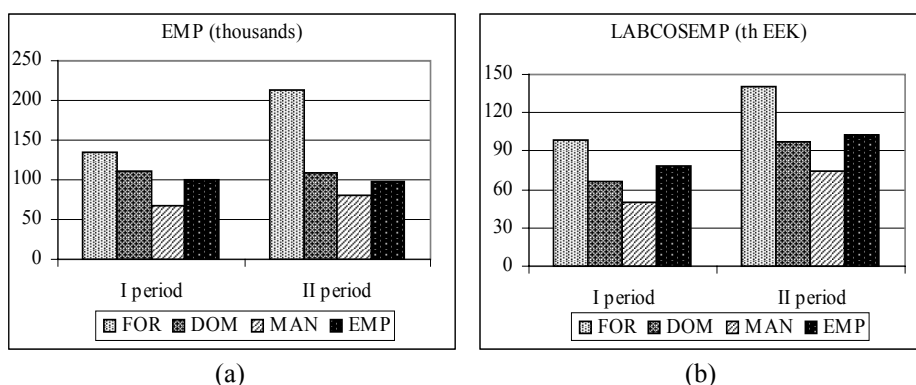
ANOVA results for ownership effects between enterprises with unchanged ownership

In this section, the analysis within enterprises where ownership has remained unchanged throughout the survey period will be performed. For capturing the ownership effects, the enterprises are grouped according to four dominant ownership groups: foreign ownership, domestic outsider ownership, manager ownership and employee ownership. Appendices 34 and 35 provide summary statistics and ANOVA results for performance variables between these four ownership groups. The results of ANOVA analysis show that regarding all analysed performance indicators, except fixed assets per employee⁴² and profit margins, the differences between those groups are statistically significant in both periods.

Figure 12 shows the comparison of average number of employees (a) and labour costs per employee (b) between four analysed ownership groups. The results of ANOVA analysis indicate that enterprises with foreign ownership are significantly larger than enterprises with manager ownership. This difference has been statistically significant in both periods. However, in the second period

⁴² The differences in fixed assets per employee are significant in the first period, but have turned insignificant in the second period.

also the difference between foreign and domestic outsider owned enterprises becomes significant. The differences between enterprises with domestic ownership (domestic outsiders, managers and employees) are not significant in both periods. Still, it is seen from figure 12(a) that in the first period the differences are bigger than in the second period. However, it is clear that foreign investors have been interested more in large enterprises. This also reflects the fact that when privatisation of large infrastructure enterprises started then they were mainly sold to foreign investors. In general, these results support the findings from earlier studies and from subchapter 2.2.2 that large enterprises are more likely owned by foreign owners.



Notes: The figures indicate the means for different periods. FOR=foreign ownership, DOM=domestic outsider ownership, MAN=manager ownership, EMP=employee ownership, I period = 1996–1999, II period = 2000–2004.

Figure 12. Average number of employees (a) and labour costs per employee (b) according to four ownership groups (Source: author’s figures on the basis of research database).

The analysis of labour costs per employee indicates that the labour costs are the highest in enterprises with foreign ownership, followed then by enterprises with domestic outsider and manager ownership. Still, in the first period, the labour costs in employee owned enterprises are not significantly lower than in foreign owned enterprises, though it is the case in the second period. Thus, the assumption that foreign owned enterprises pay higher wages is confirmed by the current analysis. This obviously enables them to attract more highly qualified employees. An interesting result is that labour costs in employee owned enterprises are significantly higher than in manager owned enterprises. However, this remains true only for the first period, although the difference is rather similar also in the second period. This might indicate that employees in these enterprises are rather highly educated (see Mygind 2000/2001) or that

employees just pay higher wages for themselves. Still, not very strong conclusion can be made as the number of observations in employee owned enterprises is rather low.

Figure 13 shows the differences between ownership groups in labour productivity both measured by value-added per employee and sales per employee. It is seen that enterprises with foreign ownership are most productive. Value-added produced by enterprises with foreign ownership overcomes three other groups more than one and half times. High valued added is usually related to high investment level. Thus, it might indicate that foreign owned enterprises have higher capital intensity. However, the analysis of ownership determinants in subchapter 2.2.2 indicated that high capital intensity is a predictor of foreign ownership only in the first period. This probably reflects the fact that domestic enterprises were more interested in high profits and short-term success in the first period than long-term investments (see Kooskora 2006). Still, the differences in valued added per employee remain significant between foreign and domestic enterprises also in the second period.

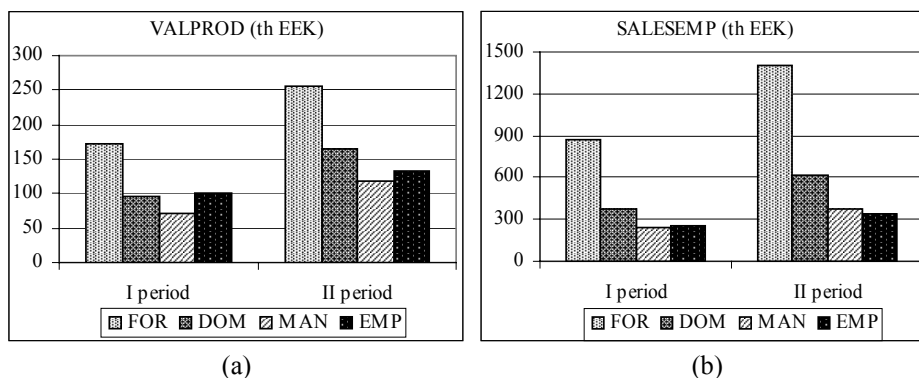


Figure 13. Labour productivity by value added per employee (a) and sales per employee (b) according to four ownership groups (Source: author's figures on the basis of research database. See the notes in Figure 12).

The comparison of sales per employee indicators shows that the difference between enterprises with foreign ownership and other ownership groups is even bigger than it was between value-added per employee indicators. However, high variable mean might be affected by a few outliers as the standard deviation of this mean variable is rather high. An interesting finding is that value-added productivity is high in enterprises with employee ownership, but they perform rather poorly in terms of sales productivity. It is seen from summary statistics that in enterprises with employee ownership, labour costs form approximately 77 per cent of value-added. In comparison, the same indicator in enterprises with foreign ownership is around 57 percent. This shows that value-added

creation in enterprises with employee ownership is mainly based on labour costs instead of good sales volume or effective cost management as it seems to be in the enterprises with foreign ownership.

Similar to previous studies (see Hannula 2001, Mygind 2002), enterprises with foreign ownership are more export-oriented compared to enterprises with domestic ownership also according to this analysis. It is seen from Figure 14 that exports to sales ratio in enterprises with foreign ownership is approximately 60 per cent, respectively in enterprises with domestic outsider ownership around 25 per cent and in enterprises with employee ownership around 20 per cent. Surprisingly, enterprises with manager ownership are more export oriented (export sales forms approximately 32 per cent of net sales) than other domestic ownership groups, although they are comparatively smaller and less productive. The results indicate that enterprises with domestic ownership are mainly oriented towards domestic market. Thus, their international competitiveness is not very high and/or they have no such high interest in doing international business.

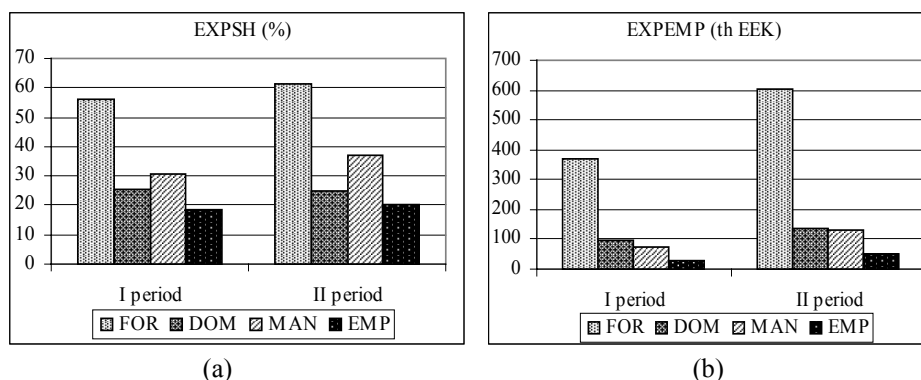


Figure 14. Exports to sales ratio (a) and export per employee (b) according to four ownership groups with unchanged ownership (Source: author's figures on the basis of research database. See the notes in Figure 12).

The differences between ownership groups in terms of fixed assets per employee, which shows the level of capital intensity, are statistically significant only in the first period. Here, the results indicate that both foreign and domestic outsider owned enterprises are more capital intensive than manager owned enterprises. This, as already mentioned above, explains also their higher value-added productivity.

The differences in profit margins are not statistically significant in both periods. Still, one can make two distinctions: first, in the first period, the profit margins in all ownership groups have been much lower compared to the second period, and second, the profit margins in enterprises with foreign ownership are

comparatively lower than in other ownership groups (if not taking into account the domestic outsider ownership group in the first period). To explain, it is expected that in the first period, the profit margins are lower because of general slowdown of economic development at the end of the period. Profit margins in enterprises with foreign ownership might be lower because they did make larger investments at this period (reflects in their high capital intensity) as they did not have so big pressure to be highly profitable in short-term.

To conclude, Table 21 summarizes main differences between analysed ownership groups. The results of ownership effects analysis indicate that differences between ownership groups remain statistically significant for both periods. In comparison with these four ownership groups, enterprises with foreign ownership are the largest and show the highest performance in terms of value added, sales, labour costs and exports. Still, their capital intensity level remains lower compared to enterprises with domestic outsider ownership and their profit margin is the lowest in comparison of all other ownership groups. The performance of enterprises with domestic outsider ownership stays mainly on medium level compared to other ownership groups. This means that in general their performance is poorer compared to enterprises with foreign ownership (apart from the level of fixed assets as mentioned already above), but better than in enterprises with manager or employee ownership. Nevertheless, compared to enterprises with manager ownership they are less export-oriented, which means that they are mainly oriented to domestic market.

Enterprises with manager ownership show rather poor performance compared to other analysed ownership groups. They are mainly small enterprises with rather low value-added and labour costs. The performance of enterprises with employee ownership is also in general poorer than in enterprises with foreign or domestic outsider ownership, but differs in many aspects from enterprises with manager ownership. Enterprises with employee ownership have slightly higher value added productivity than managers, also high labour costs and high profit margin, but low sales productivity, low capital intensity and small export orientation. Employee enterprises' low capital intensity is probably connected to their modest value-added productivity and high profit margin might reflect their low sales productivity. **Thus, the current analysis does not support the proposition P3a which specified that performance differences between different ownership types are expected to weaken in the later transition period due to the changes in institutional environment.**

Table 21. Summary of ownership effects between enterprises with unchanged ownership by four ownership groups

Variable	Ownership group			
	Foreign	Domestic outsider	Manager	Employee
EMP*	Highest	High	Low	Medium
VALPROD*	Highest	High	Low	Medium
SALESEMP*	Highest	Medium	Low	Low
STAFCOSEMP*	Highest	Medium	Low	High
EXPSH*	Highest	Medium	High	Low
EXPEMP*	Highest	Medium	Medium	Low
FIXEDEMP	High	Highest	Medium	Low
OPROFIT	Low	Medium	High	Highest

Notes: ‘highest’ – much higher compared to other three groups; ‘high’ – slightly lower than ‘superior’ group, but significantly higher compared to ‘medium’ and ‘low’ group; ‘medium’ – between the ‘high’ (or ‘superior’) and ‘low’ group; ‘low’ – the lowest compared to other three groups. * – differences between ownership groups are statistically significant at 1% level in both periods.

Source: compiled by the author on the basis of ANOVA analysis

ANOVA results of ownership effects between enterprises with changed ownership

Differently from previous section that concentrated on outlining the differences between enterprises with unchanged ownership, the main focus of this section is to find out what kind of differences exist between enterprises whose types of owners have changed. As already was mentioned in the beginning of this subchapter, ownership has changed in one-third of enterprises during the analysis period. From these enterprises, it is possible to create 13 groups of enterprises with different ownership transitions. In the following analysis, these groups have been divided into five bigger groups according to initial ownership, that is, in the first group, the initial owner is the state, in the second group, the initial owner is the foreign investor, in the third group, the initial owner is the domestic outsider, in the fourth group, the initial owner is the manager, and in the fifth group, the initial owner is the employee.

It is important to note that ownership transitions in these 13 groups reflect the change in ownership between the time of privatisation and 2004. This might cause the problem with somewhat biased results as if enterprise has belonged to the initial or end owner group for a very long time, then the behaviour can be expected to adjust to this group. It is rather likely that in the second period, the results reflect more the influence of new owner group as the intensity of ownership changes has been highest in the first period. However, for receiving more significant results, the ownership transitions are reported for a whole

period as many ownership change groups include very few observations. Thus, it is important to bear this in mind when discussing the results.

Appendix 36 gives summary statistics for all analysed variables by all 13 enterprise groups. Appendix 37 provides the results for ANOVA analysis for five bigger groups where in each of them the difference between enterprise groups with similar initial ownership has been tested. According to ANOVA results, the differences in ownership change groups are not in many cases statistically significant. A reason is probably the few number of observations in many ownership change groups. Still, there are a few groups where the differences between some performance indicators are statistically significant.

From Appendix 37, it is seen that the number of employees is bigger in enterprises where ownership has changed from initial foreign ownership to domestic outsider ownerships than in enterprises where ownership has changed from initial foreign ownership to manager ownership. Also, in the case where the initial owner has been domestic outsider, the number of employees has been bigger in enterprises where ownership has moved to foreign investors compared to enterprises where ownership has moved to managers. This might indicate that if ownership moves from outsider to outsider, then it takes place between large enterprises, but if it moves from outsider to insider, then it takes place in small- and medium-sized enterprises. The latter is in line with the previous research and findings in the subchapter 2.2.2.

The differences in labour costs per employee are statistically significant between enterprise groups where initial ownership has been state or domestic outsider. It is seen that if state enterprise has been taken over by foreign investors, the labour costs are higher than if it is taken over by domestic outsider or manager. The same way in enterprises with initial domestic outsider ownership, the labour costs are higher in enterprises which have been acquired by foreign investors than enterprises which have been acquired by managers. Thus, it is rather likely that foreign owners induce the increase in labour costs, preferably in terms of higher wages. It can be stated that if initial owner is the foreign investor, manager or employee, then the new owner does not have such a large influence on the labour costs.

The differences in value-added per employee are statistically significant between enterprise groups where initial owner has been the state, but only for the second period. The results indicate that state enterprises which were acquired by foreign investors are more productive than state enterprises that were acquired by domestic outsiders or managers. It is rather likely that the increase in value added has happened after the takeover, though as the overview of privatisation indicated, the foreign investors were favoured in privatisation of large and strategically important infrastructure enterprises. A difference between enterprise groups where the initial owner is domestic outsider is statistically significant only when looking at the whole period, but not when the periods are analysed separately.

In both cases above, it is seen that value added per employee is higher in enterprises where ownership has changed to foreign investors than in enterprises where ownership has changed to domestic outsider or manager ownership. However, here the influence might go in both ways. It is expected that foreign investors invest more and this might explain also the increase in value added productivity. At the same time, according to theoretical expectations, foreign investors are more likely to be interested in well-performing enterprises (Jones *et al.* 2005). The results of net sales per employee indicators support the arguments set up based on value added per employee indicators. However, the analysis of ownership determinants did not support the argument that the higher labour productivity is a predictor of foreign ownership.

The differences in export orientation are statistically significant in two groups: in a group where initial owner has been domestic outsider and in a group where initial owner has been the manager. It is seen that export orientation is higher in enterprises where ownership has changed from domestic outsider to foreign investor than in enterprises where ownership has changed from domestic outsider to manager. This might show either that foreign investors are more interested in enterprises with high export potential or that they may have taken over firms with high export potential which they realized after their takeover. The similar conclusion can be made also comparing the results in enterprises where initial owner has been the manager. As it was seen from previous section, enterprises with foreign ownership are much more export oriented than enterprises with domestic outsider ownership. Thus, it is rather expected that if the new owners are the foreign investors, they are more interested in increasing the export capacity of enterprise than domestic outsider owners, whose main target market have been local customers.

The analysis of fixed assets per employee indicates that the level of capital intensity is different between enterprises where ownership has changed to outsiders and where ownership has changed to managers. It is seen that if initial owner has been foreign investor the level of capital intensity is comparatively higher in enterprises which have been acquired by domestic outsiders than in enterprises acquired by managers. Also, if initial owner has been domestic outsider, the level of capital intensity is higher in enterprises acquired by foreign investors than in enterprise acquired by managers. This shows that managers have rather low capital intensity, which also is reflected in their low labour productivity.

The differences in profit margins are statistically significant only if initial owner is foreign investor and new owner is either domestic outsider or manager. It is seen that the profit margin is higher if foreign owned enterprise is taken over by domestic outsider than by manager. The results of summary statistics show that if enterprise has been taken over by manager, then in the first period, it is faced by loss which in the second period has turned to profit. Thus, it might indicate either that managers have taken over lower-performing foreign enterprises to save their job places, or that they have used their insider advantage to

acquire enterprises when its value is low. Nevertheless, as there is no information about the takeover reasons, this conclusion remains hypothetical and needs further research.

In sum, the results of ownership change effects show that there are clear differences between ownership change groups where ownership has changed from initial domestic outsider ownership to foreign ownership or manager ownership. In that case, the enterprises taken over by foreign owners are larger, with higher labour costs, more productive, capital intensive and export-oriented. If ownership has changed from initial foreign ownership to domestic outsider ownership, then it is characterised by larger number of employees, higher capital intensity and profitability. If ownership has changed from initial manager ownership to foreign ownership, then it is characterised by higher export orientation. **However, it is difficult to make, on the basis of this analysis, any large generalizations as the analysis provides many insignificant results, which is probably due to the small number of enterprises in some ownership change groups. Therefore, this analysis will be developed further in the following subchapter.** In that case, the number of ownership change groups will be lowered and only ownership change groups with comparable number of enterprises entered into the analysis. Moreover, to gain better results on relationship between ownership changes and enterprise restructuring and performance, the OLS regression analysis will be performed.

2.3.2. The relationship between ownership changes and enterprise restructuring

The present subchapter further develops the analysis of ownership change effects started in the previous subchapter and aims to analyse the relationship between ownership changes and enterprise restructuring and performance. It will be built on the propositions P3c–P3f which specified the following relationships: 1) ownership change from insider to foreign is expected to lead to faster increase in the use of external financing, that is, to faster financial restructuring; 2) ownership change from insider to foreign is expected to lead to faster growth in investments and capital intensity, that is, to faster technological restructuring; 3) ownership change from insider to foreign is expected to lead to faster reductions in employment and growth of real wages and exports; and 4) ownership change from insider to foreign is expected to lead to a faster increase in labour productivity and a slower increase in profitability. The preliminary analysis in the previous subchapter indicated that enterprises taken over by foreign owners have a larger firm size, labour costs, higher productivity, capital intensity and export-orientation. However, the following analysis is expected to provide an additional insight as to how specific ownership changes have influenced the different types of restructuring.

The following analysis will be carried out in five phases. First, the variables and research models used in the analysis will be introduced. Then, the analysis of ownership changes and financial restructuring will be performed. After that, the relationship between the ownership changes and technological restructuring will be examined. Next, the relationship between ownership changes and growth in employment, wages and exports will be carried out. And finally, the relationship between ownership changes and enterprise performance will be analysed.

In analysing the relationship between ownership changes and enterprise restructuring, a distinction between three different restructuring dimensions will be made. As was discussed in the theoretical part, enterprises in transition need to undertake changes in three important areas: financial, technological and organizational (see Figure 7 and subchapter 1.2.2). Financial restructuring refers to the changes in enterprise capital structure which was rather non-rational in the former state-owned enterprises. Here, it is expected that during transition, enterprises achieve higher financial autonomy including the ability to borrow from banks and to create a capital structure which is in accordance with the financing needs of the enterprise. Technological restructuring is necessary to improve the production process and the quality of products which can be induced by higher investment level into plants and equipment. The changes in the organisational side involve changes in management, human resources, marketing strategies, etc. However, the scope of organisational changes is rather wide and these changes can be induced by many different aspects which are more difficult to capture based only on quantitative data. However, indirectly these changes might be reflected, for example, in changes of labour force, wages, export-orientation, and so on. Often the change in wages is taken as an indirect measure of change in human capital quality and change in export-orientation as an indirect measure of change in export strategy, although the latter can be used also as a proxy for technology improvements. Hence, based on the previous research (see Table 5 and subchapter 1.2.2) and availability of data from the current research database, the following variables will be used to analyse the above mentioned changes:

1. Financial restructuring variables – debt-ratio (denoted as DEBT2004) and debt-equity ratio (DEBTEQ2004).
2. Technological restructuring variables – investment rate (INVEST2004), fixed assets per employee (FIXEDEM2004), and share of electricity costs to total costs (ENERGY2004).
3. Organizational restructuring variables – change in employment (EMPCH04_96), change in real wage (realWAGEEMP04_96) and change in export intensity (EXPEMP04_96). For more detailed explanations of the variables, see Appendix 38.

As already mentioned in subchapter 2.1.2, in this dissertation the performance of enterprises is treated as the outcome of enterprise restructuring. Thus, the following performance variables will be analysed: value-added per employee

(VALPROD04_96), net sales per employee (SALESEMP04_96) and profit margin (OPROFIT04_96). These are the most common indicators used in the literature to measure economic performance (see subchapter 1.3.1).

All restructuring and performance variables in the current analysis are continuous and calculated either as the level at the end of the survey period (2004) or growth indicators over the whole period (1996–2004). Ownership changes are measured by the set of dummy variables. Although the propositions P3c–P3f are set up for ownership changes from insider to foreign ownership (insiders are employees and managers), the analysis also includes other types of ownership movements. The latter is done for comparative and explorative purposes. In addition, the analysis in the previous subchapter indicated that the movements from employee to foreign ownership have been extremely rare, thus, in the current analysis, only the movements from manager to foreign ownership will be included.

The analysis includes one dummy variable for enterprises with unchanged ownership and eight dummy variables for specific ownership changes. It is important to mention that in this analysis, like in the previous analysis in subchapter 2.3.1, these ownership changes reflect ownership changes over the whole period. This means that if ownership has changed twice, for example, from employee to manager in the early period and then from manager to foreign in the later period, the ownership change explains the shift from employee to foreign. Thus, this might provide somewhat biased results. Still, for receiving more significant results, the ownership changes are reported for a whole period as many ownership change groups include very few observations.

A dummy variable for enterprises where ownership has not changed is taken as reference group (OWN_UCH_2004). As the analysis in the previous subchapter indicated, these enterprises have in general higher performance, and thus could be taken as a benchmark for those where ownership has changed. The dummy variables for enterprises where ownership has changed describe the following ownership changes: ownership change from foreign to domestic outsider (OWN_FD_2004); ownership change from foreign to manager (OWN_FM_2004); ownership change from domestic outsider to foreign (OWN_DF_2004); ownership change from domestic outsider to manager (OWN_DM_2004); ownership change from manager to foreign (OWN_MF_2004); ownership change from manager to domestic outsider (OWN_MD_2004); ownership change from employee to domestic outsider (OWN_ED_2004); and ownership change from employee to manager (OWN_EM_2004).

In addition to ownership change variables, several firm-specific and industry characteristics will be added to the models as controls. Control variables are entered for firm size (PerSIZE_*), industry (IND_*_04), initial owner (INITIALOWN_*) and privatisation time (PRIVTIME_*). By size, firms are divided into micro enterprises (1–19 employees), small enterprises (19–49 employees), medium-size enterprises (50–249 employees) and large enterprises

(250 or more employees). Industries are grouped at NACE 2–digit level. Initial owner refers to the enterprise ownership at the time of privatisation and is distinguished by four ownership types: employee, manager, domestic outsider and foreign. Privatisation time divides enterprises into three groups: enterprises privatized before 1991; enterprises privatized during 1991–1995 and enterprises privatized after 1996. The explanations for all independent variables are given in Appendix 38.

The relationships between ownership changes and enterprise restructuring and performance will be analysed using OLS regression models. An alternative would have been to use fixed- and random-effects models. However, whilst the database includes cross-sectional data, not panel data (the ownership data are available only at three different time points), the OLS regression models are more appropriate. Moreover, all model estimates will be tested with robust standard errors, as OLS regressions assume constant error variance (homoscedasticity), which is often not fulfilled in the case of cross-sectional estimates (heteroscedasticity problem).

In building up the basic model for the following analysis, the most widely used empirical strategy in the literature was applied. This is to estimate regressions in which the dependent variable is a measure of enterprise restructuring or performance and ownership along with other control variables are the regressors (see, for example, Jones 2004). Thus, the ownership is measured by a set of dummy variables for different ownership changes. Additionally, to control variables as pointed out above, the following models will include also some independent continuous variables which are associated with dependent variable. Hence, the propositions P3c–P3f will be tested in the form of an OLS regression equation with the basic model as follows:

$$PERF = \beta_0 + \beta_1 OWN0 + \beta_2 OWN1 + \beta_3 OWN2 + \beta_4 OWN3 + \beta_5 OWN4 + \beta_6 OWN5 + \beta_7 OWN6 + \beta_8 OWN7 + \beta_9 OWN8 + \beta_{10} DUM1 + \beta_{11} DUM2 + \beta_{12} DUM3 + \beta_{13} DUM4 + \varepsilon$$

where PERF denotes either restructuring or performance variable or change in restructuring or performance variable

OWN0 – no ownership change

OWN1 – ownership change from foreign to domestic outsider

OWN2 – ownership change from foreign to manager

OWN3 – ownership change from domestic outsider to foreign

OWN4 – ownership change from domestic outsider to manager

OWN5 – ownership change from manager to foreign

OWN6 – ownership change from manager to domestic outsider

OWN7 – ownership change from employee to domestic outsider

OWN8 – ownership change from employee to manager

DUM1 – firm size dummy variables (PerSIZE_*)

DUM2 – initial owner dummy variables (INITIALOWN_*)
DUM3 – privatisation time dummy variables (PRIVTIME_*).
DUM4 – industry dummy variables (IND_*_04)
 β – the regression parameters
 ε – the random error terms

In analyzing the relationship between ownership changes and different types of restructuring, the results from two separate OLS regression models will be presented. The first model is static and presents the relationship between dependent variable level at the end of the period and ownership changes (Model 1). The second model is dynamic and presents the relationship between dependent variable change during total period and ownership changes (Model 2).

Relationship between ownership changes and financial restructuring

For analysing the relationship between ownership changes and financial restructuring, two capital structure indicators will be used: debt-ratio and debt-equity ratio. The enterprises' debt ratio is measured as a share of debt obligation in total assets. Debt ratio indicates how much of enterprises assets are financed by external capital. It also shows the potential risk an enterprise faces in terms of its debt-load. It is expected that if the debt ratio has increased during the analysis period, then enterprises' loan possibilities have improved. The debt-equity ratio indicates what proportion of debt and equity an enterprise uses to finance its assets. This is measured as the ratio of debt obligation and long-term liabilities to total equity capital. It is expected that if the debt-equity ratio has decreased during the transition period, then the enterprise finances its activities instead of loan capital from equity capital. It is likely that these enterprises that have a higher rate of return and more tangible assets have better possibilities to get a loan. Therefore, also return on assets and tangible assets (measured as a ratio of fixed assets in total assets) variables are included into the models. In addition, it could be expected that capital-intensive industries have higher debt ratios as they have higher needs for investments than labour-intensive industries.

Whilst at the beginning of transition the capital markets were underdeveloped and access to loan capital was very limited, it is expected that during the analysis period, the amount of enterprises debt obligations has increased as a result of banking and capital market developments. It is expected that ownership change from insider to foreign leads to a faster increase in use of external financing than other ownership change groups. The previous research has indicated that foreign investors have better access to finances than other ownership types (see subchapter 1.2.2). The access to loan capital is also connected to firm size. Previous research among Estonian enterprises has indicated that small companies were constrained in their access to finance in the early period (1995–1999), especially in case of lack of foreign ownership (see Mickiewicz *et al.* 2006). Thus, as both foreign and domestic outsiders owned

enterprises are larger than manager or employee owned enterprises, it could be expected that also ownership changes from insider to domestic outsiders leads to faster use of external financing.

Table 22 provides the results of OLS regression for debt ratio and debt-equity ratio models. It is seen that the models do not provide very many significant results⁴³. This might indicate that in terms of debt ratios the ownership change groups and reference group do not differ so much. However, it also might be related to the low number of observations in ownership change groups. Still, it is possible to point out some interesting results.

Table 22. Results of OLS regression – financial restructuring

Variable	Model 1		Model 2
	DEBT 2004	DEBTEQ 2004	DEBT 04_96
OWN_FD_2004	4.351 (0.55)	246.388 (1.39)	1.757 (0.19)
OWN_FM_2004	-9.117 (2.04)**	801.073 (1.02)	15.264 (1.90)*
OWN_DF_2004	4.086 (0.87)	-131.743 (1.39)	13.833 (1.34)
OWN_DM_2004	5.505 (1.50)	9.562 (0.11)	7.881 (1.27)
OWN_MF_2004	-0.825 (0.16)	-70.512 (0.37)	-59.791 (4.97)***
OWN_MD_2004	-0.136 (0.03)	35.069 (0.35)	8.276 (1.22)
OWN_ED_2004	-2.511 (0.51)	-17.330 (0.24)	4.964 (0.64)
OWN_EM_2004	1.169 (0.25)	149.954 (1.97)**	11.531 (1.81)*
ROA2004	-0.176 (3.24)***	-0.408 (0.19)	
TANG2004	0.094 (2.54)**	1.451 (1.67)*	
ROA04_96			-0.102 (1.54)
TANG04_96			0.147 (2.45)**
PerSIZE_19	-4.563 (2.03)**	-126.907 (1.69)*	-0.204 (0.04)

⁴³ While the debt ratio variables range between 0 and 100 (if measured in per cent), also the Tobit regression analysis was performed (unreported results) which enables to analyze the models with limited dependent variables. However, it did not provide any more significant results than OLS regression analysis.

Variable	Model 1		Model 2
	DEBT 2004	DEBTEQ 2004	DEBT 04_96
PerSIZE_49	-1.884 (0.89)	71.865 (0.97)	2.880 (0.78)
PerSIZE_more250	5.278 (1.76)*	66.508 (1.11)	3.745 (0.85)
INITIALOWN_F	4.236 (0.97)	-134.663 (1.02)	-0.429 (0.07)
INITIALOWN_M	3.192 (1.00)	-19.692 (0.21)	-0.181 (0.04)
INITIALOWN_E	3.725 (0.79)	-97.026 (1.13)	1.719 (0.27)
PRIVTIME_90	-4.683 (1.41)	-1.199 (0.02)	4.723 (1.11)
PRIVTIME_96	6.513 (2.32)**	122.778 (1.72)*	8.134 (1.73)*
Industry controls	Yes**	Yes*	Yes*
Constant	4.415 (1.12)	84.860 (0.83)	-10.594 (2.35)**
Observations	453	456	345
R-squared	0.13	0.08	0.14

Notes: * significant at 10% level, ** significant at 5% level, *** significant at 1% level. Robust t-statistics are given in parentheses. The reference groups are OWN_UCH_2004, PerSIZE_249, INITIALOWN_D and PRIVTIME_91_95. Industry controls are marked significant when at least one industry dummy has been significant.

Source: author's calculations on the basis of research database.

