UNIVERSITÄT POTSDAM

Wirtschafts- und Sozialwissenschaftliche Fakultät

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STATISTISCHE DISKUSSIONSBEITRÄGE

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Potsdam 2006

ISSN 0949-068X

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Statistical Analysis of the Corporate Governance System in the Ukraine: Problems and Development Perspectives

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2006, ISSN 0949-068X

Abstract

This paper investigates the formation of the ownership structure and the corporate governance system of the Ukraine as a country in transition. Numerous studies consider that privatization results in the establishment of a proprietors' motivation mechanism. On the other hand it causes ownership concentration in the hands of a few shareholders and managers. The goal of economic reform in transition and, largely, its pace, is measured by the degree to which shareholders participate in short- and long-term corporate value creation. Shareholder access to such created value depends on the ability of corporate "insiders", especially executives and management, to claim a disproportionate share of corporate value (the "insider effect"). An econometric analysis of the correlation between privatization and macroeconomic factors studies the degree of effectiveness of economic reforming in Ukrainian regions.
Key words: corporate governance, shareholders, econometric modelling

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1. Introduction

The pace of economic reforming in transitional countries defines the effective ownership structure formation and establishment of shareholders' motivation mechanism. The unfair privatization in some East European countries causes a lot of issues among scientists and businessmen concerning the possibility of future reprivatization and nationalization. The slow pace of corporate sector development in transitional countries and corporate disclosures in the developed countries have led to analyzing the corporate governance system with the goal of improvement of and elaboration on its mechanism. Also the adoption of international standards of corporate governance is a goal.

The global stock market widening and East European countries (EEC) inclusion into international equity transactions remain an important issue of the development of the global financial system. The liberalization of foreign capital stimulates the international capital movement, and leads to better allocation of resources at the national and international levels

The analysis of various theories of corporate governance suggests two main approaches: the definition through the companies' governance system, and the determination of the allocation of value added among stakeholders. The difference of the initial conditions and variety of privatization programs conduce to the diverse distribution among countries. Hungary, Poland, Slovenia are leaders in corporate governance performance. Czech Republic, Slovakia and Southern East European countries (SEE) follow the leaders in the speed and feasibility of property reforms. Baltic States have good perspectives of enterprises improvement. Commonwealth Independent states (CIS) countries have fallen behind the Central European countries (CEC) in property rights development and corporate governance system establishment.

The global changes raise the issue for good corporate governance performance, and set the number of questions towards global and country's system of monitoring, accountability improvement, and new system establishment. Good corporate governance is associated with reduced risk of financial crises. A better quality of shareholder protection dcorrelates with a larger size of the country's stock market. Weak corporate governance leads to higher costs of capital. In case of better corporate governance there is higher returns on assets in the developed countries. Numerous studies consider that the privatization result not only in the establishment of a mechanism for proprietors' motivation, but it also causes ownership concentration in the hands of insiders. Management provides opportunistic behavior towards minority shareholders. The conflicts between management and shareholders are constantly arisen and resolved in the company. The managers' withdrawal of a part of company' resources for own needs is considered one of the typical infringements in the corporate sector. It significantly decreases the company value added. The absence of managers' personal motivation suggests the possibility of agency problems emergence. It does not provide maximization of managers' skills for company's management improvement.

The contrary of short-term managerial interests and long-term company' performance causes the conflict among the insiders and outsiders company's owners. It results in the inefficient company's capital allocation, economic development utilization, its balance structure destruction, and bankruptcy. The econometric modeling in this paper is directed to the privatization and restructuring of enterprises, improved economic performance effectiveness assessment in the Ukraine. Implementation of American and Western European models positive features into the transitional corporate governance system would reduce the insider effect, increase the transparency, allow accountability of value distribution, raise corporate control, and develop corporate culture in Eastern Europe.

2. Privatization in East European countries: forms, methods, consequences

The ownership change is the crucial question for all governments in transition to market economy. The privatization of large and small enterprises was a typical feature of transformation from the command system. The main distinction of this process relates to the methods of privatization for medium-size and large enterprises. The ownership transfers to insiders and external investors' access to privatized company's shares are the continuing stages in private property rights establishment.

The unfair and unsuccessful results of mass privatization in CIS countries demonstrate the absence of a sufficient privatization program, an undeveloped legal and institutional environment, and a weak level of management at the company level. Privatization aims the entrepreneurial incentives to undertake strategic restructuring, create a motivation mechanism for proprietors, and provide profit maximization. It is associated with an increase of productivity and profitability. The basic forms of the privatization include the Greenfield privatization, the transfer of state enterprises into the hands of new owners or the lease of state enterprises, and the corporatization along with state ownership of assets. The issue of vouchers or certificates of investment has been used for the employee buy-back schemes in a majority of CIS countries, including Russia. The major part of the population does not have financial sources, which results in property concentration in the hands of small groups of owners. The majority of privatized enterprises succeeds in the improvement of the basic economic indicators GDP, industrial output, unemployment rate, inflation rate. Privatization includes mass privatization and small-scale privatization. Czechoslovakia, Slovakia and Poland provided equity shares voucher exchange to investment funds which is characterized the typical form of privatization. The exchange of vouchers to minority stakes in firms is limited in Baltic States. The policy of property transfer into the hands of core investors can be mentioned, too. This policy stimulates to develop steady and highly sustainable firms with value-added by manufacture. The inefficient management system is caused by the transfer of control towards unqualified managers. The assessment of privatization methods indicates the preferable use of the sale to outside owners and the voucher privatization as the fair forms of property disposure in Eastern Europe (See table 1).

Table 1: Trade-off among privatization routes for large firms

Method	Better corporate govern-ance	Speed and fea-sibility	Better access to capital and skills	More govern-ment revenue	Greater fairness
Sale to outside owners	+	-	+	+	-
Management-employee buyout	-	+	-	-	-
Equal-access voucher privatization	?	+	?	-	+
Spontaneous privatization	?	?	-	-	-

Source: World Bank data, World Development Report 1996, p.52.

Nureev and Runov (2002) argue that one could see two processes in Russia: the real market development of private property and the parallel process of power-property modification. There are three instruments of property alienation for the state interests: deprivatization, reprivatization, and nationalization. The main methods of privatization of medium-size and large enterprises in Russia made up 55 per cent management-employee buyout, 11 per cent equal-access voucher privatization.[1] The unfair and unsuccessful results of mass privatization in CIS countries depict the absence of a sufficient privatization program, an undeveloped legal and institutional environment, and a weak level of management at the company level. The privatization failures challenge the lack of fundamental rights, behavior norms that provide predictability, transparency, convertibility, and stability of economic relations. The insiders take part in enterprises' privatization that results in the limitation of outsiders' roles in property strengthening. The insider ownership has become the dominant property form in the ownership structure in transition countries. The problem of the extent of insider ownership is pointed out in the majority of surveys.[2] "Managers are the most powerful group of corporate owners in Russia. This is due not only to their ownership stake (around 15 per cent) but also to weak legal enforcement, which allows managers to run firms as they wish without risk of sanction from law enforcers and other shareholders,"- pointed Sprenger (2002). This managers' property share is sufficient to provide control over the company according to the dispersed ownership model in East European countries. Scientists consider that the biggest mistake of property reform relates to an absence of setting up the real owners in the privatization period. The surveys assessments confirm the concentration of the major part of property in the hands of former directors and "nomenclature" representatives in CIS countries.

