

RENT SEEKING AND INTEREST  
GROUPS UNDER INSTITUTIONS OF  
TRANSITION: THE CASE OF  
UKRAINE

by

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Abstract

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This thesis relates rent seeking by powerful interest groups to poor performance of some transition economies, and shows this relationship on the example of Ukraine. I used the existing theory to build and solve a mathematical model, which shows how the power of interest groups and institutions determine the equilibrium amount of rent seeking of each group and, in turn, the income in the economy. Some empirical evidence presented, supports the hypothesis that there are strong interest groups in Ukraine, involved in rent seeking, and these activities are widespread and pervasive enough, to hamper the efficiency of the economy. It also shows, how rent seeking could be related to other transitional diseases: non-monetary payments, permanently loss-making enterprises, tax evasion and capital flight. As the result, I come up with a circular flow for the rent-seeking economy, which shows how rent-seeking activities extract value out of productive activities. This redistribution leads to a shift of incentives from the productive activities towards rent seeking, and reduces growth. High level of rent seeking becomes self-sustaining, as far as it is the major source of income for powerful interest groups.

## TABLE OF CONTENTS

Chapter I. Introduction.....	1
Chapter II. Theory.....	5
2.1.Literature Overview.....	5
2.2.Mathematical Model of Rent -seeking Economy .....	13
Chapter III. Empirical Evidence and Analysis.....	19
3.1.Empirical Evidence on Rent Seeking of Interest Groups.....	19
3.1.1. Metallurgy Sector.....	27
3.1.2. Coal-mining Sector .....	29
3.1.3. Fuel and Power Sector.....	32
3.1.4. Public Sector.....	37
3.2.Analysis of the Rent-Seeking Economy .....	
Chapter IV. Conclusions.....	28
Works Cited.....	30

## LIST OF TABLES

<i>Number</i>	<i>Page</i>
Table 1: Rank of Ukraine among 59 surveyed countries (1-best, 59-worst) on competitiveness indicators (Global Competitiveness Report 1999).....	20
Table 2: Major Economic and Political Interest Groups and Spheres of Their Activity.....	21
Table 3: Direct subsidies from the budget to industry and agriculture, in % of GDP .....	22
Table 4. Tax privileges.....	22
Table 5. Profitability by Industries.....	26
Table 6. Real Output Changes (% of previous year) .....	27

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## *Chapter 1*

### INTRODUCTION

*Ukraine – the country – does not steal, but certain Ukrainians do. Their names are well known. It is impossible to earn money in Ukraine today, but it is possible to steal. But in order to steal, one must receive permission from highly placed authorities. This is the essence of today's crisis in Ukraine. (O. Moroz, interview to Nezavisimaya gazeta, issue May 11)*

There are continuing debates on why transition brought to many countries severe economic recession instead of prosperity and efficiency offered by a well-working market economy. Many theories see a cause in various specific transition problems such as corruption, widespread non-monetary payments, little restructuring at industrial and firm levels, bad macroeconomic policies, etc. It seems, however, that all these problems have the common ground. Nearly all poorly performing developing and transition countries are populated with interest groups, empowered to redistribute the value from the rest of the economy through rent-seeking activities (WB World Development Report 1999/2000, EBRD Transition Report 1999). I argue that these predatory (rent seeking) activities, which became extremely pervasive and self-sustaining due to favourable institutions created by transition process, undermine the successful development of these economies. This paper analyses the impact of rent seeking activities of

interest groups on Ukrainian economy, where they exist in particularly intensive and explicit forms.

Economic rent, here, are gains of an enterprise from its privileged position - subsidies, tax privileges, monopoly status and other favourable regulations, etc. Rent seeking, in a broad context, means predatory, unproductive activities aimed to receive extra profits. Productive activities are aimed at creating a value, while predatory activities just take the created value from productive activities of other agents without creation of net social gains. To clarify the meaning of productive versus predatory, unproductive activities, consider the following example. A metallurgical plant's management raises profits trying to receive energy at a lower than market price through arrears, barter, privileged prices, etc. The result of this predatory, unproductive activity is the value transfer from the rest of the economy to this plant. In contrast, investment in energy saving technologies is a productive activity, which improves both the profitability of the plant and overall efficiency of the economy.

The specificity of rent-seeking activities in Ukraine is that rents received by the enterprise do not go to its profits and are not used for its development, but rather are illegally transferred (tunnelled) to those private entities, which control the enterprise. Thus, rent-seeking enterprise becomes a cost-bearing entity, while all the profits, gains from rents are accumulated in the private pockets. There are several reasons for these tunnelling activities. Keeping enterprise formally loss making with arrears to workers and the budget facilitates rent seeking. Rent seeking enterprises are usually in state or collective ownership, and tunnelling serves as a transfer of funds from owners to private agents - managers, who control the enterprise. Also tunnelling is used for tax evasion. Resources could also be tunnelled directly from the state funds or assets, taking hidden forms of stealing. The essence of these tunnelling activities brightly describes Ickes (1998)

as “stealing from enterprise”, while standard rent-seeking activities he compares to “stealing for the enterprise”. Rents received by the enterprise do not improve its performance, because they are tunneled away, and this makes this enterprise demand further rent. Thus tunneling exacerbates rent-seeking activities in transition economies.

In Ukraine, partial and disrupted reforms created numerous possibilities for rent seeking. Rents could be received through fiscal sphere as direct subsidies and implicit subsidies, including tax privileges, restructuring and clearance of the tax arrears, tax offsets, paying taxes in kind, privileged credits, privileged contracts with government, privileged access to State Reserve Fund etc. Rents could also be received at the expense of households as wage arrears and wage payments in kind. Another source of rents are various state regulations, restriction of competition, price controls, which give some enterprises a monopolistic power to receive the profits at the expense of their customers. To conceal these rent-seeking and tunneling activities, which are often illegal, a tangled network of non-monetary payments is used, that make monitoring nearly impossible. Thus rent seeking is connected with other transitional problems: widespread non-monetary payments, arrears, poor competition created by non-level playing field and large proportion of loss-making enterprises.

All these cause price distortions, which make rents possible. As a result, prices do not perform their market functions—of reflecting marginal scarcities -- and, this, in turn, undermines the efficient resource allocation. This system provides non-market incentives that make productive activities almost unprofitable for managers, while rent seeking, which produces nothing but simply redistributes existing value, offers high returns. Rents are the main source of income of narrow interest groups, and they try to maintain them by influencing policy-making process.



The hypothesis of this paper is that the poor performance of many transition economies is determined by widespread rent seeking, predatory activities that "tunnel" value out of potentially productive spheres. I used the existing theory to build and solve a mathematical model, which shows how the power of interest groups and institutions determine the equilibrium amount of rent seeking of each group and, in turn, the income in the economy. Rent seeking is a rational choice of profit-maximizing economic agents, under given institutions. But for the whole economy maximum income is generated, when there is no rent seeking.

To support my hypothesis and the results of the model, I use qualitative analysis of industry structure, interests of "clans", the role of non-monetary payments, and other specific for transition issues, trying to connect them into the entire system. From a sample of real life cases of rent seeking activities, I derive indirect evidence that characterizes them and then extend it to the entire economy.

Analysing the empirical evidence and using theory of rent-seeking I come up with a systemic picture of the transition economy, which demonstrates how rent-seeking works in Ukrainian economy, how it causes value redistribution. The analytical framework reveals that possibility of rent extraction causes implicit transfer of resources from productive to non-productive activities, which reduces incentives to produce and undermines growth. Rent-seeking activities are inherently connected with other specific problems of transition: the large share of loss-making enterprises, widespread non-monetary payments, corruption, and capital flight. The overall result is that various kinds of rents are received at the expense of households, government and productive enterprises, who forgo profits, wages and public goods. The results of the paper imply that to start growth the most useful reforms will be those that make rent extraction hardly possible.

## *Chapter 2*

### **THEORETICAL PART**

#### **2.1. Literature Overview**

The core concept of my thesis is based on the insightful theory of Mancur Olson (Olson, 1965, 1982, 1998) where he argues that power distribution determines economic efficiency and, consequently, well being of the society.

The central argument of his work (Olson, 1998)<sup>1</sup> is that redistributive<sup>2</sup> activities negatively affect economic growth as far as they reduce the incentives to produce. The basic example is anarchy, when the production is extremely low due to constant stealing by many roving bandits. However, when the most powerful bandit becomes a stationary autocrat, he has an incentive to suppress the stealing by others, provide peaceful order and other public goods in order to enhance productivity and collect maximum taxes over time for himself. This means he has an “encompassing interest”<sup>3</sup> over his domain. But autocracy does not provide the most efficient outcome, because the autocrat diverts resources for his own consumption, and overtaxes when he fears the loss of his power. The majority under a democratic order is the major part of the society, which it taxes and for which it provides public goods, so it has even more encompassing interest than the autocrat and, consequently, makes more efficient for society decisions.