The results of Model 1 for *debt ratio* indicate that the debt ratio is significantly lower in enterprises where ownership has changed from foreign to manager ownership compared to the reference group. It is seen from the model that the debt ratio is dependent on firm size. That means the smaller the enterprise is, the lower the debt ratio is. Thus, the results of this model support the results of earlier studies that small enterprises might have some difficulties in getting a loan. Contrary to expectations, the coefficient of return on assets is negative and significant. At the same time, as expected, the more an enterprise has tangible assets, the higher its debt ratio is. Thus, it might indicate that enterprises which have moved from foreign to manager are relatively smaller than others and because of that have had difficulties to get a loan. At the same time, they might be enterprises with a high rate of return, but in industries where investment possibilities are small. Still, it might also indicate that these enterprises do not finance their activities from external capital but from their retained earnings.

The latter is rather likely in the case of Estonia where, according to the Income Tax Act, the reinvested profit is not subject to Corporate Income Tax⁴⁴.

The results of Model 2 for the growth in debt ratio indicate that during the survey period the debt ratio has increased faster in enterprises where ownership has changed from foreign to manager than in reference group. This indicates that the initial debt level in the beginning of survey period has been rather low in these enterprises. It might show that foreign investors are using different financing schemes and do not actually use external financing as their main financing source. This argument receives support from a very interesting finding that the growth in debt ratio has been significantly slower (or debt ratio has decreased) compared to the reference group, only in enterprises where ownership has changed from manager to foreign ownership. Debt obligations have increased faster compared to reference group in all other ownership change groups. Thus, contrary to expectations, foreign investors have not induced the faster increase in use of external finance. Another interesting result is also that movement away from employee ownership to manager ownership seems to improve the possibilities to get a loan.

The results of Model 1 for the *debt-equity ratio* also indicate that in enterprises where ownership has moved from employee to manager, relatively more debts are used to finance their assets than enterprises in the reference group. It is seen that small enterprises use proportionally less debts than equity capital to finance their assets than enterprises in reference group. Thus, it is clear that small enterprises are more constrained by loan possibilities than large ones. The results also show that enterprises which were privatized in 1996 or after, have higher debt and debt-equity ratio and also have experienced a larger increase in debt ratios than enterprises privatized before 1996. This might indicate that the longer an enterprise has been in private ownership, the smaller is the investment intensity as they have probably made their investments in earlier period. The results of Model 2 for the growth in debt-equity ratio were not statistically significant, thus it is not possible to report findings from this analysis.

In sum, the analysis indicates that if ownership changes from manager to foreign, the use of external financing increases more slowly (or decreases) compared to all other ownership or ownership change groups. **Thus, proposition P3c which specified that ownership change from insider to foreign leads to faster increase in use of external financing has not been confirmed.** It is seen that foreign investors use different financing schemes and it might be that they finance their assets from their retained earnings. Surprisingly, movement to manager ownership leads to faster financial restructuring, thus improving the loan possibilities. In accordance with earlier studies, the findings of this analysis seem to support the argument that small enterprises are more constrained in getting a loan than large enterprises.

⁴⁴ See the Income Tax Act [<http://www.legaltext.ee/text/en/X40007K9.htm>].

Relationship between ownership changes and technological restructuring

For analyzing the relationship between ownership changes and technological restructuring, three following indicators will be used: investment rate, fixed assets per employee as a proxy for capital intensity and the share of electricity costs to total costs as a proxy for energy intensity. It is expected that ownership change from insider to foreign leads to faster growth in investments and capital intensity, that is, to faster technological restructuring. Previous studies have indicated that the investment level has been higher in enterprises with foreign ownership (see subchapter 1.2.2). Also, that they are more prone to make investments into technology. Similarly, the level of capital intensity in enterprises with foreign ownership is higher compared to enterprises with manager or employee ownership, though the latter might not apply for domestic outsider owned enterprises as seen from the analysis in subchapter 2.3.1. The share of electricity costs in total costs indicates how energy intensive the enterprises are. Often it is used to measure how up-to-date the technology used in the enterprise is. Here, it is not possible to make strong assumptions based on previous research, however, it will be assumed that the newer the technology, the less it consumes the electricity.

Table 23 provides the results of investment rate, capital intensity and electricity costs models. It is expected that if the *investment rate* is high and it is increasing over the time, the changes in technological development have been faster. Also, it is assumed that the higher the firms' rate of return is, the bigger the investment rate is as it makes it easier for an enterprise to apply for a loan and/or they can finance their assets from retained earnings as reinvested profit is tax free in Estonia. However, the results of Table 23 indicate that the return on assets is negatively related to investment rate, though insignificantly. It is seen that the investment rate is higher in enterprises where ownership has moved away from employee ownership compared to the reference group. Thus, ownership change to domestic outsider or manager has been useful for enterprises with initial employee ownership in terms of getting more investments, which rather likely also means more restructuring. The coefficients for initial foreign and employee ownership are both negative and significant. It seems that domestic outsider owners are most aggressive in making investments. However, the results from Model 2 which analysed the relationship between ownership changes and growth in investment rate were not statistically significant, thus one can not make conclusions about how the investment activities have changed as a result of ownership changes.

The results of Model 1 for *capital intensity* indicate that the capital intensity is in general lower in enterprises where ownership has changed compared to enterprises where it has not changed. This is in line with the findings in subchapter 2.3.1. It is especially low in enterprises where ownership has moved to manager ownership. The coefficients of initial ownership are all statistically significant and it is clear that enterprises with domestic outsider ownership are the most capital intensive, which also explains their high investment rate. Also, as expected, the larger the enterprise is, the higher its capital intensity level is.

Table 23. Results of OLS regression – technological restructuring

Variable	Model 1			Model 2	
	INVEST 2004	FIXED EMP2004	ENERGY 2004	FIXEDEMP 04 96	ENERGY 04 96
OWN_FD_2004	-0.301 (1.57)	-73.275 (0.38)	0.401 (0.97)	125.406 (0.55)	0.100 (0.09)
OWN_FM_2004	-0.063 (0.28)	-420.109 (2.23)**	-1.663 (3.27)***	-98.588 (0.24)	-0.458 (0.51)
OWN_DF_2004	0.453 (0.59)	-107.008 (0.29)	-1.265 (2.73)***	-594.390 (2.11)**	-0.122 (0.10)
OWN_DM_2004	-0.219 (1.22)	-624.793 (1.79)*	-0.056 (0.09)	-552.041 (0.92)	-0.607 (0.88)
OWN_MF_2004	-0.286 (0.78)	196.809 (0.72)	-1.623 (2.26)**	-390.974 (0.69)	0.447 (0.37)
OWN_MD_2004	-0.423 (1.46)	175.514 (0.69)	-0.573 (0.86)	-711.587 (1.34)	0.944 (1.09)
OWN_ED_2004	0.459 (1.76)*	137.340 (0.93)	1.010 (1.17)	287.223 (0.43)	-0.091 (0.06)
OWN_EM_2004	0.382 (1.66)*	-63.610 (0.33)	1.022 (1.43)	-13.220 (0.03)	1.569 (1.11)
ROA2004	-0.001 (0.64)				
FIXEDEMP2004			-0.000 (1.18)		
FIXEDEMP04_96					0.000 (1.11)
PerSIZE_19	-0.128 (1.34)	286.871 (1.42)	0.293 (0.66)	-8.031 (0.03)	0.109 (0.18)
PerSIZE_49	0.095 (0.71)	91.670 (0.75)	1.098 (2.81)***	29.683 (0.19)	1.616 (3.45)***
PerSIZE_more250	-0.145 (1.01)	408.070 (2.18)**	0.476 (1.38)	153.032 (0.54)	-0.178 (0.37)
INITIALOWN_F	-0.255 (1.92)*	-404.612 (1.82)*	-0.805 (1.87)*	-817.366 (2.18)**	0.410 (0.62)
INITIALOWN_M	-0.159 (0.72)	-712.256 (1.81)*	-0.075 (0.12)	-360.525 (0.49)	-0.650 (0.76)
INITIALOWN_E	-0.374 (2.30)**	-572.258 (2.75)***	-1.184 (2.09)**	-331.349 (0.71)	-0.966 (0.82)
PRIVTIME_90	0.319 (0.80)	504.781 (1.00)	1.141 (1.18)	478.254 (0.84)	0.585 (0.58)
PRIVTIME_96	-0.039 (0.31)	14.753 (0.13)	-0.070 (0.25)	125.687 (0.45)	-0.802 (0.89)
Industry controls	Yes***	Yes*	Yes***	Yes	Yes*
Constant	0.547 (3.49)***	674.184 (3.33)***	2.368 (5.72)***	937.096 (2.49)**	-0.525 (0.93)
Observations	379	450	434	342	342
R-squared	0.12	0.15	0.11	0.12	0.11

Notes: * significant at 10% level, ** significant at 5% level, *** significant at 1% level. Robust t-statistics are given in parentheses. The reference groups are OWN_UCH_2004, PerSIZE_249, INITIALOWN_D and PRIVTIME_91_95. Industry controls are marked significant when at least one industry dummy has been significant.

Source: author's calculations on the basis of research database.

From Model 2, it is seen that the growth in capital intensity has been much lower in enterprises with changed ownership compared to enterprises where it has not changed. Only in two cases, that is, when ownership has moved from foreign to domestic outsider or from employee to domestic outsider, it has increased faster than in the reference group. This indicates that, in addition to domestic outsiders' higher capital intensity level, they also induce a bigger increase in capital intensity. Surprisingly, if ownership has changed from domestic outsider to foreign then the increase in capital intensity has been significantly slower than in the reference group. The same is the case when ownership has changed from manager to foreign, though this estimate coefficient is insignificant. Still, it indicates that foreign owners do not always put the biggest pressure or they have not had the need to restructure their fixed assets. This statement gets also support from the estimates of initial owner variables where it is seen that the increase in capital intensity has been the slowest in enterprises with initial foreign ownership. Thus, although their capital intensity level is not the lowest compared to other ownership groups, it has changed much less during the survey period than in other ownership groups, which means less restructuring has taken place.

The results of Model 1 for the *share of electricity costs* show that electricity costs are significantly lower in enterprises where ownership has changed to foreign ownership compared to the reference group. The same has also, when ownership has changed from foreign to manager ownership. This indicates that the production of enterprises with foreign ownership is less energy intensive, which might be related to the use of more up-to-date technology. In addition, from initial owner variables, it is seen that the level of electricity cost is lowest in enterprises with foreign ownership and highest in enterprises with domestic outsider ownership. Thus, foreign owned enterprises are rather capital intensive (apart from domestic outsiders who are even more capital intensive), but not most energy intensive. The results of Model 2 for the growth in electricity costs do not provide any statistically significant results between ownership change groups and reference group. However, it is seen that the electricity costs have increased faster in small enterprises than medium-sized enterprises.

In sum, the analysis indicates that if ownership changes away from employee ownership to domestic outsider or manager ownership, it is accompanied by a higher investment rate. It is clear that most the aggressive in making investments and most capital intensive are the enterprises with domestic outsider ownership. Domestic outsiders clearly induce a bigger increase in capital intensity than foreign owners. It seems that foreign owners do not always put the biggest pressure or they have not had the need to restructure their fixed assets. The capital intensity level in enterprises with foreign ownership has changed much less during the survey period than in other ownership groups. This means that they have not undertaken faster technological restructuring. **Thus, the proposition P3d which specified that ownership change from insider to foreign leads to faster growth in investments and capital intensity has not been confirmed by the current analysis.** The

results of this study are somewhat different from earlier studies which have indicated that foreign owners are more prone to make investments and increase the level of capital intensity. Still, these different results might be related to different analysis periods as earlier studies refer to the changes in the period before 2000. It could be expected that in the later transition period, the differences in terms of investment and capital intensity level between domestic and foreign enterprises weaken due to better access to loan capital.

Relationship between ownership changes and organizational restructuring

For analyzing the relationship between ownership changes and organizational restructuring, only the changes during the total period, not the levels at the end of the period, in three following indicators will be analysed: change in employment, change in real wages and change in export intensity. The static analysis of these indicators is not performed because in terms of organizational restructuring, it is more interesting to compare the changes than the levels as the latter might not be the reflection of ownership. It is expected that ownership change from insider to foreign leads to faster reductions in employment and growth of real wages and exports. Previous studies have indicated that labour hoarding was widespread in many companies, but only insider owned firms were not so reluctant to undertake significant downsizing (see subchapter 1.2.2 and Table 5). Therefore it is expected that with foreign takeovers the number of employees in enterprises is falling. The studies have shown that foreign investors are paying higher wages and this was also confirmed from the current analysis in subchapter 2.3.1. Similarly, they are more export-oriented, which is connected also with their better access to foreign markets (see also Hannula 2001).

Table 24 provides results of employment, real wage and export intensity change models. It is seen from Table 24 that the *growth in employment* level has been smaller or decreased in most of the ownership change groups compared to the reference group. The ownership change from insider to foreign ownership has been accompanied by rather slow employment growth, but this result is insignificant. It is seen that when ownership has changed from foreign to manager or from employee to domestic outsider then the employment level has increased significantly more slowly or decreased compared to the reference group. Thus, domestic outsiders or manager owners have not been so active in creating new job places. Contrary to expectations, the level of employment has increased most in enterprises where ownership has changed from domestic outsider to foreign ownership. The positive and significant coefficients for initial foreign and manager owner also indicate that the level of employment has increased most in enterprises with foreign ownership followed then by enterprises with manager ownership.

Table 24. Results of OLS regression – organizational restructuring

Variable	Model 2		
	EMPCH04_96	realWAGEEMP04_96	EXPEMP04_96
OWN_FD_2004	-62.679 (1.31)	38.027 (1.93)*	364.128 (0.82)
OWN_FM_2004	-96.016 (2.25)**	16.626 (0.73)	-239.244 (1.55)
OWN_DF_2004	197.600 (3.38)***	-4.074 (0.10)	-30.595 (0.19)
OWN_DM_2004	39.562 (1.44)	29.023 (1.79)*	178.072 (0.84)
OWN_MF_2004	-93.470 (0.76)	27.688 (0.62)	641.658 (1.34)
OWN_MD_2004	-38.103 (1.42)	-32.538 (1.61)	-302.815 (1.85)*
OWN_ED_2004	-79.314 (2.05)**	-4.674 (0.30)	-64.405 (0.26)
OWN_EM_2004	-20.704 (0.70)	21.509 (1.20)	-210.232 (0.89)
realSALESCH04_96	0.211 (4.65)***		
realFIXASSETS04_96	0.021 (1.82)*		
realSALESEMP04_96		0.198 (5.13)***	
PerSIZE_19	-5.785 (0.31)	10.265 (0.67)	154.039 (0.71)
PerSIZE_49	-4.421 (0.39)	-9.230 (1.23)	-52.631 (0.55)
PerSIZE_more250	77.668 (1.76)*	5.509 (0.62)	-75.232 (1.05)
INITIALOWN_F	125.268 (2.90)***	-3.833 (0.33)	85.126 (0.58)
INITIALOWN_M	57.699 (2.26)**	29.097 (2.07)**	60.710 (0.42)
INITIALOWN_E	41.447 (1.43)	4.599 (0.35)	185.919 (0.86)
PRIVTIME_90	-5.785 (0.31)	-3.626 (0.28)	160.552 (1.24)
PRIVTIME_96	-4.421 (0.39)	6.389 (0.76)	1.707 (0.02)
Industry controls	Yes*	Yes***	Yes
Constant	-57.053 (2.72)***	23.798 (2.00)**	201.065 (1.56)
Observations	336	350	241
R-squared	0.47	0.29	0.10

Notes: * significant at 10% level, ** significant at 5% level, *** significant at 1% level. Robust t-statistics are given in parentheses. The reference groups are OWN_UCH_2004, PerSIZE_249, INITIALOWN_D and PRIVTIME_91_95. Industry controls are marked significant when at least one industry dummy has been significant.

Source: author's calculations on the basis of research database.

The changes in *real wages* indicate that in general the wage level has increased faster in most of ownership change groups compared to the reference group. This might indicate that the initial wage level in these enterprises has been rather low. The biggest increase in wages has taken place in enterprises where ownership has changed from foreign to domestic outsider and also when ownership has moved to manager ownership. Still, the increase has been slower compared to the reference group when the ownership has changed from insider to domestic outsider ownership, though these results are insignificant. The wage level has also increased faster than the reference group in enterprises where ownership has changed from manager to foreign, but this result is insignificant. It is seen from initial owner variables that growth in the wage level has been biggest in enterprises with initial manager ownership than in enterprises with initial domestic outsider ownership. Thus, contrary to expectations, it seems that managers as new owners have put more weight in increasing the wage level.

The model of growth in *export intensity* does not provide very many significant results. This might be because of low number of observations as there are many enterprises that do not export. It is seen from the results that exports have increased much slower or decreased in enterprises where ownership has changed from manager to domestic outsider compared to the reference group. The analysis in subchapter 2.3.1 also indicated that the level of exports is rather low in domestic outsider enterprises. As expected, the ownership change from manager to foreign has induced the biggest increase in exports compared to the reference group, but unfortunately this result is not statistically significant. Therefore, based on this analysis, it is not possible to make very strong conclusions about the changes in firms' export strategies.

In sum, the analysis indicates that ownership change from managers to foreign is not always accompanied with faster reductions in employment and faster increase in wage level. On the contrary, they might induce a faster increase in employment level. Similarly, the wage level has also increased faster in enterprises where ownership has moved to manager or domestic outsider ownership. In general, it seems that wages have increased faster in most of the enterprises where ownership has changed compared to enterprises where ownership has not changed. It is rather likely that it has been accompanied by good economic development in the period 2000–2004. However, ownership change from manager to foreign has induced faster increase in exports, but these results are insignificant. **Thus, the proposition P3e which specified that ownership change from insider to foreign leads to faster reductions in employment and growth of real wages and exports has not been confirmed by the current analysis.**

Relationship between ownership changes and enterprise performance

As above analysis between ownership changes and financial, technological and organizational restructuring indicates, in terms of some restructuring types, the relationship between ownership changes and analysed variables is clearer (for

example, technological restructuring) than in others (for example, financial and organizational restructuring). Thus, analyzing the relationship between ownership changes and restructuring separately for different restructuring types justifies itself. Usually restructuring is measured only in terms of performance indicators. In that case, the performance indicators reflect the total outcome of restructuring and it is often difficult to say what kind of changes that have taken place in enterprises which have lead to such performance levels.

For analyzing the relationship between the changes in ownership and enterprise performance, the following indicators will be used: valued-added per employee and net sales per employee, both as a measure of labour productivity, and profit to net sales ratio as a measure of profitability. It is expected that ownership change from insider to foreign leads to a faster increase in labour productivity and a slower increase in profit margins. Previous studies have not provided enough evidence on the relationship between ownership changes and enterprise performance (see subchapter 1.3.1 and Table 6). Still, the studies have shown that if ownership changes to outsiders, it is accompanied by an increase in labour productivity. It is clear that enterprises with foreign ownership have higher labour productivity compared to enterprises with manager or employee ownership (Djankov and Murrell 2002). This was captured also by the analysis in subchapter 2.3.1. In terms of profit margins, no clear relationship is found. However, as the analysis of ownership determinants indicated, the high profit margin is a predictor of insider ownership rather than outsider ownership. Therefore, a not very fast increase in profit margin is expected when foreign owners take over insider owned firms. Thus, the following analysis will be rather explorative.

Table 25 provides the results of labour productivity and profit margin models. The results of Model 1 indicate that *labour productivity*, if measured as value-added per employee, is statistically lower in enterprises where ownership has moved from manager to foreign compared to reference group. The same results are obtained when labour productivity is measured as the net sales per employee, though it is insignificant. It is seen that labour productivity is related to firm size, that is, the larger the enterprise is the lower the labour productivity is. Also, it is seen that the value added productivity is highest in enterprises with initial manager ownership than in enterprises with initial domestic outsider ownership. In the case of sales productivity, the enterprises with initial employee ownership are more productive than enterprises with initial domestic outsider ownership. Thus, both of these results are rather unexpected as one would expect that labour productivity is higher in foreign or domestic outsider owned firms as the analysis in subchapter 2.3.1 indicated. Still, it might show that enterprises with insider ownership have had a large increase in their labour productivity level. However, as goodness of fit of both models is not very high, not very strong conclusions can be made about these results.

The results of Model 2 support the argument that the increase in labour productivity is faster in enterprises where ownership has changed from manager

to foreign compared to reference group (and also with other ownership change groups). Such a high increase might indicate that the initial labour productivity in these enterprises has been rather low. Thus, foreign investors have induced significant performance improvement in these enterprises. In addition, if ownership moves away from employee ownership then it is accompanied by a faster increase in labour productivity. At the same time, the increase in labour productivity has been slower in enterprises where ownership has changed from domestic outsider to foreign. The analysis of employment growth indicated that the employment level has increased most in these enterprises. Also, that in general their capital intensity level is low and increase of capital intensity level has been slowest in these enterprises compared to other ownership change groups. Thus, it seems that these enterprises are rather labour-intensive, which might explain their low labour productivity growth.

Table 25. Results of OLS regression – enterprise performance

Variable	Model 1		Model 2		
	VAL PROD 2004	SALES EMP 2004	VAL PROD 04_96	SALESE MP 04_96	OPROFIT 04_96
OWN_FD_2004	-35.775 (0.78)	-156.81 (0.60)	-215.617 (1.08)	59.033 (0.58)	6.125 (0.19)
OWN_FM_2004	173.996 (1.49)	691.53 (1.19)	-188.392 (1.36)	-66.702 (0.80)	-7.350 (0.47)
OWN_DF_2004	-48.674 (1.06)	3.577 (0.01)	-119.598 (0.86)	-136.339 (1.76)*	23.029 (1.08)
OWN_DM_2004	52.566 (1.05)	90.903 (0.48)	-238.141 (1.33)	-89.020 (1.41)	28.198 (1.12)
OWN_MF_2004	-114.840 (1.67)*	-174.08 (0.55)	636.488 (2.88)***	502.200 (1.56)	-4.835 (0.35)
OWN_MD_2004	-69.736 (1.13)	-156.308 (0.43)	144.569 (1.33)	45.566 (0.76)	4.485 (0.38)
OWN_ED_2004	-45.972 (0.55)	-330.14 (0.69)	295.940 (0.70)	182.914 (1.76)*	28.558 (1.33)
OWN_EM_2004	-19.360 (0.26)	-430.58 (1.17)	190.057 (1.01)	172.936 (2.21)**	16.523 (1.42)
FIXEDEMP2004	0.004 (0.57)	0.031 (0.78)			
FIXEDEMP04_96			0.209 (1.43)	0.077 (1.48)	0.003 (0.96)
PerSIZE_19	92.558 (1.90)*	216.204 (1.01)	-74.761 (0.58)	-63.269 (1.06)	0.609 (0.02)
PerSIZE_49	27.826 (1.19)	93.039 (0.62)	-110.207 (1.33)	-128.336 (3.50)***	12.130 (0.79)
PerSIZE_more250	-13.932 (0.40)	-284.810 (1.78)*	-122.732 (1.17)	-77.985 (1.20)	1.854 (0.36)

Variable	Model 1		Model 2		
	VAL PROD 2004	SALES EMP 2004	VAL PROD 04 96	SALESE MP 04 96	OPROFIT 04_96
INITIALOWN_F	44.957 (0.96)	309.747 (1.22)	-21.523 (0.14)	-51.731 (0.61)	25.263 (1.66)*
INITIALOWN_M	99.655 (2.21)**	245.287 (1.31)	-264.952 (1.46)	-108.907 (1.59)	24.502 (1.04)
INITIALOWN_E	96.625 (1.23)	701.396 (2.19)**	-290.814 (1.15)	-130.839 (2.39)**	16.026 (1.02)
PRIVTIME_90	101.483 (1.48)	129.329 (0.63)	-127.909 (0.97)	-34.438 (0.70)	-3.367 (0.37)
PRIVTIME_96	7.327 (0.30)	91.467 (0.59)	-284.711 (2.03)**	1.255 (0.02)	-2.695 (0.44)
Industry controls	Yes	Yes**	Yes***	Yes**	Yes*
Constant	116.751 (2.79)***	475.500 (2.65)***	226.610 (1.37)	235.197 (3.92)***	-27.090 (1.59)
Observations	377	380	341	341	341
R-squared	0.11	0.09	0.14	0.15	0.14

Notes: * significant at 10% level, ** significant at 5% level, *** significant at 1% level. Robust t-statistics are given in parentheses. The reference groups are OWN_UCH_2004, PerSIZE_249, INITIALOWN_D and PRIVTIME_91_95. Industry controls are marked significant when at least one industry dummy has been significant.

Source: author's calculations on the basis of research database.

The results of Model 1 for *profit margins* were all insignificant. Also, the results of Model 2 do not provide any significant results between different ownership change groups and reference group. Still, it is seen that the increase in profit margin has been faster in most of enterprises where ownership has changed compared to enterprises where it has not changed. Only in enterprises where ownership has changed from insider to foreign (as it was assumed also in the current analysis) and from foreign to manager the increase in profit margins has been slower compared to the reference group. However, as both of these results are insignificant, not very strong conclusions can be made. The analysis indicates that the increase in profit margin has been faster in enterprises with initial foreign ownership than domestic outsider ownership.

In sum, the analysis indicates that ownership change from manager to foreign leads to a faster increase in labour productivity. Still, it would be wrong to argue that the shift to foreign ownership always induces faster labour productivity increase. The latter is also dependent on initial ownership as well as firm size. In addition, the analysis indicates that the change away from employee ownership leads to significant improvement in labour productivity. However, the relationship between ownership changes and profit margins still remains unclear as no significant result could be obtained from the current

analysis. **Thus, the proposition P3f which specified that ownership change from insider to foreign leads to faster increase in labour productivity and slower increase in profit margins has only found partial confirmation.** In analysing the effects of ownership on the enterprises performance, the production functions or stochastic frontier functions have also been used in the previous empirical research (see Jones 2004). It might be that using of these empirical methods instead of applied OLS regressions could provide more significant results. Still, in the current research, the results were not estimated with these alternative methods due to limitations of the dissertation space. However, bearing in mind the options for further research, it could be interesting to also estimate the models with these alternative methods.

2.3.3. Synthesis of the research results and implications

In the conceptual part of the dissertation, the framework for the present empirical research was set up. The framework for analyzing the changes in ownership structures, their determinants and role in the restructuring and performance of enterprises in transition was summarized in Figure 8. The framework for the empirical research was proposed on the basis of the previous theoretical and empirical research, focusing on the main theories of corporate governance, developments of national corporate governance systems, and transition-specific approach about the determinants of ownership structures and the effects of ownership on the enterprise restructuring.

The key issue of the present work intended to identify the post-privatisation changes in ownership structures, the firm-specific determinants behind these changes and the impact of these changes on the restructuring and performance of Estonian enterprises. A theoretical context of the current work was related to the Central and East European region. The conceptual framework developed for empirical research is applicable to any country which aims to undertake transition. The empirical framework is drawn to analyse the changes in ownership structures and their role in the restructuring in Estonian enterprises. For that purpose, the unique dataset with enterprises ownership and financial data for nine years was used.

Regarding the propositions defined in the subchapter 2.1.2; their validity was tested in chapters 2.2–2.3. The propositions P1a–P1d that aimed to examine the specificity of ownership structure developments in Estonia were tested in subchapter 2.2.1. The propositions P2a–P2c, which aimed to identify how firm-specific factors determine the specific ownership structures and ownership changes, were evaluated in subchapter 2.2.2. The propositions P3a–P3f, concerning the relational aspects between specific ownership changes and enterprise restructuring and performance, were tested in chapter 2.3. This subchapter aims to synthesize all empirical results (see Table 26). Reporting on the actual results, three distinctive topics will be addressed as follows.

Table 26. Summary of the main research results

SPECIFICITY OF OWNERSHIP STRUCTURES (P1a–P1d)
<ul style="list-style-type: none"> • The level of average ownership concentration is high and increasing over time (at the time of privatisation – 83% and 2004 – 86%) • The level of ownership concentration is highest in foreign owned enterprises (99–100% in 71% of firms), then followed by domestic outsider (99–100% in 63% of firms), manager (99–100% in 37% of firms) and employee owned enterprises (99–100% in 0% of firms; it is between 41–60% in 78% of firms) • The intensity of ownership changes is highest in employee owned enterprises (until 2000, 71%), then followed by domestic outsider (24%), manager (22%) and foreign owned enterprises (11%) • The intensity of ownership changes is highest in the earlier transition period (until 2000, 30%; 2000–2004, 23%)
DETERMINANTS OF OWNERSHIP (P2a–P2c)
<ul style="list-style-type: none"> • Enterprises with larger firm size, higher wage, higher capital intensity, higher equity investments are more likely owned by outsider owners (in 1996 and 2004). Enterprises with smaller firm size, lower wage, lower capital intensity and higher profit margin are more likely owned by insider owners (in 1996 and 2004) • Initial large firm size and low labour productivity increases the probability that ownership changes from insider to outsider. Initial small firm size and high profit margin increases the probability that ownership changes from outsider to insider. (only before 2000) • Increasing capital intensity increases probability that ownership changes from insider to outsider. Increasing firm size decreases probability that ownership changes from outsider to insider. (only before 2000) Increasing capital intensity increases probability that ownership changes from outsider to insider (only 2000–2004). • Higher labour productivity increases the probability that enterprise is owned by insider owners (only 1996). Larger firm size increases the probability that enterprise is owned by outsider owners (only 2004)
RELATIONSHIP BETWEEN OWNERSHIP CHANGES AND ENTERPRISE RESTRUCTURING (P3a–P3f)
<ul style="list-style-type: none"> • Post-privatisation ownership changes are especially intensive in lower performing enterprises. • Ownership change from M=>F leads to slower increase (decrease) in the use of external financing compared to enterprises with unchanged ownership; ownership change F=>M leads to faster increase in the use of external financing. • Ownership change groups E=>D and E=>M have higher investment rate. Ownership change groups F=>M and D=>M have lower capital intensity level. Ownership change groups F=>M, D=>F and M=>F have lower electricity costs. Ownership change D=>F leads to slower increase (decrease) in capital intensity level. • Ownership change F=>M and E=>D lead to slower increase (decrease) in employment level and D=>F faster increase in employment level. Ownership change F=>D and D=>M lead to faster increase in real wages. Ownership change M=>D leads to slower increase (decrease) in exports. • Ownership change group M=>F has lower labour productivity. Ownership change M=>F, E=>D and E=>M lead to faster increase in labour productivity.

Notes: F – foreign ownership, D – domestic outsider ownership, M – manager ownership, E – employee ownership.

Source: compiled by the author.

Specificity of ownership structure developments in Estonia (P1a–P1d)

Based on corporate governance literature, one can conclude that the development of ownership structures is influenced by historical, economic, legal and cultural factors. In the transition literature, the prevailing argument is that the development of ownership structures in CEE countries has been additionally influenced by political factors, especially by privatisation. Different privatisation methods applied in the CEE countries produced different types of ownership structures which differ in terms of ownership concentration level and owners' identity. Due to initial conditions, such as strong need of restructuring, poorly functioning capital markets and weak governance institutions, it is expected that ownership structures become more concentrated (see, for example, Berglöf and Pajuste 2003, Crotty and Jobome 2004, Jones and Mygind 2005, Pučko 2005). In addition, it is argued that different privatisation methods favoured some type of owners and this lead to the emergence of ownership structures which would not have developed in a market-based system (see, for example, Jones and Mygind 2005). Therefore, the occurrence of post-privatisation ownership adjustments, which would bring the ownership structure back to a 'normal' equilibrium, is expected.

These theoretical arguments have been met also by previous empirical studies. It is suggested that the level of ownership concentration is increasing in CEE countries (see, for example, Berglöf and Pajuste 2003, Blaszczyk *et al.* 2001, Grosfeld and Hashi 2003, Jones and Mygind 2005, Kočenda and Valachy 2001, Simoneti *et al.* 2001, etc.). In terms of changes in ownership structures, several studies report the change away from employee ownership and the stability of foreign ownership (see, for example, Estrin and Wright 1999; Jones *et al.* 2005; Jones and Mygind 1999, 2005; Kalmi 2003; Kozarzewski and Woodward 2001; Mygind *et al.* 2006). In Estonia, Jones and Mygind (2005) find that the change away from employee ownership occurs in a specific cycle: employee → manager → domestic outsider.

