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Veikko Kärnä

***A RETURN TO THE PAST?
An Institutional Analysis of
Transitional Development in the
Russian Mining Industry***

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Tampere April 23, 2007

Veikko Kärnä

DEDICATION

Dedicated, in loving memory,
to my Father,

Mauno Ilmari Kärnä

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1 INTRODUCTION

1.1 The initial interest in the phenomenon

After the collapse of Soviet Union in the beginning of 1990's Russia and the other former Soviet Republics have, to a certain extent, transferred their economic system from state socialism to a market economy. However, the transformation to a market economy in these countries is still far from complete, and "in spite of the collapse, the Soviet Union continues to exist, in the form of the bequest it left" (Sutela, 2004, 42-43). According to Sutela, the price of the past exists in, amongst other things, large-scale heavy industries, far too few small and medium sized enterprises, the fact that some industry branches are missing e.g. a service sector, the peculiar spatial distribution of production e.g. in inhospitable regions, inefficient self-sufficiency e.g. isolation from international trade and human misallocation e.g. too many narrowly specialized engineers.

The same observation has been made by other researchers (Boiko et al, 1999, Kosonen, 2004). Boiko et al. state: "Russian enterprises could not get rid of their Soviet heritage..." (Boiko et al, 1999, 68). On the other hand, they conclude that "large Russian enterprises in all industries (except for a few) are 15 to 30 times smaller than their western counterparts". This might seem surprising, but in reality the difference is explained by the structure of the enterprises. Whereas Western companies are often structured in the form of a concern, Russian ones are mostly large individual factories (ibid, 68).

Both the Soviet heritage as explained by Sutela, and the structure of Russian companies as noted by Boiko et al. are focused on in this study. The actual scope of the study will be the Russian mining industry and the mining enterprises during the 1990's. Although the Russian government supported the independence of the mining industry during the transitional period the mines and other mining enterprises (processing factories, smelttries and metal product factories) seemed, according to Fortescue, to choose a passive strategy in their development (Fortescue, 2000). The majority of the mining industry enterprises did not seem to use the freedom received by the liberalization phase of the transitional policies introduced by the Yeltsin government and the closure of the production ministries. Thus, their way of working did not

change, although new possibilities were available. This resulted in a noticeable inertia in their action.

At the same time the work productivity of Russian mines compared to Western mines was very low (World Bank, 1996), and the mines did not seem to take positive action to improve their productivity levels. Long into the 1990's and even into the new Millennium the Russian mines seemed to work as they would have worked in previous decades, when they were part of the Soviet economic system.

Quite naturally such inertia leads to one question: why? Why did they not change? Why did they not take an active role in adapting to the changes? Why did they passively wait for the outside world to change, and only then react to those changes?

These empirical observations led to the formation of this study and the two main subjects of this study: Firstly the Russian mining enterprises, and secondly the whole industry itself. Both will be studied here from their transition from state socialism to the market economy and into the future i.e. from the beginning of the 1990's up to the middle of the 2010's.

The above observations, e.g. the unchangeability and low work productivity have been the "guiding principles" of this study. At first the low productivity was studied in a form of a pilot study. During the second stage the unchangeability was focused upon and it formed the main part of this thesis.

It should be noted that the focus is on formerly state owned socialist mines whose task was to change from state owned to privately owned mines. In addition to individual mines the whole post-Soviet mining industry is also studied. The primary subject will be the mines themselves, we will see how they received temporary independence from the state in the early 1990's, but lost it to the mining holding companies until the beginning of the new millennium. The holding companies are Russia's answer to the lack of a mesoeconomic level of enterprise governance, which was mostly missing from the economic sphere in Russia in the middle of the 90's (Boiko et. al, 1999, 68).

The path that the Russian mines took from state socialism to a market economy is a paradox. On one hand they received relative independence at the beginning of 1990's when central production ministries were dismantled, and local property funds used the owner's, e.g. the state's (silent) voice in the mines' management. During this era the (former Soviet) managers ran the mines almost without restrictions (cf Fortescue, 1992, 122). On the other hand, after privatization and following consolidation the mines lost the possibility to run their own business to the (primarily) Moscow based holding companies. This is the reason for calling this study "A Return to the Past".

In losing their independence many of the Russian mines returned to the old Soviet industrial structure of vertical integration. Later on in this study this feature will be explained as the reinstitutionalization of an old institution, e.g. an old form of an organizational mesostructure. In many cases this resulted in a power shift from the regions back to a center, usually Moscow. Independent decision making in the regions was often transferred to Moscow's central administrative offices, also a very typical Soviet feature, and is one example of the bequests of socialism, as noted by Sutela (Sutela, 2004, 42-43).

1.2 New Institutionalism in organizational studies

This study attempts to conceptualize the changes, which have occurred in Russian mines and the Russian mining industry by the use of New Institutionalism in organizational studies (Meyer and Rowan, 1977, DiMaggio and Powell, 1983).

This study examines the changes of organizational practices and the organizational field within transitional Russian companies. The target company group is Russian mining companies, formerly state owned enterprises (FSOE's), which have gone through a truly extraordinary path of changes since Russia's "new independence" began in 1990, when the whole country's economic system started to change from socialism to a market economy. As a resulting of this shift in institutional settings (see Powell and DiMaggio, 1991, 30) in the operating field, the FSOE's began a difficult path through uncertainty towards a market economy. In the midst of this transitional period Russian companies were learning new strategies, organizational practices, new ways to arrange their external connections and internal methods to cope with the changes in their society and in their organizational fields.

The reasons for using New Institutionalism in this study are several. First of all, the concept of inertia or unchangeability is a central feature of New Institutionalism. Organizations tend to keep the old organizational practices and structures and do not seek change actively. As noticed by Fortescue, this happened in the Russian Mining Industry in the early 1990's. Secondly, New Institutionalism contains the concept of the organizational field, which for the purposes of this study will be regarded as the Russian Mining Industry (RMI) and its different partners both in government, education and business. Thus, the concept of an organizational field in New Institutionalism allows the study of both the individual mines and the whole industry at the same time.

Thirdly, although New Institutionalism has a strong flavour of inertia or unchangeability, it contains the concepts of de-institutionalization and re-

institutionalization, which provide an adequate frame for studying change, e.g. the appearance of new modes of action (organizational procedures or structures) as well as their disappearance. The transition research deals with such changes which have taken place in the former Soviet Union bloc since the collapse of the socialism (World Bank, 2000).