G. Meier (1998) points out three types of privatization approaches: 1) sales of state enterprises to outsiders ("real" owners with capital and managerial skills), 2) management-employee buyouts, 3) preferential treatment in voucher-based programs. Claessence, Djankov, Pobl (1998) check the hypothesis whether firms with more concentrated ownership are indeed

[1] See World Development Report 1996 (1999), p. 53.
[2] See Kuznetsov (2001), Fiatotchev (1999).

better managed, and so profitability should correlate positively with the degree of ownership concentration. They find the existence of strong positive relationships between ownership concentration and profitability, and also that the more concentrated the ownership of a firm, the higher its market value. The empirical results confirm that the Czech privatization program was effective in improving firms' management because of the resulted concentration in ownership structure. The Czech model of mass privatization shows that the speed of privatization matters, and both more concentrated ownership and indirect owneship by banks lead to faster restructuring.

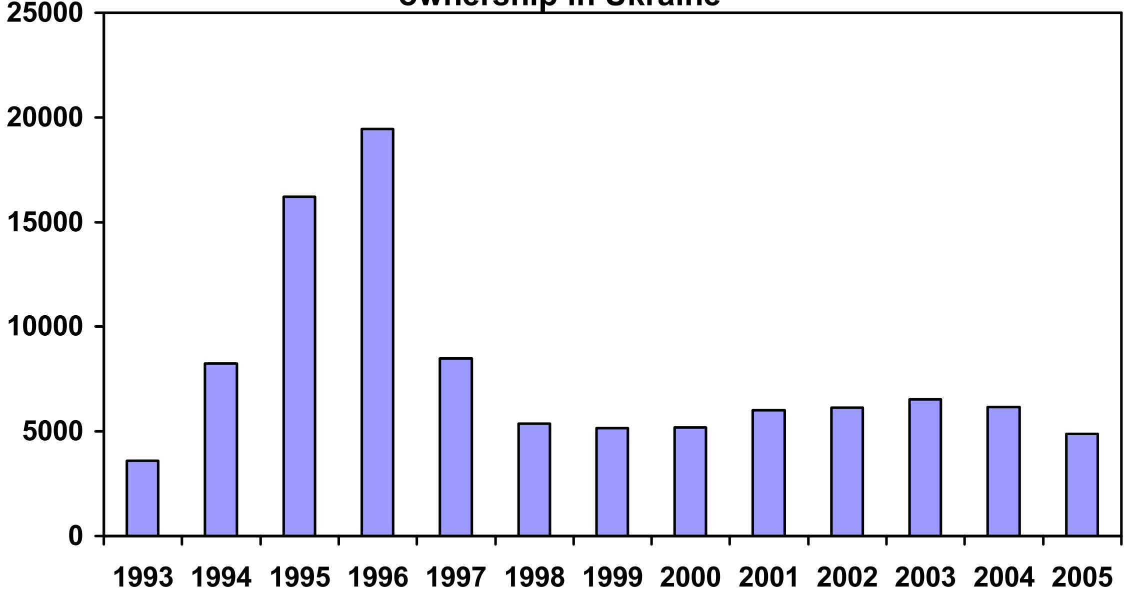
The study of Anderson, Djankov, Pobl and Claessons (1997) covers more than 6000 industrial firms in seven Central and Eastern European countries. The results show that privatization is the single most important factor in restructuring. The method of privatization has been less important: to date management buyouts and massive giveaways of firms through voucher privatization have led to results similar to those of case-by-case sales to foreign or domestic investors. The inclusion of a market mechanism in a functioning system affects the establishment of a successful company management and leads to bankruptcy of the unproductive enterprises. A World Bank investigation, based on the data of 1300 large listed and unlisted firms in industry and services (representing 17 per cent of Russia's industrial employment (3.3 million) and 57 per cent of the industrial output) proves the significant level of ownership concentration of a number of business groups in Russia.[3] The significant concentration of ownership in the hands of the 23 largest private owners and their financial-industrial groups at the national level suggests that these firms perform better than state –owned firms. Goldman (2003) notes that the small business sector contributes only 10-30 per cent of Russian GDP, compared to 50 per cent in the Western economies. The small groups of individuals who emerged in control of the privatized enterprises fall into three different categories, according to Goldman. The first is former factory directors that became factory owners. The next two groups were the ones who obtained the greatest wealth – the nomenclature and non-nomenclature oligarchs. In comparison to Russian privatization Poland concentrated on encouraging the formation of starts-ups and small business, rather than the privatization of large state enterprises.

The fundamental objective for privatization and enterprise restructuring relates to the economic performance enhanced by the emergence of an effective ownership system and skilled managers through competition. The consequences are shown in the social, political and economic obstacles, and are preventing the implementation of economic programs in East European countries. The results of the privatization process could be summarized in the appearance of 35000 stock companies, including 12000 open-end investment companies in 2001 in the Ukraine (Figure 2). The number of stockholders makes up 33 million people, which at-

[3] See Transition, 2003 (2004), p.7.

tract investment resources through shares' subscription in open-end investment companies. The cumulative value of securities emission reaches 100 billion grivna. The index capitalization of nominal market equities to GDP makes up 37,2 %, and the ratio of sum of market equities to GDP equals 8,3 %.[4] The data from the State Statistical Committee show, that the state enterprises share in the total volume of objects makes up 0,1 % to 20 % in various fields of business activity in the Ukraine in 2003. It is equaled to 45,4 % in the government sphere. Moreover the share of the communal property objects achieves 57,5 %, and a private property makes up 29,6 %.[5]

Fig.1: Number of entities that changed their type of ownership in Ukraine



Source: Data of the State Statistical Committee in Ukraine.

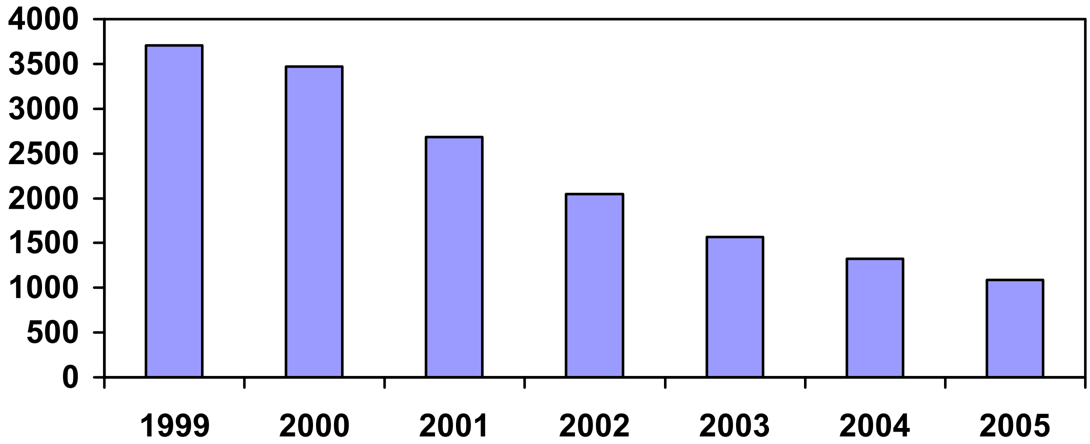
In 2001 the Ukrainian budget receives only on 37,3 % from fulfillment of the privatization plan, in 2002 this decreases to 10,3 %. "Ukrtelecom", one of the biggest telecommunication companies in the Ukraine, and twelve energy producing and distributing companies are unrealized privatization projects.