Results from the present survey confirmed the claim introduced in the propositions suggesting that ownership concentration in Estonia is in general very high and increasing over time. These findings are in line with other empirical research in CEE countries. This shows that Estonian ownership structures are similar to CEE and also Germanic countries in terms of ownership concentration; due to the weak protection of minority investors and small stock exchange market. From the perspective of corporate governance theories, this indicates that the governance problems between large and small shareholders are more prevailing in Estonian enterprises than between owners and managers. Furthermore, the present analysis found that the level of average ownership concentration is highest in foreign owned enterprises, which may well be expected, but significantly high also in domestic outsider owned enterprises and lowest in employee owned enterprises.

Regarding the ownership changes, the current study attempted to analyse the changes in ownership in two different time periods which enabled the

analysis of ownership changes in the earlier (until 2000) and later transition period (2000–2004). The results indicated, in accordance with the previous research, that the most considerable and the fastest movement has been the change away from employee ownership, either to manager ownership or domestic outsider ownership. These changes have been more intensive in the earlier period, but continued also in the later period. This explains the continuously increasing ownership concentration level which is due to less concentrated employee ownership movements into more concentrated manager or highly concentrated domestic outsider ownership. Much moderate have been the changes from initial manager ownership to domestic outsider ownership or foreign ownership. Similarly, the changes from initial domestic outsider ownership to manager or foreign ownership have been less intensive. The least intensive movements have taken place in enterprises with initial foreign ownership.

Unlike Jones and Mygind (2005), it is not possible, based on the current results, to draw one specific ownership cycle. Rather than sequential change from employee to manager to domestic outsider, the present analysis found that employees could change to domestic outsider as well as manager. In addition, there are reciprocal changes between manager and domestic outsider ownership. Thus, the ownership cycle could be regarded more as being more interrelated than previously thought. As a new result not previously reported in the earlier studies, the current analysis shows that the changes in ownership are more frequent in the earlier transition period, up to 2000. The later period, 2000 to 2004, is characterised by less intensive changes or stability, and there are a few first signs about the ownership movements from enterprises with foreign ownership to domestic outsider ownership or insider ownership. Nevertheless, it is still too early to make strong conclusions about this tendency in the future.

Determinants of ownership and its changes (P2a–P2c)

Both theoretical and empirical research on the determinants of ownership structures (see, for example, Demsetz and Lehn 1985, Himmelberg 1999, Jones *et al.* 2005, Jones and Mygind 1999, Qu 2004) show that ownership structures are endogenous depending on various firm-specific factors. It is suggested that firms' strategic dynamics and corporate governance changes are interlinked (Filatotchev and Wright 2005, Jones and Mygind 2005). For example, Jones and Mygind (1999) received supportive results for a large firm size and high capital intensity as the determinants of outsider ownership. Similarly, it is expected that reliable income flows and high profits are the determinants of insider ownership (Jones *et al.* 2005). Theoretical arguments behind the determinants of ownership changes state that high performance is related to movement from insider to outsider ownership (Jones *et al.* 2005). Though, sometimes poorly performing firms may have to turn to investors in order to survive. Likewise, employee buy-outs are related to underperformance, and management

buy-outs to undervaluation of shares. However, the empirical evidence about the relationship between performance and ownership changes is still unclear.

The current analysis of ownership determinants was performed for two different time points, 1996 and 2004. This study found support that enterprises with a large firm size and high capital intensity are more likely owned by outsider owners. Likewise, enterprises with a small firm size, low capital intensity and high profit margins are more likely owned by insiders. Contrary to expectations, high labour productivity turned to be the predictor of insider ownership. Still, the result was significant only for 1996. However, this might reflect the fact that the preferences given to employees in the early privatisation and possible insider information for managers enabled to buy enterprises with better performance. In addition, the results from the analysis in the level of specific ownership types revealed that enterprises with high capital intensity are more likely owned by foreign rather than other ownership types only in the early transition period, but this might not be the case in the later transition period.

The analysis of determinants of ownership changes provided rather mixed results. It is clear that in the earlier period outsiders have taken over insiders that have been initially with a large firm size and low labour productivity. Thus, it is rather likely that outsiders have taken over somewhat problematic firms. However, the relationship between increasing firm size and outsider ownership did not find support. Moreover, it seems that decreasing capital intensity might determine the ownership changes from outsider to insider ownership in the earlier period, but it is not true for the later period when probably more stable economic environment and better possibilities for bank loans do not restrict, at least financially, the takeovers also from outsiders to insiders. Similarly to previous studies, the relationship between performance changes and ownership changes remained unclear. Thus, the further research in these issues is still needed.

In general, the results of the current study support the argument that different ownership structures are determined by different firm-specific factors. However, it provides evidence that these determinants play a different role over time. The differences between ownership types in terms of the firm size were not significant in the early period, but it is seen that the larger firm size is predominantly related to foreign ownership in the later period. This reflects the fact that until 1996, foreign owners did not buy larger enterprises than other owners, but were active in buying large infrastructure enterprises which sale started after 1996. The higher capital intensity in the early period was clearly predictor of foreign ownership rather than domestic outsider or employee ownership, but in the later period, these differences were not significant anymore. Moreover, they indicate that the higher capital intensity could also be a predictor of domestic outsider or employee ownership rather than foreign ownership. This might reflect the change in institutional environment, for example, better possibilities to bank loans. Similarly, in the early period, the higher labour productivity was the predictor of employee or manager ownership

rather than domestic outsider ownership. In the later period, this difference was insignificant. Still, it might reflect that employees or managers might have been in a position to buy enterprises with higher performance.

The changing role of firm-specific factors over time is probably related to a mismatch of actual ownership structure and firm-specific factors in the early period. In the early period, some ownership structures might have been developed either because of favourable treatment or because of under-developed institutions which did not provide equal possibilities to all owners. This mismatch explains also higher intensity of ownership changes in the earlier period. In the later period, the changes in ownership are related to the changes in firm-specific factors (for example, growth in size) and the changes in external country environment (for example, better possibilities for bank loans).

The effects of ownership changes on the enterprise restructuring and performance (P3a–P3f)

Referring back to various kinds of previous studies (see subchapter 1.2.2), the differences between ownership types are of great economic importance in terms of firm performance. The prevailing statement in the transition literature is that the identity of owners causes the differences in the progress of the restructuring of firms. From the perspective of transaction cost economics and resource-based view of the firm, this indicates that different owners have different resources and capabilities to motivate and make contracts with other stakeholders (see subchapter 1.1.1). Thus, their transactions costs of getting information, motivating/bonding managers and creating efficient governance structures differ. However, the empirical evidence is rather mixed on the effects of different ownership types. Still, most empirical findings suggest that there is a positive relationship between foreign ownership and performance and that the role of employees as owners is neutral or negative (see, for example, Djankov and Murrell 2002). The relationship between other ownership types is more mixed.

The influence of post-privatisation ownership changes on the enterprise restructuring and performance has remained rather under-researched; largely because of lack of data. The findings of few empirical studies have remained rather mixed and inconclusive (see Table 6). Therefore, the arguments about the relationship between ownership changes and enterprise restructuring were also set up based on the studies that analyse the effects of ownership on enterprises restructuring and performance (see subchapter 1.2.2). Thus, the last set of propositions was rather explorative. In the transition literature the distinction is made between three main types of restructuring: financial, technological and organisational restructuring (see, for example, Bonin 1998, Lieberman 1990, 1994 and Figure 7). The financial aspects of restructuring have received very little attention in the empirical literature. Empirical studies on the technological and organizational restructuring range from studies that focus on a single type of change to all-inclusive analyses that encompass a broad bundle of restructuring activities (see, for example, Wright and Suhomlinova 2003 and

Table 5). Based on the earlier studies, it was expected that ownership change from insider to foreign leads to: faster use of external finances; faster increase in investments and capital intensity; faster increase in wage level; faster increase in export intensity; faster increase in labour productivity; faster reductions in employment and slower increase in profit margin.

The findings of this study indicated, contrary to put up proposition which suggested that, due to institutional developments, the difference between ownership types is expected to weaken in the later transition period, that the differences between ownership types remain statistically significant also in the later period. Enterprises with foreign ownership show the highest labour productivity level and export-orientation compared to other ownership types. Still, the capital intensity level in these enterprises remain lower compared to enterprises with domestic outsider ownership. The performance of enterprises with domestic outsider ownership is in general poorer than enterprises with foreign ownership, but better than in enterprises with manager or employee ownership. However, their export-orientation remains very low. Enterprises with manager ownership are mainly small enterprises with rather low value-added productivity, but higher export-orientation. Still, the analyses do not provide full support on the argument that employee ownership is accompanied with the lowest performance. In comparison with manager owned enterprises, their value-added productivity is higher. However, they are with the lowest capital intensity and the smallest export-orientation.

The analysis reveals that post-privatisation ownership changes take place in enterprises with lower performance and smaller export-orientation. This is in line with the theoretical expectations that if privatisation provides preferable treatment to some type of owners, it might lead to the emergence of ownership structures which would not have developed in a market-based system. Thus, survival of employee ownership seems to be problematic in early transition period: due to the mismatch between starting conditions and institutional settings. This finds confirmation also from the analysis of ownership determinants which indicated that insider enterprises with initially low labour productivity are more likely owned by outsiders.

Current research made an attempt to analyse the relationship between ownership changes and restructuring distinguishing three different types of restructuring: financial, technological and organizational. Moreover, the performance as the outcome of restructuring was included as a separate analysis. Long survey period enabled to analyse the changes over nine years. The results of the analysis yielded different types of relationships between specific ownership changes and different types of restructuring. Contrary to expectations, the analysis indicated that if ownership changes from manager to foreign, it is not accompanied with faster increase in the use of external financing. Based on this result, it could be assumed that foreign investors use different financing schemes. Moreover, it might indicate that they finance their assets from their retained earnings which is rather likely in case of Estonia

where, according to the Income Tax Act, the reinvested profit is not subject to Corporate Income Tax. Surprisingly, movement to manager ownership leads to faster financial restructuring. The findings indicate that if managers take over employee owned enterprises, their financial situation will improve.

The findings from the analysis of technological restructuring provided also some interesting results. For example, it is seen that if ownership moves away from employee to domestic outsider or manager, it is accompanied with higher investment rate. This is in line with findings from financial restructuring analysis, indicating that ownership change for initial employee owned enterprises provides them better investment possibilities, probably as the possibilities to get a loan have improved. However, the domestic outsider owners seem to be most aggressive in making investments and increasing the capital intensity level. Contrary to expectations, foreign investors have not induced very fast increase in capital intensity level. Thus, the results of this analysis are somewhat different from earlier studies which have indicated that foreign owners are more prone to make investments and to increase the level of capital intensity.

Looking at the changes in employment and wage level, the proposed argument was not met by the analysis. The results showed that if ownership changes from domestic outsider to foreign, it is accompanied with much faster increase in employment level. The wage level has increased faster in enterprises where ownership has moved to manager or domestic outsider ownership. In terms of export intensity, the analysis did not provide very many significant results, though it indicates that if ownership changes from manager to domestic outsider, it is accompanied with relatively slow export increase. In comparison, if ownership changes from manager to foreign the increase in exports has been fastest, though this result is insignificant.

As expected, the analysis showed that ownership change from manager to foreign ownership leads to a faster increase in labour productivity. In addition, the analysis indicates that the change away from employee ownership leads to significant improvement in labour productivity. Thus, the ownership change in enterprises with initial employee ownership has definitely induced more restructuring and improved the general performance of these firms. Based on this analysis, the relationship between ownership changes and profit margins remains still unclear. However, current analysis indicates that some specific ownership changes have induced the shift towards more efficient ownership structures. Thus, in case of Estonia, one could argue that there are positive effects of changed ownership on economic and financial performance, contrary to findings of Simoneti *et al.* (2001) for Slovenia.

To summarize, the main research results indicate that ownership structures in Estonia are rather varied and dynamic. It was learnt that the level of ownership concentration in Estonia is in general very high and it is increasing over time. The high ownership concentration level could be considered as the feature of CEE countries economies. In general, the intensity of ownership changes has not been very high, but it has been related to specific ownership structures. The intensity of

ownership changes tends to be the highest in enterprises with initial employee ownership. It was also learnt that the changes in ownership structures are more frequent in the earlier transition period. The changes in ownership structures have not been random, but rather likely influenced by mismatch of initial conditions and firm-specific factors as well as changes in economic environment. It was learnt that enterprises with a large firm size and high capital intensity are more likely owned by outsider owners and enterprises with high profit margin by insider owners. In addition, in the early transition period, increasing capital intensity led to ownership change from insider to outsider and decreasing firm size to ownership change from outsider to insider.

The analysis indicated that the post-privatisation ownership changes take place in lower performing enterprises. It was learnt that ownership change from manager to foreign ownership does not lead to faster financial and technological restructuring. Similarly, it does not induce faster decrease in employment and faster increase in wages. Still, it is accompanied with faster increase in labour productivity. Contrary to expectations, the ownership change from employee to domestic outsider or manager ownership leads to faster financial and technological restructuring. In addition, it contributes to faster increase in labour productivity. In general, the domestic outsider owners seem to be rather aggressive in making investments and increasing the level of capital intensity. It was also learnt that the influence of specific ownership changes on the different types of restructuring is different. However, the changes in ownership structures have induced more restructuring and higher economic performance. Thus, based on the current research, it is suggested that post-privatisation ownership adjustments towards more efficient ownership structures have taken place in Estonia.

Taking into account all aspects of the analysis performed in the present dissertation, the proposed research propositions were supported, partially supported or not supported. Table 27 collects the information about the validity of the propositions about the ownership changes, their determinants and role in the restructuring and performance of Estonian enterprises.

Table 27. The validity of the research propositions

SPECIFICITY OF OWNERSHIP STRUCTURES	Proposition	Result
The level of ownership concentration is high and it is increasing over time	P1a	Supported
The level of ownership concentration is highest in foreign and domestic outsider owned enterprises and lowest in employee owned enterprises	P1b	Supported
The intensity of ownership changes is highest in enterprises with initial employee ownership, followed then by initial manager, domestic outsider and foreign ownership	P1c	Partially supported
The changes in ownership are more frequent in the earlier transition period	P1d	Supported

DETERMINANTS OF OWNERSHIP	Proposition	Result
Enterprises with a large firm size, high financial requirements and high productivity are owned by outsider owners and enterprises with a small firm size, low financial requirements and high profitability are owned by insider owners	P2a	Partially supported
Increasing firm size, financial requirements and productivity lead to ownership change from insider to outsider and a decreasing firm size, financial requirements and productivity lead to ownership changes from outsider to insider	P2b	Partially supported
Firm-specific factors play a different role over time in determining the ownership structures	P2c	Supported
RELATIONSHIP BETWEEN OWNERSHIP AND ENTERPRISE RESTRUCTURING		
Performance differences between different ownership types weaken in the later transition period	P3a	Not supported
Secondary ownership changes take place in lower performing enterprises	P3b	Supported
Ownership change from insider to foreign leads to faster increase in the use of external financing	P3c	Not supported
Ownership change from insider to foreign leads to faster growth in investments and capital intensity	P3d	Not supported
Ownership change from insider to foreign leads to faster reductions in employment and growth of real wages and exports	P3e	Not supported
Ownership change from insider to foreign leads to faster increase in labour productivity and slower increase in profitability	P3f	Partially supported

Source: compiled by the author.

Implications

The empirical research provides a ground for several implications. It is seen that a high concentration level is an important feature of Estonian ownership structures and it is increasing over time. Thus, is the Estonian corporate governance system converging towards the Anglo-American or Continental-Europe model or something new? The results show that Estonia is progressing more towards the Continental-Europe model which, similar to Estonia, is characterized by an extremely concentrated ownership that is by big blockholder owners. Also, the role of the stock exchange market in the economy is low and the legislation related to corporate governance in Estonia is more on the creditors' than investors' side. This means that Anglo-American corporate governance rules are not suitable for Estonian enterprises and, in developing the good corporate governance practice one should follow the experience of countries applying the Continental-Europe governance model. Therefore, the

Estonian government, legal- and financial institutions should bear this in mind when formulating any future policies.

From the analysis, it is seen that the intensity of ownership change has been higher in the early transition period, before 2000, when the Estonian economy went through its first downturn (caused externally by the Asian and Russian financial crisis). At the same time, it is seen that during the later period, 2000–2004, the ownership changes are much less intensive as this period was very stable in terms of economic growth. Thus, it would seem that ownership changes are related to the changes in the economic environment, and this analysis helps to explain what happens with ownership structures in different circumstances, that is, during economic growth and development, and also during economic downturns and crises. As Estonia is now (in 2008) facing a second economic downturn, we could expect that there will be again a more intensive period of change in ownership structures. However, it is difficult to predict which way the changes will occur, given that the causes for the current downturn are this time internal, caused primarily by a burst in the housing bubble. It is not clear whether intensity of foreign owners' take-overs will increase because the economic downturn will affect the takeover value. In theory, this should make enterprises more attractive for foreign investors, as the decreased value should be more attractive for them. However, this has been somewhat mitigated by the higher labour costs that Estonia has accrued during the last decade, making it a less attractive intention. Thus, we might expect more ownership changes between domestic enterprises and/or more bank takeovers. Here, domestic investment funds will play an increasingly important role in filling the gap left by foreign investors.

The analysis of the relationship between ownership changes and different types of restructuring indicated that there have been positive effects of changed ownership on restructuring and economic performance of enterprises. The changes away from employee ownership to manager or domestic outsider ownership have been accompanied by faster financial and technological restructuring than changes away from manager to foreign ownership. In spite of that, the increase in labour productivity in these enterprises has remained slower than in enterprises taken over by foreign investors. Though foreign investors have not induced such a high increase in capital intensity level, they have induced a faster increase in labour productivity as well as exports. Thus, foreigners are more successful in restructuring from the point of an economic efficiency argument. This argument was also supported by analysis of ownership effects which indicated that foreign investors are far more productive than other ownership types. Thus, we could ask based on what do they achieve their higher labour productivity? It is difficult to provide an answer for that, but on the basis of the current analysis, it could be assumed that it is supported by their high export intensity and higher wages. This might imply that it is important to continue to have a strong policy for foreign investors at the governmental level and also, that more effort should be put on the development of stronger export policy. For

enterprises, this is a sign that it is important also to extend production towards foreign markets and not to be oriented only towards the domestic market.

The theoretical contribution of the current research relies on a more systematic approach for studying the corporate governance issues, the different aspects related to the development of ownership structures and the different dimensions of restructuring. The theoretical framework developed in the research is applicable to any transition country and it enables the analysis of the impact of ownership changes on different dimensions of restructuring in a more systematic and accurate way. Thus, the results of the dissertation are of utmost importance for the emerging countries' economies which are still undergoing the transition, especially those further East.

In terms of empirical contribution, the results of the current research both support earlier findings, but also provide some new evidence into the literature of corporate governance in CEE countries. The results that are similar to previous research could be treated as additional evidence for helping to develop the theoretical base for the developments of ownership structures in CEE countries. The new results could be taken as additional findings that help to explore and extend the understanding of ownership issues in CEE countries as well as small economies.

CONCLUSION

The present dissertation focused on developing a framework for analyzing the changes in ownership structures, the reasons behind these changes and the role of ownership changes in restructuring and performance of enterprises during transition. The relationships developed in this framework were controlled in Estonian enterprises. The results of the analysis show that Estonian ownership structures are varied and dynamic; the latter is explained by a mismatch of initial conditions and firm-specific factors as well as changes in the economic environment. The role of post-privatisation ownership changes in the restructuring depends on specific ownership changes. The influence of specific ownership changes on the different types of restructuring varies. The results indicate that post-privatisation ownership adjustments towards more efficient ownership structures have taken place in Estonia.

The present dissertation consists of two major parts. The first theoretical part reviews the theories which explain the role of ownership and development of ownership structures within different corporate governance systems and provides an overview of the literature about the developments of ownership structures and the issues of enterprise restructuring in transition. The second part of the dissertation includes the empirical evidence on the specificity of Estonian enterprises' ownership structure developments, their determinants and role of specific ownership changes in restructuring of Estonian firms. The present subchapter will first summarize the main concepts leading to the formulation of the conceptual framework. Then, data and research methodology will be presented. This is followed by an overview of research propositions and their validity. Finally, suggestions for future research in the area of ownership changes and enterprises restructuring are proposed.

The theoretical concepts leading to the formulation of a framework for analyzing the ownership structure changes and their role in firms' restructuring and performance

To develop the theoretical basis for analyzing the changes in ownership structures, their determinants and role in the enterprise restructuring and performance, four main realms of literature were used, namely, conventional and associated corporate governance theories, literature about the national corporate governance systems, research in the area of ownership changes and their determinants, and studies on enterprise restructuring and the impact of ownership on enterprises restructuring and performance in transition economies.

Conventional corporate governance theories, agency theory and transaction cost theory, describe the firm as a 'nexus of contracts' and governance structure. The particular focus of agency theory is on the agency relationship as a contract between a principal (owner) and an agent (manager). The interest of conflict

between the owner and manager arise because the utility-maximising agent has the incentive to appropriate a larger amount of the corporations' resources in the form of perquisites and to exert less than full effort to create value for shareholders. The theory suggests that for the survival of the organisation, it is important to segregate the decision control from the decision management. Agency theory offers many useful ways to examine the relationship between owners and managers and verify how the final objective of maximizing the returns to the owners is achieved when the managers do not own the corporation's resources. Thus, from the perspective of agency theory owners of corporations have to undertake a strong monitoring function (control) within the firm bearing in mind that humans are boundedly rational, self-interested and prone to opportunism.

A basic argument of transaction cost theory is that markets and hierarchies are alternative instruments for completing a set of transactions. These alternative instruments are often also called 'governance mechanisms'. Market forms of governance rely on prices, competition, and contracts to keep all parties informed of their rights and responsibilities. Hierarchical forms of governance bring parties to an exchange under the direct control of a third party. Theory suggests that firms face three transactions costs when writing the contracts: a) the cost of thinking about all different eventualities that can occur during the course of the contractual relationship; b) the cost of negotiating with others about these plans and c) the cost of writing down the plans in such a way that they can be enforced by a third party. Therefore, governance structure can be seen as a mechanism for making decisions that have not been specified in the initial contract, that is, it allocates residual rights of control over the firm's nonhuman assets.

Still, not only the distribution of ownership rights between different contract parties, but also the identity of different parties who are taking the ownership start to play an important role in creating the efficient governance structures. Therefore, the differences in governance structures in terms of their efficiency might be related to the resources and capabilities of contract parties. The latter is the central concern in the resource-based view of the firm, which describes firms as a set of resources and an entity for accumulation of knowledge. Firm resources include all assets, capabilities, organizational processes, firm attributes, information and knowledge controlled by the firm that enable it to conceive of and implement strategies. These resources do not develop by themselves over time, but rather are dependant upon the strategies employed to help them develop (coordination and cooperation). The resource-based view of the firm enables the treatment of ownership as a heterogeneous firm attribute. This means that ownership can provide unique resources which will make firms different in their incentives and monitoring mechanisms and/or governance mechanisms.

The stakeholder approach takes a broader view of the firm where the corporation is responsible to a wider constituency of stakeholders other than

shareholders. The stakeholder view of a firm considers that investors, employees, suppliers, customers and stakeholders generally both contribute and receive benefits from a firm. The central point of this approach is that firms should attend to the interest of all stakeholders, not just their shareholders. Here the ownership is defined by the allocation of residual rights. Thus, the ownership status can be extended to all the parties in the nexus of contracts.

The following subchapter of the theoretical part focused on the national corporate governance systems. The review of national corporate governance systems showed that the development of ownership structures is very much influenced by historical, economic, legal and cultural factors. Corporate governance systems across countries differ in terms of the firm's concept, ownership concentration, salient stakeholders, importance of stock market in the national economy, active external market for corporate control and enforcement of corporate governance legislation. The Anglo-American corporate governance system is shareholder-oriented and its ownership structure is relatively widely held. A large part of shareholding in Anglo-American countries takes place via the stock exchange. An active external market for corporate control is one of the best known characteristics of this system. From a legal point of view, the system is characterized by high investor protection and low employee protection. Continental Europe governance systems are more stakeholder-oriented and characterised by a relatively strong concentration of ownership of large individual enterprises. Another feature of this system is the small and undercapitalised stock markets. Therefore the banks take the role of main lenders and an active external market for corporate control is weak. The protection of investors is low and often the creditor rights are emphasized over shareholder rights.

The development of corporate governance systems in CEE has been affected much by historical, economic, legal and cultural factors but also largely by political factors. There exists a large variety of ownership structures in CEE countries mainly as a consequence of the governments' different approaches to privatisation of state-owned enterprises. In general, three privatisation methods were used: 1) direct sales of state property either to domestic or foreign investors, 2) management and employee buy-outs (MEBOs), and 3) free distribution through vouchers or a combination of these strategies. In terms of ownership concentration these methods led to different outcomes. Direct sales gave rise to highly concentrated ownership, MEBOs resulted in either dispersed or concentrated ownership depending on to what extent employees were turned into shareholders of their enterprises; and voucher privatisation led to a dispersion of ownership unless the privatisation funds collected the vouchers. As a result, privatisation generated four corporate governance models: 'foreign' corporate control, 'banking and managerial' control, control by an 'outsider-insider coalition' and 'employee and start-up' control.

The next subchapter of the theoretical part started with a discussion of the main ownership typologies, determinants of ownership structures and post-

privatisation ownership changes in transition economies. This enabled the identification of five main ownership typologies that have emerged after privatisation: manager, employee, domestic private, foreign and state ownership. The first two typologies form a group of insider owners and the three last typologies form a group of outsider owners. The variety of new ownership types is considered to be an extremely important characteristic of CEE ownership structures. However, as the privatisation in transition countries was more driven by political than economic interest, then it is suggested that created ownership structures would not have developed in a market based system. Therefore, it is expected that the post-privatisation adjustment of ownership structures takes place, which will bring the ownership structures back to a 'normal' equilibrium.

The literature points out four important initial conditions that should be taken into account in explaining the changes in ownership structures in transition economies: the privatisation method, the strong need for restructuring, the under-developed financial system and not fully developed governance institutions. Furthermore, it is suggested that the development of ownership structures is also influenced by firm-specific and country-specific factors. Firm-specific factors that determine the development of ownership structures are firm size, rate of return, financing requirements, specificity of inputs, industry and performance. Correspondingly, main country-specific factors are macroeconomic cycles, legal environment, development of stock market and banking sector and social relations and culture.

The fourth subchapter in the theoretical literature studied the issues of enterprise restructuring in transition economies and the role of ownership in it. In the literature it has been pointed out that for former state firms to survive not only changes in the structure of ownership, but also changes in the structures and the organisation of their production must take place. It is suggested that a newly privatised company needs to examine four broad areas to succeed in the competitive marketplace: operations, marketing, finances and organization. The literature often classifies these restructuring dimensions under three broad categories: financial, technological and organisational restructuring. The prevailing understanding in the literature is that restructuring requires ownership by outsiders for reasons that include better access to raising new capital and a better ability to pay for necessary expenditures. However, the influence of specific ownership types on the different restructuring dimensions is still rather unclear. In terms of enterprise performance, a clear distinction between enterprise with foreign ownership and domestic ownership has been made. The relationship between foreign ownership and enterprises performance is positive. Still, among the domestic outsider, manager and employee ownership no clear pattern has emerged, although the role of employees is considered to be neutral or negative. At the same time there is evidence that does not confirm this relationship.

Thus, in analysing the changes in ownership structures it is important to take into account the initial conditions, especially the privatisation process and external conditions. Due to that, the post-privatisation ownership changes are expected. The development of initial and secondary ownership is influenced by several firm-specific and country-specific factors. Besides this, the changes in ownership are dependent on the interest and resources of owners. The impact of ownership and ownership changes on the restructuring of enterprises is also dependent on the owners' interest and resources. These suggestions are used as a basis for identifying the changes in ownership structures, their determinants and role in enterprises restructuring and performance in Estonian enterprises.

The data and research methodology

The empirical analysis of this dissertation was based on two databases: 1) balance sheet and income statement data of Estonian enterprises, and 2) ownership survey data of Estonian enterprises. The financial database includes enterprises data since 1996 to 2004. The ownership survey provides the distribution of enterprises' nominal capital for three different time points: at the time of privatisation, at 2000 and at 2004. The ownership database enabled the distribution of enterprises according to five different ownership types: state ownership, employee ownership, manager ownership, outsider domestic ownership and foreign ownership. These five ownership types were formed according to the 'dominant owners' approach, where the enterprise is assigned to the ownership group holding more shares than any other group. For analysing the determinants of ownership and relationship between ownership changes and enterprises restructuring and performance, these two databases were merged. As a result of the merge a new database was created with data on 555 enterprises over nine years from 1996 to 2004. This cross-sectional database was used for analyzing the validity of all propositions set up in the dissertation.

The empirical analysis was carried out in four sub-phases. For analyzing the changes in ownership structures a descriptive method of analysis was used. The level of ownership concentration in Estonian enterprises was examined at the level of single largest owner as well as dominant ownership group level. The changes in ownership were illustrated using ownership transformation matrices. This was followed by a binary and multinomial logit analysis, which was used to analyse the determinants of ownership and ownership changes. The logit regression analysis enabled to test the change in probability that the firm is owned by certain ownership type if a marginal change in the independent variable had taken place. Third, the effects of ownership and ownership changes were estimated using ANOVA analysis. The ANOVA analysis enabled the identification of statistically significant differences among firms where ownership had not changed and among firms where ownership had changed. Fourth, the relationship between secondary ownership changes and enterprises

restructuring and performance was examined using OLS regression models. This model was used as it enabled the estimation of the impact of eight specific ownership change groups on the different types of restructuring and enterprise performance.

Validity of research propositions and generalization of findings

The conceptual framework developed in this dissertation suggested that in analyzing the changes in ownership structures three different aspects can be taken into consideration. First, general ownership transitions in the post-privatisation period due to initial conditions. Second, the influence of firm- and country-specific factors on the development of ownership structures. And third, the role of ownership changes in the restructuring of enterprises and improving their performance. According to that three groups of propositions with specific sub-propositions were developed. The first group concentrates on analyzing the changes in ownership structures, the second on analyzing the firm-specific determinants of ownership and its changes, and the third group focuses on analyzing the relationships between post-privatisation ownership changes and the restructuring of enterprises and their performance. All these propositions and the main results of the empirical analysis are presented in the following paragraphs.

P1a: The level of ownership concentration is rather high due to the applied privatisation strategy and it is increasing over time due to weak protection of minority investors and small stock exchange market.

P1b: The level of ownership concentration is highest in foreign and domestic outsider owned enterprises and lowest in employee owned enterprises.

Both propositions were fully supported by the analysis. The analysis yielded similar results in comparison with the previous studies. It was clearly identified that in general the level of ownership concentration in Estonian enterprises has been high since privatisation and it is increasing over time. The analysis showed that the highest average ownership concentration in Estonian enterprises is in the enterprises with dominant foreign ownership and domestic outsider ownership. The level of average ownership concentration remains moderate in the case of dominant manager ownership and it is the lowest in enterprises with dominant employee ownership.

P1c: The intensity of ownership changes is highest in enterprises with initial employee ownership, followed then by enterprises with initial manager, domestic outsider and foreign ownership.