Furthermore, according to New Institutionalism, when organizations start to change, their decision makers seem to mimic the behaviour of other organizations in their environment. Hence, the new private owners of Russian mines started to copy the old Soviet meso-organization model in the middle of 1990's in their (cognitive) belief that it would be the more profitable to sell end-products than raw materials. They started to organize their new holding companies consisting of mines, processing plants and smelters into vertically integrated mining groups. Re-incarnation, a new concept for New Institutionalism in organizational analysis, as specified in this study, is a new form of New Institutionalism's re-institutionalization as defined by Jepperson (Jepperson, 1991, 152).

In New Institutionalism there has been a lot of research conducted on the formation of institutions, less on their persistence, and even fewer on their dissolution (see Farjoun, 2002, 848), but in general New Institutionalism lacks research on how institutions come to be reproduced (Barley and Tolbert, 1997). Since this study will have its focus on the re-institutionalization of institutions it will bring new knowledge to the study of institutions and new institutional theory and institutional change.

New Institutionalism in organizational analysis is closely connected with organizational history. Berger and Luckmann write: "Institutions ... imply historicity and control. Reciprocal typifications of action are built in the course of a shared history" (Berger and Luckmann, 1991, 72) and "Institutions always have history, of which they are products" (ibid, 72). Bearing this in mind the organizational history approach as a methodological tool has been used together with New Institutionalism when studying the path of Russian mines and the mining industry to a market economy.

1.3 Previous research on the subject matter

The transition of the Soviet planned economy to a Russian market economy has been the focus of many researchers (see Desai, 2006, Sergi, 2004, Spubler, 2003, Economics, 2003, Berglöf et al., 2003, The New Russia, 2001). Also, industrial change including enterprise restructuring has interested many studies (Krueger, 2004, Kosonen, 2004, Iwasaki, 2003, Naulapää, 2000, Russian, 1999, Management, 1995), but there has not been any major

academic research into the RMI's development during the transitional period. Two can, however, be named: Fortescue's and Rautio's studies.

Fortescue has analyzed the changes of RMI from the point of view of the adaptation strategies that the mining sector has used during the transition period. He divides the strategies available into three categories: survivalist, reactive adaptation and dynamic adaptation.

Fortescue's conclusion on the developments of the 1990s is that most of the companies in the mining industry have been using the survival adaptation strategy, which can be termed the, "do not do anything new" –strategy. A dynamic strategy has been used only by a very few companies; Fortescue names one of them as RUSAL's Oleg Deripaska with his ambitions to enlarge his company and expand into new areas (Fortescue, 2000). It is worth noticing that Fortescue made his remarks in 2000, just around the time when the consolidation process of the RMI began. It seems that it was only when the industry was privatized by new owners and a strategic view on the situation was brought with them, that the mining industry started to plan its future. However, larger changes started with the consolidation of the industry into bigger groups.

Rautio has studied the transition in the RMI through Russia's north-west mining communities' changes (Rautio, 2003). He came to the conclusion that the restructuring of resource communities in the Russian north differs from similar Western processes because of the Soviet legacy and the present Russian context.

From the point of view of this study the Fortescue study touches on the same subject as this study. He asks what strategies have been used in the transitional processes of the RMI. This study looks at the development of "industrial field" as defined by Paul DiMaggio and Walter Powell in their "The iron cage revisited: institutional isomorphism and collective rationality in organizational fields" (1983).

Rautio's conclusions support the initial research interest of the introductory chapter of this thesis. He has found evidence of the Soviet legacy (as also have Sutela, Kosonen and Boiko; see earlier references) that has made the Russian processes different to other processes in the West.

In Russia the available research on the mining industry has been based on the quantitative approach, and it has mainly been based on the factual development and reconstruction of the coal mining industry (see Den Shakhtyora, 2004, Shafranik, Malyshev and Kozovoi, 2004, and Artemyev, 2004). These studies are not directly applicable to this study, because of a lack of focus on the organizational development of the mining industry. However, they include some very important figures on development during the transitional period.

It can also be noted that Eyyubogly has studied the effects of the privatization of the mining industry in the West, e.g. in the Turkish mining industry. He has found that competition, organizational and operational changes were the main causes of improvement attained in the post-privatization period (Eyyubogly, 2006, 3017). However, the Turkish development is not directly comparable with the transition of Russia from socialism to market economy, because Turkey was already a market economy with only some government owned companies going through privatization. In Russia privatization occurred for all companies in the country. In addition the whole political system of the country changed, which is not the case in Turkey. Thus, the socialist legacy and the huge transformations in the former socialist countries present an institutional environment, which is immensely different from what a typical Western firm would encounter (Peng and Heath, 1996, 493).

As a whole there is not a significant amount of research on the subject's phenomenon, e.g. the RMI and its transition. The available Russian research (for instance Krueger, 2004, Kosonen, 2004) concerns other industries or areas other than the mining industry. The research also presents dissenting opinions about the changes that occurred. This thesis will supplement, deepen and improve the present available knowledge.

1.4 The purpose of the study and the research question

The phenomenon focused upon in this study is the transition of a state from socialism to capitalism, from a planned economy to a market economy, from state owned companies to private ownership. Consequently, the purpose of this study is to find out what has happened within this phenomenon at the industry/enterprise level in the RMI during the years of transition from 1990 to 2006. The scope of the study is the RMI, which was earlier part of the Soviet mining industry. Part of the former Soviet mining industry is now within the Commonwealth of Independent States (CIS). Its main focus is on the individual Russian mines, and their short-lived autonomy between 1990 and 1995, and the organizational field these mines belong to.

The main research question is defined as:

What institutional changes in the RMI and mining enterprises during the transition period from 1990 to 2006 can be identified and how can these changes be conceptualized?

The research question is further divided into the following research questions:

-How can the changes in an organizational field, the mesostructure and organizational structures be described?

-How can the changes that occurred in the RMI be conceptualized in terms of New Institutionalism?

-What implications and ways of dealing with such implications can be identified for practitioners and scholars?

New institutional theory is used to explain the phenomenon. Furthermore, the aim of the study is to test if a Western organizational theory can explain the development of an industry in a transition economy. Hafsi and Faraneshi have studied the applicability of Western management theories in developing countries, and come to the conclusion that “there is a widespread applicability of Western based concepts or management and organizational theories to developing countries” (Hafsi and Farashahi, 2005). Liuhto has come to the same conclusion in his work concerning the Russian transition (Liuhto, 1999). However, there seems to remain a certain Russian hybrid regarding the adaptation of Western theories into the Russian reality (see Kosonen, 2004). By using the concepts and terminology of New Institutionalism in organizational studies this study will test the applicability of Western theories in Russia.