The State Property Fund provides an implementation of the reprivatization program in the Ukraine. The non-fulfillment of proprietors' obligations would cause the retransfer to the state of about 30 enterprises. Approximately 11 strategic objects are prepared for reprivatization procedures. The reestimation of the privatization results is provided in accordance with the list of reprivatized companies confirmed by the Ukrainian government. Because of the absence of an elaborate privatization strategy and consistency in the applied methods and forms, at the state level reprivatization would not provide confidence in business in the future, would not

[4] See Statistical Yearbook in the Ukraine in 2001 (2002), p. 95.
[5] See Україна у цифрах у 2003 році. Короткий статистичний довідник. – К.: Консультант, 2004.- р. 172, 60.

stimulate economic growth, and would give damage to investment attractiveness of the country.

Fig. 2: Number of joint stock companies after privatization in Ukraine (in units)



Source: Data of the State Statistical Committee in Ukraine.

The degree to which shareholders participate in short- and long-term corporate value added defines the goal of economic restructuring in transition and, largely, its pace. Shareholder access to such value added is determined by the degree to which key corporate "insiders", especially executives and management, can claim a disproportionate share of corporate value (the "insider effect"). Privatization is becoming to be replaced by M & A, which play an important role in CIS countries. A survey by Ernst & Young points out that the volume of M & A in 2004 of these countries is the largest in the Russian Federation with $ 30 billion, it equals $ 2.6 billion in the Ukraine, while the volume of M & A in Kazakhtan is $ 0.7 billion.

In the majority of East European countries privatization resulted in underestimation of property, unfair wealth distribution, ownership concentration in the tycoons' hands, inefficient property system organization, and weak management within the companies. The absence of democratic principles also causes a conflict between democratic values in the society and economic agent's values.

3. Corporate governance system in transitional countries: models and development perspectives

The majority of East European countries meet with the dilemma which model of corporate governance system should be chosen. The corporate sector development demonstrates the use of mixed models in transition countries, based partly on the principles of the American and German models of corporate governance system application. The modern models of corporate governance system are based on the diverse capital structure in Eastern Europe. It is characterized by a large variety of shareholders, including state, institutional investors and individual shareholders. The corporate governance structure specifies the distribution of rights and responsibilities among owners and management in the corporation. The board of directors, managers, shareholders and other stakeholders take part in the elaboration rules and procedures for making decisions on corporate affairs. Good corporate governance is associated with sustainable company's value creation on a global scale. The better the quality of shareholder protection, the larger the country's stock market. Weak corporate governance leads to higher costs of capital and better corporate governance guarantees higher returns on assets.

The corporate governance determines the mode and mechanism of a company's governance. Scientists define corporate governance in a variety of ways. Claessens (2003) emphasizes the following two approaches of corporate governance. The first definition deals with the actual behavior of corporations, and measures as performance, efficiency, growth, financial structure, and treatment of shareholders and other stakeholders. The second definition characterizes the rules coming from such sources as the legal system, the judicial system, financial markets, and factor (labor) markets.

The definition of value added through the companies' governance system and allocation of value added among stakeholders relate to the key factors influencing value creation within the company and their disposables. The lack of the formal institutions caused the appearance of informal forms of relations among companies, banks, and representatives of the state authorities. The dissemination of the informal rules for companies' behavior results in the appearance of disclosures and frauds in the corporate sector in Eastern Europe. The absence of a long–term corporate control policy summons in an ineffective system of corporate governance formation in CIS countries. The existence of weak-enforcement of company's law gives an opportunity for managers to manipulate the insider information for personal interests, and as a result to gain an additional profit. Managers blocked the access of domestic and foreign investors to the companies' shareholding process. The weak enforcement mechanism in EEC (e.g. Czech Republic, Russian Federation) enhanced the legal sphere for changing corporate sector rules and adopting new laws on bankruptcy and foreign investment. Poland and Hungary succeeded in restructuring of enterprises and development of corporations. The development of a plurality and variety of ownership forms is considered the basis for property market establishment. The specification of property rights includes the subject definition and the object concerning to which a corresponding set of proxies is applied. Western scientists contribute to privatization theory including the trajectory of path development analysis for East European countries.

The motivation mechanism for shareholders' dividends has not been created in Eastern Europe. The absence of shares' income return and an undeveloped stock market do not stimulate shareholders and managers interests to increase profit. The stock market should provide functions for attracting and saving money as well as redistribution of assets from unprofitable to profitable branches. Leechor (1999) argues that good governance in the banking sector relies on three key building blocks: proper incentives, adequate transparency, and clear accountability. The significant role belongs to supervisors who should set targets for the risk exposure of public funds, explain any deviations from the targets, and give a corrective actions plan.

The absence of a legal mechanism for bank access to company's shareholding, weak stock market development, undeveloped financial infrastructure, the lack of system's transparency, and the low level of control of managers are considered the typical features of modern corporate governance models in East European countries. Managers do not have incentives to take care for the dispersed shareholders interests. The short-term shareholders' interests predominate in the decision making process for company's corporate development. The assessment the ramifications of ownership, and string shareholder protection laws shows that larger cash-flow rights by the controlling owner boosts valuations, weak shareholder protection laws lower bank valuations, and greater cash flow rights mitigate the adverse effects of weak shareholder protection laws on bank valuation .[6] The results confirm that laws can play a role in restraining this expropriation, and concentrated cash-flow rights also represent an important mechanism for governing banks. A study of 245 companies listed on CEE stock exchanges explores the transparency rules in individual countries and the nature of information released by companies, with particular attention to the enforcement of disclosure requirements in different countries.[7] The author differentiates between private ordering, private enforcement and public enforcement, and emphasizes the substitution effect of private and public enforcement.