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<sup>1</sup> The following paragraphs present the key points of Olson (1998)

<sup>2</sup> Olson calls rent-seeking activities, in the sense I defined in my work, “redistributive”

<sup>3</sup> Encompassing interest means that utility of agent positively depends on the productivity and well-being of the society.

However, under weak democracy narrow interest groups can emerge, which redistribute valuable resources from the rest of the society for themselves. To gain power, they claim that they represent the interests of the majority, shielding or distorting information about their redistributive actions. Majorities will often fail to see their true interest because of rational ignorance of median voter on public affairs - they can be “victims of predation that they do not notice”.

*Because majorities have encompassing or even super encompassing interests, democratic governments that are not influenced by special interest groups will to a great extent be concerned with the provision of public goods and will usually impose only relatively tolerable losses in the efficiency on the economy. Really large distortions in the economy will naturally arise only because of the lobbying or cartelization by narrow special interest organizations. (Olson, 1998, p. 62)*

Olson argued that special interest groups, which are small in relation to the economy, would bear costs far in excess to benefits if they acted in the common interest of the larger group to which they belong. Consequently, special interest groups prefer to act in their narrow self-interest to the detriment of the common interest of the whole society. Olson showed the importance of this argument to the study of the economic growth. He reasoned that although economic efficiency and growth are in the interest of all interest groups in the society, each relatively small special group has no incentive to work spontaneously for an increase in efficiency and output. Small groups thus prefer increasing their slice of the pie to increasing the whole social pie. These groups will fight for higher tariffs, price supports, tax privileges, higher wages and blocking innovations of their competitors, all of which prevent the efficient allocation of resources.

*...when a group constitutes only a narrow segment of the income earning capacity of the economy is able to act collectively, its main incentive is to redistribute to itself through lobbying and price fixing and to continue such activities even when the losses to the society are large in the relation to the amount the group obtains through its redistribution struggle. The distortions of prices and obstacles to innovation arising from distributional coalitions make such an economy sclerotic...* (Olson, 1998, p. 102)

Olson emphasized the distinction between redistribution to narrow interest activities, which reduces overall efficiency of the economy, and such redistribution by the state as unemployment benefits, benefits to disabled, etc. The latter are public goods that provide some kind of social insurance for the victims of bad luck, and are very important for social order and stability that have positive impact on the overall productivity.

In the result, Olson spells out the conditions necessary for prosperity of the economy:

*Prosperous economies need market-augmenting government, powerful enough to create and protect private property rights and to enforce contracts, yet constrained so as not by its actions, to deprive individuals of these same rights.*  
(Olson, 1998, p. 158)

Following the Olson's logic, Tornell (1998) and Tornell and Lane (1998) developed a model on the distortive impact of powerful interest groups on the economy with weak legal-political infrastructure. In this model, the groups can earn income in two sectors: a formal sector, and a less efficient shadow sector (i. e. tax heavens outside the country). Due to weak institutions, each group has open access, via the fiscal process, to the capital stocks of other groups in a formal sector. In contrast, capital in the informal sector is truly private—it is not a subject to appropriations of other groups through fiscal process. Thus the

appropriation of each group lowers net rate of return in the formal sector for all groups. In the equilibrium, each group redistributes resources up to the point when net return in the formal sector equals the rate of return in the informal sector.

With this model, Tornell and Lane (1998) demonstrate the “voracity effect”, which describes a situation when an increase in the raw rate of return in the formal sector or windfall resources (i.e. foreign aid) lead to a more than proportional increase in fiscal redistribution and reduces growth. This is reflected in a higher tax rate in the formal sector, which induces a reallocation of capital to the informal sector, where it is safe from taxation. This shift reduces the growth rate in the economy, counteracting the direct positive effect of an increase in the raw rate of return. Tornell and Lane prove that redistribution increases more than proportionally to the windfall, and that the direct effect of the windfall is dominated by the voracity effect, so that the growth rate declines as the raw rate of return increases.

In another article, Tornell (1999) employs his model to show endogenous institutional reforms that have taken place in the context of economic crisis and drastic political change. It is individually rational for groups, in the course of their rent seeking, to drive the economy to a crisis; they behave voraciously even though they know that when a crisis occurs, there will be a conflict and a reform will take place. That reform is the tool used by some powerful groups to limit the power of their political opponents by making rent seeking impossible for everyone. So reform in developing countries comes as a result of political struggle rather than social welfare maximization.

An empirical investigation by Demirbas (1999) suggests that rent seeking is comparatively low in developed countries whilst high in developing countries. He

argues that the security of property rights is one of the most important institutional differences between developed and developing countries and their violation results in rent seeking. He approximates rent seeking to changes in budget distribution and showed the difference between countries by applying a cross section and a time series regression analysis.

There is large economic literature on rent seeking, which analyses the welfare effects of this activity. The early theory of rent seeking introduced by Tullock (1967) and developed by Krueger (1974) and Bhagwati (1980) is concentrated on the estimation of costs that are incurred by producers on lobbying for monopoly status or tariff protection. They consider social losses from monopolies and tariffs to be greater than deadweight loss triangle, because producer spend part of his profit on lobbying for rents.

Further development of rent seeking theory, reflected in an article by Murthy et. al. (1993), points out the negative effect of rent seeking on the incentives to produce and economic growth. Rent-seeking, in their theory, is the value transfer from the productive sphere, so it misallocates resources and decreases the return on production. A simplified model of a rent seeking society is introduced in the article, and it shows that the equilibrium prevails with low production and living standards. Murthy et. al. also consider the effect of property rights identification on rent seeking—under perfectly secure property rights rent seeking is impossible. They argue that rent seeking is subject to very natural increasing returns, which means that high levels of rent seeking may be selfsustaining.

The economic literature has paid limited attention to rent seeking activities in transition economies. Ickes (1999) describes value-transfers from efficient enterprises and industries to inefficient, value-subtracting enterprises by means of barter and arrears. Effective enterprises produce “hard” goods, which are

competitive and meet demand, while ineffective enterprises produce “soft” - outdated inferior goods. Hard goods earn monetary payments from which taxes should be paid, soft goods are paid in non-monetary payments and allow tax evasion. To convert soft goods into hard goods restructuring is needed. However, the system allows enterprises and industries to survive producing these soft goods, as far as barter transactions hide the actual value subtractors. Ickes has shown that such system seriously distorts prices and shifts the incentives for managers from productive activities to “building relations”, which is almost the same as rent seeking. Ickes analyses the decision problem of managers in Russia in terms of allocating efforts and capital to restructuring, which help to improve productivity, or to “relational capital”, which allows them to survive with soft goods. He argues that managers behave rationally, despite the fact that they do not maximize profits; they actually do maximize profits, if profits are suitably measured. Formal profits usually attract the attention of the tax authorities and the criminal sphere, they make it difficult not to pay wages to workers and dividends to shareholders. So managers chose to seek informal profits.

*Regardless of their form, the distinctive feature of all informal activities is a lack of transparency. Something is being concealed from the tax man, from shareholders, from the managers, from workers, from regulators, from politicians, from the police or someone else. Someone's interests are suffering--- people inside the company, or outside. They may be employees, owners, competitors, or partners. . . . But if the informal activities exist on a large scale, there will also be parties from whom the activity is not concealed, parties who participate in the scheme. This is one of things that is special about the current Russian virtual economy: it has so many participants that all have a stake in making the entire system work. What holds it all together is the system of personal relationships among the participants. (Ickes, 1999b, Ch. 4, p. 2)*

But why do Ukrainian and other transition economies work differently from healthy market economies, and why have the rent-seeking system here become

sustained? This question is covered in EBRD Transition Report 1999 (section 5, 6). In a market economy rent seeking or tunnelling activities are not so pervasive, due to market-based and democratic institutions incorporated in the system that restricts them. Strong property rights, good corporate governance and transparency reduce managers' incentives for tunnelling, as this activity destroys the enterprise in the long run and makes its production uncompetitive. At the same time, the more efficient and noncorrupted government will not so readily support loss-making enterprises, while their non-payments to the budget, workers and input suppliers will lead them to bankruptcy. Under the level playing field, investment in normal, productive activities becomes much more attractive.

Tunneling from the government also is hardly possible under a true democracy and civil society with a high degree of political competition. In such a system the government heavily depends on the society, so corruptive activities and a weak provision of public goods will undermine its reputation and give power to its competitors. Thus tunneling activities cannot become sustained in a good-working western economy.