This proposition found only partial confirmation. The analysis indicated that the most considerable movement has been the change away from initial employee ownership, either to manager ownership or domestic outsider ownership. Also, that the least intensive movements have taken place in

enterprises with initial foreign ownership. Both these results are in line with the previous studies. Much more moderate have been the changes from initial manager ownership to domestic outsider ownership or foreign ownership. Similarly, the changes from initial domestic outsider ownership to manager or foreign ownership have been less intensive. However, the sequence specified in the proposition about the enterprises with manager and domestic outsider ownership is not confirmed by the current analysis. This analysis indicates that the intensity of ownership changes is slightly smaller in enterprises with initial manager ownership than initial domestic outsider ownership. Moreover, it is difficult to present a clear sequence here as the differences in intensities between these two ownership groups are very small.

P1d: The changes in ownership are more frequent in the earlier transition period than later transition period due to the unstable economic and slow institutional development.

This proposition was fully confirmed by the analysis. The analysis showed that between 2000 and 2004 the changes in ownership have been rather marginal compared with the period before 2000. This shows that adjustment of ownership structures in the post-privatisation period has mainly taken place before 2000. After 2000 only minor changes in ownership structures have occurred. An interesting finding was that the number of enterprises with foreign ownership has decreased in the later period. Manager ownership has been continuously increasing and employee ownership decreasing. It is suggested that the lower intensity of ownership changes in the later period has been supported by the more stable economic environment and institutional developments during 2000–2004. Thus, these results might help to explain the changes in ownership structures in different economic development periods.

P2a: Enterprises with a large firm size, high financing requirements and high productivity are more likely owned by outsider owners and enterprises with a small firm size, low financing requirements and high profitability are more likely owned by insider owners.

The claim presented in this proposition found only partial confirmation. The analysis confirmed that certain ownership types can be characterized by certain firm-specific determinants. It indicated that enterprises with a large firm size and high financing requirements are more likely owned by outsiders. Similarly, enterprises with a small firm size and low financing requirements are more likely owned by insiders. The higher profit margins are first of all the predictor of insider ownership. However, contrary to expectations, the high labour productivity also turned out to be the predictor of insider ownership. This might reflect the fact that the preferences given to employees in the early privatisation period and possible insider information for managers enabled them to buy enterprises with a relatively better performance.

P2b: Increasing firm size, financing requirements and productivity lead to ownership changes from insider to outsider and a decreasing firm size,

financing requirements and profitability lead to ownership changes from outsider to insider.

This proposition was validated only partially. The analysis revealed that increasing capital intensity leads to change in ownership from insider to outsider and decreasing firms' size leads to a change from outsider to insiders. However, this was true only for the earlier period, until 2000. The results did not confirm that increasing firm size and productivity leads to ownership change from insider to outsider and that decreasing capital intensity and productivity leads to ownership change from outsider to insider. Decreasing capital intensity might determine the ownership changes from outsider to insider ownership in the early period, but it is not true for the later period, when probably a more stable economic environment and better possibilities for bank loans do not restrict, at least financially, the take-overs also from outsiders to insiders. The effects of performance on ownership changes remained unclear similarly to previous studies.

P2c: Firm-specific factors play a different role over time in determining the ownership structures due to the changes in institutional environment.

This proposition found support from the analysis. The differences in firm size were not significant in the early period, but turned to be significant in the later period. The analysis indicated that the larger firm size increases the probability that an enterprise is owned by foreign investors. The higher capital intensity in the early period was clearly a predictor of foreign ownership rather than domestic outsider or employee ownership, but in the later period these differences were not longer significant. Moreover, they indicate that the higher capital intensity could also be a predictor of domestic outsider or employee ownership rather than foreign ownership. This might reflect the change in institutional environment, for example better possibilities for bank loans. Similarly, in the early period the higher labour productivity was a predictor of employee or manager ownership rather than domestic outsider ownership. In the later period this difference was vice-versa, though insignificant. It is suggested that the changes in firm-specific ownership determinants are related to a mismatch of actual ownership structure and firm-specific factors in the early period.

P3a: Performance differences between different ownership types are expected to weaken in the later transition period due to the changes in institutional environment.

This proposition was not confirmed by the empirical research. The results of ownership effects analysis indicated that performance differences between ownership groups remained statistically significant for both periods. In the comparison of the four ownership groups, enterprises with foreign ownership are the largest and show the highest performance level in terms of value added, sales, labour costs and exports. Still, their level of fixed assets remains lower compared to enterprises with domestic outsider ownership and their profit margin is the lowest in comparison to all other ownership groups. The

performance of enterprises with domestic outsider ownership remains lower than in enterprises with foreign ownership, but higher compared to other ownership groups. Enterprises with manager ownership show rather poor performance compared to other analysed ownership groups. The performance of enterprises with employee ownership is also in general poorer than in enterprises with foreign or domestic outsider ownership, but differs in many aspects from enterprises with manager ownership.

P3b: Secondary ownership changes are expected in lower performing enterprises.

This proposition was confirmed by the analysis. The comparison of enterprises with unchanged and changed ownership showed that enterprises with unchanged ownership are performing better than enterprises with changed ownership. The enterprises where ownership had not changed were performing better in terms of higher labour productivity, higher export-orientation and export intensity. Moreover, their wage level and capital intensity level is higher, though the latter result was statistically insignificant. Differences in profit margins were also insignificant, although the profit margins were higher in enterprises with unchanged ownership. Thus, it is suggested that the enterprises where ownership has changed are somewhat problematic.

P3c: Ownership change from insider to foreign is expected to lead to faster increase in the use of external financing, that is, to faster financial restructuring

P3d: Ownership change from insider to foreign is expected to lead to faster growth in investments and capital intensity, that is, to faster technological restructuring.

P3e: Ownership change from insider to foreign is expected to lead to faster reductions in employment and growth of real wages and exports

None of these propositions found support from the empirical research. The analysis indicated that if ownership changes from manager to foreign then the use of external financing increases relatively slower (or decreases) compared to all other ownership change groups. It is suggested that foreign investors use different financing schemes and they finance their assets more from their retained earnings. Contrary to expectations, the analysis showed that movement to manager ownership leads to faster use of external financing, and thus might improve the loan possibilities.

In addition, the analysis indicated that if ownership changes from employee to domestic outsider or manager then it is accompanied by a higher investment rate. The most aggressive ownership group in making investments and increasing the level of capital intensity seem to be the enterprises with domestic outsider ownership. Foreign owners have not induced faster growth in investments and capital intensity level than other ownership change groups. These results are somewhat different from earlier studies which have indicated that foreign owners are more prone to make investments and to increase the level of capital intensity.

In terms of growth in employment level and wages, the analysis indicated that the change from managers to foreign is not always accompanied with faster reductions in employment and a faster increase in wage level. On the contrary, they might induce faster growth in employment level. However, ownership change from manager to foreign has induced a faster increase in export intensity, but this result was insignificant. In general, the analysis indicated that the post-privatisation ownership changes have induced more restructuring through all analysed restructuring types. However, the progress of these changes is dependent on each specific ownership change.

P3f: Ownership change from insider to foreign is expected to lead to a faster increase in labour productivity and a slower increase in profitability.

This proposition found partial confirmation. The analysis indicated that ownership change from manager to foreign leads to a faster increase in labour productivity. The result that foreign owners induced higher labour productivity is in line with the earlier studies. In addition, the analysis indicated that the ownership change from employee to manager or domestic outsider leads to growth in labour productivity. However, the relationship between ownership changes and profit margins remained unclear as no significant result could be obtained from the current analysis.

Thus, the suggested research propositions were mostly supported, with the remainder being partially supported, or not supported. **The main research results from the present dissertation indicate that in the post-privatisation period the ownership concentration level in Estonian enterprises has increased and several further ownership adjustments have taken place. These ownership adjustments have been especially intensive in lower performing enterprises and in the earlier period before 2000. The post-privatisation ownership changes have induced more restructuring, but the impact of these changes on different types of restructuring have been dependent on specific ownership changes. However, it is seen that several of these changes have been accompanied by positive effects towards more efficient ownership structures.** The analysis indicated that ownership change from manager to foreign ownership is accompanied with a faster increase in labour productivity. In addition, the ownership change from employee to domestic outsider or manager ownership leads to faster financial and technological restructuring. Moreover, it contributes to a faster increase in labour productivity. In general, the domestic outsider owners seem to be rather aggressive in making investments and increasing the level of capital intensity. The results of current research are of utmost importance both for theoretical and empirical literature on corporate governance in CEE countries. The current research provides a more systematic approach for studying the corporate governance issues, the different aspects related to the development of ownership structures and the different dimensions of restructuring. The theoretical framework developed in the research is applicable to any transition country and it enables the analysis of the impact of ownership changes on different

dimensions of restructuring in a more systematic and accurate way. In terms of empirical contribution, the results of the current research both support earlier findings but also provide some new evidence. The results that are similar to previous research could be treated as additional evidence for helping to develop the theoretical base for the development of ownership structures in CEE countries. The new results could be taken as additional findings that help to explore and extend the understanding of ownership issues in CEE countries as well as small economies.

Recommendations for future research

In general, the area of research, particularly the topic of post-privatisation ownership changes and enterprise restructuring, is under-researched in the literature. Researchers usually meet with the problems of the lack of the data. Therefore, the results of the current study could be considered a rather important contribution to that research stream.

The current research could be developed further in constructing similar models for different ownership groups where ownership has not changed. Also, the analysis of the relationship between ownership changes and organisational restructuring could be improved if a case study method could be applied, as mechanisms for organisational change cannot always be captured through quantitative analysis. In this research the organisational aspects still remain under-researched. Regarding the alternative methods for analysing the relationship between ownership changes and enterprise performance, the methods currently used could be extended through the use of production functions or stochastic frontier functions which may enhance the analysis.

The analysis of determinants of ownership changes could be developed further through also testing the impact of changes in the economic and institutional environment on the development of ownership structure. This would compliment and enhance the understanding of the complex interrelationship between external environment and firm-specific features that affect the development of ownership structures.

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APPENDICES

Appendix I. Definitions of corporate governance

Origin	Definition	Comment
Denis (2001, p. 192)	Corporate governance encompasses the set of institutional and market mechanisms that induce self-interested managers (the controllers) to maximize the value of the residual cash flows of the firm on behalf of its shareholders (owners)	Here the shareholder is the focus of the company. It mentions the classical corporate governance problem of separation of ownership and control
Shleifer and Vishny (1997, p. 737)	Corporate governance deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment	This definition is not focused only on shareholder but stresses also the importance of other investors.
Zingales (1998, p. 500)	Corporate governance is the complex set of constraints that shape the ex-post bargaining over the quasi-rents generated by a firm	This definition is in favour of stakeholders as it looks the enterprises as the nexus of contracts. It gathers all parties that affect the process through which quasi-rents are distributed
John and Senbet (1998, p. 372)	Corporate governance deals with mechanisms by which stakeholders of a corporation exercise control over corporate insiders and management such that their interest are protected	This definition is closer to Shleifer and Vishny (1997) definition as they include stakeholders not just shareholders, but also debtholders and nonfinancial stakeholders
Centre for European Policy Studies (1995, p. 5)	Corporate governance is the whole system of rights, processes and controls established internally and externally over the management of a business entity with the objective of protecting the interests of all stakeholders.	This definition clearly protects the interest of all stakeholders, which is a common feature of Continental Europe governance systems.
The Cadbury Report (1992, p. 15)	Corporate governance is the system by which companies are directed and controlled. Boards of directors are responsible for the governance of their companies. The shareholders' role in governance is to appoint the directors and the auditors and to satisfy themselves that an appropriate governance structure is in place.	This definition highlights the role of shareholders and boards of directors, but does not say anything about the stakeholders

Origin	Definition	Comment
OECD Principles of Corporate Governance (2004, p. 11)	Corporate governance is the system by which companies are directed and controlled. Corporate governance defines a set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined.	This definition is very broad, taking into account all parties involved into company activities.

Source: compiled by the author.

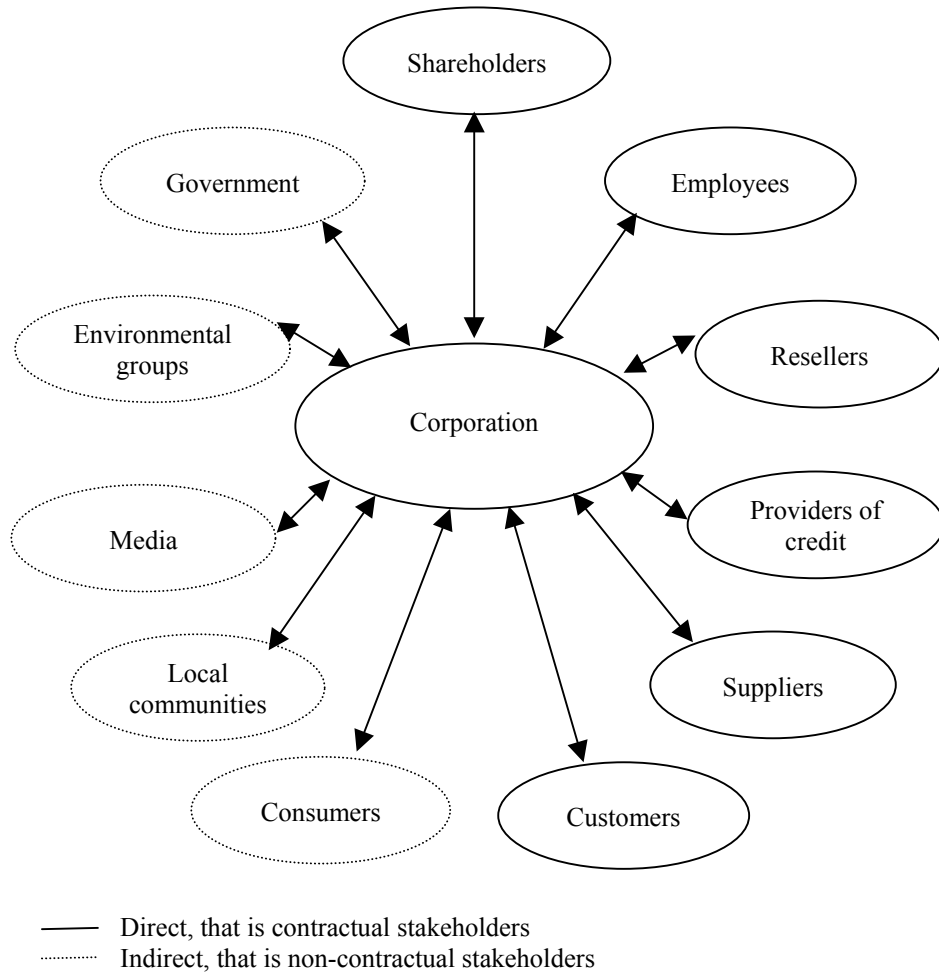
Appendix 2. Theoretical perspectives on corporate governance

Dimension	Theoretical perspective						
	Agency	Transaction cost economics	Stewardship	Resource dependency	Stakeholder	Managerial hegemony	Class hegemony
Corporate governance and board role	Self-interested utility maximizing motivation of individual actors Ensure match between managers ('agents') and shareholders ('principals')	Focus on governance needs of exchange relations Concerned with mechanisms which reduce costs associated with contractual hazards	Ensure the stewardship of corporate assets Maintains no inherent conflict of interest between managers and owners, and that optimum governance structures allow coordination of the enterprise to be achieved	Reduce uncertainty; boundary spanning; highlights the interdependence of firms rather than viewing them simply in terms of management intentions Connecting firm with external resources helps to reduce uncertainty	Defines firm as inclusive multilateral agreements between enterprises and multiple stakeholders These relationships constrain and create strategic possibilities of the company	The board as a 'legal fiction'; managerial control Need to understand the relationship between owners, managers and the boards of directors	Perpetuate elite and class power; corporations as exploitative vehicle for accumulation of wealth and power
Theoretical origin	Economics and finance	Economics and finance	Organization studies	Organization studies	Politics, law and management organization studies	Management organization studies	Sociology and politics
Unit of analysis	Individual	Transaction	Coordination	Resources	Stakeholders	Management	Corporations

Dimension	Theoretical perspective						
	Agency	Transaction cost economics	Stewardship	Resource dependency	Stakeholder	Managerial hegemony	Class hegemony
Focal dimension	Agency costs	Asset specificity	Stewardship	Interdependence	Relationships	Control	Exploitation
Focal cost concern	Residual cost	Maladaptation	n/a	n/a	n/a	n/a	n/a
Contractual focus	Ex ante alignment	Ex post governance	n/a	n/a	n/a	n/a	n/a
Detail on board activity	Low	Low	Low	Low	Low	Moderate	Low
Empirical support	Equivocal	Equivocal	Limited	Moderate	Moderate	Moderate	Moderate
Limitations of theory	Assumptions too narrow; ignores the complexity of organisations	Assumptions too narrow; ignores the complexity of organisations	Largely untested	Focus on resource attainment, not resource use; Interlocks not shown to influence behaviours	Multi-stakeholder relationships difficult to prioritise	Problems over definition of 'control'; owner networks underestimated	Partial view of board motivation and impact of corporations
Representative studies	Fama and Jensen (1985); Jensen and Meckling (1976); Kosnik (1987)	Coase (1937); Williamson (1975, 1984, 1985, 1998)	Donaldson and Davis (1991)	Pfeffer (1972); Pfeffer and Salanick (1978)	RSA (1995); Blair (1995); Clarke (1998)	Freeman (1984); Mace (1971); Lorsch and Maciver (1989)	Mills (1971); Useem (1980)

Source: adapted from Clarke 2007, p. 27–28.

Appendix 3. The corporation and its stakeholders



Source: compiled by the author based on Charkham 1992 and Mallin 2004, p. 44.

Appendix 4. Privatisation objectives in CEE countries

Objectives	Problem areas	Possible solutions
Economic efficiency Tying together residual control rights and claims to residual returns, creating incentives for profit maximization. Creating an efficient match between the resources and endowment of owners and managers and firm assets	To achieve these objectives, post-privatisation property rights transfers are critical. However, the transaction costs of the latter may be high, before the adequate institutional and legal framework is implemented, which may take time	Attention should be paid to the initial distribution of property rights, as subsequent transfers of ownership may be slow
Creating the opportunity to introduce competition	High level of concentration in manufacturing, monopolies in utilities	Competition from imports. Breaking-up large firms before privatisation, regulation of natural monopolies
Innovation, adjustment, entrepreneurship (the latter especially important when the environment is uncertain)	Managers of state-run firms chosen for their ability to implement a plan and conformity, not for innovative skills	<i>De novo</i> firms, outside ownership
Optimum wage and employment decisions	Insider interests	<i>De novo</i> firms, outside ownership
Financial objectives Funds for restructuring/investment under a 'hard' budget constraint	Insufficient domestic capital	– FDI – Leasing, delayed payments, – Contracts with explicit investment clauses
Raising revenue for the government	'Crowding-out' effect: less money for private investment	Government investment in infrastructure
Political economy arguments Reduce government interference in the economy	Credibility of the declared 'hard' budget constraint	Stable government Commitment Speed
To make lobbying for government support more difficult		
To promote wider share ownership and create political support for reform programmes, and create a foundation for democracy	Losers (impact of restructuring on employment and wage structure) Corruption, unjustified private gains leading to social dissatisfaction	Social safety net Concessions for insiders Quality of public administration, adequate law and enforcement
The link between private property and political freedom		

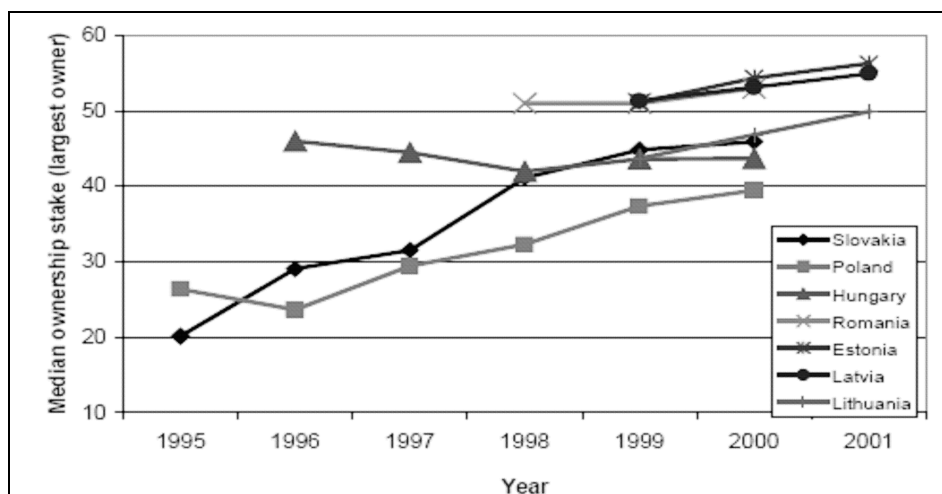
Source: Mickiewicz 2005, p. 66–67.

Appendix 5. Methods of privatisation for medium and large enterprises in CEE countries

Country	Primary method			Secondary method		
	Direct sales	MEBO	Vouchers	Direct sales	MEBO	Vouchers
Czech Republic			+	+		
Estonia	+					+
Hungary	+				+	
Latvia	+					+
Lithuania			+	+		
Poland	+				+	
Slovak Republic	+					+
Slovenia		+				+

Source: EBRD Transition Report 1999, p. 32.

Appendix 6. Dynamics of ownership concentration in selected CEE countries



Notes: The Figure shows the median ownership stake of the largest shareholders in seven CEE countries from 1995 to 2001.

Source: Berglöf and Pajuste 2003, p. 36

Appendix 7. Typology for division in ownership groups

Majority-based			Based on dominant owner (the biggest share)					
1	2	3	4	5	6	7	8	9
mP	I>PO	E>=M	dP	dI	E>M	dI	E>M	dE
	mI	E>=M			M>E		M>E	
		mE						
		mM			DO>F		M>E	
		M>E						
	I>PO	M>E		dPO	DO>F	dDO		
	PO>I	DO>F						
	mPO	DO>F		F>DO	dF			
		mDO						
		mF						
F>=DO								
PO>I	F>=DO	dS	dS	dS				
mS	I<=5%							
	5<I<25							
	I>=5%							

Notes: m=majority, d=dominant, P=private, S=state (+municipal), I=insider, PO=private outsider, E=non-managerial employee, M=manager, DO=domestic outsider, F=foreign.

Source: Jones and Mygind 1998, p. 11.

Appendix 8. Factors favouring ownership by different stakeholders

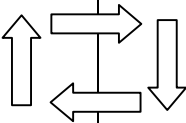
Stakeholder	Ownership interest	Ownership resources	External conditions
	Stakeholder objectives Firm-specific conditions	Access to capital Governance skills Information	State regulation Market conditions for fixed contracts
Employees	High cost of losing job High specific human capital High unemployment Low mobility Low unemployment benefit Desire for self-governance (high risk aversion)	Lack of capital Difficult to obtain loans => low capital intensity Highly educated have best access to information Governance easiest when small, homogeneous group experience of participation	Labour market: non transparent High transaction costs Difficult to monitor contracts Unions for or against?

Stakeholder	Ownership interest	Ownership resources	External conditions
Managers	High specific human capital Desire for self-governance continue as manager	Lack of capital => low capital inputs needed Asymmetric information Direct governance => no agency problem	Unstable markets Low development of market for managers and equity markets
Risk capital Venture Portfolio -funds -individuals	Hunting potential profits in under-performing firms Following signals from capital markets	Access to high-risk capital Professional governance Economies of information Usually passive ownership diversified, free-riding	Dependent on: – transparent and effective capital market – legislative efficiency on shareholders' rights
Debt capital banks	Takeover to secure loans or building holdings: FIGs	Access to high-risk capital Often lower risk segment High information demand Professional governance	Good bankruptcy rules Legislative efficiency on creditors rights Unstable markets – FIGs
Strategic investor supplier/ customer, parallel firm	Target enterprise trade with supplier/customer High/low price input/output Scale-economy/ specialisation or market takeover	Access to high risk capital Mainly foreigners Some information barriers especially for foreigners Professional governance	Ownership alternative to market contract when low product market competition and/or high transaction costs Weak contract legislation
Government local/ central	Important externalities and/or political defined: “strategic” for society	Access to high-risk capital Information problem Governance problem: incentives for bureaucrats	Ownership alternative to market contract when low product competition market and/or high transaction costs

Source: Mygind 2000/2001, p. 324.

Appendix 9. Organizational and corporate governance dynamics

		<i>Transparency/Accountability</i>	
<i>Organizational resource base</i>	Narrow	Limited <i>Quadrant 1</i> Small family businesses Start-ups University spin-offs	High <i>Quadrant 2</i> ‘Threshold firms’ Initial public offerings (IPOs)
	Extensive	<i>Quadrant 4</i> Declining organizations Public-to-private buy-outs	<i>Quadrant 3</i> Mature listed firms



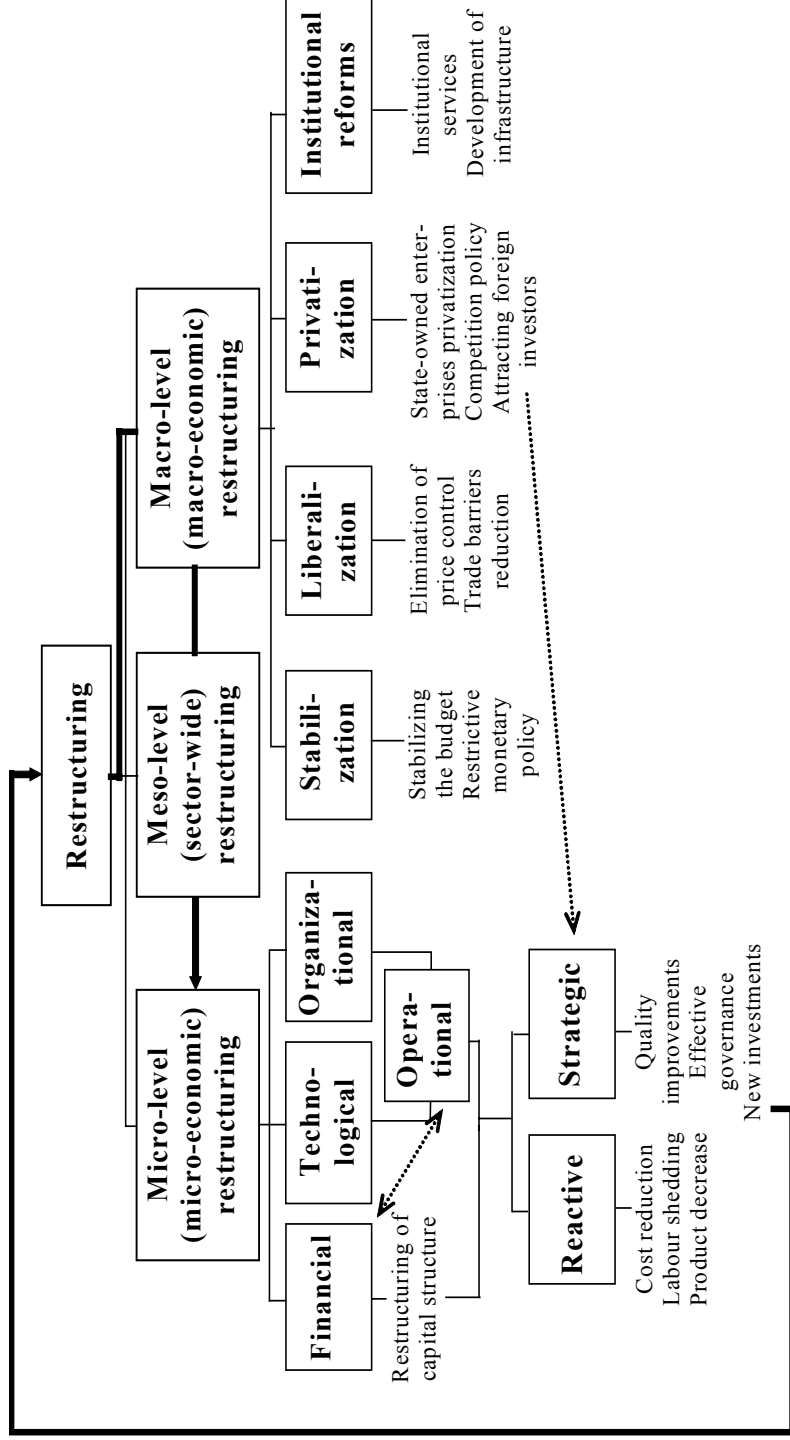
Source: Filatotchev and Wright 2005, p. 3.

Appendix 10. Governance cycles in developed market economies: core stages of change in governance/ownership – classical cycle

Start-up stage Entrepreneur ownership (management, family ownership)
Early growth stage Change in ownership/governance because of need of supply of external capital, management skills and networks by: <ul style="list-style-type: none">• bank (often rather passive role in relation to management)• closely related investors, take active part in management• venture capital, take active part in management
Later growth stage Change in ownership/governance because of need of supply of external capital, management skills and networks by: <ul style="list-style-type: none">• strategic investor, take full control of company• public investors, often diversified ownership
Crisis/restructuring stage Change in ownership/governance because of take-over by: <ul style="list-style-type: none">• bank (bad loans <i>de facto</i> transferred to ownership capital)• venture capital (often specialised in take-overs (often friendly))• strategic investor (use opportunity to take over cheap assets)• defensive take-over by insiders (to avoid close-down and unemployment)• close-down (assets transferred to other uses)

Source: Jones and Mygind 2005, p. 258.

Appendix II. Theoretical model of restructuring in transition economies



Source: adapted from Hannula (Rozeik) 2001, p. 98.

Appendix 12. Differences between the effects of a variety of owners
(Statistics derived from 341 pairwise comparisons of owners taken from 24 studies)

	Workers	Traditional State	Diffuse Individual	Managers	Insiders	Outsiders	Commercialized State	Banks	Foreign	Block-holders
t-statistic for {(effect of owner listed on row) minus (effect of owner listed on column)}										
Traditional State	1.36									
Diffuse Individual	1.78	0.50								
Managers	1.93	0.90	0.63							
Insiders	2.77	2.61	3.12	0.45						
Outsiders	3.20	3.45	3.54	1.09	1.67					
Commercialized State	4.12	5.69	7.21	1.99	5.28	2.28				
Banks	3.53	3.42	3.04	1.93	2.09	1.39	0.63			
Foreign Block-holders	4.82	7.82	7.67	2.98	6.66	4.18	3.44	0.44		
Investment Funds	4.90	7.73	7.74	3.09	6.71	4.36	3.71	0.56	0.38	
	5.55	7.05	5.98	4.28	5.30	4.60	3.97	2.47	2.96	2.84

Notes: To compare owners A and B: If the cell located at the intersection of A's row and B's column is blank, then B is more productive than A. If the cell corresponding to A's column and B's row in non-empty, then the number in that cell is the t-statistic for a test of the null hypothesis that B's effect minus A's effect is equal to zero.

Source: Djankov and Murrel 2002, Table 5.