This study will focus in particular on one organizational mesostructure, vertical integration, which was how the Soviet Mining Industry was organized during Communist rule before 1990, how Russian Mining Industry was organized once again after 1995. Vertical integration disappeared in 1990, and returned after five year’s absence. This study will analyze, why this old Soviet industry structure was once more taken into use by the new private owners of the RMI. This re-born organizational structure will be regarded as the reincarnation of an old and abandoned organizational structure. Simultaneously it will be regarded as a new hypothesis for new institutional theory. Consequently, this study can also be regarded as a theory developing study.

Another purpose of this study is to deepen the understanding of the changes of organizational practices that have occurred. Organizational practices in this study are defined as being institutions like “archetypes, scripts, typifications, categories etc” (Scott, 1995, 52), which are main elements of new institutional theory in organizational studies.

1.5 The structure of the study

This study is a theory bound study, which means that empiricism proceeds theory, and that the theory is connected to the study after the empirical work

has been performed. However, this study report is presented below like a theory based study. This means that the theory is presented before the empirical case studies. Consequently, new institutional theory is presented before the evidence from the case studies.

This study consists of seven chapters. They are not placed in this report in chronological order, but in a linear-analytical order so that theory is presented first, and after that evidence from the field visits. Chapter One is the introductory chapter, where the purpose and research questions of the study are presented. In Chapter Two the methodological choices, data collection and methods of analysis, as well as the research methods used are discussed. Chapter Two discusses the validity of this study, too.

In Chapter Three the theoretical basis of the study is discussed. New Institutionalism in organizational studies is presented, and a consecutive model of institutional change is drawn based on literary research.

Chapter Four demonstrates the general transitional path of the Russian economy and the detailed transition of the RMI during the transitional period between 1990 and 2006. The transition of the mining industry will be presented from two perspectives: from the mesostructure of the mining industry and from the organizational field aspect of New Institutionalism in organizational studies. Chapter Five consists of two comparative field study cases and Chapter Six consists of the theoretical discussion. Finally, Chapter Seven presents the conclusions of the study and discusses the implications of the study and suggests future research proposals.

This study also includes a pilot study, which was based on “unproductivity” a guiding principle, which is not presented in the main chapters of this study. The reason for this is the fact that the “unproductivity” guiding principle was abandoned during the course of the study, and the inclusion of the pilot study in the dissertation became unnecessary. However, an unpublished draft of the pilot study is attached to Appendix No. 5.

Other appendices include the Critical Incident Method questionnaire, lists of interviews both for the case studies and for the “researcher in disguise” phases as well as the list of mines referred to in this study and a copy of a letter of introduction from Sandvik Tamrock to the case study enterprises.

2 RESEARCH METHODOLOGY AND METHODS

2.1 Methodology

Research methodology is regarded as consisting of discussion concerning ontology, epistemology, voluntarism/determinism and the methodological approach of the study.

Firstly, concerning ontology: what is reality? In this study reality is seen as a social construction. It is a collective conception; a shared view of the world. Thus, reality presented in this study is not that of one man, but the collected opinion of several actors in the organizations studied. We are very close to the ontology of social constructionism (Auttila and Raiskila, 1998, 227) and Berger and Luckmann's (Berger and Luckmann, 1994) ontological assumptions.

Today, New Institutionalism or institutional theory in organizational studies, which is the theoretical framework for this study, follows the script of its founders. There are strings of empirical research each following the ideas of Meyer & Rowan or DiMaggio & Powell, or Zucker. Each of these lines of research follows in the footsteps of the founding articles carrying in them the conceptual sorting, contradictions and unsteadiness (Houtsonen, 2002:42). When studying these seminal writings of the founders of New Institutionalism in detail one notices several differences between them with regard to the social structure, the actors and interest, the three main concepts of the institutional theory.

Houtsonen (2002) has analyzed the two main articles of New Institutionalism and compared the thoughts of Meyer & Rowan with the ones of DiMaggio and Powell¹. According to Houtsonen's Bourdeian² analysis they seem to have different views regarding social structure, the actors and interest, the main three concepts of institutional theory. While Meyer and Rowan see

¹ Zucker is not included because she has a slightly different approach and scope of research compared to Meyer & Rowan and DiMaggio & Powell. She treats the organization itself as a source for institutions, while other founders of new institutionalism treat the organizational environment as a source for institutions.

² see Bourdieu, 1990

social structure as symbolic and cognitive, DiMaggio and Powell see that as a material resource. Concerning the actors, Meyer and Rowan see as them passive and similar to each other; DiMaggio and Powell see them as being different from each other and able to manipulate the environment. With regard to the interests of the actors, Meyer and Rowan see them as always institutionally defined, while DiMaggio and Powell see them as rationally, selfishly and opportunistically defined.

In conclusion, new institutional theory has somewhat different basic assumptions which do not correspond to each other. This, as defined by DiMaggio and Powell (DiMaggio and Powell, 1991), forms the “ontological anxiety” of New Institutionalism.

The following Table 1: The polarities of the main concepts of New Institutionalism (Source Houtsonen, 2002) summarizes the polarities of the three main concepts of new institutional theory in organizational studies.

Table 1: The polarities of the main concepts of New Institutionalism

| | Meyer & Rowan | DiMaggio & Powell |
|------------------|----------------------|--|
| <i>Structure</i> | Symbolic/cognitive | Material resource |
| <i>Actor</i> | Passive/homogenous | Manipulative/heterogeneous |
| <i>Interest</i> | Always institutional | Activeness -rationality -selfishness -opportunism |

This study will be based on the DiMaggio and Powell approach, which enables us to study the institutional field from a more voluntaristic approach and give the actors the possibility to be active in strategical, tactical and operational issues, and also in organizational practices.

Secondly, with regard to epistemology, what are the sources of knowledge and its nature? The epistemological source of knowledge is, in this study, an individual, who works in the organizations studied and who shares his knowledge of the social reality. The source of the knowledge is, thus, mainly empiricist, and its nature is subjective and based on the experience of the actors interviewed. Thus, relativism (Mir and Watson, 2000, 946) is the main epistemological approach in this thesis.