On the contrary, a transition process allowed evolution of rent-seeking society. Under the command economy tunneling activities were restricted not by the market mechanisms and true democracy institutions, but by strong control of the Communist party. When this power was dismantled, but the market mechanisms still did not evolve, there appeared large opportunities for tunneling resources out of the economy. Thus, the countries, where partial market reforms were introduced were most hardly affected by these activities. But the countries, where strong state power was maintained (Belorussia, Kazakhstan, etc.) and the countries, where market reforms were introduced rapidly and there was



developed civil society (Poland, Estonia) have met limited rent-seeking and tunneling of resources out of productive economy.

Aslund and Johnson (2000) describe the evolution of the type of rent seeking activities characteristic for transition economies - tunneling. They consider differences in the outcomes of the similar reform policies to be explained by rent-seeking activities of political elite. They provide some examples of rents that were widely used during the early stage of transition in Russia and Ukraine that considerably disrupted the reform process. On early stages of transition rent seeking ranged from primitive stealing to the advanced rent-seeking mechanisms. Aslund and Johnson (2000) name four dominant forms of those rents. The first was to buy domestic standard products (metals, chemicals, coal), which were cheap due to price regulations and export them by the world prices, which were 10 times higher than domestic. That required access to these resources and exports permits, so the beneficiaries were commodity traders, foreign trade officials and some politicians. The second method was to import certain commodities, notably natural gas from Russia at a low, subsidized exchange rate, and resell them at a higher price. It was even more profitable not to pay for deliveries but let the government pay on the basis of state guarantees for these imports. The third form of rent seeking was privileged access to subsidized credits at the interest of 20% per year, while the inflation rate was 10155% in 1993. The fourth form were direct budget subsidies, given mostly to the energy sector, coal mining, and agriculture. During 1992-1993 these rents, according to Aslund and Johnson (2000) estimations, amounted to over 60% of GDP.

As a result, several groups of traders and directors, connected with politicians, usurped a large share of GDP at early stages of transition. They tried to retain their rent seeking position, so they invested in control over productive enterprises

and government, elections, etc. However, the initial rents described above dwindled, as resources became exhausted, and were replaced by new, smaller rents. Radical economic structural reforms are considered to be the main efficient cure in order to lessen rent-seeking and achieve growth. This point of view shows that political elite is responsible for the current state of economy with all distortions generated, and that it is highly interested in maintaining this situation.

## **2.2. Mathematical Model of Rent-seeking Economy**

To describe the role of rent seeking in transition economy I have developed a simple static mathematical model. On the basis of the discussed theory I defined the following features of rent seeking economy. The economy is populated with narrow interest groups, and each group has an objective to maximize its income. The group receives income from rent-seeking activities and production. Rent seeking is a value transfer from the rest of the economy to the rent-seeking group. Institutions of this economy, such as property rights, transparency and corruption, affect the ability of all groups to redistribute value from the rest of the economy. Rent seeking decreases the efficiency of the economy in two ways. First, rent seeking of one group reduces the return on productive activities of all groups in the entire economy. Second, economic agent spend valuable resources, capital, time and talent to receive rents, which otherwise can be invested in production.

Government is present in this model only implicitly. It is assumed that, without rent seeking, government acts in the interest of the entire society. In this case, all taxes collected are spent on valuable public goods, which increase the return on productive activity. So, for every group, I consider taxes spent on valuable public goods, as capital invested in production. However, when tax collected from one group goes on rents to the other group, this decreases the returns on productive activities of the first group. In this case, taxes are the means of value

redistribution - rents, and it is not important that this redistribution goes through the government

**The model is built on the following assumptions:**

The economy is populated with  $N$  interest groups, and each group has an objective to maximize its income  $Y_i$ .  $Y = \sum Y_i$  is the total income produced in the economy. For each group  $Y_i = R_i + Q_i$ , where  $R_i$  is rent, which group  $i$  receives as a transfer of resources from the entire productive economy, and  $Q_i$  is the income of group  $i$  from its productive activities.

Group  $i$  owns or controls the amount of tangible and intangible capital  $K_i$ , where  $K = \sum K_i$  is a total stock of capital / resource endowment of the economy. It can invest its capital in productive activities and from rent-seeking activities in order to receive income:  $a_i$  is a share of the capital group  $i$  uses for production,  $a_i \in [0,1]$ ; while  $(1 - a_i)$  is a share of the capital group  $i$  uses for seeking rents. Both in rent-seeking and productive sphere I assume a linear technology.

The return on capital invested in rent seeking or redistributive activities depends on institutions that make rent seeking possible, relative political power of each group and the size of productive economy. Here I employ a composite index of institutions in the economy  $p$ , which could be treated as corruption, transparency or security of property rights in the economy;  $p=0$  makes rents extraction impossible. Personal advantage of group  $i$  in rents extraction is  $s_i$ , and it reflects the distribution of political power among groups,  $\sum s_i = 1$ . So for each group institutional factor, which allows it to receive rents is  $s_i * p$ , and the sum of these factors of each group determines the institutions in the economy  $p$ . Government may influence  $s_i * p$  by introducing reforms, which increase transparency, enhance competition, tighten control over fiscal spending, etc. The total share of resources

employed in productive sphere  $\frac{\sum \mathbf{a}_i K_i}{\sum K_i}$  also determines the return on rent seeking. So the overall amount of rent that group **i** receives is:

$$R_i = s_i p \frac{\sum \mathbf{a}_i K_i}{\sum K_i} (1 - \mathbf{a}_i) K_i$$

The constraint  $\sum R_i \leq \sum \mathbf{a}_i K_i$  should hold for the total rent collected by all groups in economy.

Income, which group **i** receives from productive activities  $Q_i$ , is *assumed* to be the linear function of the capital it invested. If there is no rent seeking in the economy  $Q_i = r * \mathbf{a}_i K_i$ , where  $\mathbf{r}$  (*assumption*  $\mathbf{r} \hat{=} [\mathbf{0}, \mathbf{1}]$ ) is a rate of return in productive economy, given no rent-seeking and existing level of technology, *assume* it is the same for all groups. But the actual return on productive capital is decreased by the rent seeking of all groups in the economy  $\frac{\sum R_i}{\sum \mathbf{a}_i K_i}$ , **so**

$$Q_i = \left( r - \frac{\sum R_i}{\sum \mathbf{a}_i K_i} \right) * \mathbf{a}_i K_i$$

As far as rents are just transfers, the total income produced in the economy is:

$$Y = \sum Y_i = r * \sum \mathbf{a}_i K_i$$

Thus the maximum income in the economy ( $\mathbf{Y} = \mathbf{r} * \mathbf{K}$ ) under given  $\mathbf{K}$  and  $\mathbf{r}$  is generated, when all  $\mathbf{a}_i = \mathbf{1}$ .

Group **i** maximizes function  $\mathbf{Y}_i$  by making decision on share of capital it invests in production  $\mathbf{a}_i$ :

$$Y_i = R_i + Q_i = s_i p \frac{\sum \mathbf{a}_i K_i}{\sum K_i} (1 - \mathbf{a}_i) K_i + \left( r - \frac{\sum R_i}{\sum \mathbf{a}_i K_i} \right) * \mathbf{a}_i K_i$$

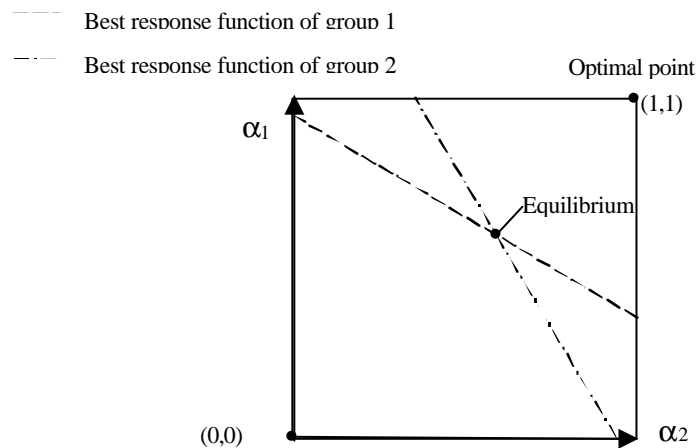
Differentiating function  $Y_i$  with respect to  $\mathbf{a}_i$  we receive a best-response function of group i:

$$\alpha_i = f(r, p, s_j, K_j, \alpha_j (j \neq i))$$

Second order condition proves it is maximum for assumed values of  $\mathbf{r} \hat{\mathbf{I}} [0,1]$

Each group chooses its strategy ( $\alpha_i$ ) with respect to other groups' strategies ( $\alpha_j$ ). Equilibrium is an intersection of all best response functions.