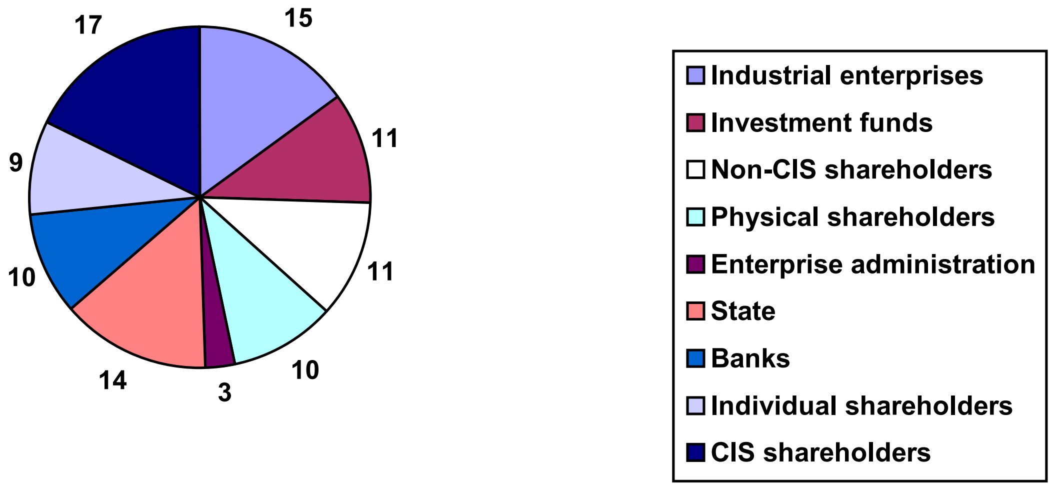
Corporate governance could be determined as the system of behavior rules used to direct and control joint stock companies. The functional corporate governance model is characterized by transition features from command to market economy in Eastern Europe. The elements of the traditional corporate governance models have been applied in the formation of a

[6] See Caprio, Laeven, Levine (2004), p.30.
[7] See Pajuste (2004), p.6.

corporate sector in transition countries. The alternative form of corporate governance application includes hostile takeovers, proxy fights, board activity, and the use of executive compensation scheme mechanisms. They are directed to control shareholders, extract private benefits and manage to weaken the insiders' protection. The empirical data analysis shows the existence of widely dispersed shareholders' structure in the majority of East European countries.

One could mention the growth of the ownership concentration, for example the 22 largest business groups control about 40 % of Russian industry.[8] In the Ukraine the ownership is dispersed among several groups of different stockholders, including state, industrial enterprises, investment funds and others (Figure 3). It enables managers to neglect the interests of owners and stockholders. Management provides opportunistic behavior towards shareholders. They combine simultaneously ownership functions and management functions in case of being bigger shareholders of the company. Chief executives obtain free access to company's insider information and use different proxy mechanisms for increasing votes. Managers usually succeed to set the inside control over a company. Management provide governance in the company and withdraw some part of company's assets due to the absence of a strong legal mechanism for the protection of minority shareholders rights.

Fig.3: Property Structure of Corporate Industrial Sector in the Ukraine (2001, as % of total)



Source: Data of the State Statistical Committee in Ukraine.

The stockholder-sovereignty model assumes the complementary institutions setting, and includes the internal work organization of enterprise, the labor market, and financial market institutions. This is the basic but is not sufficient condition of corporate governance formation. The degree of management autonomy depends on the involvement in the decision making process and manager's responsibilities within the company.

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[8] See Guriev and Rachinsky (2004), p. 4.

The degree of competition and protection affects the corporate governance. Claessens (2003) points out that the ability of insiders to mistreat minority shareholders depends on the different alternatives to invest in various assets. Estrin (2002) argues that the budget constraints belong to an important factor influencing enterprise restructuring. Empirical works confirm the positive impact of hard budget constraints on total factor productivity or sales growth. Better operational performance leads to better allocation of resources and better management in the company. A good corporate governance would lead to wealth creation and results in profit maximization generated by the company.

The majority of Eastern European countries have adopted a national code of best practice for corporate governance. It aims to define the strict rules for listing the companies' shares on a stock market, clarify the powers of shareholders and supervisory boards, and to make signals for any financial changes to foreign investors. Nevertheless the questions of corporate governance structure, models, control, audit system, and quality of management within the company need to be defined and further investigated theoretically. The research results, new methodological approaches,and methods need to be applied in practice for corporate sector development in transition countries.

The experience of emerging markets demonstrates the predominance of powerful families in some corporations. In countries with weak shareholding business groups construct pyramid structures and cross-shareholdings supporting each other. The appearance of "iron triangles" (close links among companies, banks and state) negatively affects on the transparency and efficiency of the corporate sector performance in transition countries. Aslund (2003, 2004) argues that sitting on the boards of several state companies; senior state officials receive substantial income. Many remaining state enterprises have become cobwebs of corruption. The 1999 Business Environment and Enterprise Performance Survey (BEEPS) was designed to assess the quality of governance from the perspective of about 3000 firms in 20 countries of Central and Eastern Europe.[9] The survey, commissioned jointly by EBRD and the World Bank, provides firm-level data on obstacles in the business environment. The empirical research demonstrates clear evidence of the importance of public procurement corruption, defined as efforts to secure public contracts through payment of kickbacks to officials, as an often used channel of influence as well. Authors find that firms that choose rent-seeking strategies based on kickbacks for public procurement also show substantially greater gains than other firms.

The corporate governance structure is divided on three governing bodies: the supervisory board, the stockholders assembly, the board of directors in the Ukraine. The corporate governance mechanism is based on the election and the appointment of all bodies, achieving the managers' and stockholders' interests balance and community interests' satisfaction. The Coordina-

[9] See Hellman, Jones, Kaufmann and Schankerman (2000), p.41.

tion Council of Stock Company Corporate Governance has been established in the Ukraine in 2002. The typical tendency of contemporary corporate governance system model formation deals with “insider control” problems in transition.

The key corporate governance problem relates to the lack of a mechanism for the rights protection of minority stockholders. Minority shareholders do not have full information for shareholders assembly procedure, equal rights for nominal value shares buying in case of additional emissions, and free access to data of a company’s economic performance. Corporate conflicts demonstrate the absence of administrative and criminal responsibility in a majority of cases. The number of corporate conflicts is still high in the Ukraine as it was in 2002-2003. The typical forms of corporate conflicts combine with washing up assets reorganization within company. It results in the property alienation to fictitious proprietors. The stockholders’ rights violation suggests an absence of timely personal information of vote registered shares. The lack of company transparency causes additional risks. The government blocks the decision making process for the emission of additional shares. The problem of corporate rights determination, corporate governance law adoption and stable legal system formation relate to the key questions of the national legislation foundation. The precise definition of the list of reprivatized companies and the usage of transparent auction principles will be directed to correct the unfair results of mass privatization in the Ukraine.

Some studies investigate the impact of differences in corporate governance on enterprise performance. Studies demonstrate that new managers lead to higher productivity: by 6.2 percent in Czech Republic and 7.3 percent in Central Europe. Managerial bonus schemes appear to raise total factor productivity: doubling managers’ bonuses increases total factor productivity growth by 7.4 percent[10]. The adoption of the basic corporate governance principles is directed to restore an objective assessment, fact-based decision making within a company, trust workability of the system in Eastern Europe. Estrin (2002) points out the crucial role of the ownership concentration because concentrated holdings of block holders, funds, foreigners, and banks. Obloj (2004) argues that the biggest corporate governance conflicts arose from inherent tensions between foreign investors looking to fit their Polish subsidiaries into a multinational network, and local investors seeking to maximize their in-country returns. Weiss and Nikitin (2004) allege that firms with foreigners or municipalities as their major shareholders were more profitable and higher investment rates than firms where the main owner was either an investment fund or the national government in Czech Republic.