Appendix 13. Overview of empirical works about the dynamics of ownership and its determinants in transition economies

Study	Country(ies)	Sample	Research method	Results
Estrin and Wright (1999)	Russia	Comparative overview of several studies	Comparison of equity ownership in privatized firms in 1993–1997	Insiders are majority owners in Russia, albeit their ownership is falling; among insiders there is a shift from employees to managers.
Filatovchev, Wright and Bleaney (1999)	Russia	Studies 84 privatised enterprises	Comparison of ownership structures in 1994 and 1995/1996	Small reduction of insider's equity share; significant decline in state shareholdings and increase in domestic outsider investors' shares.
Jones and Mygind (1999)	Estonia	Studies 666 firms	Ownership transition matrix for the period 1995–1997 and models for determinants of ownership changes: 1. ownership shares at the end of the 1997 using two-limit Tobit models 2. ownership transitions from 1995 to 1997 by multinomial logit models	The number of firms with employee ownership is decreasing; the majority employee ownership switches to majority manager ownership. Firms with high capital-labour ratio would expect to have lower employee and manager ownership share, but higher foreigners, domestic outsider and state ownership share. The bigger is the enterprise the lower is the share of employee and manager ownership and the higher the share of domestic outsider ownership. The state has a special interest in firms in certain strategic sectors and foreigners are interested in building up ownership in service sectors.
Kocenda and Valachy (2001)	Czech Republic	Studies 1155 voucher privatized firms for 1996 and 853 firms for 1997	Dynamics of ownership concentration and single largest owner in 1996–1999	Ownership concentration of voucher-privatised firms generally increased; industrial companies and individual owners are most stable single largest owners; portfolio firms are the least stable owners.
Kozarzewski and Woodward (2001)	Poland	Studies 110 firms privatised by employee buy-outs	Comparison of ownership structures at the time of privatisation, 1997, 1998 and 1999, transformation matrix between time of privatisation and 1997	Ownership structure of employee-leased companies was characterized by large holdings of dispersed insider owners. The shares of non-managerial employees declined, while outsiders grow. Ownership structures seemed to be inert. The most important factor influencing the direction and dynamics of ownership was the economic condition.
Blaszczyk, Gorzynski, Kaminski and Paczoski (2001)	Poland	Studies 512 firms privatised through NIF Program	Comparison of the changes in ownership shares by different investors in NIFs in the period 1995–2000	Significant shifts in the ownership of funds and strong tendency to ownership concentration. The share of State Treasury and small investors decreased significantly, while crossholdings between NIFs and the shares of institutional domestic and foreign investors increased.

Study	Country(ies)	Sample	Research method	Results
Simonei, Böhm, Rems, Rojec, Damijan and Majcen (2001)	Slovenia	Studies 183 firms privatised under mass privatisation program	Comparison of concentration indices and weighted averages of shares of various types of owners at the time of completion of privatisation and at the end of 1999; transformation matrix between time of privatisation and 1999	Increased concentration of ownership, especially in insider owned companies. Small shareholders, state and para-state companies had reduced ownership shares, while managers and strategic investors have increased. Both of latter groups have accumulating their shares more intensively in the companies not traded on the stock exchange.
Grosfeld and Hashi (2003)	Czech Republic and Poland	Studies for Czech Republic 652 firms privatised through voucher schemes and for Poland 512 firms privatised in NIF program	For Czech firms comparison of average shares of the largest shareholders over the years 1996–1999 and transformation matrix between 1996 and 1999 For Polish firms comparison of average shares of the largest shareholders over the years 1996–2000 and changes in equity holdings between 1995–2000 and the largest shareholder in NIF companies in 2000	Among Czech firms, industrial companies, individuals and investments funds have increased the number of companies under their control. Dominant shareholder has been changed in one third of the companies. There has been emergence of individual entrepreneurs and the largest shareholders. Among Polish firms, nearly half of NIF companies have been transferred to strategic investors including foreign investors. Most strategic investors have gained absolute control of the firms' equity.
Kalmi (2003)	Estonia	Studies 364 firms that were private (privatised or <i>de novo</i>) in 1995	Ownership changes between privatisation and the beginning of 2001; ownership changes in employee-owned firms in 1995–2001	Employee ownership is declining and manager ownership increases. Foreign ownership is very stable. The number of firms with former employee ownership has increased. When firms with employees, managers and former employees are classified as 'insiders' and firms owned by foreign or domestic outsider investors as 'outsider', then, insider ownership has increased in Estonia during the transition.
Mygind, Demima, Gregoric and Kapelyushnikov (2006)	Slovenia and Russia	Studies for Slovenia 150 non-financial joint-stock firms registered in stock exchange Studies for Russia 152 firms	Ownership transition matrixes with average concentration on first largest owner for period 1998–2003 for Slovenian firms and for period 1995–2003 for Russian firms	Ownership dynamics are similar in both countries. In Russia employee ownership changes to manager or non-financial domestic outsider ownership. In Slovenia employee ownership changes to financial outsiders (Privatisation Investment Funds). Foreign ownership is very rare in Russia, but has rapidly increased in Slovenia.

Study	Country(ies)	Sample	Research method	Results
Jones, Kalmi and Mygind (2005)	Estonia	Studies 500 firms, that were private (privatised or <i>de novo</i>) in 1995	Ownership changes between 1995 and 1999, and models for determinants of ownership structures and changes: 1. determinants of initial ownership structures and ownership structures in 1999 using binary logit and multinomial logit models, 2. determinants of ownership changes in insider-owned firms and outsider-owned firms using binary logit models	Rapid decrease of firms with employee ownership and sharp increase in firms with manager ownership. Ownership by foreigners and domestic outsiders has remained relatively stable. Results of the analysis do not support the hypothesis that the determinants of initial ownership structures were completely random. Insufficient wealth to invest in equity limits the possibilities to establish employee-owned firms. Employee ownership is most durable in less volatile firms. Managerially-owned firms are associated with significantly higher volatility than employee-owned firms. The effects of performance, capital intensity or investment are insignificant and do not show clear patterns.
Jones and Mygind (2005)	Estonia, Latvia and Lithuania	Studies for Estonia 500 firms that were private (privatised and <i>de novo</i>) in 1995, for Latvia 915 firms and for Lithuania 330 firms	Ownership transition matrices for privatised and new firms between time of privatisation and 2002 in Estonia, 1995–1999 in Latvia, and time of privatisation and 2000 in Lithuania; transition matrices and ownership concentration tables between years 2000 and 2002 in Estonia, 1997 and 1999 in Latvia, and time of privatisation and 2000 in Lithuania	In all three countries corporate governance cycle follow the expected patterns: employee → manager → domestic. There is a strong tendency for higher concentration in all three countries. The change away from employee ownership is fastest in Estonia and here the level of concentration is higher than in Latvia and Lithuania.

Source: compiled by the author based on Blaszczyk *et al.* 2001; Estrin and Wright 1999; Filatovchev *et al.* 1999; Grosfeld and Hashi 2003; Jones *et al.* 2005; Jones and Mygind 1999, 2005; Kalmi 2003; Kocenda and Valachy 2001; Kozarzewski and Woodward 2001; Mygind *et al.* 2006; Simonett *et al.* 2001.

Appendix 14. Key economic indicators of Estonia's progress during transition, 1991–2007

	1991	1994	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007*
Real GDP growth (%)	-13.6	-1.6	5.0	10.8	5.4	-0.1	9.6	7.7	8.0	7.2	8.3	10.2	11.2	7.1
Inflation (%)	210.5	47.7	23.1	11.2	8.1	3.3	4.0	5.8	3.6	1.3	3.0	4.1	4.4	6.6
Unemployment (%)	1.5	7.6	10.0	9.6	9.8	12.2	13.6	12.6	10.3	10.0	9.6	7.9	5.9	4.7
FDI inflow, net (billion US dollars)	0.0	0.212	0.111	0.130	0.574	0.222	0.324	0.343	0.153	0.763	0.703	2.252	0.569	0.952
Exports (billion US dollars)	0.0	1.226	1.812	2.292	2.690	2.515	3.295	3.366	3.506	4.596	5.983	7.771	9.654	11.084
Imports (billion US dollars)	0.0	1.583	2.832	3.417	3.805	3.337	4.076	4.141	4.623	6.152	8.003	9.674	12.613	14.694
Exchange rate (annual average, %)	n.a	13.0	12.0	13.9	14.1	14.7	17.0	17.5	16.6	13.9	12.6	12.4	12.5	11.4

Notes: * – estimate; n.a. – not available.

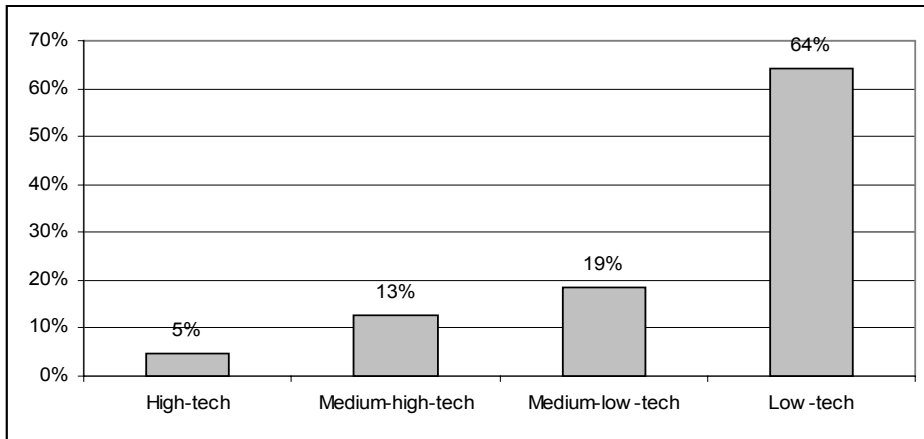
Source: compiled by the author on the basis EBRD Economic Statistics and Forecasts (www.ebrd.com/country/sector/econo/stats/index.htm).

Appendix 15. Distribution of the research database by NACE industry classification
(No. of observations 4182, sample size 555)

Nace	Description	No. of observ.	Share (%)
A	Agriculture, hunting and forestry	7	0.2
B	Fishing	37	0.9
C	Mining and quarrying	171	4.1
D	Manufacturing	2827	67.6
15–16	Manufacture of food products, beverages and tobacco	435	10.4
17	Manufacture of textiles and textile products	148	3.5
18	Manufacture of wearing apparel; dressing and dyeing of fur	272	6.5
19	Manufacture of leather and leather products	110	2.6
20	Manufacture of wood and wood products	320	7.7
21–22	Manufacture of pulp, paper and paper products; publishing and printing	224	5.4
23	Manufacture of coke, refined petroleum products and nuclear fuel	1	0.0
24	Manufacture of chemicals, chemical products and man-made fibres	100	2.4
25	Manufacture of rubber and plastic products	71	1.7
26	Manufacture of other non-metallic mineral products	157	3.8
27–28	Manufacture of basic metals and fabricated metal products	254	6.1
29	Manufacture of machinery and equipment n.e.c.	200	4.8
30–33	Manufacture of electrical and optical equipment	182	4.4
34–35	Manufacture of transport equipment	45	1.1
36–37	Manufacturing n.e.c.; Manufacture of furniture	308	7.4
E	Electricity, gas and water supply	34	0.8
F	Construction	178	4.3
G	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	344	8.2
H	Hotels and restaurants	90	2.2
I	Transport, storage and communication	201	4.8
J	Financial intermediation	2	0.0
K	Real estate, renting and business activities	259	6.2
L	Public administration and defence; compulsory social security	0	0.0
M	Education	0	0.0
N	Health and social work	26	0.6
O	Other community, social and personal service activities	6	0.1
P	Activities of households	0	0.0
Q	Extra-territorial organizations and bodies	0	0.0
Total		4182	100.0

Source: author's calculations on the basis of research database.

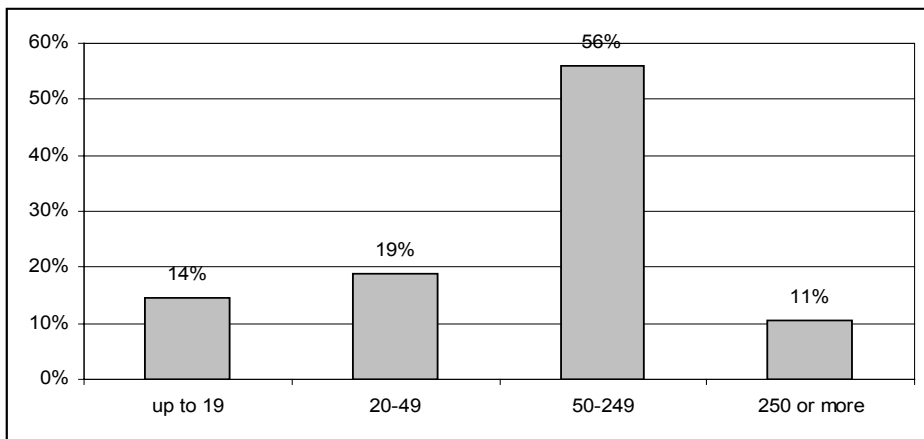
Appendix 16. Distribution of the sample by manufacturing sectors according to OECD industry classification



Note: OECD classification groups manufacturing sectors into four subsectors according to their technology level. High-tech sectors are following industries: 24.4, 30, 32, 33, 35.3; medium-high-tech: 24.0–24.3, 24.5–24.7, 29, 31, 34, 35.2, 35.4–35.5; medium-low-tech: 23, 25, 26, 27, 28, 35.0–35.1; low-tech: 15, 16, 17, 18, 19, 20, 21, 22, 36, 37 (see for explanation of NACE industry codes, 2003 European Innovation...)

Source: author's calculations on the basis of research database.

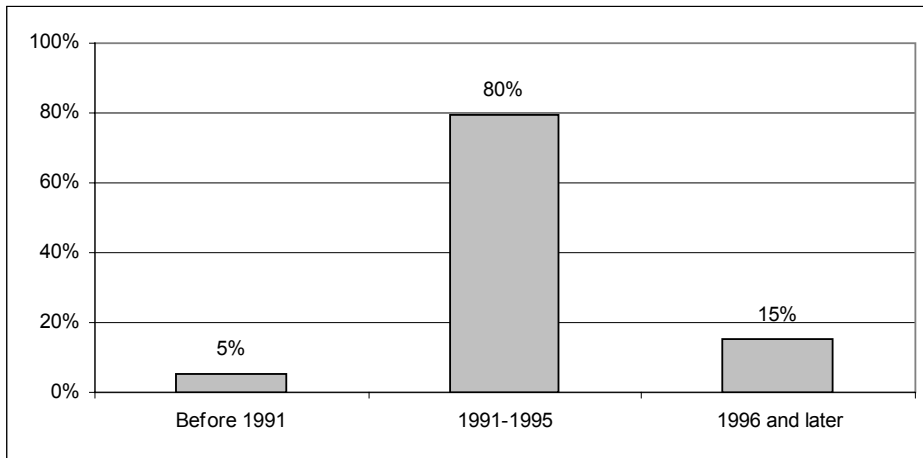
Appendix 17. Distribution of the sample by number of employees



Note: distribution follows EU enterprise classification according to the number of employees: up to 19 – micro enterprises; 20–49 – small enterprises; 50–249 – medium enterprises; 250 or more – large enterprises.

Source: author's calculations on the basis of research database.

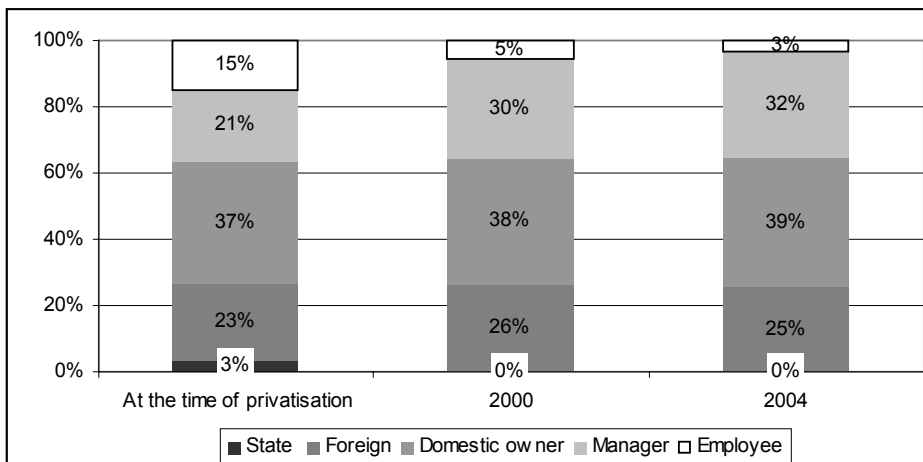
Appendix 18. Distribution of the sample according to privatisation time



Note: Before 1991 – enterprises privatised before and in 1991; 1991–1995 – enterprises privatised during 1991–1995; 1996 and later – enterprises privatised in 1996 and later.

Source: author’s calculations on the basis of research database.

Appendix 19. Distribution of the sample by ownership type



Source: author’s calculations on the basis of research database.

Appendix 20. Distribution of the sample by ownership groups according to change in ownership

Ownership group	Change between time of privatisation and 2000		Change between time of privatisation and 2004	
	Number of observations	Share (%)	Number of observations	Share (%)
11	7	0.2	0	0.0
12	57	1.4	56	1.3
13	43	1.1	35	0.8
14	18	0.4	26	0.6
16	0	0.0	9	0.2
22	884	21.6	851	20.4
23	63	1.5	84	2.0
24	39	1.0	55	1.3
25	0	0.0	9	0.2
32	82	2.0	96	2.3
33	1075	26.3	1064	25.4
34	241	5.9	276	6.6
35	9	0.2	9	0.2
36	9	0.2	21	0.5
42	49	1.2	49	1.2
43	93	2.3	155	3.7
44	702	17.1	677	16.2
45	33	0.8	18	0.4
52	26	0.6	17	0.4
53	234	5.7	231	5.5
54	206	5.0	289	6.9
55	184	4.5	105	2.5
56	0	0.0	8	0.2
63	15	0.4	9	0.2
64	18	0.4	18	0.4
66	9	0.2	15	0.4
Total	4096	100.0	4182	100.0

Note: Ownership groups are formed based on the following logic: 1 refers to state ownership, 2 – foreign, 3 – domestic outsider, 4 – manager, 5 – employee, 6 – public distribution. For example, 11 refers to enterprise which has remained under state ownership, 12 refers to enterprise which ownership has changed from state ownership to foreign ownership, etc.

Source: author's calculations on the basis of research database

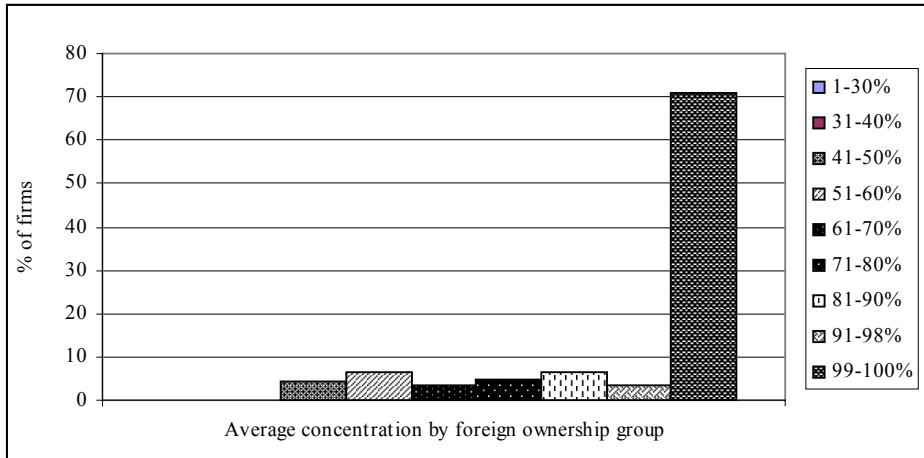
Appendix 21. Representativeness of the sample by manufacturing sector, 2004

NACE	No. of enterprises			No. of employees			Sales (million EEK)			Exports (million EEK)		
	ESO	SS	%	ESO	SS	%	ESO	SS	%	ESO	SS	%
15-16	437	53	8.8	17744	9815	13.8	15856	11065	18.3	4078	2599	12.7
17-18	588	53	11.8	23384	13224	18.1	7575	4314	8.8	5669	3402	16.6
19	72	13	1.4	2126	1436	1.6	518	325	0.6	372	246	1.2
20	1071	36	21.4	18558	4467	14.4	13795	4212	15.9	7743	2514	12.2
21-22	516	25	10.3	7544	3180	5.8	5132	2439	5.9	1307	1034	5.0
23	5	1	0.1	991	15	0.8	716	0.9	0.8	252	0	0.0
24	98	10	2.0	2782	1045	2.2	4815	2117	5.6	3374	1741	8.5
25	150	8	3.0	4199	902	3.3	3360	673	3.9	1618	371	1.8
26	162	17	3.2	4834	2606	3.7	4803	3071	5.6	1322	906	4.4
27-28	702	30	14.1	11560	3074	9.0	7576	2121	8.8	3445	1312	6.4
29	225	19	4.5	5091	1941	3.9	2846	940	3.3	1599	721	3.5
30-33	331	22	6.6	12200	6037	9.5	8763	4480	10.1	6064	3582	17.4
34-35	135	6	2.7	4816	884	3.7	4245	423	4.9	2482	324	1.6
36-37	503	34	10.1	13189	5990	10.2	6518	2506	7.5	4093	1785	8.7
D	4994	327	100.0	129020	54616	100.0	86519	38688	100.0	43416	20539	100.0

Notes: ESO – Estonian Statistical Office sample, SS – survey sample. Explanations for NACE classification see Appendix

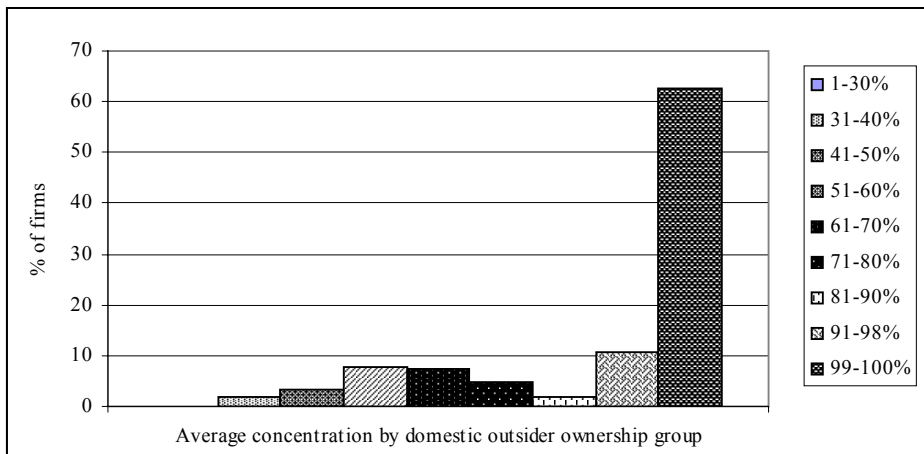
Source: author's calculations on the basis of Estonian Statistical Office annual statistics database "Financial statistics of enterprises" (http://pub.stat.ee/px-web.2001/1_Databas/Economy/Economy.asp,02.07.2007) and research database.

Appendix 22. Distribution of firms according to average ownership concentration by dominant foreign ownership, 2004



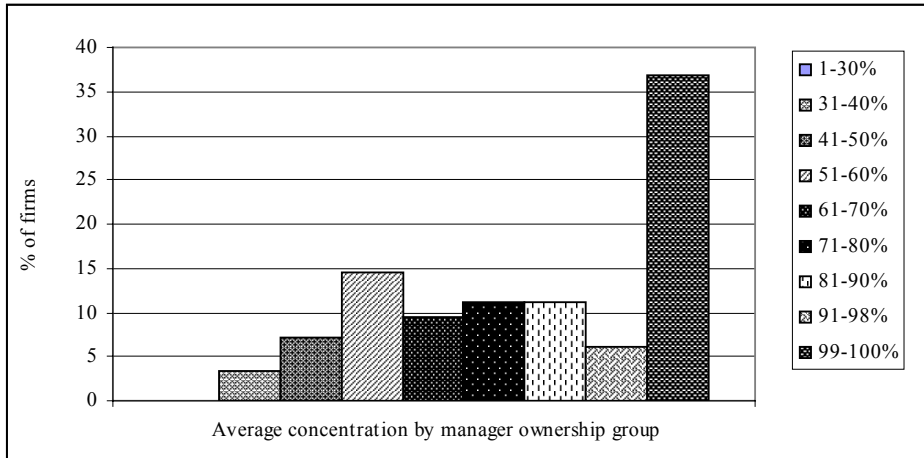
Source: author's calculations on the basis of research database.

Appendix 23. Distribution of firms according to average ownership concentration by dominant domestic outsider ownership, 2004



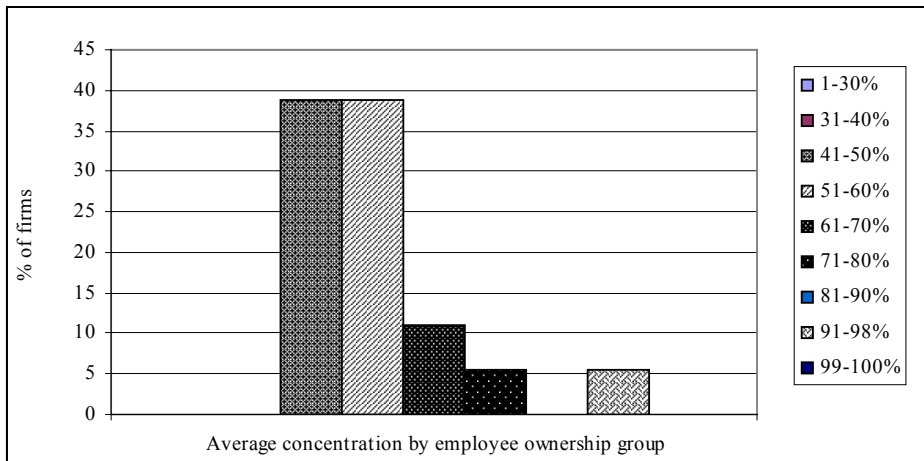
Source: author's calculations on the basis of research database.

Appendix 24. Distribution of firms according to average ownership concentration by dominant manager ownership, 2004



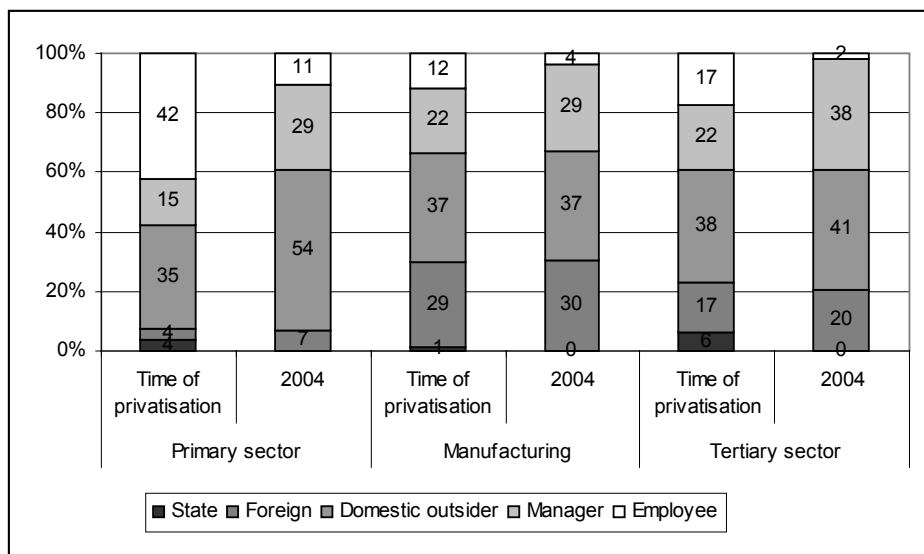
Source: author's calculations on the basis of research database.

Appendix 25. Distribution of firms according to average ownership concentration by dominant employee ownership, 2004



Source: author's calculations on the basis of research database.

Appendix 26. Distribution of ownership types by industrial sector (at the time of privatisation and 2004, %)



Source: author's calculations on the basis of research database.

Appendix 27. Explanation of the variables used in the analysis

Variable	Definition
EMP	Average number of employees
lnEMP96	Natural logarithm of average number of employees; respectively in 1996, 2000 and 2004
WAGEEMP	Wage per employee, in 1000 EEK
lnWAGEEMP96	Natural logarithm of wage per employee; respectively in 1996, 2000 and 2004
FIXEDEMP	Fixed assets per employee, in 1000 EEK
lnFIXEDEMP96	Natural logarithm of fixed assets per employee; respectively in 1996, 2000 and 2004
SALESEMP	Net sales per employee, in 1000 EEK
lnSALESEMP96	Natural logarithm of nets sales per employee; respectively in 1996, 2000 and 2004
OPROFIT	Profit margin (operating profit to sales ratio), in per cent
OPROFIT96	Profit margin (operating profit to sales ratio); respectively in 1996, 2000 and 2004
EQUITYEMP96	Equity per employee; respectively in 1996, 2000 and 2004
VALPROD	Value-added per employee, in 1000 EEK
STAFCOSEMP	Labour costs per employee, in 1000 EEK
EXPSH	Exports to net sales ratio, in per cent
EXPEMP	Exports per employee, in 1000 EEK
EMPCH00_96	The change in the average number of employees in per cent; respectively measures the differences between 1996 and 2000, 2000 and 2004, 1996 and 2004
FIXEDEMP00_96	The change in the fixed assets per employee in per cent; respectively measures the differences between 1996 and 2000, 2000 and 2004, 1996 and 2004
realWAGEEMP00_96	The change in the real wage per employees in per cent; respectively measures the differences between 1996 and 2000, 2000 and 2004, 1996 and 2004; deflated by consumer price index
SALESEMP00_96	The change in the net sales per employee in per cent; respectively measures the differences between 1996 and 2000, 2000 and 2004, 1996 and 2004
EQUITYEMP00_96	The change in the equity per employee in per cent; respectively measures the differences between 1996 and 2000, 2000 and 2004, 1996 and 2004
OPROFIT00_96	The change in the operating profit to sales ratio in percentage points; respectively measures the differences between 1996 and 2000, 2000 and 2004, 1996 and 2004
PRIVTIME	Categorical variable for time of privatisation, 1=before 1991, 2=between 1991 and 1996, 3=after 1996
Industry controls	Categorical variable for industry sector, 1=primary, 2=secondary, 3=tertiary

Source: compiled by the author.

Appendix 28. Summary statistics for the variables in the ownership analysis in 1996 (means and standard deviations)

Variable	ALL* N=532	INS N=203	OUT N=329	EMP N=84	FOR N=126	DOM N=203	MAN N=119
EMP96	95.606 (137.4)	79.788 (133.7)	105.88 (139.0)	85.919 (110.9)	104.21 (148.1)	107.14 (132.4)	75.744 (147.3)
lnEMP96	3.969 (1.135)	3.779 (1.114)	4.093 (1.133)	3.901 (1.148)	4.048 (1.100)	4.127 (1.161)	3.699 (1.090)
WAGEEMP96	41.458 (26.9)	32.966 (24.1)	47.000 (27.2)	38.254 (32.58)	56.266 (28.89)	39.982 (23.78)	29.479 (15.66)
lnWAGEEMP96	3.557 (0.586)	3.341 (0.556)	3.697 (0.563)	3.451 (0.603)	3.896 (0.534)	3.546 (0.540)	3.268 (0.512)
FIXEDEMP96	144.68 (436.7)	75.540 (257.4)	189.81 (517.0)	103.38 (388.5)	197.74 (289.9)	183.80 (638.5)	57.175 (102.9)
lnFIXEDEMP96	3.853 (1.465)	3.290 (1.313)	4.217 (1.445)	3.353 (1.365)	4.526 (1.322)	3.986 (1.493)	3.249 (1.283)
SALESEMP96	337.10 (503.0)	423.24 (576.9)	285.49 (446.3)	447.09 (607.6)	300.70 (332.2)	276.62 (501.8)	407.42 (558.5)
lnSALESEMP96	5.277 (0.987)	5.479 (1.031)	5.157 (0.941)	5.508 (1.047)	5.307 (0.884)	5.069 (0.965)	5.460 (1.025)
EQUITYEMP96	109.08 (246.9)	45.72 (87.7)	150.08 (302.1)	58.353 (125.1)	175.96 (256.0)	130.34 (332.6)	37.666 (50.6)
OPROFIT96	3.355 (10.91)	4.774 (10.36)	2.434 (11.17)	3.496 (11.05)	1.524 (12.21)	3.133 (10.30)	5.5907 (9.88)
PRIVTIME	2.118 (0.441)	2.054 (0.400)	2.158 (0.461)	2.011 (0.329)	2.134 (0.407)	2.172 (0.492)	2.084 (0.443)

Notes: * – Due to missing observations N varies between 299 and 532. Explanations for columns labels: ALL=all firms, INS=insider-owned firms, OUT=outsider-owned firms, EMP=employee-owned firms, FOR=foreign-owned firms, DOM=firms owned by domestic outsiders, MAN= manager-owned firms.