For  $N=2$ ,  $K_1=K_2$ ,  $s_1=s_2$



For the case of 2 firms and symmetric capital endowment I have estimated the equilibrium values of  $\mathbf{a}_1$  and  $\mathbf{a}_2$

$$\alpha_1 = \frac{(-2 \cdot r^2 \cdot s_2 + r^2 \cdot s_1 \cdot p \cdot s_2 + r^2 \cdot p \cdot s_2^2 - 2 \cdot r \cdot s_1 - r \cdot p \cdot s_2^2 + 4 \cdot r \cdot s_2 - 3 \cdot s_2 \cdot r \cdot p \cdot s_1 + r \cdot s_1^2 \cdot p + s_2 \cdot p \cdot s_1)}{[p \cdot (3 \cdot s_2 \cdot s_1 + r \cdot s_1^2 + r \cdot s_2^2 + 3 \cdot r^2 \cdot s_1 \cdot s_2 - 8 \cdot s_2 \cdot r \cdot s_1)]}$$

$$\alpha_2 = \frac{(s_2 \cdot p \cdot s_1 - 2 \cdot r \cdot s_2 - 3 \cdot s_2 \cdot r \cdot p \cdot s_1 + r \cdot p \cdot s_2^2 - r \cdot s_1^2 \cdot p - 2 \cdot r^2 \cdot s_1 + r^2 \cdot s_1^2 \cdot p + r^2 \cdot s_1 \cdot p \cdot s_2 + 4 \cdot r \cdot s_1)}{[p \cdot (3 \cdot s_2 \cdot s_1 + r \cdot s_1^2 + r \cdot s_2^2 + 3 \cdot r^2 \cdot s_1 \cdot s_2 - 8 \cdot s_2 \cdot r \cdot s_1)]}$$

As a benchmark case we can analyze these function with a further assumption  $s_1 = s_2$ :

$$\alpha_1 = \frac{1}{3} \cdot \frac{(-p \cdot s_2 - 2 \cdot r + 2 \cdot r \cdot p \cdot s_2)}{[p \cdot s_2 \cdot (-1 + r)]}$$

$$\alpha_2 = \frac{1}{3} \cdot \frac{(-p \cdot s_2 - 2 \cdot r + 2 \cdot r \cdot p \cdot s_2)}{[p \cdot s_2 \cdot (-1 + r)]}$$

For this simplified case we can see that  $\frac{da_i}{dr} > 0$ , (for the values of  $p$ , which satisfy constraint  $\sum R_i \leq \sum a_i K_i$ ), so increasing return in productive sphere increases  $\alpha_i$  and  $Y_i$ . We also can find find that  $\frac{da_i}{dp} < 0$  for  $r \in [0,1]$ , so the decreasing level of corruption is favourable for all groups, as it increases  $\alpha_i$  and  $Y_i$  for every group.

However, each group is interested to have relatively higher  $s_i$ , because its income is a positive function of  $s_i$ .

The model provides us with following results:

1. Total income/ output of the economy is a positive function of  $\mathbf{a}_i$  (this is consistent with theory and quite obvious fact). The less capital each group invests in rent seeking, the more it devotes to productive activities –the more income it generates. Income is at its maximum when all  $\mathbf{a}_i = 1$ . This result shows that collectively rational is to set all  $\mathbf{a} = \mathbf{1}$ , however it is rational individually to set  $\mathbf{a}_i < \mathbf{1}$ , when  $p$  is high enough.
2. The greater is bad-institutions factor ( $\mathbf{p}$ )– the greater is the total level of rent seeking in the economy, and the less income it produces. Income of each group is a negative function of  $\mathbf{p}$ , so everyone is interested in reducing  $\mathbf{p}$ .
3. However, as far as for each group income is a positive function of  $\mathbf{s}_i$ , it is reluctant to reduce  $\mathbf{s}_i * \mathbf{p}$ , which is treated as a uniform factor. The government can reduce  $\mathbf{p} = \hat{\mathbf{a}} \mathbf{s}_i$  only by reducing  $\mathbf{s}_i * \mathbf{p}$  for each group. Because of imperfect information and uncertainty problems, the government cannot make a credible commitment that it will reduce  $\mathbf{s}_i * \mathbf{p}$  of each group proportionally and preserve relative power distribution  $\mathbf{s}_i$ . Thus groups may prefer status qua with a high  $\mathbf{p}$ .

The general implication from this model is that institutional factor  $\mathbf{p}$  makes the difference between good-working and bad-working economy, and it is the only variable, which could be influenced by government policies.

## *Chapter 3*

### **EMPIRICAL INVESTIGATION AND ANALYSIS**

#### **3.1.Evidence on Interest Groups Rent Seeking**

Several very powerful groups, engaged in rent seeking and tunneling (clans or oligarchs), are formed in Ukraine. Some indirect measure of interest groups power, according to EBRD Transition Report (1999), is income inequality, which is exceptionally high in Ukraine. The Gini coefficient index (WB World Development Report 1999/2000) for Ukraine in 1995 is 47.5, which is greater than for USA (40.1), while for most transition economies Gini index is less than 30<sup>4</sup>.

Powerful interest groups gained enormous influence on politics and reform process in the country. These groups could be considered in terms of the theory and developed model as narrow interest groups with comparatively large personal political power (**si**). These groups enjoy generous rents from their access to power: monopoly status, tax privileges, subsidies, tax arrears' clearances and government induced credits. A nontransparent, overregulated, and noncompetitive system with a "hand-managed" budget gives them such opportunities, so they are interested in maintaining it. Some support for the influence of interest groups provides ranking of the Global Competitiveness Report 1999, which surveyed a sample of 59 countries (see table #1). These

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<sup>4</sup> For comparison: Russia 48 (1996), Estonia 35.4 (1995), Romania 28.2 (1994), Czech Republic 24.7(1993), Hungary 27.9 (1993), Latvia 28.5 (1995), Slovenia 29.2 (1993), Belarus 28.8 (1995); source - WB World Development Report 1999/2000



indicators shows that interest groups have substantial influence on government policies, and this, in turn, severely distorts competitiveness.

**Table 1: Rank of Ukraine among 59 surveyed countries (1-best, 59-worst) on competitiveness indicators (Global Competitiveness Report 1999)**

#	Indicator	Rank
1	Competitiveness ranking	58
2	Government favoritism to well-connected firms	57
3	Influence of pressure of special interest groups on government economic policies	57
4	Trust in politician honesty	56
5	Tax evasion	57
6	Weak antitrust policy	51
7	Bribes and kickbacks to senior politicians	57
9	Provision of public goods	50
10	Tax system undermines business competitiveness	59

Table #2 presents three major interest groups or clans with the greatest political power in Ukraine. They are very close to the President, having invested significant capital in his reelection campaign. According to unofficial information presented by Financial Times, top US officials have advised Ukrainian president during December 1999 meeting to limit the influence of the leaders of these groups on policy making, as it undermines market reforms. Leaders and most members of these groups are parliamentarians - together they constitute more than 1/3 of the parliament. To have more lobbying opportunities they created their parties, free from any ideology, and fractions in the parliament, and gained control over most popular mass media<sup>5</sup>. According to Mykola Azarov<sup>6</sup> (Head of State Tax Administration), more than half of the deputies of Verhovna Rada have

<sup>5</sup> Information is based on newspaper *Invest gazeta*, #2, 2000: this is common –knowledge information which could be verified with privatization news, various political news, etc, see also “Zerkalo Nedeli” newspaper in every issue.

<sup>6</sup> Infobank News Service, issue April 18, 2000

direct relation to enterprises, which make 25% of Ukrainian imports and 10% of exports. Despite the fact that these enterprises have numerous tax and other privileges, they have arrears to the state budget of 4 bln. hrn.

**Table 2: Major Economic and Political Interest Groups and Spheres of Their Activity<sup>7</sup>**

<b>Leaders of informal interest groups</b>	<b>Political party owned</b>	<b>Spheres of activities</b>
O. Volkov	Democratic Union	Oil and gas complex Financial companies (arrange deals to extract rents in real economy) By-product-coking industry
V. Medvedchuk G. Surkis	Social-Democratic Party	Electrical energy (control over 8 energy distributing companies) Metallurgy (control Zaporozhskiy ferrous plant) Petroleum products market Alcoholic beverages, sugar and candy
V. Pinchuk A. Derkach	Labor Party	Control over coal-mining enterprises Piping (most pipe plants in Ukraine) Metallurgy Ferroalloy Control over coal-mining enterprises Export-import operations Gas and energy deliveries to enterprises

The direct subsidies - a classical source of rents –are declining as a share of GDP in Ukraine from 6.05% in 1995 to 1.81% (see Table #3). The largest share of subsidies goes to inefficient but socially important coal-mining sector - 1.18% out of 1.81% of GDP. This type of subsidies is the easiest to control and monitor. Their reduction is the result of lack of real money in budget (according to State

<sup>7</sup> Based on the materials of newspaper *Invest gazeta*, #2, 2000

Statistic Committee, nonmonetary payments constituted 30% of budget revenues in 1999), and international credit organizations demand their contraction.