They are not forced to pay attention to protecting minority shareholders’ rights. The contrary of short-term managerial interests and long-term company performance causes the

[10] See Evaluating Internal Controls. Evaluating Overall Effectiveness, Identifying Mattes for Improvement, and Ongoing Assessment of Controls (2003).

conflict among the insiders and outside company's owners. It results in the destruction of a company's balance structure and bankruptcy.

The managerial property concentration results in the conflict of proprietors' interests and leads to property redistribution among various companies' participants. There is a lack of enforcement mechanism to boost efficiency through managerial performance incentives. The government continues to affect managers' and directors' appointments. Empirical company surveys suggest that chief executives do not have stimulus to maximize long-term wealth of the company. Legal standards and enforcement are considered to be complementary, and both can improve as countries develop.[11]

Shareholder interests are served when management is highly motivated to strive for higher productivity and better performance. It results in the increment of the company's value added. Conflicts between management and shareholders are arisen and resolved constantly in the company. The managers' withdrawal of a part of company's resources for own needs is considered one of the most important conflicts. It decreases significantly the wealth of the company. Rydyk (2004) emphasizes, that «activity of corporation is the catalyst of agency conflicts. For example, as soon as in structure of the capital of corporation there is a debt loading then there is an agency conflict between shareholders and bond's holders». The managers' activities contain an opportunity for the emergence of agency problems which are connected with the appearance of a multitudeof unpredictable situations within the company. Managers try to reduce the probability of adverse consequences and therefore act according to a policy of making smaller efforts instead of the implementation of risk managemant policies in the company and with respect changing world market conditions. They are guided via a choice of a smaller investment horizon of the company's development. It is dealt with the restriction of the long-term definition of the company's strategy development. Managers try to decrease the probability of implementation of some inefficient decisions. Management activity is directed towards reduction of risk. The policy of managers is directed to avoid political, investment, financial, and also random factors: uncertainty and unpredictability in the world financial markets. The management activity does not aspire to achieve profit maximization of decision-making process within the company. Jensen, Mecking (1976) conducted an analysis of the U.S. and UK corporate sector development. They argue that in case of ownership diffusion, as is typical for U.S. and UK corporations, agency problems stem from the conflicts of interests between outside shareholders and managers who own an insignificant amount of equity in the firm. In case of one owner (or a few owners acting together) the problem of monitor and discipline management shifts to better company's performance under decrease of information asymmetries.

[11] See Berglof and Classens (2004), p.12.

The state does not play an important role in company's monitoring or bank's reorganization. Uncertainty and high investment risk demonstrate the choice of western companies to list their shares on a stock market with strict corporate governance rules. Legal definition and observance are considered to form a guarantee for the protection of property rights, for maintenance of financial transparency, for stability, and for predictability of the economic development in a society. The decrease of managers' control in the company and the shareholders' access to the decision making process relate to an important issue in creating a good corporate governance system.

4. Statistical analysis of corporate governance system in the Ukraine

4.1 Approaches in the literature

The statistical analysis of the corporate governance system is aimed to extract some objective information from national and international data sources. The basic database for the statistical analysis of corporate sector is the General State List of Enterprises and Organizations and the State Tax Administration in the Ukraine.

In the literature different approaches are applied for statistical and econometric assessment of corporate governance systems. Johnston and Tamirisa (1998) determine capital controls as one of the instruments for balance of payments and macroeconomic management. Capital controls are justified by the need to protect infant industries and less developed markets. The use of capital controls is also justified by the need to preserve systemic stability. The empirical results from a cross-section of 45 developing and transition economies show the significant factors, motivating the capital controls on different transactions. These factors are considered to be important for transition countries[12]. Johnston and N.Tamirisa (1998) include the following factors:

- balance of payments, capital inflows and outflows;
- macroeconomic management, primarily for capital inflows;
- institutional and market evolution, explaining recourse to financial regulations and controls on most types of inflows and outflows;
- weak domestic regulatory systems and financial repression,
- explaining the overall use of capital controls;
- the size and stage of development of the economy.

They consider that the prudential role of capital controls may be limited by preventing portfolio diversification, by a tendency to increase investment risk, and, by slowing down the development of financial markets, they reduce liquidity and hence the quality of financial assets.

Estrin and Rosevear (1999) tested hypotheses on the effects of privatization on enterprise performance and restructuring, using a large new company data base of 150 Ukrainian enterprises in 1997.[13] The hypothesis is that for each firm i,

$$p_i = f\,(E_i\,, Own_i) \qquad (1)$$

[12] See Johnston, Tamirisa (1998).
[13] See Estrin and Rosevear (1999), p. 455.

where p_i denotes an indicator of performance, E_i denotes a vector of factors exogenous to the firm influencing performance, and Own_i denotes the ownership form for the enterprise. Depending on variables used to proxy p_i, for example, price – cost margin, total factor productivity, labor productivity, or profitability, E_i can include elements such as product and inputs prices, market structure, or financial constraints. The authors define five broad areas of enterprise and management activity with respect to restructuring , namely product restructuring, input restructuring, management and labor restructuring which includes changes in corporate governance, asset disposal, and financial restructuring. Estrin and Rosevear (1999) find no evidence that private ownership, or any particular dominant private owner, is associated with improved economic performance at the enterprise level.

Wojicik (2001) has examined the dynamics of the German model of corporate governance, using data pertaining to major holdings of voting rights in listed companies between 1997 to 2001. The concentration of voting rights is lowest in companies included in the DAX30 stock market index. Factors affecting the types of holders of voting rights in a company include company size, age, economic sector, and location. The analysis shows that the German model is characterized with different types of companies and different regions demonstrating a variety of corporate governance.

Zelenyuk and Zheka (2003) look for empirical support for a hypothesis that there is a *positive* relationship between the levels of corporate governance quality across firms and the relative efficiency levels of these firms. [14] This hypothesis is related to Liebenstein's idea of X-efficiency. The authors use the data envelopment analysis (DEA) estimator to obtain a proxy for X-[in]efficiency and then use regression to analyze the relationship of this proxy to various indicators of quality of corporate governance, ownership and industry specific dummies. The data is coming from 11 industries in Ukraine. Zelenyuk and Zheka (2003) find empirical support for the hypothesis that there is a positive relationship between the levels of corporate governance quality across firms and the relative efficiency levels of these firms.

4.2 Modelling Ukrainian data

The analysis of the corporate governance system in the Ukraine presented here is based on macroeconomic data of the State Statistical Committee in the Ukraine from 2003 to 2005.[15] on ownership change and privatization for 27 Ukrainian regions, including 24 oblasts, the Autonomous Republic of Crimea and the two cities Kyiv and Sevastopol.