New Institutionalism, which is the theoretical paradigm used in this study has been accused of having a very deterministic view of actors (cf Strategy Safari, 1998, 294). The supporters of strategy research (usually seen as an opposite to institutionalism) have a very voluntaristic idea of man. In fact, the management of organizations are seen to have unrestricted possibilities for

acting according to their own wishes. This study situates itself between these two extremes. Even during the era of the Soviet Union, where organizations and especially enterprises had strict coercive rules, the managers of organizations had some freedom of movement (see Liuhto, 1999). Most probably this freedom of action in Soviet enterprises was smaller than in corresponding Western enterprises. When Russian enterprises received their relative freedom from central authorities at the beginning of the 1990's they did not according to this study's main argument use the new freedom of action because old the institutions did not allow them to do anything. Thus, this study is based on the assumption that the organizations had some voluntaristic freedom to take action as they wish.

The methodology used in this thesis is close to ideographic methodology (see Burrell and Morgan, 1989), which uses subjective and qualitative research methodology including research methods like interviews and observations.

Although qualitative research methodology is the core of this thesis as methodology, there are some parts, which are quantitative in character. This concerns the field studies made, during which a lot of quantitative material was retrieved from the case enterprises, and that material is presented in the field study sections of this study.

Since this thesis is about changes in organizations and in an organizational field, constituting a part of the whole social system, there is a need to address the question of social change. How is social change seen, then? As we are studying the changes in industry mesostructures, organizational structures and practices, we need to ask whether the change is seen as an evolution or revolution, are we talking about social change of conflict (Marx) or of social change with consensus (Weber, Durkheim, Pareto)? Similarly, we can ask, are we talking of first order change, where changes occur within the system or are we talking of second order change, where the whole system is changed (Watzlawick, Weakland and Fisch, 1974)?

The answer to these questions is that in this thesis change is seen as evolution, as social change with consensus. New Institutionalism in organizational studies treats change with great resistance, and change is usually seen as the result of exogenous sources making the enterprises mimic successful organizational practices.

On the whole, the general strategy for research in this thesis is interpretative, although strictly speaking the study of organizations would be impossible within the interpretative paradigm of organizational studies, because it denotes the possibility of organizations. However, this study clearly accepts that there are organizations, social constructions of reality, which in this study are the Russian mining companies, i.e. objective organizations based upon shared conceptions of reality.

2.1.1 The scientific reasoning and the execution of the study

The scientific reasoning in this study is based on induction, deduction and abduction. These three forms of logic are used in the subsequent phases of this study. Abduction identifies what *may be*, induction shows what *actually is*, and deduction proves what something *must be* (Liebhafsky, 1993, 741).

Both deduction (reasoning from general to specific, or the prediction of effects) and induction (reasoning from specific to general, or the discovery of laws) are problematic forms of reasoning in qualitative research, although they are commonly used. Deduction cannot create new theories, it can only reject hypotheses and induction in its purest form should deliver only observations, not theories (see Grönfors, 1982, 36). Thus the biggest problem with such a dichotomy of scientific reasoning is its practicality. In addition, the third form of logic of scientific reasoning called abduction is usually ignored (Tuomi and Sarajärvi, 2002, 97).

Abduction (the discovery of causes or hypotheses) can solve the problematic issues of deduction and induction by so called guiding principles, which can be whatever, and they can be based on theory, empiricism, intuition (Grönfors, 37) or empathy and guesses (Ottens and Shank, 1995, 201). There can be several guiding principles in one study, and these guiding principles can be changed at any time of the process (Grönfors, 1982, 36). The idea of guiding principles resembles the process of detective work of Sherlock Holmes, or the dialogue of a medical doctor and his patient, or the consultative sales process of a sales executive. The idea is to create through intuition or traces of clues a hypothesis, which could explain the observations.

The basic idea of abduction is that theory formation is possible only when there is a guiding principle or clue to guide the research process (see Alasuutari, 1994). Thus, abduction is uncertain reasoning in which one infers the (approximate) truth of the best explanation of the evidence (Psillos, 1996, 326).

The concept of abductive reasoning was first systemized by C.S. Pierce (1839 – 1914). In Pierce's approach abduction is the process of forming an explanatory hypothesis (Collected papers of Charles Sanders Pierce, 1965, 105), and the goal of abduction is to make a hypothesis directly from observations (Ottens and Shank, 1995, 200). Today, abduction is an inference mechanism where the reasoner has a given knowledge base and some observations and tries to find hypotheses, which together with the knowledge base explain the observations (Baral, 2000, 1 – 2).

Abduction is often used as a 'backward reasoning' method where observations are explained, but 'forward reasoning' using abduction is possible, too. This happens when certain new conclusions are entailed by each

of the explanations (or each of the preferred explanations) of an observation together with the knowledge base. New conclusions in this context are conclusions that are not entailed by the knowledge base without using abduction. Moreover, these conclusions may not be entailed by the theory, but obtained by simply adding the observations to the knowledge base (Baral, 2000, 1-2).

Abduction is the starting point for this study because it can make certain perplexing, unique, or equivocal circumstances meaningful or understandable (Ottens and Shank, 1995, 203). The researcher visited several Russian mines in the beginning of 1990's and noticed the same thing as Fortescue, that they did not use the freedom they had received as a result of Russia's liberalization policies. In principle they could have started new strategies, new policies, changed their organizations to resemble for instance, Western mining companies, but they seemed not to use that possibility. This unchangeability became one "guiding principle" for the abductive process of this study.

Another guiding principle for the study was the low productivity of the Russian Mines at the beginning of 1990's. The Russian mines seemed very much more unproductive than their Western counterparts. It seemed that the Russian mines had many time more workers and personnel than the Finnish, Swedish, American or Australian mines, which were visited by the researcher during the same time period.

The second guiding principle was tested at first in this research project. A pilot study was made in 2001 to find out, according to a comparative benchmarking basis, what the difference in productivity between Russian and Western mines was. The pilot study is attached in Appendix No. 5 to this study.

The results of the pilot study showed that the productivity of a Western mine was two to three times higher than the productivity of a corresponding Russian mine. A very peculiar observation was made: the productivity of a Russian mine is worse than the productivity of a Western mine even though they have exactly the same machinery fleet at their disposal. This observation led the researcher back to the first guiding principle: unchangeability. It seemed possible to say that if the reason for low productivity is not the equipment fleet, it must then be the organization of the mine. Thus, all attention was directed towards solving the dilemma of unchangeability. This was done in the form of a backward directed abduction, e.g. observation led to the working hypothesis of unchangeability.