**Table 3: Direct subsidies from the budget to industry and agriculture, in % of GDP**

	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>
<b>Total</b>	6.05%	4.17%	4.87%	2.24%	1.81%
<b>Industry and energy</b>	4.77%	2.94%	4.11%	1.66%	1.42%
<b>including coal-mining</b>	3.12%	1.23%	1.30%	1.27%	1.18%
<b>Agriculture</b>	1.28%	1.23%	0.76%	0.58%	0.39%

However, as direct subsidies went down, various kinds of implicit subsidies evolved, which are very difficult to control, monitor or estimate. Among the most widespread are tax privileges. According to the estimates of State Tax Administration, the losses of budget due to tax privileges approximately amounted to 6.9% of GDP in 1999. The largest tax privileges enjoy such industries as agriculture (VAT exemption), metallurgy, coal-mining (VAT exemption), joint ventures in export-import operations, etc. Tax and regulatory privileges are also granted to Special Economic Zones, only during the year before presidential elections 8 SEZ were created

**Table 4. Tax privileges<sup>8</sup>**

	<b>1997</b>	<b>1998</b>	<b>1999</b>
<b>Tax privileges (bln. hm.)</b>	4.5	6.98	8.74
<b>Tax privileges as % of GDP</b>	4.9%	6.8%	6.9%
<b>Tax privileges as % of budget expenditures</b>	13.1%	22.4%	25.3%

<sup>8</sup> Estimated by State Tax Administration

Another source of rents is the possibility of tax arrears. By October 1998, the overdue payments to the budget, extra-budgetary funds and social-insurance arrears have reached 17 bln. hrn. (Derzhkomstat data). The incentives for arrears accumulation range from receiving a kind of credit from the budget at smallest if any interest rates, to the realistic expectations of debt forgiving. In 1997 tax clearances amounted to 30.4% of budget revenues, or 9.2% of GDP, for 11 months of 1998<sup>9</sup> they amounted to 16% of budget revenues, or 4.3% of GDP (Lunina, 1999).

Another departure from efficiency, which may indicate rent seeking, is a growing share of loss-making enterprises that continue functioning, and even increase their output. The share of loss-making enterprises in industry has reached 60% in 1999, around 90% of firms in agriculture are loss making. The losses of unprofitable enterprises just in industry are of the size about 60%<sup>10</sup> of profits of profitable. These facts conflict with expectation that only such reforms as privatization and liberalization are sufficient to improve productivity by giving proper incentives to managers. However in practice, managers do little to reduce official losses. This suggests that they find beneficial keeping enterprise formally loss making – they may not pay taxes, wages, dividends, and for inputs in full, while they may expropriate part of the value through created intermediaries. Such arrears reduce the real cost of production – overdue payables of enterprises were 80%<sup>11</sup> of GDP in 1998, and they grew up even more in 1999.

The common way of tunneling is selling production to or buying from own intermediaries at manipulated prices. However, tax administration is very suspicious, if output is sold at a lower price than its cost, or inputs, products or

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<sup>9</sup> In 1997 one third of all clearances occurred in December (Lunina, 1999)

<sup>10</sup> Estimated with the data from Minstat bulletin for the first half of 1999

<sup>11</sup> Ukrainian Economic Trends, 1999 December

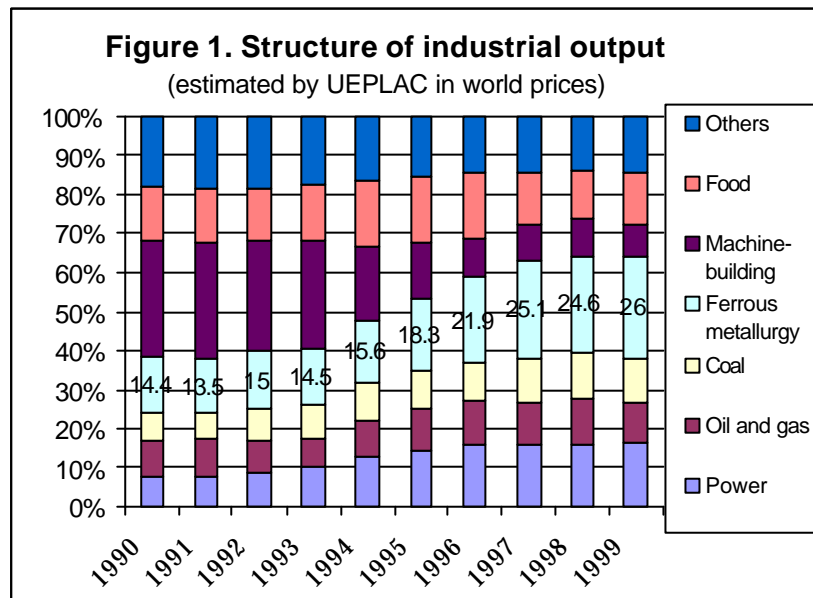
services are bought at a price higher than the market. As far as tunneling are not legal, they are hidden with a network of barter, and other non-monetary operations that are extremely difficult to monitor (Lunina, 1999; Korenyok, 2000). According to the State Statistics Committee of Ukraine, barter transactions constituted approximately 33% in 1999 and 40% in 1998 of all industry sales and in some industries (i.e. cement) this figure approach 80%<sup>12</sup>. Another rent seeking possibility is created by the nonmonetary payments of taxes to the budget, which allows to pay taxes with a considerable real discount (Lunina, 1999). These nonmonetary payments to the budget, including taxes in kind, mutual offsets, paying with veksels have grown in 1999 to approximately 30% of budget revenues. The losses from these transactions are hardly possible to estimate.

Lets analyse the spheres, in which these interest groups are engaged and raise their large profits. They are mostly outdated and inefficient resource oriented and intermediary goods sectors, such as metallurgy, power, fuel industries or financial sphere that serves their tunnelling activities. World Bank' Country study (1999b) names these sectors the most uncompetitive, regulated, corrupted and intransparent. These opinions could be supported with foreign direct investment statistics – metallurgy and fuel sector has the smallest FDI weighted by their output, approximately 12 times less than food industry. The share of these sectors in total output of the industry is growing (from 38% in 1990 to 64% in 1999, see Figure 2), despite the fact that they are very inefficient and unprofitable.

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<sup>12</sup> Data from HIID working files (source - State Statistics Committee).

The consequence of widespread rent seeking is that almost no restructuring on the sectors level has occurred during the transition. Energy-intensive sectors, raw material and commodity producing sectors crowd out consumption and high-tech goods production, resource rich agriculture is almost dying. Those sectors of economy perform are gaining large share in GDP, where better opportunities for rent seeking exist. This conclusion is consistent with Mancur Olson theory, that it is rent-seeking, redistributive activities, which distort the most efficient outcome for the economy.