In detail the following variables are available and are considered where index i runs over all 27 regions and index t over all time points considered (years or quarters respectively):

[14] See Zelenyuk and Zheka (2003), p. 11.
[15] See Data from http://www.ukrstat.gov.ua

$TOTAL_{it}$ - total number of entities that changed their type of ownership
$STATE_{it}$ - number of entities of former state property that changed their type of ownership
$PUBLIC_{it}$ - number of entities of former public property that changed their type of ownership
$VALTOTAL_{i\,t}$ - total value of entities that changed their type of ownership in million UAH;
$VALSTATE_{i\,t}$ - value of entities of former state property that changed type of ownership in million UAH;
$VALPUBLIC_{i\,t}$ - value of entities of former public property that changed type of ownership in million UAH;
$FDIIN_{i\,t}$ – foreign direct investment inflow in million USD;
$FDIOUT_{i\,t}$, - foreign direct investment outflow in million USD;
$WAGE_{i\,t}$, - average monthly wage per one worker in Ukrainian currency UAH (average in t);
$RATES_{i\,t}$ – rate of increase or decrease of industrial output in percent relative to last year;
$EX_{i\,t}$ - export in million USD;
$IM_{i\,t}$ – import in million USD;
$POP_{i\,t}$ – population in thousands (average in t);
$POPURB_{i\,t}$ – urban population in thousands (average in t).
Further we consider the derived variables:
$P\_STATE_{i\,t}$ – percentage of state property companies of all privatized companies;
$REL{*}{*}{*}_{i\,t}$ – relative value: *** divided by POP;
$REL{*}{*}{*}URB_{i\,t}$ – relative value: *** divided by POPURB.

Two regional panel data sets are constructed from on this base:

- an annual data set containing all variables specified above for the three years 2003, 2004 and 2005 (with missing values of VALSTATE, VALPUBLIC and VALTOTAL for 2003)
- a quarterly data set containing all variables but FDIIN, FDIOUT and RATES for the eight quarters of 2004 and 2005.

The numbers and values of entities that changed ownership stand for the volume of corporate governance activity in that region over that time. Exports measure the present competitiveness of the economy, the development of wages describes the participation of the workers on the performance of the economy. Foreign direct investments inflow describes the attractiveness to investors and can be used for an assessment of expectations regarding the future development. Population variables are considered to control for different sizes and structures of the regions.

We use standard panel data models for the analysis of these two data sets. Unfortunately the time horizon of these data sets is very limited and only for the quarterly data there is the slight hope to find any dynamic relations. We estimate quarterly data of the State Static

Committee of the Ukraine. Although we formally calculate test statistics (t-values) that rely on random samples, we have to interpret our results differently, since the selection of the regions is not random but complete. Therefore we assume the data were realizations of random variables in an hypothetical space of possible outcomes. Then significant t-values indicate a systematic dependence, a linear correlation, of the dependent and independent variables.

4.2.1 Numbers of changes as dependent variable

The number of changes of ownership may be a misleading variable since nothing about the size of the companies is included. Further we only have data for the recent years without regarding the history. Some regions may have started earlier with privatization than others and therefore produce lower numbers now. But since this is the only data available, one could analyze them.

For the annual data set it is difficult to find a model that can be reasonably fitted to the data. Taking the number of changes directly there can be no good fit achieved, and the fit of any model changes dramatically whether the city of Kyiv is included in the estimation or excluded. Since the size of the region, especially measured in population, should be correlated with the number of changes of ownership, we consider relative data. Companies are to a larger part situated in cities, so we take the number of changes relative to urban population. We find that the number of changes of ownership relative to urban population is described well by average wage, percentage of state property that changed ownership and the imports relative to urban population. There are tendencies that a higher wage and a higher percentage of privatized state property correlate with a lower relative number of privatized entities. An explanation would be that there are regions with a higher share of state relative to public owned companies, the companies in state property are larger than average and the wages in these companies are below average. Also higher imports are correlated with a higher number of privatized entities, given the other values to be fixed. There may be an connection that privatized companies need to import more, but more likely there simply is a hidden relation that in urban regions the imports are higher. As a conclusion this data offers just a fit of a model that is not based on an economic theory and only shows some more or less plausible connections of the variables.

Dependent Variable: RELTOTALURB
Method: Panel Least Squares
Cross-sections included: 27
Total panel (balanced) observations: 81

Variable	Coefficient	Std. Error	t-Statistic	Prob.
WAGE	-0.0010	0.0003	-3.6065	0.0007
P_STATE	-0.2444	0.0777	-3.1456	0.0028
RELIMURB	0.0565	0.0230	2.4607	0.0173
C	0.3424	0.0381	8.9796	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.90	Mean dependent var	0.21
Adjusted R-squared	0.84	S.D. dependent var	0.11
S.E. of regression	0.04	Akaike info criterion	-3.10
Log likelihood	155.65	F-statistic	15.87
Durbin-Watson stat	2.15	Prob(F-statistic)	0.00

Estimation results for quarterly data; total number of changes relative to urban population

For the quarterly data the outcome is different. Here the number of changes of ownership can be fit to a model directly. Similar to the yearly data there seems to be dependence with the share of state property privatized and the size of the regions, measured by urban population. But exports show a correlation instead of imports now, and the value of public owned companies, that changed ownership, contributes to the fit. Since imports and exports of the regions show some correlation, the one may substitute the other without changing the fit strongly. The dependence on the value of public owned companies that changed ownership seems to be almost trivial if the value of the single companies does not vary strongly: the more companies are privatized, the higher their overall value.

Cross-sections included: 27
Total panel (balanced) observations: 216

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXPORT	0.07	0.02	3.24	0.0014
POPURB	0.88	0.19	4.54	0.0000
VALPUBLIC	1.1	0.15	7.51	0.0000
P_STATE	-40.67	10.75	-3.78	0.0002
C	-1007.75	230.12	-4.38	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.87	Mean dependent var	54.72
Adjusted R-squared	0.85	S.D. dependent var	51.47
S.E. of regression	20.25	Akaike info criterion	8.99
Log likelihood	-939.55	F-statistic	40.12
Durbin-Watson stat	2.22	Prob(F-statistic)	0

Estimation results for yearly data: total number of changes

Unfortunately the conclusion cannot be improved: this data offers just a fit of a model that is not governed by economic theory and only shows some more or less plausible connections of the variables.

4.2.2 Value of changes as dependent variable

More important than the sheer number of companies that changed ownership may be the value of the companies transferred.