The first guiding principle, e.g. unchangeability, which was developed through observing the Russian mines and their personnel, was subsequently studied during the field study phase of the study, when the researcher visited the two case study mines. The guiding principle was the only basis for the

field studies and the motivation for the open interviews, as well as the use of the critical incident method. There was no other theoretical theme other than “change” in the questionnaires presented to the case study mines, although previous research studies had already provided some suggestions as to what theory could explain the pre-study observations.

Consequently, the field visit case studies were made without a prior theory basis. The following analysis of the results produced new ideas for consideration and theorizing. The additional analysis of the organizational literature confirmed that new institutional theory in organizational analysis could be used as a theoretical basis for the study, because of its emphasis on inertia and unchangeability. The following deduction of theoretical hypotheses from New Institutionalism brought new insight into the course of the study. These hypotheses were analyzed together with the field visits’ study material.

Finally, forward directed abduction was used, and a new hypothesis, which was not included in the institutional theory, was drawn up. This concerns the re-incarnation of the old Soviet industry mesostructure, the vertical integration, which disappeared after the collapse of Soviet Union, when the RMI was liberalized by abolishing the production ministries (cf Fortescue, 1992, 122), resulting in the birth of hundreds of new and autonomous mines..

A couple of years later, e.g. after the privatization of the RMI after 1995, the new private owners started to consolidate their mines, processing plants and smelteries in exactly the same way as happened in the Soviet Union, i.e. in a vertically integrated industry form. This was seen as the re-incarnation of an old model, which had been temporarily deinstitutionalized.

In brief, when privatization was over the previously deinstitutionalized template of the industry’s organization returned, and the RMI was once again organized according to this old method of vertical integration. This new theoretical hypothesis was then added to new institutional theory as an example of re-institutionalization.

The following Figure 1: The modes of reasoning and the phases of study, shows the different phases of the study and the mode of reasoning used in each phase.

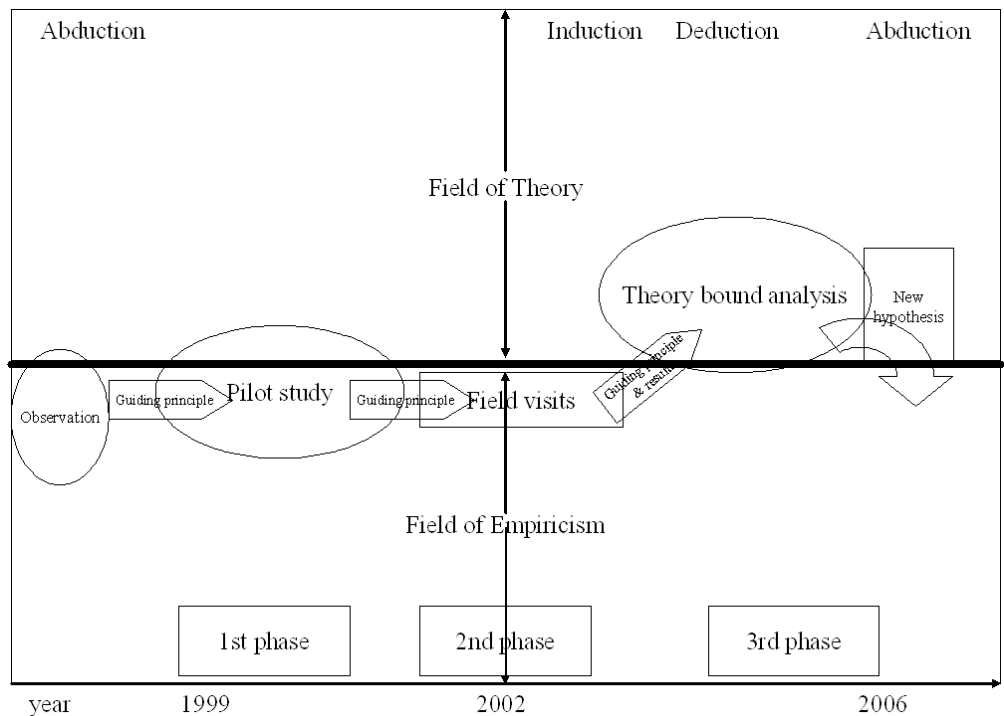


Figure 1: The modes of reasoning and the phases of study

The black thick line in the middle of the figure divides the area of study into two fields: The upper part is the theoretical field, and the lower part is the empirical. As shown on the left hand side of the figure the first “guiding principle” (unproductivity) is derived from the observations of the researcher and it guided the research process through the pilot study phase (1st phase of study). Both the preliminary observations and the pilot study are on the empirical side of the Figure. The guiding principle was changed after the pilot study to “unchangeability”, and it continued to lead the process through the field visit phase (2nd phase of study) all the way to the analysis phase (3rd phase of study), where the guiding principle and field visit results are analyzed. In the third phase of the study theory becomes central, and the hypotheses were deduced from new institutional theory, which by this time had been chosen as the theoretical basis for the study. Forward directed abduction brought new conclusions to the theory in the form of new hypotheses (the reincarnation of deinstitutionalized organizational templates). The analytical phase of the study is clearly placed on the theoretical side of the figure.

The selection of case study enterprises was made after the pilot study phase, when the researcher had realized that the RMI had been split into two groups:

one which was organized according to the old Soviet way of vertical integration, and another which was only mining raw materials and operated without its own processing facilities. The sampling in this study, thus, resembles the theoretical sampling of typical and atypical cases (Handbook, 2004, 129). By comparing different kinds of cases through cross-analysis results can bring contrasting conclusions, but it can also support the emergent theory (ibid, 129). Thus, in this study one mine was chosen from the vertically integrated group and another from the raw material business group. The second principle followed during the case enterprise selection was to select the enterprises so that they were as far away as geographically possible, and that they would be in different administrative regions of Russia. Thirdly, the enterprises should produce different metals/material.

There were about twenty eligible enterprises that matched the requirements described above. All of them were ones that the researcher had visited several times earlier, and had general managers who he knew. Finally, “Ugol” and “Mineral” were chosen based on the above principles by the researcher. The subsequent case studies made of “Ugol” and “Mineral” allow us to make analytical generalizations about the results with reference to the theory of New Institutionalism.

The approach to the mines was made by calling on a phone to the general managers of “Ugol” and “Mineral”. A brief explanation of the research idea was given and in both cases the general managers gave their consent to the case study research. Formal contracts about the study were not drawn up and the researcher operated with only the general manager’s oral permission. Furthermore, “Ugol” and “Mineral” were the only enterprises that were officially contacted and asked to participate in the study, no other enterprises were contacted. The employer of the researcher accepted the dual role of the researcher, and signed a letter permitting this. The introductory letter of the company is attached to this study as Appendix No. 6.