**Table 5. Profitability by Industries<sup>13</sup>**

	1996	1997	1998	1999 Jan- June	1999 Jan- July
	Profitability of production	Profitability of production	Profitability	Profitability of production	Correction on overdue receivables**
<b>Industry</b>	8.9%	5.7%	6.3%	7.4%	23.87%
<i>including:</i>					
Power	12.9%	12.4%	16.5%	17.1%	67.37%
Fuel:	18.3%	12.8%	17.6%	21.0%	31.57%
oil-processing	N/A	25.1%*	N/A	5.2%	N/A
gas	N/A	134.0%*	N/A	64.1%	N/A
coal	N/A	-8.0%*	N/A	2.7%	N/A
Ferrous metallurgy	2.3%	0.1%	-0.4%	-1.0%	2.38%
Non-ferrous metallurgy	N/A	1.5%*	-6.8%*	0.7%	21.72%
Machine- building and metal- processing	10.4%	4.9%	5.1%	4.5%	8.22%
Chemical and petro-chemical	7.4%	-1.2%	--3.8%	0.6%	-0.89%
Light manufacturing	1.6%	-4.3%	-4.2%	-3.8%	-1.84%
Food processing	12.2%	7.4%	6.8%	6.2%	-0.56%
Wood, pulp and paper	7.7%	3.4%	2.7%	4.5%	1.31%
Constraction Materials	3.7%	1.4%	-1.5%	-1.5%	11.95%
Profitability for 1996 is biased upward due to high inflation					
Profitability is estimated as profit from production realization divided by its cost					
* - profitability is estimated for the period January-June					
** - this figures are estimated as the ratio of overdue receivables change during the period divided l					

<sup>13</sup> State Statistic Committee Bulletin for the presented periods

**Table 6. Real Output Changes (% of previous year)<sup>14</sup>**

	1996	1997	1998	1999
<b>Industry</b>	-5.1	-1.8	-1.5	3
Energy	-6.9	-2.6	-0.3	6.6
Fuels	-6.7	4.5	-0.7	-1.3
Ferrous metals	11.9	7.7	-3.8	6.2
Non-ferrous metals	8	2.7	12.4	8.9
Chemicals and petrochemicals	-3.4	-0.6	0.9	-1.1
Machine-building and metal processing	-26.1	-3.6	-4.5	-0.8
Wood/pulp and paper	-18.6	-5.1	10.4	23.6
Construction materials	-34.2	-7.9	4.1	-0.6
Light industry	-24.6	-5.2	1.5	5.7
Food	-7.2	-14.6	-0.5	7.8

### **3.1.1. Metallurgical and other Export-Oriented Sectors**

The example of metallurgical sector is quite characteristic: ferrous and non-ferrous metallurgy exhibited mostly positive rates of growth (see table 6), while the share of ferrous metallurgy in industrial output increased from 14% in 1990 to 27% on the end of third quarter 1999<sup>15</sup> This production direction seems even stranger if to consider the low or even negative profitability of these branches (see table 1). It also conflict with their high energy-consumption ratio under ever increasing energy prices, as well as drastic reduction in their consuming sectors (machine building and metal processing).

<sup>14</sup> *Quarterly Predictions* January 2000, ICPS, the source of the data is State Statistic Committee

<sup>15</sup> Ukrainian Economic Trends, 1999 December



However, the main advantage of these sectors for rent seeking interest groups is that they produce exportable production, so bring them hard currency. Moreover, exports make tunneling and capital flight possible – exports could be sold to the intermediary in offshore and then resold, resulting in money accumulation in overseas accounts of the private agents. The largest share of exports (38%)<sup>16</sup> goes to non-precious metals. This is a quite sellable (liquid) on international market product, which could be produced in Ukraine at a price lower than the world price. It usually does not need any quality improvements to become sellable (because of its standard nature). However, its comparatively low cost is achieved not due to better productivity (the productivity is approximately 40% of the US level<sup>17</sup>) but due to various implicit government subsidies, as well as the possibility of wage and other arrears. The high energy-consumption of this production does not restrict its expansion due to the possibility of the arrears to energy sector, barter, etc. Metallurgical plants, which are controlled and owned by mentioned in Table #1 groups, are the greatest debtors for energy<sup>18</sup>. Tunnelling intermediaries build barter chains, providing the enterprise with most necessary for production inputs at a very low cost (i.e. coal could be received by barter at 30% of its cost, according to Korenyok (2000)). In exchange they acquire a liquid on international market production. During this process, they receive the informal profit whether by reselling output through the virtual firm abroad (usually to offshore company) or by input reselling through the virtual firms in Ukraine.

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<sup>16</sup> Ukrainian Economic Trends, 1999 December

<sup>17</sup> McKensey report, assumption of the close productivity of Russian and Ukrainian plants, as far as they were build of the same type in Soviet times, and overall economic conditions are fairly common for this sector in two countries

<sup>18</sup>“Now most of big Ukrainian enterprises are in debt for electricity. The largest energy arrears (more than 20 mln. hrn.) have, for instance, Yuzniy, Severniy and Inguletskiy ore mining and processing enterprises, Makeyevskiy, Alchevskiy, Dnepropetrovskiy metallurgical plants, Nicopolskiy, Stakhanovskiy and Zaporozhskiy ferroalloy plants.” – from Ukrainian Weekly Economic news, issue #3, 2000 ; The same enterprises are owned by three interest groups – according to “Invest gazeta”, #2, 2000

The same is the situation with the other “traditional” Ukrainian export commodities: agricultural production (including sunflower, low-quality grain), chemicals, sugar, and other raw materials and intermediate products. All of them have common features: they all are the source of income for major trading groups, being basic products they can be sellable (liquid) on international markets without any investment in quality, their comparatively low cost is the result of implicit budget subsidies, barter and arrears opportunities. Moreover, these sectors continue seeking for various privileges (i.e. there were given substantial tax relief to the metallurgy sector, under argument that it produces major export product, and was damaged by 1998 crises<sup>19</sup>, tax privileges to chemical sector, as it produces fertilizers for agriculture, etc.).

Scandals around Mykolaiv Alumina Plant (MAP)<sup>20</sup> have brought one more example of tunneling from enterprise. The majority of shares were in state ownership, so the government appointed directors. Former prime -minister Valeryi Pustovoitenko, who have lobbied the interests of the offshore conglomerate Trans World Group (TWG), have organized an appointment of the new director–TWG person Mykolai Naboka. TWG have supplied MAP with bauxite using tolling schemes that allowed tunneling \$10 mln. monthly to offshore TWG companies. During this period, profits of plant approached to zero, while MAP have experienced a significant rise in output. Only after Prime Minister changed and the position of TWG has weakened, that director was charged and dismissed.

### **3.1.2. Coal-mining sector**

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<sup>19</sup> information source: July and August issues of Ukrainian Weekly Economic News

<sup>20</sup> newspaper *Den*, 1999: issues 117, 217, 241; 2000: issue 44

The problems of coal mining sector give us give us the bright example of rent-seeking and tunnelling activities in the entire economy. This sector is one of the 2 largest recipients of the budget subsidies and tax exemptions (the second is agriculture), and has huge arrears to workers, budget, and energy suppliers. Barter share in sales is around 60% in 1998 and around 45% in 1999.<sup>21</sup> Recently, on May 10, Ukrainian parliament enacted an amendment to the law on the 2000 budget, which allocates additional 1.5 bln. hrn. to coal sector to repay back wages and monthly legal claims of miners. It was these demands that the striking miners put forward when they went on strike May 10<sup>22</sup>.

The analysis of rent-seeking activities and tunnelling in this sector I ground on the information provided by State Tax Administration in Lugansk oblast about “conducted inspection of operations with coal in 1997 and first quarter of 1998 of firms and enterprises dealing with coal in Lugansk oblast”<sup>23</sup>. The inspection covered 131 coal-mining enterprises (out of 293 in this industry) and 40 commercial firms, intermediaries. In the result of this inspection on 117 out of 131 coalmines, and on 28 out of 40 commercial structures were found violations. This document supports my hypothesis about tunnelling entities:

*For receiving uncontrolled and illegal profits managers of commercial structures broadly use shadow or virtual firms. These firms are created and used by large productive enterprises, as well as by groups of agents for providing services in specific sphere for medium enterprises. To provide security for owners of these firms, they are constructed so that it is impossible for controlling agencies to find founders or true owners of these entities. (the same document, p.2).*

The following information gives some hint about the spread of transactions with virtual firms:

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<sup>21</sup> Data from HIID data base, source Derzhkomstat

<sup>22</sup> Infobank News Service, issue May 11, 2000

<sup>23</sup> State Tax Administration, Document #8578/23-111/211 dated 07.08.98 year, on #9281/10/23 dated 05.08.98 year

*To verify coal payments for received inventories, there were directed more than 300 inquiries to other Tax Administrations. There were received 134 answers, 65 of which were not proved with inspection because of such reasons as: firm is closed, does not exist in state company register, is not found, etc. (the same document, p. 1)*

There are also presented in this document several typical transactions based on real-life cases, which show how money is tunnelled from coal-mining enterprises to private pockets. The most common scheme is barter exchange of coal for mining equipment or other inventories, when the price of equipment is set several times higher than price of plants-producers. The simplified transaction looks as follows: coal mine through barter transaction sells coal for state regulated minimal price to the commercial firm and buys mining equipment for considerably overstated prices, so that relative price of coal is considerably lower than actual. To accumulate profits on this transaction, virtual firm (tunnelling entity controlled or owned by coal mine management) is used to buy equipment from its producer and resell it to commercial firm for much higher price. Commercial firm realizes coal at a price lower than minimal price for cash (in order to make it competitive) to final consumers, and pay with this cash to virtual firm for equipment. In the result of this transaction virtual firm accumulates large surplus, which is cashed through the bank, and divided between the participants of this transaction. Virtual firm does not pay taxes from its huge profits, because it disappears soon after transaction.