Cross-sections included: 27
Total panel (balanced) observations: 189

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EX	-0.64	0.30	-2.10	0.04
EX(-1)	-0.84	0.24	-3.48	0.00
POPURB	5.57	2.33	2.39	0.02
C	-6099.12	2762.22	-2.21	0.03

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.35	Mean dependent var	40.30
Adjusted R-squared	0.23	S.D. dependent var	200.73
S.E. of regression	176.15	Akaike info criterion	13.33
Log likelihood	-1229.23	F-statistic	2.94
Durbin-Watson stat	1.76	Prob(F-statistic)	0

Estimation results for quarterly data: total value of changed ownerships

Looking for models with a good fit, only exports remain with some contribution to a fit and the urban population serves again as a measure of size of the regions. It is interesting to mention, that the exports lagged by one quarter are significant. But on the contrary to the total number of changes where exports had a slight positive correlation, now the correlation with the value is negative, meaning regions with higher exports this and previous quarter show less value of newly privatized companies. This may be an effect of different speed of privatization: regions that began restructuring earlier have higher exports now and less volume left to privatize.

Dependent Variable: VALTOTAL
Method: Panel Least Squares
Cross-sections included: 27
Total panel (balanced) observations: 54

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EX	-0.56	0.18	-3.21	0
IM	0.07	0.04	1.95	0.06
FDIIN	-0.47	0.26	-1.81	0.08
C	803.16	198.57	4.04	0

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.72	Mean dependent var	34.67
Adjusted R-squared	0.37	S.D. dependent var	132.18
S.E. of regression	104.86	Akaike info criterion	12.44
Log likelihood	-305.97	F-statistic	2.08
Durbin-Watson stat	3.86	Prob(F-statistic)	0.04

Estimation results for yearly data: total value of changed ownerships

For the yearly data almost nothing can be said. The relative value to urban or total population can not be modelled with any significant variables. Only the total value itself shows some weak relations with imports, exports and foreign direct investments. The negative effects of exports and foreign direct investments may be explained again by different speeds of restructuring as for the quarterly data.

4.2.3 Export as dependent variable

On the basis of the quarterly data the exports can be modelled with an almost perfect fit. This is achieved by a low variance of the exports and the flexibility of the fixed effects model. The resulting correlations of the variables are not straightforward. Imports and the number of privatized former state owned companies show a positive correlation while urban population and value of privatized former state owned companies show negative correlation. The explanation would be the large portion of agrarian goods in the Ukrainian exports: rural regions with large exports have less urban population but more state owned companies with value below average.

Dependent Variable: EX
Method: Panel Least Squares
Cross-sections included: 27
Total panel (balanced) observations: 216

Variable	Coefficient	Std. Error	t-Statistic	Prob.
IM	0.11	0.02	6.24	0
STATE	3.31	0.91	3.64	0
VALSTATE	-0.09	0.02	-4.28	0
POPURB	-2.28	0.58	-3.92	0
C	2958.21	687.6	4.3	0

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.99	Mean dependent var	305.94
Adjusted R-squared	0.99	S.D. dependent var	479.18
S.E. of regression	54.91	Akaike info criterion	10.98
Log likelihood	-1154.98	F-statistic	539.66
Durbin-Watson stat	1.64	Prob(F-statistic)	0

Estimation results for quarterly data: exports

The estimation result written as a model equation is:

$EX_{i\,t} = 2958.21 + \mathit{effect}_i + 0.11\ IM_{i\,t} + 3.31\ STATE_{i\,t} - 0.09\ VALSTATE_{i\,t} - 2.28\ POPURB_{i\,t}$,

where effect_i is the fixed effect of the region, that is the region specific deviation from the constant, as listed in the following table. It can be observed that in the eastern regions the values of effects are greater than in the western regions. Especially the industrialized regions of Dnipopetrovsk and Donetsk are labelled by high values, indicating their exports being far above average.

region	location	effect
Crimea	east	-37.38
Vinnytsya	west	-1040.94
Volyn	west	-1709.86
Dnipropetrovsk	east	5011.69
Donetsk	east	8577.28
Zhytomyr	west	-1205.08
Zakarpattya	west	-1791.64
Zaporizhzhya	east	833.18
Ivano-Frankivsk	west	-1420.06
Kyiv	east	-505.53
Kirovohrad	west	-1420.06
Luhansk	east	2304.77
Lviv	west	670.65
Mykolayiv	east	-929.59
Odesa	east	872.17
Poltava	east	-463.9
Rivne	west	-1694.64
Sumy	east	-996.77
Ternopil	west	-1859.67
Kharkiv	east	2278.55
Kherson	east	-1359.29
Khmelnytskiy	west	-1279.09
Cherkasy	west	-1204.09
Chernivtsi	west	-2092.97
Chernihiv	east	-1314.44
City of Kyiv	city east	3905.38
Sebastopol	city east	-2128.69

Estimation results for quarterly data: region effects for export as dependent variable

This is just a description of the conditions in the Ukraine, which does not give much insight into the mechanism of how privatization influences the economy.

Another almost perfect fit, for the same reason, is achieved with just one independent variable: the 2-quarter lagged total number of companies that changed ownership. A higher number of privatized companies half a year ago are correlated with higher exports in the present. This may be interpreted as a positive effect of the privatization.

Dependent Variable: EX
Method: Panel Least Squares
Cross-sections included: 27
Total panel (balanced) observations: 162

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TOTAL(-2)	0.6	0.17	3.56	0
C	282.5	9.85	28.68	0

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.99	Mean dependent var	314.62
Adjusted R-squared	0.99	S.D. dependent var	490.43
S.E. of regression	50.06	Akaike info criterion	10.82
Log likelihood	-848.44	F-statistic	567.37
Durbin-Watson stat	1.53	Prob(F-statistic)	0

Estimation results for yearly data: exports

Using the yearly data we similar pattern. Summing up over the quarters of a year we still have a positive correlation of exports and total number of privatized companies. A higher value of privatized companies corresponds to less exports which may be due to the sector of economy again, especially the agrarian sector. It is no surprise that wages tend to be higher in regions with more exports.

Dependent Variable: EX
Method: Panel Least Squares
Cross-sections included: 27
Total panel (balanced) observations: 54

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TOTAL	0.78	0.33	2.39	0.02
VALTOTAL	-0.49	0.14	-3.40	0
WAGE	1.57	0.64	2.47	0.02
C	878.89	115.52	7.61	0

Effects Specification

Cross-section fixed (dummy variables)

R-squared	1.00	Mean dependent var	1223.92
Adjusted R-squared	1.00	S.D. dependent var	1916.77
S.E. of regression	92.70	Akaike info criterion	12.20
Log likelihood	-299.31	F-statistic	780.56
Durbin-Watson stat	3.86	Prob(F-statistic)	0

Estimation results for yearly data: exports

We can conclude this section with the statement that there is a strong indication that a higher number of privatizations is correlated with higher exports. Since this effect can be observed lagged, also the causality seems to be clear: Privatizations induce exports. Higher exports are a sign of a competitive economy.

4.2.4 Import as dependent variable

Fitting the imports using the quarterly data we obtain again a description of the relations of the variables. Of course regions with a higher population need more imports. In contrast to the other models here only the total population is significant, not just the urban population. Higher wages lead to higher demand for imported goods and imports and exports are correlated. The best fit is achieved by integrating the number of privatized former public companies two previous quarters into the model. If there is a causal relation for this it must be hidden in the nature of the former public companies that were privatized, e.g. needing more foreign goods, paying higher wages, or attracting more people into the region.