The field contact with the case study enterprises was made in both cases by a short meeting with the general managers of both mines. With “Ugol” this happened on July 20, .2002 and with “Mineral” on September 9, 2002. During these meetings the researcher explained his new position. That is, he was no longer a business executive visiting the mines in his pursuit to sell equipment, but was now a researcher aiming at finding how both mines had transformed themselves from being a Soviet mining enterprise to a new Russian mine. Both general managers accepted the new role of the researcher. After the initial meetings both general managers assigned a personal assistant to the researcher. In both cases this person was the Deputy Chief Engineer of the mines’ central administration; in “Ugol” Dimitri N. and in “Mineral” Aleksandr R. These research assistants helped the researcher agree on the

interview dates and facilitated the other requests of the researcher. At “Ugol” the researcher was given the office of the chairman of the board, who was on a business trip at the time of the visit to the mine. The office was located beside the general manager’s office. In “Mineral” the researcher was stationed in “Aleksandr R’s” office. In both case study enterprises the researcher remained one whole working week.

The attitude to the researcher in both case study enterprises was very positive and he was warmly greeted and accepted. In other words the researcher was participating with the approval of the case study enterprises. He was not a neutral researcher, but a trusted friend to whom the interviewees were ready to openly explain how both of the mines were doing³.

Consequently, the researcher was also a participating observer during the field visits. Knowledge about the mines’ operations was gathered in a systematic manner during the visits. This was enabled by the good Russian language skills of the researcher. He did not need interpreters to grasp the meanings of situations. This was also possibly due to the fact that the researcher had made hidden observations of both mines earlier during prior business trips to the mines. Both mines had been previously visited by the researcher several times. Also, the researcher had carried out his “researcher in disguise” role for three years prior to the field trips.

In both “Ugol” and “Mineral” the researcher interviewed the general managers and their deputies. The General Managers’ interviews were taped on audio, and written up on paper after the meetings. Both meetings took about two hours. The deputies of the general managers were interviewed, but not taped. In “Ugol” the deputies were the Chief engineer and the Planning Manager, and in “Mineral” the Operations Manager, and Purchasing Director. Notes were taken during all interviews with the two deputies in both mines, and written down by hand, and they lasted for about one hour each.

Other management figures at both mines were interviewed through the critical incident method. This meant that a questionnaire was distributed to the managers of both mines, and they filled that in. When returning the questionnaires to the researcher, the researcher asked them additional questions, and also asked them to draw a graph of the development of the mine during the transitional period. The answers to the additional questions of the researcher were written down by the researcher.

³ This is not always the case in Russia. Kolobkov from UMMC said in his interview to the researcher, that when Mr. Olavi Urvas, who works part time for the Finnish Mining Company Outokumpu Oy and part time for EU TACIS programme comes to UMMC in his role as TACIS mine auditor, they do not tell him openly how UMMC is doing. They do not want to tell him about their confidential issues. On the other hand, when Urvas visits UMMC as an Outokumpu executive, they tend to tell him more openly about their plans and business perspectives (Kolobkov, interview 05.03.2001).

In addition to the interviews and questionnaires the researcher made his own notes on his observations, and wrote them up. Furthermore, the researcher used his video camera to capture some organizational practices⁴ and moments from the mines and their working environment. These films can be regarded as physical artifacts from the case study enterprises. The observations of the researcher and the video films were used later on in the narratives written by the researcher.

In both “Ugol” and “Mineral” the Communication Managers of the mines were connected to the study, and they gathered internal and external press releases for the researcher as well as local newspaper articles, and other internal documents.

Additionally, the Financial Managers of both “Ugol” and “Mineral” were connected to the study. Both of them gave financial information about the enterprises to the researcher.

2.1.2 Research methods

As no single organizational theory can explain how such a phenomenon as a firm’s transition from a planned economy to a market economy arises, exists and develops, the chosen research method is a multiple case study (see Yin, 1994), the aim of which is to find a theory to explain the phenomenon. The purpose is to look for theories, which are possible to find in each case (see Järvinen and Järvinen, 2004, 75). In a case study, although no new theory is found, the case can reveal new knowledge that better explains what reality looks like.

Prior to the pilot study between 1999 and 2001 the researcher gathered pre-study information to start to form the theoretical framework of the study. This was conducted by researching the relevant literature and as a “researcher in disguise”. The latter was accomplished by the researcher being a mining equipment executive and a supplier of equipment to the RMI who was conducting normal business meetings, and at the same time asking “innocent” questions about the general development of the RMI. The observations made during non-formal meetings and leisure time with the Russian mining executives complemented the gathered information. Also, the researcher checked old minutes of meetings from prior years, and these notes were taken into the documentation included in the pre-study material.

⁴ For instance a so called “selector” meeting at a mine manager’s office in Ugol, e.g. intra-company phone conference.

During and after the second phase of the study i.e. the field trips, the “researcher in disguise” continued to gather new information up to the end of 2005. During this period the researcher met, as earlier, with several Russian and other CIS mining executives, who without knowing contributed to this study. The notes from these meetings were taken by writing them down during business meetings or afterwards if the meetings were conducted during leisure time (fishing, hunting, dining, sports activities etc.).

The research methods used in this study are presented in Table 2: Research methods as follows:

Table 2: Research methods

| Phase of Study: | Research Method: |
|-----------------|--|
| Pilot study | Literature study Researcher in disguise -interviews Case study Interviews Group interviews Benchmarking |
| Field visits | Multiple case studies Observations Video filming Audio taping Unstructured interviews Critical incident questionnaire |
| Analysis | Theory bound analysis of evidence |

2.1.3 Modes of analysis

Myers states that a clear distinction between data gathering and data analysis is problematic in qualitative research. Instead of data analysis Myers proposes to use a broader term “modes of analysis”, which is based on the assumption that each researcher has an individual approach to gathering, analyzing and interpreting qualitative data. From a hermeneutic perspective it is assumed that the researcher’s presuppositions affect the gathering of the data – the questions that the researcher poses to the informants largely determine what interpretations you are going to make (Myers, 1997, 7). Thus, both the data gathering and analysis methods in this study are presented together as follows.

The material analyzed has been gathered from several sources. There is some quantitative material, but the general line of enquiry in this study is qualitative.

The empirical material prior to the pilot study and after the field study was derived from interviews where the interviewer was a “researcher in disguise”. The interviews were conducted in Russia between 1999 and 2005. These interviews were conducted in several different places and areas of Russia. The notes from these meetings were taken, by the researcher, by writing them down during or after the interviews. These interviews were not recorded onto audio tape. The list of interviews is presented in Appendix No. 2.