Another type of such tunnelling transaction described in the given document is when coalmine sets contract with a virtual firm on provision some services or inputs. In this case coalmine pays with money or with coal for these goods or services are not provided actually, but their receiving is supported with forged invoices and documents. Another official document of Office of Public

Prosecutor-General from January 20, 1999 (document #2)<sup>24</sup> adds the evidence on tunnelling transactions and states that most coalmines are engaged in these activities. There are a number of other, more complex transactions when coal is transferred through multiple barter transactions in order to make monitoring more difficult, but they all have the same essence: in the result of such tunnelling transactions: coalmine bears losses and taxes are not paid to the budget, but private participants of the scheme, especially coalmine management, receive significant profits.

The losses of coalmines in the result of tunnelling activities lead to the wage arrears to the workers, as well as to the arrears to the budget. At the same time, the social importance of the sector make the government to support the sector with extensive budget subsidies. Document #2 provides the information about the wage arrears in coal-mining sector of Lugansk oblast – on the beginning of 1999 it constituted 263 mln. hrn., despite the fact that in 1998 state budget directed to this sector in Lugansk oblast 364 mln. hrn. Document #2 presents a number of cases, when the coalmine management received the funds from the state budget on repayment wage arrears, but directed these funds on administrative apparatus enlargement, buying luxury goods or simple stealing. As the result, coalmine management creates lobbying for budgetary funds simply by not paying wages to the miners, so that coalminers' strikes evolve with the demands to increase state support of the sector.

### **3.2.3. Fuel and Power Sectors**

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<sup>24</sup> "Information about the results of inspection of the team of Office of Public Prosecutor-general on the compliance with law on in time wage and social payments to the workers of coal-mining sector in Lugansk oblast", 20.01.1999 -07.02.1999, Lugansk

It may also seem strange, that oil, gas<sup>25</sup> and energy deliveries and import despite permanent non-payments for their production (see Table 5) are the sectors of activity of most interest groups. Moreover, they are most traditional rent-seeking sectors (Aslund). Firstly, enterprises in this sector have close to monopoly status, many of them are in state or semi-state ownership. Gas, oil and energy are the most necessary inputs, and under limited supply they are bought almost at any price. So various manipulations, covered with a network of barter, veksel payments and arrears, are used to set the price above the competitive level. So these groups tolerate arrears made by their own or some valuable enterprises (i.e. metallurgical) in order to receive control over them, and receive from others payments at inflated priced.. The former Prime Minister Pavlo Lazarenko has developed a barter scheme for importing of Russian gas, which allowed to overstate its price significantly, . The essence of this scheme was a centralized exchange of relatively non-liquid Ukrainian manufacturing production (mostly from gas debtors), while controlling gas deliveries allowed access to liquid exportable production, such as metallurgy. The elements of this scheme are used till now. In the result, gas, which costs \$20 on Ukrainian auction or \$30 on the border with Russia, is sold to Ukrainian enterprises for \$80, usually by barter.

The power sector have been reformed many times and (even privatization of oblenergos began), but still is considered as one of the most corrupted. According to Vice Prime Minister Yulia Tymoshenko<sup>26</sup>, regional energy-distributive companies, oblenergos, are not paying for energy received from Energorynok, but receive huge profits. In the result of these nonpayments, the price of energy for the final consumers is considerably overstated.

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<sup>25</sup> "All Ukrainian rich people have made money on Russian gas" - the words of Igor Bakai, former chair man of the board of the state monopoly "Naftogas Ukraine", a member of Volkov's clan

<sup>26</sup> Ukrainian Weekly Economic News, issues #2, #6, #7 2000

The State Company “Energoatom”, which sells the energy generated by nuclear energy plants, the most cheap energy, have finished the 1999 year with losses of 1,5 bln. Hrn. This is the result of tunneling activities of the management of this company, which through barter schemes generated large profits for intermediary companies<sup>27</sup>.

### **3.1.4. Public Sector**

The public power, which gives an access to the budgetary funds and state assets provides public officials with large possibilities of tunneling. The exact cases of tunneling activities are revealed mostly in the result of conflict between different interest groups, for example during election campaign

The state official, former Head of the Parliament Olexandr Tkachenko was in the management of the company, which have taken \$80 million credit on buying agricultural machinery under government guarantees, went bankrupt and have not returned it.

Tunneling activities are highly widespread on the level of regional administrations. A very revealing case is activities of the Lugansk region governor, Olexander Yefremov<sup>28</sup>. He gave guarantees of the regional administration for the credits to intermediaries, which were to provide agricultural firms with gasoline (\$5 mln.) and agricultural machinery (\$ 10 mln.). As these intermediaries went bankrupt and have not returned the credits, it is the regional budget, which should repay the credits together with fine. He was also “very close ” (as a former cofounder) to the intermediary “Fond, a gas dealer, which

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<sup>27</sup> Infobank News Agency, issue January 12, 1999

<sup>28</sup> weekly newspaper “Zerkalo Nedeli” # February 19, 2000 (www.mirror.kiev.ua)

sold gas by barter to the coal mines for the prices several times higher than the market level. As a result, several mines went bankrupt.

The most famous case of stealing of state assets is disappearance of Black Sea Merchant and Passenger Fleet<sup>29</sup>. During 1991-1999 various off-shore companies, which provided services to the Fleet, sued and arrested shipping. Managers of Fleet and government officials agreed with these claims, and most ships were sold at largely deflated price to cover that debt. It appeared, however, that these claims were not supported by official documents, sums of the contracts were overestimated. In the result most of the merchant navy, as well as 36 of 39 liners were sold for debts.

Another type of tunneling from the state is buying services by budgetary organizations at an inflated price. Construction services are widely used in this scheme, because of monitoring difficulties – it is easy just to report that constructors grouted concrete on a meter, while they grouted just on a half of meter. Construction services take a large part of state and regional budgets' projects, and they are often overfulfilled (in 1998 construction services were fulfilled on 120% in consolidated budget, while social payments only on 60%<sup>30</sup>). The most notorious case of this kind was spending around \$82 mln. on repairing palace "Ukraine" in Kiev in 1997, while actual cost of this repair was estimated to be several times lower<sup>31</sup>.

The list of these cases could be very long, but the examples presented give a general idea – tunneling and rent-seeking activities withdraw significant amount of money out of the potentially production sphere. These activities are extremely

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<sup>29</sup> weekly newspaper "Zerkalo Nedeli" # April 12, 2000 (www.mirror.kiev.ua)

<sup>30</sup> "Open Budget 1999", joint project TACIS-ICPS 1999

<sup>31</sup> newspaper *Den'*, issue # 152, 1998



widespread in Ukraine, and are connected with capital flight, loss making enterprises, non-monetary payments, etc. Government regulations lobbied by interest groups make extraction of rents and tunneling possible.

### **Analysis of the rent-seeking economy**

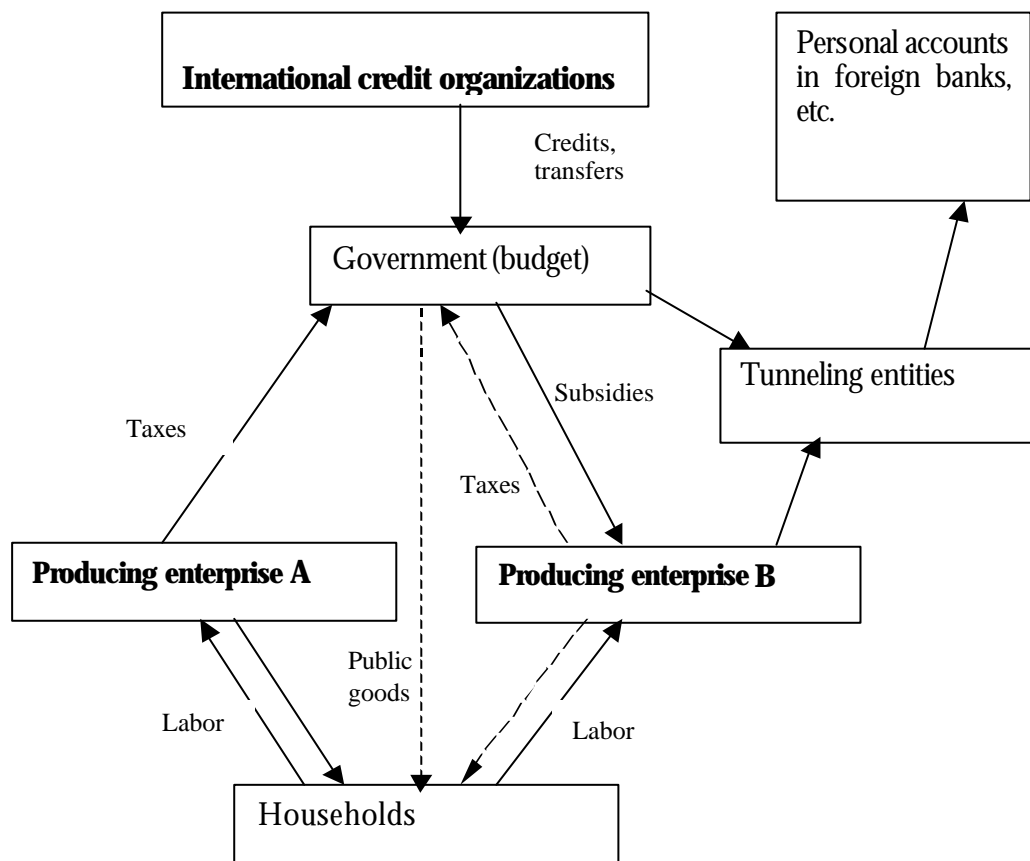
The discussed evidence allows us to analyse how rent-seeking effect the overall performance of the economy. The presented evidence shows that rents take the forms of direct stealing of state assets and budget expenditures, various privileges for their own productive enterprises, non-payments to other productive enterprises and households. From both activities the group receives income, which it can consume (mostly on imported goods) or hide in a tax haven (out of the economy), invest in production or rent seeking (in the economy).