Source: author's calculations on the basis of research database

Appendix 29. Summary statistics for the variables in the ownership analysis in 2004
(means and standard deviations)

Variable	ALL N=547*	INS N=197	OUT N=350	EMP N=18	FOR N=137	DOM N=213	MAN N=179
EMP04	132.43 (265.1)	85.92 (83.00)	156.37 (318.41)	87.83 (51.01)	232.29 (473.28)	104.93 (111.76)	85.67 (86.39)
lnEMP04	4.257 (1.128)	4.041 (1.001)	4.368 (1.175)	4.227 (0.828)	4.672 (1.227)	4.160 (1.094)	4.017 (1.021)
WAGEEMP04	91.19 (49.07)	74.94 (30.09)	99.60 (54.63)	85.60 (34.65)	119.71 (65.41)	85.83 (40.59)	73.57 (29.31)
lnWAGEEMP04	4.398 (0.471)	4.240 (0.393)	4.479 (0.488)	4.389 (0.341)	4.667 (0.477)	4.350 (0.454)	4.221 (0.396)
FIXEDEMP04	572.8 (2763.0)	299.53 (1006.0)	714.10 (3318.7)	116.56 (104.5)	386.66 (611.3)	946.90 (4300.4)	322.40 (1064.7)
lnFIXEDEMP04	4.970 (1.486)	4.556 (1.417)	5.183 (1.478)	4.145 (1.393)	5.238 (1.304)	5.144 (1.592)	4.608 (1.416)
SALESEMP04	860.48 (1704.1)	460.90 (460.8)	1067.4 (2043.9)	348.77 (210.6)	1551.7 (2877.8)	735.67 (1060.1)	475.32 (482.3)
lnSALESEMP04	6.180 (0.971)	5.836 (0.740)	6.357 (1.029)	5.719 (0.516)	6.698 (1.069)	6.124 (0.934)	5.852 (0.764)
EQUITYEMP04	541.47 (2138.3)	282.61 (850.9)	676.46 (2556.3)	148.04 (143.8)	529.55 (724.7)	776.84 (3262.2)	299.91 (901.4)
OPROFIT04	5.357 (13.73)	6.843 (12.33)	4.588 (14.35)	9.729 (17.82)	5.010 (11.64)	4.295 (15.99)	6.469 (11.47)
EMPCH04_96	68.983 (395.84)	100.521 (627.36)	51.416 (158.17)	13.474 (80.07)	105.664 (203.64)	11.963 (97.75)	108.775 (655.65)
realWAGEEMP04_96	59.780 (70.66)	72.172 (83.84)	52.878 (61.24)	49.060 (43.34)	43.194 (63.88)	59.921 (58.49)	74.364 (86.50)
FIXEDEMP04_96	539.529 (1417.2)	678.712 (1496.2)	462.914 (1369.3)	411.884 (635.8)	168.272 (375.8)	694.764 (1768.8)	702.969 (1550.3)
SALESEMP04_96	205.403 (397.52)	167.503 (187.09)	226.606 (475.45)	110.862 (82.09)	222.754 (539.20)	229.430 (424.86)	172.874 (193.47)
EQUITYEMP04_96	549.754 (1207.4)	763.632 (1351.1)	431.883 (1106.0)	358.418 (471.0)	374.682 (987.0)	474.451 (1188.8)	803.078 (1402.6)
OPROFIT04_96	-1.194 (44.3)	-3.666 (45.9)	0.189 (43.5)	-6.365 (10.4)	1.455 (13.6)	-0.738 (56.1)	-3.410 (48.0)
PRIVTIME	2.111 (0.445)	2.040 (0.402)	2.151 (0.463)	2.111 (0.323)	2.138 (0.423)	2.159 (0.488)	2.033 (0.409)

*Due to missing observations N varies between 356 and 547. Explanations for columns labels: ALL=all firms, INS=insider-owned firms, OUT=outsider-owned firms, EMP=employee-owned firms, FOR= foreign-owned firms, DOM= firms owned by domestic outsiders, MAN= manager-owned firms.

Source: author's calculations on the basis of research database.

Appendix 30. Determinants of ownership in 1996 and 2004: marginal effects from the multinomial model

Variable	F vs E		D vs E		M vs E		D vs F		M vs F		M vs D	
	1996	2004	1996	2004	1996	2004	1996	2004	1996	2004	1996	2004
Baseline probability	0.248	0.256	0.449	0.423	0.163	0.308	0.524	0.425	0.180	0.312	0.314	0.474
lnEMP96 ¹						-0.078		-0.001		-0.076		
lnWAGEEMP96	0.246				-0.174		-0.095	-0.090	-0.206	-0.365	-0.180	
lnFIXEDEMP96	0.062		0.001				-0.029		-0.029	-0.017		-0.121
lnSALESEMP96			-0.109				-0.111				0.109	
EQUITYEMP96										-0.000		-0.000
OPROFIT96		-0.006		-0.010	0.008				0.009	0.006	0.010	0.024
EMPCH04_96								-0.001		0.000		0.002
realWAGEEMP04_96								0.000		-0.002		
FIXEDEMP04_96		-0.000						0.000		-0.000		
SALESEMP04_96										0.000		
EQUITYEMP04_96				-0.000								0.000
OPROFIT04_96		0.001		0.010						0.001		-0.016
PRIVTIME	0.169						-0.136					

Notes: *Marginal effects are reported only for statistically significant coefficients. Explanations for column labels: E=employee ownership, F=foreign ownership, D=domestic outsider ownership, M=manager ownership. ¹ – For the period 2004 the variables used were for the year 2004, not 1996.

Source: author's calculations on the basis of research database.

Appendix 31. Summary statistics for the variables in the ownership change analysis: from privatisation until 2000 (means and standard deviations)

Variable	II N=149	IO N=51	OO N=274	OI N=37
EMP96	55.725 (47.715)	140.023 (234.018)	109.601 (133.368)	73.272 (90.260)
lnEMP96	3.636 (0.990)	4.213 (1.154)	4.189 (1.052)	3.684 (1.189)
WAGEEMP96	31.236 (16.373)	32.939 (15.438)	48.895 (27.780)	39.325 (24.182)
lnWAGEEMP96	3.310 (0.525)	3.367 (0.546)	3.745 (0.544)	3.499 (0.614)
FIXEDEMP96	59.441 (101.83)	51.604 (112.85)	167.104 (252.32)	72.459 (104.22)
lnFIXEDEMP96	3.254 (1.319)	3.237 (1.114)	4.307 (1.375)	3.542 (1.336)
SALESEMP96	206.623 (173.1)	143.576 (98.27)	469.821 (659.15)	289.990 (318.56)
lnSALESEMP96	5.008 (0.829)	4.729 (0.722)	5.572 (1.037)	5.200 (1.005)
EQUITYEMP96	42.131 (62.808)	54.573 (137.16)	139.653 (212.74)	80.585 (130.55)
OPROFIT96	5.311 (9.704)	3.200 (12.179)	2.120 (11.330)	5.050 (9.828)
EMPCH00_96	41.965 (119.9)	1.866 (53.5)	56.120 (174.7)	10.224 (44.7)
realWAGEEMP00_96	28.642 (48.48)	45.298 (106.95)	23.432 (48.89)	32.834 (76.06)
FIXEDEMP00_96	167.263 (425.0)	273.228 (366.1)	114.626 (235.2)	84.790 (168.0)
SALESEMP00_96	93.287 (152.3)	167.857 (261.5)	83.657 (118.7)	89.529 (122.7)
EQUITYEMP00_96	331.238 (721.9)	278.020 (291.6)	163.013 (432.3)	126.2 (194.2)
OPROFIT00_96	2.752 (19.248)	10.049 (56.399)	3.271 (17.008)	0.459 (10.714)
PRIVTIME	2.060 (0.406)	2.019 (0.373)	2.171 (0.464)	1.972 (0.287)

Notes: Explanations for columns labels: II=firms under insider ownership throughout the analysed period, IO=initially under insider ownership, then moved to outsider ownership, OO=under outsider ownership throughout the analysed period, OI= initially under outsider ownership, then moved to insider ownership.

Source: author's calculations on the basis of research database.

Appendix 32. Summary statistics for the variables in the ownership change analysis: from 2000 to 2004 (means and standard deviations)

Variable	II N=160	IO N=30	OO N=305	OI N=30
EMP00	78.951 (73.81)	62.740 (65.82)	161.759 (287.59)	78.576 (95.47)
lnEMP00	3.938 (1.031)	3.580 (1.189)	4.452 (1.108)	3.825 (1.047)
WAGEEMP00	50.545 (20.27)	45.503 (23.61)	73.095 (39.55)	48.415 (26.03)
lnWAGEEMP00	3.841 (0.410)	3.687 (0.530)	4.168 (0.494)	3.792 (0.394)
FIXEDEMP00	83.762 (117.2)	120.641 (177.3)	329.983 (640.0)	202.699 (582.0)
lnFIXEDEMP00	3.824 (1.183)	3.951 (1.321)	4.837 (1.433)	4.092 (1.460)
SALESEMP00	315.57 (222.2)	325.42 (356.0)	770.38 (1367.4)	370.01 (320.0)
lnSALESEMP00	5.503 (0.745)	5.385 (0.888)	6.064 (0.995)	5.621 (0.765)
EQUITYEMP00	111.96 (190.3)	89.981 (145.3)	329.779 (802.3)	132.155 (233.3)
OPROFIT00	6.950 (8.01)	2.771 (15.67)	5.453 (17.09)	6.126 (13.50)
EMPCH04_00	1.753 (40.79)	-12.446 (34.17)	8.877 (104.22)	-4.386 (30.39)
realWAGEEMP04_00	32.118 (33.25)	38.368 (51.74)	26.304 (41.26)	57.933 (93.74)
FIXEDEMP04_00	124.67 (234.0)	163.79 (198.2)	90.06 (249.7)	262.697 (581.2)
SALESEMP04_00	50.257 (101.8)	87.100 (159.6)	64.491 (180.3)	87.438 (146.3)
EQUITYEMP04_00	136.21 (213.7)	144.53 (200.0)	158.63 (678.6)	141.24 (186.9)
OPROFIT04_00	-0.099 (12.68)	-5.666 (15.84)	-1.210 (18.13)	1.741 (12.10)
PRIVTIME	2.043 (0.409)	2 (0.262)	2.150 (0.469)	2 (0.262)

Notes: Explanations for columns labels: II=firms under insider ownership throughout the analysed period, IO=initially under insider ownership, then moved to outsider ownership, OO=under outsider ownership throughout the analysed period, OI= initially under outsider ownership, then moved to insider ownership.

Source: author's calculations on the basis of research database

Appendix 33. Summary statistics for the variables in the ownership effects analysis by enterprise groups with unchanged and changed ownership (means and standard deviations)

Variable	ALL (N=527)		ALL (N=525)		ALL (N=554)		UCHO (N=337)		UCHO (N=339)		UCHO (N=358)		CHO (N=190)		CHO (N=186)		CHO (N=196)		
	I	II	Total		I	II	Total		I	II	Total		I	II	Total		I	II	Total
EMP	121.3	131.2	123.7		109.3	133.5	121.0		142.6	127.1	128.6		142.6	127.1	128.6		142.6	127.1	128.6
standard deviation	225.1	249.7	233.5		153.4	271.6	230.3		313.9	204.7	239.7		313.9	204.7	239.7		313.9	204.7	239.7
VALPROD (th EEK)	103.4	166.9	137.6		113.2	179.4	148.6		86.1	143.9	117.4		86.1	143.9	117.4		86.1	143.9	117.4
standard deviation	101.8	161.3	131.5		105.4	173.6	137.7		92.9	133.4	116.8		92.9	133.4	116.8		92.9	133.4	116.8
SALESEMP (th EEK)	433.9	687.8	583.4		491.4	783.3	662.0		332.3	513.3	439.8		332.3	513.3	439.8		332.3	513.3	439.8
standard deviation	678.9	1169.9	917.8		793.8	1392.5	1078.7		383.6	533.2	476.0		383.6	533.2	476.0		383.6	533.2	476.0
STAFCOSEMP (th EEK)	68.8	100.6	86.7		72.6	105.1	90.9		62.3	92.4	79.2		62.3	92.4	79.2		62.3	92.4	79.2
standard deviation	40.7	53.1	48.0		43.5	57.5	51.3		34.2	42.9	40.4		34.2	42.9	40.4		34.2	42.9	40.4
EXPSH (%)	32.1	34.4	32.5		35.8	38.4	35.9		25.6	27.3	26.3		25.6	27.3	26.3		25.6	27.3	26.3
standard deviation	35.4	36.0	34.7		36.9	36.9	36.0		31.5	33.2	31.4		31.5	33.2	31.4		31.5	33.2	31.4
EXPEMP (th EEK)	141.4	229.6	185.8		171.1	271.9	216.3		89.1	152.4	130.1		89.1	152.4	130.1		89.1	152.4	130.1
standard deviation	330.1	584.7	432.1		386.6	682.6	486.1		183.3	327.6	303.5		183.3	327.6	303.5		183.3	327.6	303.5
FIXEEMP (th EEK)	198.1	417.4	347.5		205.0	482.5	400.1		185.8	296.0	251.4		185.8	296.0	251.4		185.8	296.0	251.4
standard deviation	455.3	1525.6	1303.1		453.6	1807.5	1566.7		459.3	749.3	554.5		459.3	749.3	554.5		459.3	749.3	554.5
OPROFIT (%)	1.9	5.3	3.4		2.7	6.1	4.2		0.5	3.9	1.8		0.5	3.9	1.8		0.5	3.9	1.8
standard deviation	23.6	19.7	20.3		25.7	20.6	21.9		19.3	17.9	17.0		19.3	17.9	17.0		19.3	17.9	17.0

Notes: UCHO=ownership has been unchanged since privatisation until 2004, CHO=ownership has changed after privatisation, I=period 1996–1999, II=period 2000–2004, Total=period 1996–2004

Source: author's calculations on the basis of research database.

Appendix 35. Results of the ANOVA test for variables in the ownership effects analysis by unchanged ownership* (F-statistics and p-value)

Variable	ANOVA statistics	FOR vs DOM vs MAN vs EMP			Total
		I	II		
EMP (thousands)	F-stat: p-value: significant differences:	3.2700 0.0214 MAN<FOR	4.5600 0.0038 DOM<FOR; MAN<FOR	4.0900 0.0071 DOM<FOR; MAN<FOR	4.0900 0.0071 DOM<FOR; MAN<FOR
VALPROD (th EEK)	F-stat: p-value: significant differences:	18.770 0.000 DOM<FOR; MAN<FOR; EMP<FOR	11.260 0.000 DOM<FOR; MAN<FOR; EMP<FOR	15.220 0.000 DOM<FOR; MAN<FOR; EMP<FOR	15.220 0.000 DOM<FOR; MAN<FOR; EMP<FOR
SALESEMP (th EEK)	F-stat: p-value: significant differences:	13.4600 0.0000 DOM<FOR; MAN<FOR; EMP<FOR	11.0400 0.0000 DOM<FOR; MAN<FOR; EMP<FOR	13.9000 0.0000 DOM<FOR; MAN<FOR; EMP<FOR	13.9000 0.0000 DOM<FOR; MAN<FOR; EMP<FOR
STAFCOSEMP (th EEK)	F-stat: p-value: significant differences:	25.5600 0.0000 DOM<FOR; MAN<FOR; EMP<FOR; MAN<DOM; EMP>MAN	26.7800 0.0000 DOM<FOR; MAN<FOR; MAN<DOM; EMP<FOR	28.0800 0.0000 DOM<FOR; MAN<FOR; EMP<FOR; MAN<DOM	28.0800 0.0000 DOM<FOR; MAN<FOR; EMP<FOR; MAN<DOM
EXPSH (%)	F-stat: p-value: significant differences:	17.5400 0.0000 DOM<FOR; MAN<FOR; EMP<FOR	24.1900 0.0000 DOM<FOR; MAN<FOR; EMP<FOR; MAN>DOM	22.1900 0.0000 DOM<FOR; MAN<FOR; EMP<FOR	22.1900 0.0000 DOM<FOR; MAN<FOR; EMP<FOR
EXPEMP (th EEK)	F-stat: p-value: significant differences:	14.9900 0.0000 DOM<FOR; MAN<FOR; EMP<FOR	12.5500 0.0000 DOM<FOR; MAN<FOR; EMP<FOR	16.4800 0.0000 DOM<FOR; MAN<FOR; EMP<FOR	16.4800 0.0000 DOM<FOR; MAN<FOR; EMP<FOR
FIXEDEMP (th EEK)	F-stat: p-value: significant differences:	3.6700 0.0125 MAN<FOR; MAN<DOM	1.4000 0.2413	1.5400 0.2038	1.5400 0.2038
OPROFIT (%)	F-stat: p-value: significant differences:	0.3900 0.7629	1.0200 0.3833	0.3200 0.8103	0.3200 0.8103

Notes: *unchanged ownership – ownership has not changed since privatisation until 2004, FOR=foreign ownership, DOM=domestic outsider ownership, MAN=manager ownership, EMP=employee ownership, I=period 1996–1999, II=period 2000–2004, Total=period 1996–2004

Source: author's calculations on the basis of research database.

Appendix 36. Summary statistics for the variables in the ownership effects analysis by changed ownership* (means and standard deviations)

Variable	STA/FOR (N=7)		STA/FOR (N=6)		STA/FOR (N=7)		STA/DOM (N=4)		STA/DOM (N=6)		STA/DOM (N=6)		STA/MAN (N=3)		STA/MAN (N=3)		STA/MAN (N=3)		
	I	II	II	Total	Total	I	II	I	II	Total	Total	I	II	Total	Total	Total	Total	Total	
EMP (thousands)	636.6	507.7	507.7	526.9	526.9	116.1	144.5	116.1	144.5	144.5	155.8	174.6	147.7	158.3	174.6	147.7	158.3	174.6	147.7
standard deviation	1231.8	594.6	594.6	863.2	863.2	61.7	113.2	61.7	113.2	113.2	100.6	251.8	224.3	234.2	251.8	224.3	234.2	251.8	224.3
VALPROD (th EEK)	229.6	477.6	477.6	291.0	291.0	45.7	183.1	45.7	183.1	183.1	175.7	69.6	88.0	80.5	69.6	88.0	80.5	69.6	88.0
standard deviation	336.6	208.5	208.5	360.7	360.7	52.4	252.9	52.4	252.9	252.9	242.1	12.0	22.7	14.5	12.0	22.7	14.5	12.0	22.7
SALESEMP (th EEK)	967.3	1323.6	1323.6	1124.5	1124.5	206.2	737.4	206.2	737.4	737.4	735.0	180.9	279.6	238.3	180.9	279.6	238.3	180.9	279.6
standard deviation	595.0	823.3	823.3	662.4	662.4	76.2	1208.6	76.2	1208.6	1208.6	1207.3	53.5	38.0	43.9	53.5	38.0	43.9	53.5	38.0
STAFCOSEMP (th EEK)	123.3	160.9	160.9	140.7	140.7	69.5	115.5	69.5	115.5	115.5	110.7	57.5	94.0	78.5	57.5	94.0	78.5	57.5	94.0
standard deviation	22.1	31.5	31.5	20.2	20.2	16.2	68.5	16.2	68.5	68.5	70.6	10.1	19.4	14.3	10.1	19.4	14.3	10.1	19.4
EXPSH (%)	28.1	36.8	36.8	31.0	31.0	1.8	16.8	1.8	16.8	16.8	17.1	50.4	50.2	50.2	50.4	50.2	50.2	50.4	50.2
standard deviation	39.7	40.0	40.0	38.0	38.0	2.1	40.2	2.1	40.2	40.2	40.0	44.1	44.6	44.3	44.1	44.6	44.3	44.1	44.6
EXPEMP (th EEK)	276.7	435.1	435.1	337.7	337.7	3.3	527.2	3.3	527.2	527.2	527.9	105.3	150.4	131.8	105.3	150.4	131.8	105.3	150.4
standard deviation	433.5	557.8	557.8	479.8	479.8	3.5	1289.7	3.5	1289.7	1289.7	1289.3	101.0	139.2	122.5	101.0	139.2	122.5	101.0	139.2
FIXEDEMP (th EEK)	1041.7	983.3	983.3	985.2	985.2	344.2	1097.9	344.2	1097.9	1097.9	749.2	60.1	146.1	108.6	60.1	146.1	108.6	60.1	146.1
standard deviation	967.7	475.1	475.1	471.4	471.4	417.0	2190.3	417.0	2190.3	2190.3	1352.1	25.1	131.9	80.9	25.1	131.9	80.9	25.1	131.9
OPROFIT (%)	0.3	13.8	13.8	-0.6	-0.6	-36.2	-4.4	-36.2	-4.4	-4.4	-12.8	9.5	-26.9	-10.7	9.5	-26.9	-10.7	9.5	-26.9
standard deviation	41.1	8.1	8.1	40.6	40.6	62.5	55.2	62.5	55.2	55.2	55.1	8.3	51.1	24.9	8.3	51.1	24.9	8.3	51.1

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Variable	FOR/ DOM (N=10)		FOR/ DOM (N=10)		FOR/ MAN (N=7)		FOR/ MAN (N=8)		FOR/ MAN (N=8)		DOM/ FOR (N=14)		DOM/ FOR (N=14)		DOM/ MAN (N=38)		DOM/ MAN (N=36)		DOM/ MAN (N=39)			
	I	II	Total	I	II	Total	I	II	Total	I	II	Total	I	II	Total	I	II	Total	I	II	Total	
EMP (thousands)	94.0	90.9	91.2	42.0	33.3	37.1	271.1	242.4	242.9	72.8	74.6	71.2										
standard deviation	70.4	51.6	53.7	37.6	32.8	32.4	335.4	216.2	229.6	89.2	80.9	80.7										
VALPROD (th EEK)	101.1	172.8	142.4	97.5	122.4	104.1	125.9	189.1	173.1	83.8	137.8	111.1										
standard deviation	51.8	99.9	69.3	81.3	44.0	59.1	116.9	98.9	102.6	85.3	142.0	114.1										
SALESEMP (th EEK)	401.7	708.3	581.6	521.1	529.2	513.5	673.9	991.4	920.6	285.6	461.5	392.2										
standard deviation	295.5	531.0	427.3	454.4	333.5	377.4	630.6	782.1	722.2	256.4	548.4	466.7										
STAFCOSEMP (th EEK)	70.1	109.4	92.8	77.1	100.3	87.4	92.7	119.0	111.7	53.8	82.4	68.8										
standard deviation	25.9	42.9	34.7	44.4	47.7	46.0	42.0	38.3	40.3	35.4	38.3	37.9										
EXPSH (%)	22.6	25.3	24.2	37.7	25.0	29.6	49.0	61.0	56.6	24.9	26.0	24.4										
standard deviation	26.5	34.3	29.9	38.7	41.7	39.4	42.0	36.3	36.0	31.7	32.3	30.3										
EXPEMP (th EEK)	97.6	153.8	132.0	196.8	153.6	162.5	249.0	475.5	417.1	46.6	76.1	61.5										
standard deviation	144.8	268.7	215.3	402.0	384.0	380.7	274.6	367.9	331.0	71.1	104.6	84.2										
FIXEDEMP (th EEK)	120.5	217.1	175.6	39.4	55.8	46.0	304.6	533.4	484.9	106.3	198.4	163.6										
standard deviation	114.0	173.0	144.2	33.5	60.2	35.2	508.7	832.2	762.6	163.0	378.9	321.2										
OPROFIT (%)	2.6	4.2	3.9	-3.8	3.4	-0.7	1.7	6.6	2.9	3.8	5.3	4.6										
standard deviation	7.9	4.3	3.3	5.4	6.1	2.5	19.5	8.9	6.9	6.4	14.5	9.3										

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Variable	MAN/FOR (N=7)			MAN/FOR (N=6)			MAN/FOR (N=7)			MAN/DOM (N=21)			MAN/DOM (N=19)			MAN/DOM (N=21)			MAN/EMP (N=2)		
	I	II	Total	I	II	Total	I	II	Total	I	II	Total	I	II	Total	I	II	Total	I	II	Total
EMP (thousands)	85.8	169.5	120.7	152.4	137.1	134.5	48.9	44.1	46.2	152.4	137.1	134.5	48.9	44.1	46.2	152.4	137.1	134.5	48.9	44.1	46.2
standard deviation	103.2	212.1	158.3	308.8	252.1	266.1	16.4	28.4	23.1	308.8	252.1	266.1	16.4	28.4	23.1	308.8	252.1	266.1	16.4	28.4	23.1
VALPROD (th EEK)	92.4	158.8	124.1	78.0	105.9	93.5	58.9	92.5	77.6	78.0	105.9	93.5	58.9	92.5	77.6	78.0	105.9	93.5	58.9	92.5	77.6
standard deviation	68.8	95.2	96.6	56.9	75.5	65.5	10.9	0.5	4.6	56.9	75.5	65.5	10.9	0.5	4.6	56.9	75.5	65.5	10.9	0.5	4.6
SALESEMP (th EEK)	563.6	454.5	422.0	276.3	409.4	336.9	86.6	140.4	116.5	276.3	409.4	336.9	86.6	140.4	116.5	276.3	409.4	336.9	86.6	140.4	116.5
standard deviation	1040.3	434.2	519.2	218.0	285.1	239.1	23.1	12.1	17.0	218.0	285.1	239.1	23.1	12.1	17.0	218.0	285.1	239.1	23.1	12.1	17.0
STAFCOSEMP (th EEK)	73.5	130.6	100.9	50.8	83.1	64.9	50.7	86.2	70.4	50.8	83.1	64.9	50.7	86.2	70.4	50.8	83.1	64.9	50.7	86.2	70.4
standard deviation	54.5	72.7	74.1	29.5	38.6	35.9	7.0	13.9	10.8	29.5	38.6	35.9	7.0	13.9	10.8	29.5	38.6	35.9	7.0	13.9	10.8
EXPSPH (%)	51.2	60.6	51.8	20.5	17.4	18.0	29.0	39.4	34.8	20.5	17.4	18.0	29.0	39.4	34.8	20.5	17.4	18.0	29.0	39.4	34.8
standard deviation	40.8	33.1	38.7	27.0	27.5	24.9	29.4	52.5	42.3	27.0	27.5	24.9	29.4	52.5	42.3	27.0	27.5	24.9	29.4	52.5	42.3
EXPEMP (th EEK)	158.5	215.1	166.7	80.8	105.2	87.8	21.0	54.8	39.8	80.8	105.2	87.8	21.0	54.8	39.8	80.8	105.2	87.8	21.0	54.8	39.8
standard deviation	235.5	143.0	160.9	197.2	253.0	215.8	17.6	73.0	48.4	197.2	253.0	215.8	17.6	73.0	48.4	197.2	253.0	215.8	17.6	73.0	48.4
FIXE/DEMP (th EEK)	91.0	115.1	93.2	248.7	165.2	274.0	51.6	58.2	55.3	248.7	165.2	274.0	51.6	58.2	55.3	248.7	165.2	274.0	51.6	58.2	55.3
standard deviation	140.7	85.7	99.0	647.3	174.0	645.5	38.5	25.1	31.0	647.3	174.0	645.5	38.5	25.1	31.0	647.3	174.0	645.5	38.5	25.1	31.0
OPPROFIT (%)	1.7	3.3	2.7	2.8	-1.8	-2.4	1.9	13.6	8.4	2.8	-1.8	-2.4	1.9	13.6	8.4	2.8	-1.8	-2.4	1.9	13.6	8.4
standard deviation	5.9	1.0	3.1	14.5	29.7	21.9	2.2	5.6	2.1	14.5	29.7	21.9	2.2	5.6	2.1	14.5	29.7	21.9	2.2	5.6	2.1

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Variable	EMP/FOR (N=2)		EMP/FOR (N=2) Total	EMP/DOM (N=27)		EMP/DOM (N=29) II	EMP/DOM (N=29)		EMP/DOM (N=29) Total	EMP/MAN (N=38)		EMP/MAN (N=38) Total
	I	II		I	II		I	II				
EMP (thousands)	18.5	12.1	15.2	85.1	74.9	78.8	67.7	62.6	60.9	62.6	60.9	
standard deviation	11.7	14.9	13.1	94.3	83.1	85.6	62.6	58.7	56.3	58.7	56.3	
VALPROD (th EEK)	83.9	164.7	128.1	58.1	102.3	84.9	68.9	110.3	91.7	110.3	91.7	
standard deviation	102.9	183.2	148.4	45.3	69.2	55.2	33.4	57.1	45.8	57.1	45.8	
SALESEMP (th EEK)	149.7	316.8	239.7	175.8	332.0	264.0	236.8	399.3	322.8	399.3	322.8	
standard deviation	146.7	235.0	199.9	146.1	293.5	213.6	168.0	319.0	243.8	319.0	243.8	
STAFCOSEMP (th EEK)	63.0	82.3	73.1	56.4	83.9	72.8	52.2	77.1	66.1	77.1	66.1	
standard deviation	68.1	62.1	65.7	27.4	41.9	33.6	19.9	28.5	23.8	28.5	23.8	
EXPSH (%)	32.5	43.9	38.9	17.2	22.6	21.3	17.8	15.0	16.5	17.8	16.5	
standard deviation	42.2	62.1	53.1	26.8	29.1	28.0	24.7	22.4	23.2	24.7	23.2	
EXPEMP (th EEK)	80.5	212.5	153.9	25.8	66.6	50.5	59.5	72.0	64.2	59.5	64.2	
standard deviation	113.1	300.6	217.2	42.6	96.1	70.6	132.7	152.6	139.7	132.7	139.7	
FIXEDEMP (th EEK)	23.9	331.0	184.4	249.3	208.4	212.0	68.9	123.1	96.8	68.9	96.8	
standard deviation	12.4	70.5	19.3	722.0	300.8	477.3	82.1	103.4	86.6	82.1	86.6	
OPROFIT (%)	-0.3	7.7	4.1	-4.6	3.0	-0.1	2.0	5.9	3.9	2.0	3.9	
standard deviation	17.3	25.1	21.7	29.6	11.7	18.5	12.5	8.8	7.6	12.5	7.6	

Notes: * changed ownership – ownership has changed since privatisation; STA/FOR=ownership changed from state to foreign, STA/DOM= ownership changed from state to domestic outsider, STA/MAN= ownership changed from state to manager, FOR/DOM= ownership changed from foreign to domestic outsider, FOT/MAN= ownership changed from foreign to manager, DOM/FOR= ownership changed from domestic outsider to foreign, DOM/MAN= ownership changed from domestic outsider to manager, MAN/FOR= ownership changed from manager to foreign, MAN/DOM= ownership changed from manager to domestic outsider, MAN/EMP= ownership changed from manager to employee, EMP/FOR= ownership changed from employee to foreign, EMP/DOM= ownership changed from employee to domestic outsider, EMP/MAN= ownership changed from employee to manager; I=period 1996–1999, II=period 2000–2004, Total=period 1996–2004.

Source: author's calculations on the basis of research database.