During the second phase of the study, the field trip phase, the interviews conducted with the case study mines’ general managers were unstructured interviews, which were taped on audio. The Deputy General Managers’ interviews were also unstructured interviews conducted without audio taping. Other key management people were interviewed according to the “Critical Incident Method” (Flanagan, 1954, see also Miles and Huberman, 1994, 115) with same open questions presented to everybody interviewed. The questionnaire used is presented in Appendix No. 1, and detailed lists of the interviews from each case study mine are presented in Appendices No 3 and 4.

The data retrieved during the field visits was in the form of:

- Documentation
 - minutes of meetings, bookkeeping reports, articles from the mass media
- Archival records
 - data disks including statistical data, organizational figures, internal phone catalogues
- Interviews
 - interviews with the elite personnel of each case study mine: top managers
 - key personnel interviews: middle managers
- Direct observations
 - formal and casual data collection
- Questionnaire
 - The critical incident method questionnaire
- Physical artifacts
 - Video film clips

According to Yin’s (positivistic) case study approach the analysis of evidence consists of examining, categorizing, tabulating or otherwise recombining the evidence. However, in order to analyze case study material a subsequent general analytic strategy should be followed (Yin, 1994, 105). Yin proposes two such strategies: to follow theoretical propositions or starting a

case analysis with a descriptive approach (ibid, 106). Eskola, on the other hand, explains that such analysis in scientific research can be evidence based, theory based or theory bound (Eskola, 2001, 133-157).

When the mode of analysis is evidence based, then the form of scientific reasoning is usually inductive, and the aim is to form theoretical completeness. Grounded theory (see Glaser and Strauss, 1967, Glaser 1978, Strauss 1987 and Strauss and Corbin 1990) is based on such inductive reasoning. This is similar to what Yin proposes be called a descriptive approach to data analysis.

The theory based mode of analysis is the traditional form of scientific reasoning, and it uses deductive logic. Natural science typically relies on a certain theory, based on which a research study lay-out with pre-thought hypotheses is built. Yin defines this strategy as; “to follow theoretical propositions”.

The third form of mode of analysis according to Eskola is called theory bound analysis. This kind of analysis can solve some of the problems of evidence based analysis by abductive scientific reasoning. This type of analysis begins with an evidence based process, but at the end of the analysis an existing theory is taken into use. The data analysis is lead by a guiding principle, which has some theoretical connections, but does not directly base itself on theory.

In the theory bound mode of analysis the empirical data and theory alternate in the mind of the researcher. They interplay between themselves, and the researcher tries to couple the evidence and theory together through coercion, intuition or creativity, which can lead to new hypotheses or theory.

Theory bound analysis has been used in this study. Alongside the three separate study phases a constant literary review process has been going on in order to find a suitable theory for the phenomena discovered together with key interviewees’ interviews. Abductive reasoning has been used along with two different guiding principles, out of which the second guiding principle was abandoned after the pilot study.

The analysis of the pilot study, e.g. the 1st phase of this study, is almost purely evidence based. When the conclusion was made that the organization may be the reason for the low productivity of Russian mines, the pilot case study was not continued, and the theory formation was not finalized. The guiding principle of unchangeability then led the analysis in another direction.

Directly after the 2nd phase of the study, e.g. the researcher’s return from the field visits to “Ugol” and “Mineral” the data analysis began to be collected as evidence based. Induction was used in the data analysis. However, this method of reasoning was changed to deductive reasoning when new institutional theory was chosen as the theoretical base for the study, and the propositions, according to new institutional theory, applicable to the RMI and

the case study enterprises of this study were formulated. Abduction followed in the forward reasoning mode, and the evidence and theory started to alternate, and create new insight into the theory.

In this study the case study evidence consists of different kinds of data including elite interviews and critical incident questionnaire results. The purpose has been to combine one or more research methods, e.g. to triangulate. In this study the case study data source has been triangulated (Handbook, 2004, 130). The results of the elite interviews (first data source) have been contrasted with the results of the questionnaire of the critical incident method (second data source). Thus, two methods, e.g. interviews and a questionnaire have been used, in addition to other documentation and data in order to collect material for analysis from two different data sources, e.g. top and middle management.

All the data from the “Ugol” and “Mineral” case studies has been analyzed by traditional qualitative research methods, e.g. grouping and classifying. The analysis has been accomplished through intuitive grouping (see Koskinen et al., 2005, 243), which can be seen as part of the abductive reasoning. The actual analysis resembles contextual inquiry (see Beyer and Holtzblatt, 1998), which has been used in marketing research and product development (Koskinen et al., 2005, 243).

The data analysis of the evidence has been made according to the “visual” grounded theory approach (see Tolonen et al. 2005). In practice this means that once the categories of evidence have been defined, they have been written down on yellow slips of paper. These paper slips have then been grouped according to their common denominators. Physically the paper slips have been positioned on the researcher’s cabinet walls. The iteration process has included the disregarding of categories step by step.

The first round of data analysis regarding changes in the mines brought the following categories: own sales, own purchases, own finances, production improvement, worker involvement, new machinery, own export, own import, profit request, profitability request, new organizational structure, worker life improvement, work productivity, and salary payment. These categories were whittled down to three categories: structural changes, work quality improvement and worker life improvement through the paper slip method described above.

When the saturation point of each category was reached, the interplay with theory began. During this (the analysis) stage of the study new institutional theory was chosen as the theoretical framework to explain the changes in the RMI. According to the theory bound analysis the theory and evidence have been coupled together by coercion, intuition and creativity. This process has

been supported by the richness of the individual experience of the researcher working in Russia and the RMI.

For the final step of data analysis the case study reports were written up. Both of the case studies have been constructed in similar fashion, and they consist of five different parts: the story of the transition and adaptation of the mine to a market economy in a form of a narrative, the quantitative development of each mine as a producer of their own product, the development of each mine's organizational field during the transition, the results of the interviews with top management and the results of the "Critical Incident Method" questionnaire, and the conclusions of each case study visit.