To illustrate the value transfer process, I have developed a simplified analytical model of value creation and transfer in the Ukrainian economy (see Diagram 1 below). Consider two types of producing enterprises A and B. The type A enterprise is more or less competitive, not engaged in rent seeking, it pays taxes, wages and inputs in full. The type B enterprise heavily relies on the state support in the form of subsidies, various privileges, monopoly status, etc., and it hardly pays taxes, wages, etc., accumulating arrears, using non-monetary payments.

There are also “tunneling” entities—intermediary firms usually created by someone who controls the enterprise (i.e. managers), in order to extract (tunnel) profits from this enterprise. It could be off shore firm outside the economy or virtual (shadow) firm in Ukraine (see section 3.1.2). The aim of tunnelling is to transfer capital, which is not fully in someone’s property, to his full private property, and hide it out of the reach of the fiscal sphere as well as other rent seekers. A common scheme of tunnelling is selling an enterprise’s output at a lower than the market price to an tunneling intermediary, i.e. an offshore firm, or buying inputs

from an intermediary at a price much higher than the market one. As a result, the enterprise's costs often exceed revenues, and it accumulates arrears to the state budget, workers and suppliers of inputs (mostly energy). Weak enterprise performance becomes the reason to seek for the state support in various forms—rent seeking, while some portion of funds accumulated by «tunneling entities» finances lobbying.

**Diagram 1: Circular Flow of Rent Seeking Economy**



- > - for monetary payments
- - - - -> - for non-monetary payments, barter, arrears

The same “tunneling” entities are created around government agencies. There are multiple kinds of rents that could be extracted directly from the state, such as supplying goods and services to budgetary organizations at a price above the market level, government guarantees for credits and supply of inputs, which are never repaid, etc. So, these tunneling entities could be heavily interrelated, sometimes being the same entity.

One can see in the scheme that both types of enterprises produce some value using labor, supplied by households, and pay wages to households and taxes to the government. But type B enterprise, which tunnels part of its value to intermediaries, is now unable to meet its obligations to the households and government. So it either uses non-monetary payments, which have lower value than monetary, or simply accumulates arrears, which could be written off by government. As a result, the government receives taxes mostly from type A enterprises. These revenues are channeled in three directions overall economy as public goods (i.e.: social sphere payments to households), to the type B enterprise as some kind of support, and some part goes to the tunneling entities, as rents. Because of the latter two uses of budget funds, the portion remaining for the social sphere is insufficient, causing arrears to households and contraction of social programs. A large part of the support, given to enterprise B, again goes to tunneling entities.

Tunneling entities transfer a large portion of the acquired money out of the country, because of safety considerations: money within the country could be easily expropriated in the case of a conflict with government. Some part of their funds they invest in strengthening their exclusive position, by means of bribes, elections, gaining control over productive entities, etc. Some part goes on

consumption, but as the agents engaged in rent seeking are high-income people, they buy mostly imported, luxury goods. All these uses of tunneled funds are negative-sum activities, as they take up capital from productive use in the economy. And only a slim part goes to investment in promising, productive activities, such as enterprise A, because in the existing situation the returns on real investment, productive activities are lower than returns on rent seeking.

As a result of these transactions enterprise A, which is a net donor to the rest of the economy, remains with little, if any, profit, because of significant tax pressure and a non-level playing field created by distorted prices. Thus, it has weak incentives to invest in production and improve its productivity, but receives strong incentives to seek rents. Households are also worse off, as they are underpaid both by the enterprises and the government. That, in turn, reduces aggregate demand for domestic production, and adds to stagnation of production sphere, oriented on domestic market (i.e. enterprise A). Government provides insufficient amount of public goods (mostly by quality, not by quantity), including development of legal system, infrastructure, impartial contract enforcement, social sphere, and other goods and services that enhance the overall productivity of the economy.

Summarizing, we can determine three ways of value redistribution from the enterprise A to B. Rents received by enterprise B through the fiscal sphere – subsidies, weak tax payments (privileges, arrears, offsets, etc). Rents received directly from enterprise A due to favorable regulations for enterprise B, i.e. monopoly statuses of power sector enterprises. Rents received through households – wage arrears to workers of enterprise B, which reduce the aggregate demand on the production of enterprise A (if it is consumer-oriented). The undersupply of public goods (i.e. health care, legal system, education,

infrastructure) by the state, which is the result of tunneling, further diminishes the return overall productivity in the economy.

The overall desperate economic performance - a result of this value transfer - pushes the government to seek the help of international credit organizations. However, granted credits again are tunnelled outside the economy, through the same scheme. The overall situation with tunnelling value from productive to non-productive spheres is not obvious, as it is shielded with a tangled network of arrears, barter and other non-monetary payments among enterprises, government and households. Another problem is that these activities not only destroy the enterprise, reduce government efficiency, enhance corruption, but also considerably distort prices.

## *Chapter 4*

### **CONCLUSIONS**

The transition process is favorable for spreading tunneling activities, because during this period neither strong state power nor established market and democracy institutions restrict them. Rent seeking activities are common in many countries, but they became so pervasive in Ukraine that they disrupted market environment. Rents received by the enterprise do not improve its performance, because they are tunneled away, and this make this enterprise demand further rent. Thus tunneling, characteristic for economy with weak property rights, exacerbates rent-seeking activities in transition economies.

The mathematical model presented in the paper, shows that the equilibrium level of rent seeking in the economy is a rational choice of profit-maximizing agents–interest groups, given the quality of institutions and relative power of the groups. The optimal level of rents in the economy, which generates the highest possible income, is zero, but to achieve it improvement of institutional factors is needed. This improvement is difficult to achieve by policy reform, because of resistance of interest groups, which fear to lose their relative power.

Although it is impossible to measure precisely the total amount of rent, direct and indirect evidence analyzed in the paper, supports the hypothesis that there are strong interest groups in Ukraine, involved in rent seeking, and these activities are widespread and pervasive enough, to hamper the efficiency of the economy. It also shows, how rent seeking could be the related to other transitional diseases:

non-monetary payments, permanently loss-making enterprises, tax evasion and capital flight are often the result of tunneling and rent seeking activities.

Rent-seeking activities create a non-level playing field, as they have lower cost of production due to arrears and subsidies, exclusive opportunities of selling its production to government at any prices, more favorable state regulation. That shift incentives from productive investment to rent seeking. Poor government sector, unable to provide public goods efficiently and loss-making enterprises are made cost-bearing entities, while all profits are accumulated on tunneling entities. At the same time, tunneling activity pumps created value out of the economy, or wastes it on rent seeking, so the domestic demand on consumption goods falls.

The overall result is a huge implicit transfer of resources from productive to non-productive activities, which reduce incentives to produce and undermines growth. The resulting lack of investment opportunities leads to enormous capital outflows, both legal and illegal. The most wealthy and powerful interest groups in society are clans that are earning money on tunneling, and they struggle to preserve the existing rent-seeking possibilities.

The results of the paper imply that to start growth the most useful policy measures will be those, which make rent extraction and tunneling hardly possible. The most obvious examples of such measures are: cut-off support to constantly loss-making enterprises, increase transparency of budget process, get rid of a number of privileges and regulations, which create a non-level playing field.

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