Appendix 37. Results of the ANOVA test for variables in the ownership effects analysis by changed ownership* (F-statistics and p-values)

Variable	ANOVA statistics	STA/FOR vs STA/DOM vs STA/MAN			FOR/DOM vs FOR/MAN			DOM/FOR vs DOM/MAN			MAN/FOR vs MAN/DOM vs MAN/EMP			EMP/FOR vs EMP/DOM vs EMP/MAN		
		I	II	Total	I	II	Total	I	II	Total	I	II	Total	I	II	Total
EMP (thousands)	F-stat: 0.5100 p-value: 0.6114 sign. diff.	1.4700	0.7600	0.7600	3.1400	7.5100	6.2500	11.4500	16.2700	16.6000	0.2600	0.2100	0.1200	0.9400	0.8600	1.1100
		0.2695	0.4883	0.4883	0.0965	0.0145	0.0237	0.0014	0.0002	0.0002	0.7758	0.8147	0.8836	0.3978	0.4261	0.3372
					FM<FD	FM<FD	FM<FD	DM<DF	DM<DF	DM<DF						
VALPROD (th EEK)	F-stat: 0.8500 p-value: 0.4532 sign. diff.	4.4700	0.6200	0.6200	0.0100	1.7500	1.5400	2.0300	1.5300	3.1900	0.3000	1.1300	0.5700	0.7800	0.8500	0.6700
		0.0354	0.5506	0.5506	0.9126	0.2049	0.2328	0.1605	0.2220	0.0799	0.7455	0.3417	0.5726	0.4613	0.4317	0.5147
					SD<SF; SM<SF											
SALESEMP (th EEK)	F-stat: 5.3400 p-value: 0.0239 sign. diff.	1.3400	1.1200	1.1200	0.4300	0.6900	0.1200	10.1400	7.3500	9.7400	1.0200	0.7600	0.7200	1.3000	0.4100	0.5900
		0.2990	0.3565	0.3565	0.5197	0.4192	0.7284	0.0025	0.0093	0.0030	0.3751	0.4779	0.4962	0.2785	0.6653	0.5545
					SD<SF; SM<SF			DM<DF	DM<DF	DM<DF						
STAFCOSEMP (th EEK)	F-stat: 17.4500 p-value: 0.0004 sign. diff.	2.2300	2.0200	2.0200	0.1700	0.1800	0.0800	11.1700	9.2600	12.7600	1.0600	2.2800	1.5600	0.3700	0.2900	0.4400
		0.1497	0.1725	0.1725	0.6861	0.6754	0.7782	0.0016	0.0038	0.0008	0.3594	0.1247	0.2281	0.6943	0.7527	0.6431
					SD<SF; SM<SF			DM<DF	DM<DF	DM<DF						

continues ...

continues ...

Variable	ANOVA statistics	STA/FOR vs STA/DOM vs STA/MAN			FOR/DOM vs FOR/MAN			DOM/FOR vs DOM/MAN			MAN/FOR vs MAN/DOM vs MAN/EMP			EMP/FOR vs EMP/DOM vs EMP/MAN		
		I	II	Total	I	II	Total	I	II	Total	I	II	Total	I	II	Total
EXPSH (%)	F-stat: 1.7100 p-value: 0.2256 sign. diff: 0.4918	0.7500 0.4918	0.7000 0.5149	0.9300 0.3514	0.0000 0.9882	0.1100 0.7445	4.9500 0.0306	11.0200 0.0017	10.4500 0.0022	2.6300 0.0903	4.8100 0.0175	3.5700 0.0422	0.3300 0.7213	1.5300 0.2254	0.8700 0.4236	
EXPEMP (th EEK)	F-stat: 0.9700 p-value: 0.4092 sign. diff: 0.8421	0.1700 0.8421	0.2200 0.8064	0.5300 0.4796	0.0000 0.9990	0.0500 0.8329	17.9500 0.0001	36.0100 0.0000	39.2200 0.0000	0.5300 0.5959	0.6300 0.5413	0.5100 0.6056	0.9200 0.4055	1.1100 0.3369	0.7600 0.4731	
FIXEDEMP (th EEK)	F-stat: 2.2300 p-value: 0.1541 sign. diff: 0.6375	0.4700 0.6375	1.0000 0.3939	3.2900 0.0899	6.2800 0.0234	6.1100 0.0251	4.6300 0.0363	3.8700 0.0549	4.7200 0.0344	0.2800 0.7572	0.5800 0.5692	0.3700 0.6965	1.2600 0.2916	1.8600 1.8600	1.1000 0.3402	
OPROFIT (%)	F-stat: 1.1500 p-value: 0.3529 sign. diff: 0.4047	0.9800 0.4047	0.1300 0.8784	3.5000 0.0808	0.0900 0.7620	10.6400 0.0049	2.4300 0.1256	0.1000 0.7524	0.4000 0.5318	0.0200 0.9776	0.3700 0.6950	0.4300 0.6531	0.7600 0.4731	0.6800 0.5084	0.7400 0.4811	

Notes: *changed ownership – ownership has changed since privatisation; STA/FOR=ownership changed from state to foreign, STA/DOM= ownership changed from state to domestic outsider, STA/MAN= ownership changed from state to manager, FOR7DOM= ownership changed from foreign to domestic outsider, FOT/MAN= ownership changed from foreign to manager, DOM/FOR= ownership changed from domestic outsider to foreign, DOM/MAN= ownership changed from domestic outsider to manager, MAN/FOR= ownership changed from manager to foreign, MAN/DOM= ownership changed from manager to domestic outsider, MAN/EMP= ownership changed from manager to employee, EMP/FOR= ownership changed from employee to foreign, EMP/DOM= ownership changed from employee to domestic outsider, EMP/MAN= ownership changed from employee to manager, I=period 1996–1999, II=period 2000–2004, Total=period 1996–2004.

Source: author's calculations on the basis of research database.

Appendix 38. Explanation of the variables used in the OLS regression analysis

Variable	Definition of variables
DEPENDENT VARIABLES	
<i>Financial restructuring</i> DEBT2004	Measures the ratio of debt obligations at the end of the period – year 2004; calculated as follows: average debt obligations/average total assets, in per cent; continuous variable
DEBTEQ2004	Measures the debt-equity ratio at the end of the period – year 2004; calculated as follows: average debt obligations+average long-term liabilities/average total equity, in per cent; continuous variable
DEBT04_96	Measures the change in the ratio of debt obligation during the total analysis period – difference between 1996 and 2004; calculated as follows: DEBT2004–DEBT1996, in percentage points; continuous variable
Technological restructuring	
INVEST2004	Measures the investment rate of increase at the end of the period – year 2004; calculated as follows: (the end of the period fixed assets (2004) – the beginning of the period fixed assets (2004)) + depreciation/the beginning of the period fixed assets (2004), in per cent; continuous variable
FIXEDEMP2004	Measures the level of fixed assets per employee at the end of the period – year 2004; calculated as follows: the end of the period fixed assets/number of average employee; continuous variable
ENERGY2004	Measures the share of electricity costs in total costs at the end of the period – year 2004; calculated as follows: electricity costs/total costs, in per cent; continuous variable
FIXEDEMP04_96	Measures the change in the level of fixed assets per employee during the total analysis period – difference between 1996 and 2004; calculated as follows: FIXEDEMP2004 – FIXEDEMP1996, in per cent; continuous variable
ENERGY04_96	Measures the change in the share of electricity costs in total costs during the total analysis period – difference between 1996 and 2004; calculated as follows: ENERGY2004 – ENERGY1996, in percentage points; continuous variable
Organizational restructuring	
EMPC04_96	Measures the change in the average number of employees during the total analysis period – difference between 1996 and 2004; calculated as follows: average employment 2004 – average employment 1996/ average employment 1996, in per cent; continuous variable
realWAGEEMP04_96	Measures the change in the level of real wage per employee during the total analysis period – difference between 1996 and 2004; calculated as follows: wage per employee 2004 – wage per employee 1996/ wage per employee 1996, deflated by consumer price index at 1996 constant prices, in per cent; continuous variable

Variable	Definition of variables
EXPEMP04_96	<p>DEPENDENT VARIABLES</p> <p>Measures the change in the level of export per employee during the total analysis period – difference between 1996 and 2004; calculated as follows: export per employee 2004 – export per employee 1996/ export per employee 1996, in per cent; continuous variable</p>
<i>Performance indicators</i>	
VALPROD2004	<p>Measures the level of labour productivity at the end of the period – year 2004; calculated as follows: the end of the period valued added/number of average employee; continuous variable</p>
SALESEMP2004	<p>Measures the level of labour productivity at the end of the period – year 2004; calculated as follows: the end of the period net sales/number of average employee; continuous variable</p>
VALPROD04_96	<p>Measures the change in the level of labour productivity during the total analysis period – difference between 1996 and 2004; calculated as follows: value added per employee 2004 – value added per employee 1996/ value added per employee 1996, in per cent; continuous variable</p>
SALESEMP04_96	<p>Measures the change in the level of labour productivity during the total analysis period – difference between 1996 and 2004; calculated as follows: net sales per employee 2004 – net sales per employee 1996/ net sales per employee 1996, in per cent; continuous variable</p>
OPROFIT04_96	<p>Measures the change in the level of profitability during the total analysis period – difference between 1996 and 2004; calculated as follows: operating profit/net sales 2004 – operating profit/net sales 1996, in percentage points; continuous variable</p>

Variable	Definition of variables INDEPENDENT VARIABLES
<p><i>Ownership change groups</i></p> <p>OWN_*_2004</p>	<p>Categorical variable which differentiates post-privatisation ownership changes across eight ownership change groups between the time of privatisation and 2004:</p> <p>FD – group of enterprises where ownership has changed from foreign to domestic outsider ownership;</p> <p>FM – group of enterprises where ownership has changed from foreign to manager ownership</p> <p>DF – group of enterprises where ownership has changed from domestic outsider to foreign ownership</p> <p>DM – group of enterprises where ownership has changed from domestic outsider to manager ownership</p> <p>MF – group of enterprises where ownership has changed from manager to foreign ownership</p> <p>MD – group of enterprises where ownership has changed from manager to domestic outsider ownership</p> <p>ED – group of enterprises where ownership has changed from employee to domestic outsider ownership</p> <p>EM – group of enterprises where ownership has changed from employee to manager ownership</p> <p>The enterprise group with unchanged ownership OWN_UCH_2004 is determined as a reference group in the model</p>
<p><i>Control variables</i></p> <p>PerSIZE_*</p> <p>IND_*_04</p>	<p>Categorical variable which controls for a firm size across four types of firms: micro (1–19 employees) – PerSIZE_19; small (20 to 49 employees) – PerSIZE_49; medium (50 to 249 employees) – PerSIZE_249; and large (250 and more employees) – PerSIZE_more250. The largest group PerSIZE_249 is determined as a reference group in the model</p> <p>Categorical variable which controls for industry effects across 19 industry types: one control variable describes primary sector (IND_PRIM_04), 11 control variables describe manufacturing sector (IND_FOOD_04, IND_TEXTILE_04, IND_WOOD_04, IND_CHEMICAL_04, IND_RUBBER_04, IND_MINERAL_04, IND_METALS_04, IND_MACHINERY_04, IND_ELECTRICAL_04, IND_TRANSPORT_04, IND_FURNITURE_04, IND_TEXTILE_04), and 7 control variables describe service sector (IND_ELECTRICITY_04, IND_CONSTR_04, IND_TRADE_04, IND_HOTELS_04, IND_TRANSCOMM_04, IND_ESTATE_04, IND_HEALTH_04); in grouping the industry control variables the NACE 2–digit classification has been used. The largest group IND_TEXTILE_04 is determined as a reference group in the model</p>
<p>INITIALOWN_*</p>	<p>Categorical variable which controls for initial ownership at the time of privatisation across four types of firms: domestic outsider (INITIALOWN_D), foreign (INITIALOWN_F), manager (INITIALOWN_M), and employee (INITIALOWN_E). The largest group INITIALOWN_D is determined as a reference group in the model</p>

Variable	Definition of variables
	INDEPENDENT VARIABLES
PRIVTIME_*	Categorical variable which controls for a firm privatisation time across three types of firms: privatized before 1990 (PRIVTIME_90), privatized between 1991 and 1995 (PRIVTIME_91_95), privatized after 1996 (PRIVTIME_96). The largest group PRIVTIME_91_95 is determined as a reference group in the model
<i>Other variables</i>	
ROA2004	Measures the level of return on assets at the end of the period – year 2004; calculated as follows: operating profit/average total assets, in per cent; continuous variable
TANG2004	Measures the share of tangible assets in total assets at the end of the period – year 2004; calculated as follows: the end of the period fixed assets/the end of the period total assets, in per cent; continuous variable
ROA04_96	Measures the change in return on assets during the total analysis period – difference between 1996 and 2004; calculated as follows: return on assets2004 – return on assets1996, in percentage points; continuous variable
TANG04_96	Measures the change in the share of tangible assets in total assets during the total analysis period – difference between 1996 and 2004; calculated as follows: share of tangible assets in total assets2004 – share of tangible assets in total assets1996, in percentage points; continuous variable
realSALESCH04_96	Measures the change in the level of net sales during the total analysis period – difference between 1996 and 2004; calculated as follows: net sales 2004 – net sales 1996/ net sales 1996, deflated by consumer price index at 1996 constant prices, in per cent; continuous variable
realFIXASSETS04_96	Measures the change in the level of fixed assets during the total analysis period – difference between 1996 and 2004; calculated as follows: fixed assets 2004 – fixed assets 1996/ fixed assets 1996, deflated by produce price index at 1996 constant prices, in per cent; continuous variable
realSALSEMP04_96	Measures the change in the level of average net sales during the total analysis period – difference between 1996 and 2004; calculated as follows: net sales per employee 2004 – net sales per employee 1996/ net sales per employee, deflated by consumer price index at 1996 constant prices, in per cent; continuous variable

Notes: * – refers to different variables determined as specific groups described in the variable definition column
Source: compiled by the author.

SUMMARY IN ESTONIAN

OMANDISTRUKTUURI MUUTUSED, NEID MÕJUTAVAD TEGURID JA NENDE ROLL ETTEVÕTETE RESTRUKTUREERIMISEL SIIRDEMAJANDUSES EESTI ETTEVÕTETE NÄITEL

Töö aktuaalsus

Omandiga seotud küsimused on alati olnud oluline osa majandustegevusest vabaturumajanduses. Alates ajast, mil Adam Smith kirjutas raamatu “*Rahvaste rikkus*” (1776), on majandusteadlased väitnud, et eraomandiga sooritatud vabaturu tehingud väldiks olukorda, kus ettevõtet kontrollivad äriettevõtted ning inividid saaksid oma võimu kuritarvitada, ning aitaksid kaasa nende käsutuses olevate tootmisressursside efektiivseimale kasutusele (Blair 1995). Sel ajal oli levinud arusaam, et need, kes omavad vara, ka haldavad ning kontrollivad seda vastavalt oma isiklikule jõukusele. Olukord muutus dramaatiliselt 20. saj. alguses, mil kaks teadlast, Berle ja Means (1932), heitsid oma tööga valgust märkimisväärsetele muutustele Ameerika ettevõtete tegevuses. Nad täheldasid, et suurte ettevõtete aktsiaomand oli nii hajutatud, et ühele konkreetsele indiviidile või indiviidide grupile kuulus enamusosalus vaid 11 protsendil 200 suuremast tööstusettevõttest. Nende töö tulemusi võib pidada äriühingute valitsemise (ingl. k. *corporate governance*) alase, sh omandistruktuuridega seotud aspektide, uurimisvaldkonna alguspunktiks.

Kuni 1980ndate lõpuni keskenduti äriühingute valitsemisega seotud uurimistöö enamasti valitsemisega seotud küsimustele arenenud majandustes (ingl. k. *developed economies*). Ulatuslikum uurimistöö äriühingute valitsemise valdkonnas Kesk- ja Ida-Euroopas (KIE) algas 1990ndate alguses koos sotsialistlike majanduste kokkuvarisemisega. Riigiomanduses olevate ettevõtete erastamine ning rakendatud erastamispoliitikate mitmekesisus erinevates riikides andis tõe uut tüüpi omanike ning mitmete erinevate omandistruktuuride tekkele. Mõnes riigis kasutati täiesti uusi erastamisviise (nt. Tšehhi Vabariigis), mis polnud varem arenenud majandusega riikides rakendust leidnud. Laiemalt puudusid teadmised erastamise mõjust majandusele ja kas loodud omandistruktuurid toovad kaasa vajaliku restruktureerimise ja tulemuslikkuse (ingl. k. *performance*) paranemise, mis on olulised edukaks üleminekuks turumajandusele. Kuna sageli olid erastamisotsused pigem poliitilised kui majanduslikke mõjusid arvestavad, siis ei pruukinud tekkinud omandistruktuurid olla kooskõlas institutsionaalsete arengutega. Seetõttu tekkisid ootused laialdasteks erastamisjärgseteks (ingl. k. *post-privatisation*) omandistruktuuride kohandumisteks (vt. nt. Jones ja Mygind 2005). See tekitas vajaduse uueks uurimistööks äriühingute valitsemise vallas, et selgitada välja

erastamise mõjusid restruktureerimisele ning ettevõtete tulemuslikkusele, samuti majandusele üldiselt. Siirderiikide kogemus annab ainulaadse võimaluse nende seoste uurimiseks.

Alates 1990ndate algusest on võimalik siirderiike (ingl. k. *transition countries*) käsitlevast kirjandusest leida palju uurimusi erastamise ning omandivormide mõjudest ettevõtte restruktureerimisele ja tulemuslikkusele (vt. nt. Djankov ja Murrell 2002, Wright ja Suhomlinova 2003). Samuti on tehtud mitmeid empiirilisi uurimusi omandistruktuuride dünaamikast erastamisjärgsel perioodil (vt. nt. Blaszczyk *et al.* 2001; Estrin ja Wright 1999; Filatotchev *et al.* 1999; Grosfeld ja Hashi 2003; Jones *et al.* 2005; Jones ja Mygind 1999, 2005; Kalmi 2003; Kocenda ja Valachy 2001; Kozarzewski ja Woodward 2001; Mygind *et al.* 2006; Simoneti *et al.* 2001). Omakorda on vaid üksikud erandid, kus keskendutakse ainult omandistruktuuri muutusi mõjutavate tegurite uurimisele (vt. nt. Jones *et al.* 2005, Jones ja Mygind 1999). Lisaks sellele on empiirilistes uurimustes väga vähe käsitlust leidnud erastamisjärgsete omandistruktuuri muutuste majanduslikud mõjud (vt. nt. Blaszczyk *et al.* 2001, Hanousek *et al.* 2007, Jones 1998, Simoneti *et al.* 2001). Kuna empiiriline uurimistöö erastamisjärgsete omandistruktuuride muutuste mõjude kohta ettevõtete restruktureerimisele ja tulemuslikkusele on ikka veel puudulik, on mitmed autorid osutanud vajadusele neid valdkondi põhjalikumalt uurida (vt. nt. Blaszczyk *et al.* 2003, Jones 2004).

Käesolev doktoritöö täiendab uurimisalast tühimikku, mis puudutab erastamisjärgsete omandistruktuuride ja ettevõtete restruktureerimise vaheliste seoste uurimist. Täpsemalt põhineb uurimisalane fookus omandistruktuuri muutustel erinevatel ajaperioodidel ja kuidas need muutused on mõjutanud ettevõtete restruktureerimist ja tulemuslikkust. Oluline on välja selgitada nende muutuste spetsiifilisus ja neid muutusi mõjutavad tegurid. Varasemates uurimustes pole neid arenguid käsitletud pikema ajaperioodi raamistikus ja erinevate ajaperioodide lõikes, mis on aga oluline, et aru saada, kuidas omandistruktuurid käituvad erinevatel majandusarengu etappidel. Peamiseks takistuseks on olnud vajalike andmete olemasolu. Üldiselt on spetsiifiliste omandistruktuuri muutuste ja erinevate restruktureerimise tüüpide vahelised seosed leidnud empiirilises kirjanduses vähe käsitlust.

Töö empiiriline kontekst põhineb Eesti ettevõtete erastamisjärgsete omandistruktuuride arengutel. Eesti on väike ja avatud majandusega riik, mille rahvusvahelist konkurentsivõimet määratleb oluliselt ka stabiilne ja jätkusuutlik sisemine majanduskeskkonna areng. Võrreldes mitmete teiste siirderiikidega, on Eesti puhul unikaalseks omaduseks selle kiired ja radikaalsed majandusreformid ülemineku algusaastail, samuti kiire majandusareng ülemineku hilisemas faasis, kuni aastani 2007. Eesti erastamisprotsess erines mitmeti teistest siirderiikide erastamisprotsessidest, kuid oli kõige sarnasem Ungari erastamisprotsessile. Eesti erastamisprotsess keskendus eelkõige tuumikinvestorite leidmisele ja erastamisel ei eelistatud mingeid konkreetseid omandigruppe, kui välja arvata eelistused endistele riigiettevõtete töötajatele varases erastamisfaasis. Selle

tulemusena tekkisid Eestis väga mitmekesised omandistruktuurid, mis annab väga hea aluse erinevate omandistruktuuride majanduslike mõjude uurimiseks. Lisaks eelnevale on Eesti kogenud enda iseseisvusaja jooksul kahte majanduslanguse perioodi, esimene oli 1999. aastal ja teine algas 2008. aastal. Seega, on olemas vajadus aru saada kuidas omandistruktuurid käituvad erinevatel majandusarengu etappidel.

Uurimuse eesmärk ja ülesanded

Käesoleva doktoritöö eesmärk on selgitada välja erastamisjärgsed muutused omandistruktuurides, neid mõjutavad tegurid ning nende roll Eesti ettevõtete restruktureerimisel. Mis puutub ettevõtete restruktureerimisse, siis erilist tähelepanu pööratakse finantsalasele, tehnoloogilisele ning organisatsioonilisele restruktureerimisele. Eesmärgi täitmiseks vajalikud uurimisülesanded on järgmised:

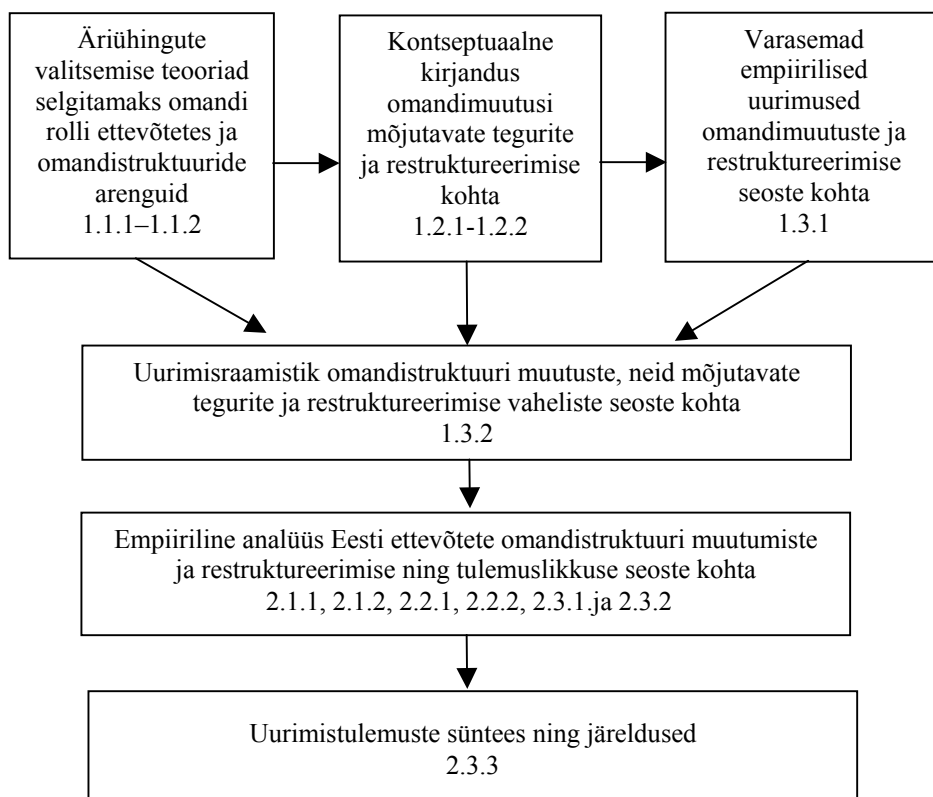
- 1) et mõista omandi rolli ettevõttes teoreetilisest vaatenurgast, vaadatakse läbi põhilised äriühingute valitsemist käsitlevad teooriad, kus erilist rõhku pööratakse omandi küsimustele;
- 2) et saada rohkem teada arengutest omandistruktuurides ning nende spetsiifikast siirderiikides, uuritakse erinevate riikide äriühingute valitsemise süsteeme, nagu näiteks Anglo-Ameerika, Kontinentaal-Euroopa, ning uued tekkinud valitsemissüsteemid siirdemajandustes;
- 3) kuna empiiriline analüüs viiakse läbi Eesti ettevõtete näitel, käsitletakse teoreetilisi vaatenurki tekkivatest omanditüüpidest, nende teguritest ja dünaamikast, samuti omandi rollist ettevõtete restruktureerimisel, siirdemajanduste kontekstis;
- 4) põhinedes töö käigus varem esitatud teoreetilistele vaatenurkadele ning käsitlustele, samuti varasema empiirilise uurimuse tulemustele, töötatakse välja kontseptuaalne raamistik empiiriliseks analüüsiks;
- 5) et kindlaks määrata Eesti iseärasusi seoses omandistruktuuride arengutega, tutvustatakse Eesti erastamisprotsessi ja põhilisi arenguid äriühingute valitsemisega seotud institutsioonides;
- 6) eelneva alusel formuleeritakse uurimisvõited empiiriliseks analüüsiks ja tutvustatakse uurimismetodikat;
- 7) järgnevalt analüüsitakse Eesti ettevõtete omandistruktuuri muutusi ja neid mõjutanud tegureid;
- 8) seejärel analüüsitakse erinevate omandivormide mõju ja omandimuutuste ning restruktureerimise ja tulemuslikkuse vahelisi seoseid Eesti ettevõtetes;
- 9) doktoritöö uurimistulemused sünteesitakse, esitatakse uurimustulemuste üldistused ja järeldused.

Doktoritöö teoreetiline taust

Käesolev doktoritöö koosneb kahest põhiosast. Esimeses osas töötatakse välja teoreetiline baas omandimuutuste analüüsiks ning ettevõtete restruktureerimiseks siirdemajandustes. Esiteks tutvustatakse teooriaid, mis selgitavad omandi rolli ning omandistruktuuride arengut erinevates riiklikes äriühingute valitsemise süsteemides. Seejärel antakse ülevaade kirjandusest, mis käsitleb omandistruktuuri muutusi ja ettevõtete restruktureerimist siirdeperioodil. Lõpuks esitatakse kontseptuaalne raamistik, analüüsivaks seoseid omandistruktuuride muutuste ja ettevõtete restruktureerimise vahel. Töö teises osas määratletakse Eesti erastamise iseärasused, esitatakse uurimisvähed, tutvustatakse andmeid ja uurimismeetodeid ning analüüsitakse omandimuutusi ja erastamisjärgsete omandimuutuste mõju Eesti ettevõtete restruktureerimisele ja tulemuslikkusele. Dissertatsiooni üldine loogika ja teoreetilise raamistiku loomise alused on esitatud joonisel 1.

Doktoritöö teoreetiline osa algab lühikese sissejuhatusega äriühingute valitsemise olemusest (alapunkt 1.1.1). Seejärel kirjeldatakse põhilisi äriühingute valitsemise teooriaid ning illustreeritakse omandi rolli ettevõttes nende teooriate vaatenurgast lähtudes. Kuna äriühingute valitsemise arengut on mõjutanud paljud distsipliinid, on ka seda kirjeldavad teooriad üsna erinevad. Siiski, kuna käesolev doktoritöö keskendub omandit puudutavatele küsimustele, tutvustatakse vaid nelja teoreetilist vaatenurka äriühingute valitsemisest.

Esimene neist on agenditeooria (ingl. k. *agency theory*), mis kirjeldab vahendussuhteid kokkuleppena omaniku (printsipaal) ja juhi (agent) vahel. Selle teooria väljatöötajateks on Jensen ja Meckling (1976) ning Fama ja Jensen (1983). Teiseks vaatenurgaks on tehingukulude ökonomika (ingl. k. *transaction cost economics*), mida on lahti seletatud Coase'i (1937) ja Williamsoni (1975, 1984 ja 1985) tööde kaudu. Antud meetod kirjeldab ettevõtet kui valitsemisstruktuuri. Kuigi agenditeooriat ja tehingukulude ökonomikat saab kasutada selleks, et selgitada, miks ettevõtted eksisteerivad, ei saa nende abil seletada, miks ühed ettevõtted on efektiivsemad kui teised. Seetõttu on abiks ideed, mis on välja töötatud ressursipõhise vaatenurga (ingl. k. *resource-based view of the firm*) (vt. nt. Barney 1986, 1991; Grant 1991) pooldajate poolt ning mis tulenevad põhiliselt Penrose'i (1959) poolt esitatud kasvuteooriast. Viimane aitab selgitada, miks mõned äriühingute valitsemise struktuurid on teistest efektiivsemad. Üks oluline vaatenurk äriühingute valitsemise vallas seoses omandisuhetega on huvigruppide teooria (ingl. k. *stakeholder theory*) (vt. nt. Blair 1995, Campell 1997, Donaldson and Preston 1995, Freeman 1984, Spurgin 2001), mis on edasiarendus omandiõiguste teooriast. Vastavalt sellele teooriale võib omandi staatust laiendada kõikidele ettevõttega seotud huvigruppidele.



Joonis 1. Doktoritöö üleschituse loogika.