For the yearly data no model shows any significant effects with the imports as dependent variable.

Dependent Variable: IM
Method: Panel Least Squares
Cross-sections included: 27
Total panel (balanced) observations: 162

Variable	Coefficient	Std. Error	t-Statistic	Prob.
WAGE	0.85	0.18	4.66	0
POP	6.08	2.28	2.66	0.01
EX	1.74	0.34	5.09	0
PUBLIC(-2)	1.49	0.66	2.27	0.03
C	-11544.93	4021.25	-2.87	0

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.92	Mean dependent var	262.69
Adjusted R-squared	0.91	S.D. dependent var	569.62
S.E. of regression	174.71	Akaike info criterion	13.33
Log likelihood	-1049.09	F-statistic	52.69

Estimation results for quarterly data: import

4.2.5. Wage as dependent variable

Modelling the average wages we find another good fit. We observe the correlation of wages and imports as seen above already. Further the higher the population of a region the less the average wage. Finally wages tend to be higher in regions where more public companies were privatized. Using the urban population instead of the total population we see that there is a difference between former state owned and public owned companies. Only the former public owned companies tend to increase average wages.

Dependent Variable: WAGE
Method: Panel Least Squares
Cross-sections included: 27
Total panel (balanced) observations: 216

Variable	Coefficient	Std. Error	t-Statistic	Prob.
IM	0.25	0.03	9.27	0
POP	-7.66	0.52	-14.79	0
PUBLIC	0.88	0.25	3.45	0
C	13945.14	905.24	15.40	0

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.83	Mean dependent var	632.33
Adjusted R-squared	0.81	S.D. dependent var	183.9
S.E. of regression	81.04	Akaike info criterion	11.76
Log likelihood	-1239.64	F-statistic	31.77
Durbin-Watson stat	0.92	Prob(F-statistic)	0

Estimation results for quarterly data: wage

Dependent Variable: WAGE
Method: Panel Least Squares
Cross-sections included: 27
Total panel (balanced) observations: 216

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TOTAL	-3.62	1.7	-2.13	0.03
IM	0.26	0.03	7.36	0
POPURB	-7.46	1.04	-7.18	0
PUBLIC	4.8	1.77	2.72	0.01
C	9386.73	1224.11	7.67	0

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.73	Mean dependent var	632.33
Adjusted R-squared	0.69	S.D. dependent var	183.9
S.E. of regression	103.07	Akaike info criterion	12.24
Log likelihood	-1291	F-statistic	16.65
Durbin-Watson stat	0.75	Prob(F-statistic)	0

Estimation results for quarterly data: wage

4.3 Conclusion

With the given data it is difficult to extract any reliable results on the effect on privatization in the Ukraine. The results must be interpreted very carefully. The main problem is the short period of time data is available for. Besides a plausible description of the economy one effect of the privatization can be observed: a higher number of privatizations seems to lead to higher exports. In long run it could be suggested the predominance of export oriented strategy of the country and improvement of international trade position. The estimation demonstrates that the pace of privatization in the industrial regions with high urbanization is higher in comparison to agrarian regions. For example, the share of privatized state property is correlated with the size of the regions, measured by urban population. Wages are estimated higher in regions where more public companies were privatized. It confirms that the privatization of public owned companies may have a positive effect on wages.

There is a need for ongoing statistical analysis of data for longer periods, including e.g. exports and imports structure, wage differentiations in regions, or economic indicators of companies. This could give a broader explanation to the processes in corporate governance in the Ukraine.

5. Policy conclusions

The statistical analysis gives insight into the dependence of companies economic performance in regions with the speed of privatization. The results of estimation confirm that privatization has the positive effect for restructuring of enterprises, and improves the economic performance in the industrially developed regions in the Eastern part of the Ukraine. The privatization has weak effects for the economic performance in the agrarian, Western and some Central regions in the Ukraine. These regions have no sufficient industrial base and urgently need to provide property reform.

The new corporate governance model formation should be based on sufficient conditions of enterprise development, the formation of internal governance structures, and strengthening the balance of interests of different stockholders. The effective corporate governance model considers the management functions division, the independence and responsibilities of the Board of Directors, defense of shareholder rights and interests, transparency and transfer of information, high corporate culture in the society. The corporate governance system determines the efficient relationship between corporate governance and management. A good corporate governance system leads to company's profit maximization and in total benefits to the overall economy.

The pace of transition to market economy depends on how the industrial policy of the government will attract foreing investment into the country. The effectiveness of a corporate governance system will depend on the formation of strong shareholders' interests in future company's performance and will lead to company's wealth creation. The sustainability of the company relates to the basic question of the financial reporting objectivity.

Adopt international corporate governance standards in the Ukraine;

Continue market-oriented institution building;

Create transparent and reliable judicial system;

Provide property rights protection in the Ukraine;

Adopt the national strategy for regional development, directed to the regional disparities reduction.

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Appendix

Table 1. Scope of Privatization and Method Used, Selected Transition Countries, 1999

Country	Score [a]	Primary method	Secondary method
Czech Republic	4.0	Voucher	Direct
Hungary	4.0	Direct	MEBO
Slovakia	4.0	Direct	Voucher
Estonia	4.0	Direct	Voucher
Poland	3.3	Direct	MEBO
Russia	3.3	Voucher	Direct
Kyrgyz Republic	3.0	Voucher	MEBO
Lithuania	3.0	Voucher	Direct
Georgia	3.3	Voucher	Direct
Slovenia	3.3	MEBO	Voucher
Bulgaria	3.0	Direct	Voucher
Croatia	3.0	MEBO	Voucher
Kazakhstan	3.0	Voucher	Direct
Latvia	3.0	Direct	Voucher
Macedonia	3.0	MEBO	Direct
Moldova	3.0	Voucher	Direct
Armenia	3.0	Voucher	MEBO
Romania	2.7	MEBO	Voucher
Uzbekistan	2.7	MEBO	Direct
Ukraine	2.3	MEBO	Direct
Azerbaijan	2.0	MEBO	Voucher
Albania	2.0	MEBO	Voucher
Tajikistan	2.0	Direct	Voucher
Turkmenistan	1.7	MEBO	Direct
Belarus	1.0	MEBO	Voucher
Bosnia	-	Voucher	Direct

MEBO - Management-employee buyout.

[a)] The score is the numerical ranking of the European Bank for Reconstruction and Development. Its classification system for assessing progress in large-scale privatization is as follows: 1= minimal progress; 2=scheme ready for implementation, some firms divested; 3= more than 25 percent of assets are privatized; 4= more than 50 percent of assets are privatized and substantial progress on corporate governance has been made.

Source: European Bank for Reconstruction and Development, 1999. Transition Report, Washington D.C.

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STATISTISCHE DISKUSSIONSBEITRÄGE

Herausgeber: Hans Gerhard Strohe

ISSN 0949-068X

UNIVERSITÄT POTSDAM

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ISSN 0949-068X

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