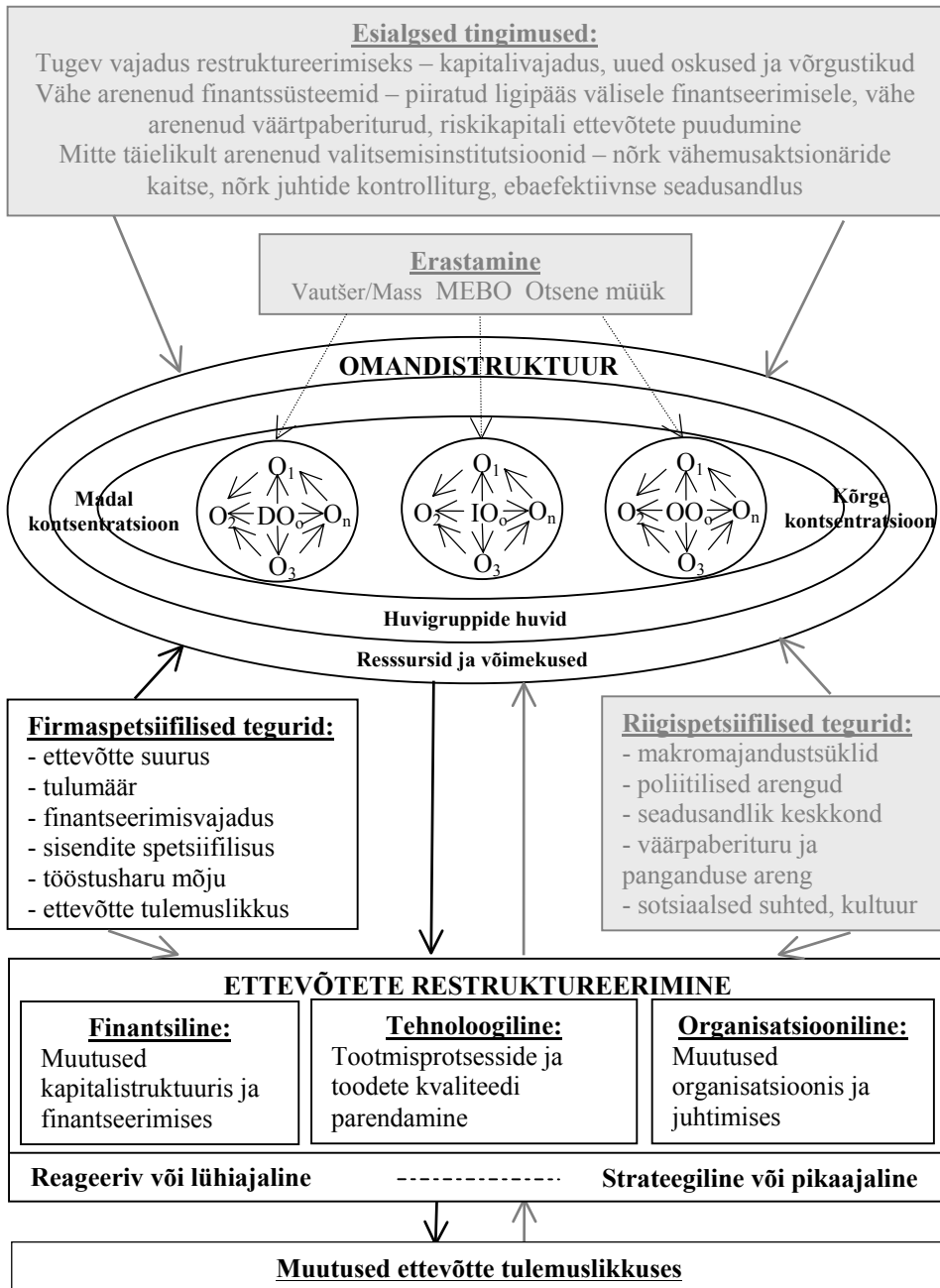
Järgmisena uuritakse erinevaid äriühingute valitsemise süsteeme (alapunkt 1.1.2). See on oluline, et mõista omandistruktuuride mitmekesisust erinevate riikide lõikes ning aru saada äriühingute valitsemise süsteemide spetsiifikast KIE riikides. Seetõttu tehakse lühike ülevaade omandistruktuuride 'evolutsioonilisest' arengust. Seejärel käsitletakse Anglo-Ameerika, Kontinentaal-Euroopa ja valitud KIE riigi äriühingute valitsemise süsteeme ning nende põhiomadusi. Analüüsides KIE äriühingute valitsemise süsteeme, uuritakse vaid Euroopa Liidu laienemise esimese ringi riike, kuna neil riikidel on olnud Eestiga võrreldes sarnasem majanduslik ja poliitiline areng kui teistel KIE ning Kagu-Euroopa siirderiikidel. Äriühingute valitsemise süsteeme Lõuna-Ameerikas, Kesk-Idas või Aasias (välja arvatud lühike kirjeldus Jaapani äriühingute valitsemise süsteemist) ei käsitleta, kuna eeldatakse, et tingituna ajaloolistest ja kultuurilistest põhjustest, arenevad äriühingute valitsemise süsteemid KIE riikides pigem kas Anglo-Ameerika või Kontinentaal-Euroopa süsteemide suunas.

Seejärel jätkatakse doktoritöös põhjalikuma analüüsiga teoreetilistest kaalutlustest omandistruktuuride arengut mõjutavatest teguritest (alapunkt

1.2.1) ning ettevõtte restruktureerimisest ja omandi mõjust sellele (alapunkt 1.2.2) siirdemajanduse kontekstis. Esiteks tutvustatakse põhilisi omanditüüpe vastavalt nende identiteedile ja kontsentratsioonile, mis tulenevad siirderiikides rakendatud erinevatest erastamispoliitikatest. Põhinedes Mygindi (2000/2001) töö, antakse võrdlev ülevaade erinevatest omanditüüpidest lähtuvalt nende ressurssidest ja huvidest, kuna see aitab mõista, miks erinevate omandistruktuuride efektiivsuse argumendid on sageli lahknevad. Omandistruktuuride tegurite ja muutuste analüüsis käsitletakse mitmeid autoreid, nagu näiteks Demsetz ja Lehn (1985), Earle ja Estrin (1997), Himmelberg *et al.* (1999), Jones *et al.* (2005), Jones ja Mygind (1999, 2005) ning Qu (2004). Lisaks sellele, toetudes Filatotchevi ja Wrighti (2005) ning Jonesi ja Mygindi (2005) ideedele, käsitletakse üsna uut teooriat äriühingute valitsemist puudutavas kirjanduses, mis selgitab äriühingute valitsemise arenguid läbi ettevõtte elutsükli etappide.

Sellele arutelu järgneb diskussioon omandistruktuuride rollist ettevõtete restruktureerimisel. Selleks analüüsitakse ettevõtte restruktureerimise erinevaid dimensioone ja tüüpe siirdemajanduses, toetudes Bonini (1998), Carlini ja Landesmanni (1997), Crumi ja Goldbergi (1998), Ericsoni (1998), Grosfeldi ja Rolandi (1995), Liebermani (1990, 1994) ning Linzi ja Kruegeri (1998) töödele. Omandistruktuuri rolli ettevõtete restruktureerimisel on põhjalikult analüüsitud paljudes empiirilistes töödes, mida käsitletakse kahe põhilise analüüsi põhjal – Djankov ja Murrell (2002) ning Wright ja Suhomlinova (2003).

Seejärel antakse ülevaade varasematest empiirilistest uurimustest omandistruktuuride muutuste kohta ning selle seosest ettevõtete restruktureerimisega siirdemajanduses (alapunkt 1.3.1). Tuginedes töö teoreetilisele osale ja varasema empiirilise uurimuse tulemustele arendati välja uurimistöö kontseptuaalne raamistik (alapunkt 1.3.2). Uurimistöö kontseptuaalne raamistik on esitatud joonisel 2.

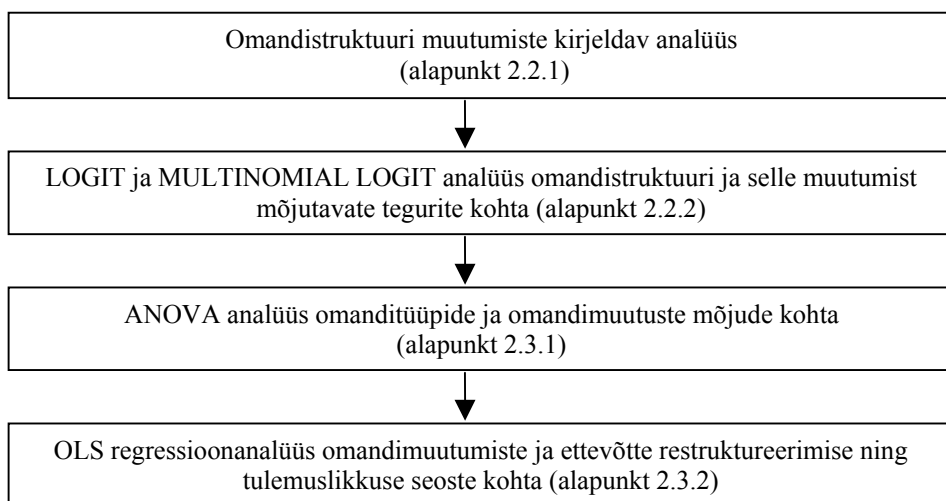


Joonis 2. Doktoritöö kontseptuaalne raamistik (DO_o – esialgne hajutatud omand, IO_o – esialgne ettevõttesisene omand, OO_o – esialgne ettevõtteväline omand, O_1, O_2, O_3, O_n – erastamisjärgsed omandimuutused).

Uurimismetoodika ja kasutatavad andmed

Käesoleva doktoritöö empiiriline analüüs põhines kahel andmebaasil: 1) Eesti ettevõtete bilansi ja kasumiaruande andmed, ning 2) Eesti ettevõtete andmed omandit käsitlevast uuringust. Finantsalane andmebaas sisaldab ettevõtete andmeid ajavahemikul 1996 kuni 2004. Omandit käsitlev uuring esitab ettevõtete aktsiakapitali jaotuse kolmel erineval ajahetkel: erastamisperioodil, 2000. ja 2004. aastal. Omandi andmebaas võimaldas jaotada ettevõtted viide erinevasse omandigruppi: riigiomand, tööjõuomand, juhiomand, kohalik ettevõtteväliline omanik ning välisomand. Need viis omanditüüpi moodustati vastavalt 'domineeriva omaniku' lähenemisele, kus ettevõttele määratakse omandigrupp, kellele kuulub rohkem aktsiaid kui mistahes teisele grupile. Et analüüsida omandistruktuure mõjutavaid tegureid ning seost omandimuutuste ja ettevõtete restruktureerimise ja tulemuslikkuse vahel, liideti need kaks andmebaasi kokku. Selle tulemusena tekkis uus andmebaas, mis sisaldab 555 ettevõtte andmeid aastatel 1996 kuni 2004. Seda andmebaasi kasutati kõikide doktoritöö uurimisvaidete kinnitamiseks.

Doktoritöö empiiriline analüüs viidi läbi neljas etapis (vt. joonis 3). Analüüsimaks muutusi omandistruktuurides, kasutati kirjeldavat meetodit. Omandi kontsentratsiooni taset Eesti ettevõtetes uuriti ühe suurima omaniku tasandil, samuti domineeriva omandigrupi tasandil. Omandistruktuuri muutuste illustreerimiseks kasutati omandimuutuse maatrikseid. Sellele järgnesid binaarne ja multinoomne logit analüüs (ingl. k. *binary and multinomial logit regression analysis*), mida kasutati omandistruktuure ja nende muutusi mõjutavate tegurite analüüsimiseks. Logit regressioonianalüüs võimaldas testida, kuidas sõltumatu muutuja marginaalne suurenemine suurendab tõenäosust, et ettevõtte kuulub mingisse kindlasse omandigruppi. Kolmandaks hinnati omandi ja omandimuutuste mõjusid, kasutades ühefaktorilist dispersioonanalüüsi (ingl. k. *univariate analysis of variance* – ANOVA). ANOVA analüüs võimaldas kindlaks määrata statistiliselt olulised erinevused ettevõtete tulemuslikkuses lähtuvalt nende omanditüübist. Neljandaks uuriti seoseid erastamisjärgsete omandimuutuste ja erinevate ettevõtete restruktureerimise tüüpide ning tulemuslikkuse vahel, kasutades vähimruutude meetodil põhinevat regressioonanalüüsi (ingl. k. *ordinary least squares regression analysis* – OLS). Seda meetodi kasutati, kuna see võimaldas hinnata kaheksa spetsiifilise omandimuutuste grupi mõju erinevatele restruktureerimise dimensioonidele ja ettevõtte tulemuslikkusele.



Joonis 3. Doktoritöö uurimismetodoloogia.

Töös püstitatud uurimisväited ja nende analüüsi tulemused

Käesoleva doktoritöö kontseptuaalse raamistiku põhjal võib väita, et omandistruktuuride muutuste analüüsimisel saab vaatluse alla võtta kolm erinevat aspekti. Esiteks, üldised omandi üleminekud erastamisjärgsel perioodil. Teiseks, ettevõtte- ja riigispetsiifiliste tegurite mõju omandistruktuuride arengule. Ning kolmandaks, omandimuutuste roll ettevõtete restruktureerimisel ning nende tulemuslikkuse parandamisel. Sellest tulenevalt jagati alapeatükis 2.1.2 välja töötatud uurimisväited kolme gruppi. Esimene grupp keskendub omandistruktuuri muutuste analüüsimisele. Teine grupp hindab ettevõtte-spetsiifiliste tegurite mõju omandistruktuuride arengule. Kolmas grupp keskendub erastamisjärgsete omandimuutuste ja ettevõtete restruktureerimise ning nende tulemuslikkuse vaheliste seoste uurimisele. Kõik eelnimetatud uurimisväited ja peamised tulemused on esitatud järgnevalt.

P1a: Nõrga väikeaktsionäride kaitse ja väikse väärtpaberituru tõttu võime eeldada, et omandi kontsentratsiooni tase on Eesti ettevõtetes väga kõrge ja see on pidevalt kasvanud

P1b: Omandi kontsentratsiooni tase on kõige kõrgem välisomandiga ettevõtetes ja kohaliku ettevõttevälise omandiga ettevõtetes ning kõige madalam tööjõuomandiga ettevõtetes

Mõlemad uurimisväited leidsid analüüsi käigus kinnitust. Analüüs näitas, et omandi kontsentratsiooni tase Eesti ettevõtetes on olnud kõrge juba alates erastamisest ja see on kasvanud kogu analüüsiperioodi jooksul. Kõige kõrgem on omandi kontsentratsiooni tase välisomandiga ettevõtetes ja kohaliku

ettevõttevälise omandiga ettevõtetes. Omandi kontsentratsiooni tase juhiomandiga ettevõtetes on mõnevõrra madalam kui kohalikus ettevõttevälise omandiga ettevõtetes. Omandi kontsentratsiooni tase on kõige madalam töäjõuomandiga ettevõtetes. Need analüüsi tulemused on kooskõlas varasemate samalaadsete empiiriliste uurimuste tulemustega.

P1c: Omandistruktuuri muutuste intensiivsus on kõige kõrgem esialgse töäjõuomandiga ettevõtetes, seejärel esialgse juhiomandiga ettevõtetes, esialgse kohaliku ettevõttevälise omandiga ettevõtetes ja esialgse välisomandiga ettevõtetes

See uurimisväide leidis analüüsi käigus osalist kinnitust. Omandistruktuuri muutuste analüüs näitas, et kõige intensiivsemad omandimuutused leiavad aset ettevõtetes, kus esialgseks omandiks on töäjõuomand. Esialgse töäjõuomandiga ettevõtted on põhiliselt üle võtnud juhid või kohalikud ettevõttevälised omanikud. Vähem intensiivsed liikumised leiavad aset ettevõtetes, mis on algselt olnud välisinvestorite kätes. Need mõlemad tulemused on kooskõlas varasemate empiiriliste uurimuste tulemustega. Samas näitas analüüs, et omandimuutuste intensiivsus ettevõtetes, kus esialgseks omandiks on juhiomand või kohalik ettevõtteväline omand, on sarnane ning jääb madalamaks kui esialgse töäjõuomandiga ettevõtetes. Siiski pole antud analüüsi põhjal võimalik väita, et omandimuutuste intensiivsus esialgse juhiomandiga ettevõtetes on suurem kui esialgse kohalike ettevõttevälise omandiga ettevõtetes. Pigem näitas analüüs vastupidist, ehkki erinevused muutuste intensiivsuses olid väga väikesed.

P1d: Ebastabiilse majandusliku ja aeglase institutsionaalse arengu tõttu võime eeldada, et muutused omandistruktuurides on sagedasemad varasemal kui hilisemal siirdeperioodil

See uurimisväide leidis kinnitust analüüsi käigus. Aastatel 2000 kuni 2004 läbi viidud omandimuutuste analüüs näitas, et sel perioodil on omandistruktuuri muutused olnud pigem marginaalsed, võrreldes aastatega enne 2000. See näitab, et omandistruktuuride kohandumine erastamisjärgsel perioodil on toimunud peamiselt enne aastat 2000. Pärast 2000.a. on omandistruktuurides esinenud vaid väiksemaid muutusi. Üks huvitav tulemus oli see, et sel perioodil on vähenenud välisomanduses olevate ettevõtete arv. Samas on tõusnud juhiomandiga ettevõtete arv. Töäjõuomandiga ettevõtete arv on olnud jätkuvalt languses. On üsna tõenäoline, et madal omandimuutuse intensiivsus aastatel 2000–2004 on olnud mõjutatud stabiilsest majanduslikust ja institutsionaalsest arengust. See tulemus võib aidata selgitada muutusi omandistruktuurides erinevatel majandusarengu perioodidel.

P2a: Suured, kõrge finantseerimisvajadusega ja töäjõu tootlikkusega ettevõtted kuuluvad tõenäolisemalt ettevõttevälistele omanikele ning väikesed, madala finantseerimisvajadusega ja kõrge kasumlikkusega ettevõtted kuuluvad tõenäolisemalt ettevõttesisestele omanikele

See uurimisväide leidis kinnitust vaid osaliselt. Tulemused näitavad et, teatud omanditüüpe on võimalik määratleda teatud ettevõttespetsiifiliste tegurite järgi. Suurte ja kõrge finantseerimisvajadusega ettevõtete omanikeks on tõe-

näolisemalt ettevõttevälised omanikud. Kõrge kasumlikkusega ettevõtete omanikeks on tõenäolisemalt ettevõttesised omanikud. Siiski, vastupidiselt eeldustele, on kõrge tööjõu tootlikkusega ettevõtete omanikeks tõenäolisemalt ettevõttesised, mitte ettevõttevälised omanikud. See võib peegeldada fakti, et varasel erastamisperioodil antud eelisõigused töötajatele ja 'insider' info omamine juhtide poolt andis neile võimaluse osta parema tulemuslikkusega ettevõtteid.

P2b: Ettevõtte suuruse, finantseerimisvajaduse ja tööjõu tootlikkuse kasv suurendab tõenäosust, et ettevõttesise omanikuga ettevõtted võetakse üle ettevõttevälise omanikuga ettevõtete poolt ning ettevõtte suuruse, finantseerimisvajaduse ja tööjõu tootlikkuse vähenemine suurendab tõenäosust, et ettevõttevälise omanikuga ettevõtted võetakse üle ettevõttesise omanikuga ettevõtete poolt

See uurimisväide leidis kinnitust osaliselt. Analüüs näitas, et kapitalimahukuse kasv on tõenäolisemalt seotud omandi liikumisega ettevõttesiselt omanikult ettevõttevälise omaniku kätte. Samuti, et ettevõtte suuruse vähenemine on tõenäolisemalt seotud omandi liikumisega ettevõtteväliselt omanikult ettevõttesise omaniku kätte. Siiski, need tulemused leidsid kinnitust üksnes varasema perioodi kohta, s.t. enne aastat 2000. Tulemused ei kinnitanud seda, et ettevõtte suuruse ja tööjõu tootlikkuse kasv suurendab tõenäosust, et ettevõttesise omanikuga ettevõtted võetakse üle ettevõttevälise omanikega ettevõtete poolt. Tulemused näitasid aga seda, et väheneva finantseerimisvajadusega ettevõtete liikumine ettevõteteväliste omanike käest ettevõttesiseste omanike kätte leiab tõenäolisemalt aset varasemal perioodil, enne 2000, kuid see ei pruugi kehtida hilisema perioodi kohta, 2000–2004. Sellise tulemuse põhjendusena võib välja tuua näiteks selle, et stabiilse majanduskasvu ja paranenud laenuvõimaluste korral ei ole suurema kapitalimahukusega ettevõtete ülevõtmine probleemiks ka ettevõttesisestele omanikele. Sarnaselt varasematele empiirilistele uurimustele, ei õnnestunud ka käesoleva analüüsi põhjal leida kinnitust tulemuslikkuse ja omandiliikumiste vahelistele seostele.

P2c: Institutsionaalse keskkonna muutumise tõttu võime eeldada, et ettevõttespetsiifiliste tegurite roll omandistruktuuride määratlemisel ajas muutub

See uurimisväide leidis analüüsi käigus toetust. Näiteks ettevõtte suuruse erinevused polnud varasemal perioodil olulised, kuid muutusid oluliseks hilisemal perioodil. Tulemused hilisemal perioodil näitasid, et mida suurem on ettevõtte, seda suurem on tõenäosus, et tema omanikeks on välisinvestorid. Samas viitasid tulemused varasemal perioodil sellele, et kõrgema kapitalimahukuse korral on ettevõtte omanikeks tõenäolisemalt välisinvestorid kui kohalikud ettevõttevälised omanikud või juhid. Hilisemal perioodil polnud need erinevused omandigruppide vahel enam olulised. Selle tulemuse põhjuseks võib olla asjaolu, et seoses institutsionaalse arenguga on hilisemal perioodil ettevõtete laenuvõimalused paranenud ja ka kohaliku kapitaliga ettevõtted saavad panustada rohkem investeerimistegevusse. Lisaks näitas analüüs, et varasemal

perioodil oli kõrgem tööjõu tootlikkus eelkõige omane tööjõuomandiga või juhiomandiga ettevõtetele, mis hilisemal perioodil iseloomustas aga pigem kohaliku ettevõttevälise omandiga ettevõtteid.

P3a: Institutsionaalse keskkonna muutumise tõttu võime eeldada, et erinevused ettevõtete tulemuslikkuses erinevate omanditüüpide lõikes muutuvad väiksemaks hilisemal siirdeperioodil

See väide ei leidnud empiirilises uurimuses kinnitust. Erinevate omandigruppide vaheline analüüs näitas, et tulemuslikkuse vahelised erinevused omandigruppide vahel, on mõlemal perioodil statistiliselt olulised. Nelja omandigrupi võrdlemisel ilmnes, et välisomanikuga ettevõtted on suurimad ning parima tulemuslikkusega, mis puudutab lisandväärtust, käivet, tööjõukulusid ning ekspordi näitajaid. Sellegipoolest, nende kapitalimahukuse tase jääb madalamaks, võrreldes kohaliku ettevõttevälise omanikuga ettevõtetega, ning nende kasumlikkus on madalam kõigist teistest omandigruppidest. Kohaliku ettevõttevälise omandiga ettevõtete tulemuslikkus on madalam kui välisomandiga ettevõtetel, kuid kõrgem võrreldes teiste omandigruppidega. Juhiomandiga ettevõtete tulemuslikkus on teistega võrreldes kehvem. Tööjõuomandiga ettevõtete tulemuslikkus on samuti üldiselt madalam, võrreldes välisomanikuga või kohaliku ettevõttevälise omanikuga, kuid erineb mitmes aspektis juhiomandiga ettevõtetest.

P3b: Erastamisjärgseid omandimuutusi oodatakse pigem väiksema tulemuslikkusega ettevõtete puhul

See väide leidis kinnitust empiirilises analüüsis. Muutumata ja muutunud omandiga ettevõtete võrdlemisel selgus, et muutumata omandiga ettevõtete tulemuslikkus oli kõrgem kui muutunud omandiga ettevõtetel. Ettevõtetel, kus omandistruktuuris muutusi ei toimunud, oli suurem tulemuslikkus, mis puudutas tööjõu tootlikkust, ekspordile orienteeritust ja ekspordi näitajaid. Lisaks sellele võib välja tuua asjaolu, et nende palgad ja kapitalimahukuse tase on kõrgemad kui ettevõtetes, kus omandistruktuur on muutunud, ehkki need tulemused polnud statistiliselt olulised. Kasumlikkuse vahelised erinevused polnud statistiliselt olulised nende kahe grupi vahel, kuid tulemused näitasid, et kasumlikkus on kõrgem ettevõtetes, kus omandistruktuur on olnud muutumatu. See kõik võib viidata asjaolule, et ettevõtted kus omandistruktuuri muutused toimuvad on mõnevõrra problemaatilised.

P3c: Omandimuutus ettevõttesisesest omandist välisomandisse toob kaasa suurema finantseerimise välisallikatest, s.t. kiirema finantsilise restruktureerimise

P3d: Omandimuutus ettevõttesisesest omandist välisomandisse toob kaasa kiirema investeringute ja kapitalimahukuse kasvu, s.t. kiirema tehnoloogilise restruktureerimise

P3e: Omandimuutus ettevõttesisesest omandist välisomandisse toob kaasa kiirema töötajate arvu vähenemise ja kiirema palkade ning ekspordi kasvu

Mitte ükski nendest uurimisväidetest ei leidnud empiirilises analüüsis toetust. Vastupidiselt eeldatule näitasid analüüsi tulemused, et omandimuutumisel juhi omandist välisomandisse finantseerimine välisallikast suurenes märkimisväärselt aeglasemalt (või vähenes) võrreldes kontrollgrupiga ja teiste omandimuutuse gruppidega. See võib viidata asjaolule, et välisinvestorid kasutavad erinevaid finantseerimisskeeme või finantseerivad enda tegevust jaotamata kasumi arvelt. Viimast käitumist soodustab eelkõige Eesti Tulumaksuseadus, mille kohaselt reinvesteeritud kasumit ei maksustata. Samas näitasid aga analüüsitulemused, et kui uuteks omanikeks saavad juhid, siis finantseerimine välisallikatest oluliselt suureneb.

Lisaks näitasid analüüsitulemused, et kui omand liigub esialgsest tööjõuomandist kohalikku ettevõttevälisesse omandisse või juhiomandisse, siis toob see kaasa investeerimismäära suurenemise. Analüüsi tulemuste põhjal võib järeldada, et kõige aktiivsemad investeerijad ja kapitalimahukuse suurendajad on kohalikud ettevõttevälise omandiga ettevõtted. Välisomandisse liikumine pole toonud kaasa kiiremat investeerimismäära või kapitalimahukuse kasvu, võrreldes teiste omandimuutumise gruppidega. Selle analüüsi tulemused erinevad mõnevõrra varasematest empiirilistest uurimustest, mis on näidanud, et välisinvestorid panustavad enam investeerimistegevusse ja kapitalimahukuse suurendamisse.

Mis puudutab muutusi töötajate arvus ja palgas, siis analüüsi tulemused näitasid, et omandimuutumine juhi omandist välisomandisse ei too alati kaasa töötajate arvu kiiremat vähenemist ja palkade kiiremat kasvu. Näiteks viitasid analüüsi tulemused sellele, et kui omand liigub esialgsest kohalikust ettevõttevälisest omandist välisomandisse, siis toob see kaasa kiirema töötajate arvu kasvu. See võib viidata asjaolule, et tegemist on tööjõuintensiivsete välisomandis olevate ettevõtetega. Samas näitasid analüüsi tulemused, et omandimuutus juhi omandist välisomandisse toob kaasa kiirema ekspordi mahukuse kasvu, ehkki need tulemused polnud statistiliselt olulised. Üldiselt viitavad analüüsitulemused, et erastamisjärgsed omandistruktuuri muutused on toonud kaasa vajaliku restruktureerimise kõikide analüüsitud restruktureerimise tüüpide lõikes, kuid restruktureerimise kiirus sõltub igast konkreetsest omandimuutusest.

P3f: Omandimuutus ettevõttesisesest omandist välisomandisse toob kaasa kiirema tööjõu tootlikkuse ja aeglasema kasumlikkuse kasvu

See väide leidis kinnitust osaliselt. Analüüs näitas, et omandimuutus juhi omandist välisomandisse toob kaasa kiirema tööjõu tootlikkuse kasvu. See uurimistulemus on kooskõlas ka varasemate empiiriliste uurimuste tulemustega. Samas näitasid analüüsitulemused, et ka omandimuutus esialgsest tööjõuomandist juhiomandisse või kohalikku ettevõttevälisesse omandisse on seotud kiirema tööjõu tootlikkuse kasvuga. Samas ei olnud analüüsitulemuste põhjal võimalik saada kinnitust kasumlikkuse ja omandimuutumiste vaheliste seoste kohta.

Ülaltoodud tulemuste alusel saab väita, et pisut enam kui kolmandik uurimisväidetest leidis analüüsi käigus kinnitust, teine kolmandik leidis kinni-

tust vaid osaliselt ja viimane kolmandik ei leidnud kinnitust. Käesoleva doktoritöö peamised uurimistulemused näitavad, et erastamisjärgsel perioodil on Eesti ettevõtete omandistruktuurid muutunud veelgi kontsentreeritumaks ja omandistruktuurides on leidnud aset mitmed edasised kohandumised. Eriti intensiivsed on olnud omandistruktuuri muutumised madala tulemuslikkusega ettevõtetes ja varasemal siirdeperioodil, enne 2000 aastat. Siiski saab täheldada, et erastamisjärgsed omandistruktuuri muutused on toonud kaasa vajaliku restruktureerimise, kuid nende muutuste mõju erinevatele restruktureerimise tüüpidele on olnud spetsiifiliste omandimuutuste lõikes erinev. Samas on näha, et mitmed omandistruktuuri muutused on avaldanud positiivset mõju ettevõtete tegevusele, mis viitab asjaolule, et erastamisjärgsete omandimuutumistega on toimunud kohandumine efektiivsemate omandistruktuuride poole. Uurimistulemused näitasid, et omandistruktuuri muutus esialgselt juhi omandist välisomandisse toob kaasa kiirema tööjõu tootlikkuse kasvu. Samuti, et omandistruktuuri muutus esialgselt tööjõuomandist kohalikku ettevõttevälisesse omandisse või juhiomandisse toob kaasa suurema ettevõttevälise finantseerimise ja kapitalimahukuse kasvu. Lisaks sellele on selline muutus seotud ka kiirema tööjõu tootlikkuse kasvuga. Tulemuste põhjal võib järeldada, et kohaliku ettevõttevälise omandiga ettevõtted on väga tugevad investeerijad ja panustavad kõige enam kapitalimahukuse suurendamisse.

Käesoleva doktoritöö tulemused on olulised nii teoreetilise kui empiirilise kirjanduse seisukohalt, kuna aitavad mõista paremini KIE riikide äriühingute valitsemise süsteemidega, eelkõige omandistruktuuri muutumistega seotud aspekte. Käesolev uurimus käsitleb äriühingute valitsemisega, omandistruktuuride arenguga ja erinevate restruktureerimise dimensioonidega seotud aspekte süstemaatiliselt, võrreldes varasemate uurimustega. Uurimuses väljatöötatud teoreetiline raamistik aitab aru saada omandistruktuuri muutumiste ja ettevõtete restruktureerimise vahelistest seostest täpsemalt ning on rakendatav ka teistele siirderiikidele. Mitmed empiirilise analüüsi tulemused toetavad varasemate uurimuste tulemusi, kuid nende seas on ka varasemalt mitte uuritud või kinnitust leidnud tulemusi. Seega saab antud töös ja varasemates uurimustest kinnitust leidnud uurimustulemusi kasutada antud uurimisvaldkonna teoreetilise baasi edasiarendamiseks. Uued tulemused laiendavad aga veelgi arusaamist omandistruktuuridega seotud aspektidest KIE riikides kui ka väikese avatud majandusega riikides. Käesoleva doktoritöö tulemused on kasulikud ka aru saamiseks omandistruktuuride käitumistest erinevatel majandusarengu etappidel.

Soovitusi tulevasteks uuringuteks

Antud uurimisvaldkond, eelkõige seonduvalt erastamisjärgsete omandistruktuuri muutumiste ja ettevõtete restruktureerimisega, on suhteliselt vähekaasitud erialases kirjanduses. Tavaliseks probleemiks on selliste seoste uurimiseks

vajalike andmebaaside puudumine. Seetõttu võib pidada antud uurimuse panust vastavasse empiirilisse uurimusse üsna oluliseks. Käesoleva töö autori soovitus on lähitulevikus panustada juba olemasoleva empiirilise uurimise edasiarendamisele. Näiteks oleks huvitav analüüsida analoogseid seoseid ka nende ettevõtte gruppide vahel, kus omandistruktuurid pole kogu analüüsiperioodi jooksul muutunud. Samuti vajavad põhjalikumat uurimist omandistruktuuri muutumiste ja organisatsioonilise restruktureerimise vahelised seosed, mida saaks täiendada juhtumanalüüsidega ning mis annavad paremat informatsiooni organisatsioonisiseste muutumiste kohta. Mis puudutab kasutatavaid uurimismeetodeid, siis omandimuutuste ja tulemuslikkuse vahelisi seoseid võib täiendada ka tootmisfunktsioonide meetodi analüüsi rakendades. Omandistruktuuri muutusi mõjutavate tegurite analüüsi saaks edasi arendada testides ka riigispetsiifiliste tegurite (näiteks majandustsüklid, finantsturu arengud ja õigus-süsteemid) mõju. See täiendaks ning aitaks paremini mõista kompleksseid vastastikuseid seoseid riigi- ja ettevõttespetsiifiliste tunnuste vahel, mis mõjutavad omandistruktuuride arengut.

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