2.2 The longitudinal analysis of change

This thesis is the result of work lasting over two decades. The researcher moved for the first time to the Soviet Union in January 1985, and stayed in Moscow for three years positioned there as Chief of Representative Office for a Finnish Mining Conglomerate Outokumpu Oy⁵. The first visit by the researcher to a Soviet mine took place in March 1985, when a delegation from Outokumpu Oy visited the Pechenganikel mine in the Kola Peninsula. In August of 1985 the researcher visited the Norilsk mines in Siberia, also as a member of Outokumpu's delegation. After these initial visits the researcher worked for Outokumpu and then began working for a Finnish mining equipment producer Tamrock Oy in 1989 as a sales executive to the Soviet Union, Russia and other CIS countries. In 1998 Tamrock Oy was bought by Swedish Sandvik⁶ group, and the researcher continued by working for Sandvik Mining and Construction in the same capacity. The career of the researcher also included a one year job as Tamrock Moscow office manager from 1993 - 1994. Both jobs in Outokumpu and Sandvik meant hundreds of visits to Russian mining enterprises all over the country, and also in other CIS countries, and thousands of contacts with Russian and CIS mine managers. Thus, by virtue of his civil job, the researcher has followed the development of the RMI for more than twenty years, and his pre-understanding of the mining industry was well-formed before the actual research project began.

Implicitly the work on this thesis started by wondering about the lack of change in the organizational practices of the Russian mines in the early 1990's, when the researcher visited hundreds of Russian mining enterprises in his role as a businessman selling mining equipment to the Russian mines.

⁵ More about Outokumpu Oy at www.outokumpu.com

⁶ More about Sandvik and Tamrock at www.sandvik.com

Explicitly the dissertation thesis preparation commenced in 1999. As a result the study is a longitudinal examination of change, in which the observations made by the researcher over 20 years were gathered together and presented.

2.3 Organizational history

Along with new institutional theory this study uses organizational or management history in its analysis. Organizational history is a rather new approach to organizational theory. Recently, there have been calls for engaging with history in the study of organizations and management. New research programs like new institutionalism or population ecology have been partly behind such development (Usdiken and Kieser, 2004, 321).

This historic turn is a part of a wider transformation, which is associated with hermeneutics, the linguistic turn and the revival of narrative (Clark and Rowlinson, 2004, 353). In this study the organizational theory of New Institutionalism and organizational history are going to be used together; the aim is to analyze organizational change through a historical account and to use some of the tools of historians, such as the narrative in the study. However, organizational theory will be regarded as primary in our analysis, organizational history as supplementary.

Organizational History (or management history) can be treated as a discrete subject area within organizational theory (Thomson, 2001, 99). It can increase the awareness of contemporary scholars and managers in order to understand the roots of today's organizational practices, and to avoid short-termed fads and fashions (*ibid*, 99).

The scope of Organizational History can be summarized in the form of:

- Organizational practices.
- The comparative historical development of management in different countries.
- Management institution.
- Managerial labour markets.
- Organizational structures and systems.
- Management thought and theory.
- Management as an occupation.
- Management skills and competencies.
- Consultants and managerial knowledge.
- Management careers.
- Management as a profession.

The above list of possible research issues for Organizational History is modified from Thomson (Thomson, 2001, 108-112). Almost everything that is

part of Organizational Theory can also be studied from a historical perspective. However, it should be noted, that from this point of view, Organizational History is not only a method for studying the past, but a way of trying to understand the management of today from a historical perspective.

Out of above listed items, which can be studied through the lenses of history, this study aims at studying the historical development of organizational practices and organizational structures.

The reasons for using historical accounts in organizational theory can be summarized as follows (Kieser, 1994, 609 - 612):

- Structures in present organizations reflect culture-specific historical developments.
- Organizational problems and their remedies are not free of ideology.
- Historical analyses can identify opportunities for choice.
- Historical analyses can test longitudinal organizational change with a longer perspective than cross-sectional studies can.

Furthermore, there are two ways we can utilize the combination of theory and history. We can either use history in organizational studies, or we can use organizational theory in historical analyses (ibid, 617). In this study most attention is focused on the development of organizational structures in the RMI. We are especially interested in the development of the mesostructure of the mining industry and the organizational field of the individual mines, as well as the change of organizational practices from a historical perspective. Thus, this study uses history in organizational analysis.

The line of enquiry when uniting organizational theory and history can be supplementarist, integrationist or reorientalist (Uskiden and Kieser, 2004, 322). According to the supplementarist position history may confirm and refine general theories. Also, historical research is seen as a useful aid in methodological terms. The integrationist position calls for the conjoining of historical analysis and the study of particular organizational forms and processes. In this aspect history does not replace the existing organizational theory, but has the ability to enrich it. Integrationists can make explanatory generalizations or theories out of historical analysis. Compared to the supplementarist position, which uses history only as a testing ground or in a complementary fashion, integrationists may achieve “historical theories of organization”. The reorientalist position goes further than the two previous: it prioritizes the narrative approach. Mainly this means moving from the functionalist approach of organization theory towards an interpretive or discursive orientation. Another strand in the reorientalist approach is inspired by Foucauldian genealogy, where the genealogical method in history is used (ibid, 323 – 325).

The position used in this study is supplementarist. First of all, the organizational theory for the study is New Institutionalism. A historical approach can be regarded as secondary and also as a methodological aid to the analysis. It helps the research by providing a historical stance on the development. Also, New Institutionalism favours longitudinal studies of organizational fields over cross-sectional studies and history is longitudinal in its character. Although New Institutionalism's emphasis is on persistence and homogeneity, institutional change is also seen as possible through the process of institutional change. The purpose is to supplement New Institutionalism through methodological approaches like narrative interpretations of history in the case study part of this thesis.

According to Yin, history and case study use mostly the same techniques, but case study design adds two other sources of evidence, which are not usually included in the research of history: direct observations and systematic interviews (Yin, 1994, 19). On the other hand a historical research approach uses other tools e.g. narratives (Clark and Rowlinson, 2004, 353).

Tolonen, Alasuutari and Peltonen note that recently history research has re-found the use of interviews (Tolonen, Alasuutari and Peltonen, 2005, 145). The amount of information in today's society is so huge that relying only on documents as a source of information leads to a lack of perspective in research. By using interviews as a tool for history research it is possible to achieve this perspective that would be lacking otherwise. The idea to include historical research in this study is to provide explanations of today's phenomena. The combination of methods and tools of both case study research and historical research will be used in this study. The aim is to make a richer and fuller analysis.

Furthermore, a historical approach is suitable for studies like this because it employs an evolutionary perspective to an organizational phenomenon (Leblebici and Shah, 2004, 353), which is also an aim of this study. In particular, institutional research has used the historical approach in the study of the industrial developments (see Farjoun, 2002, Scheinberg, 2005).

2.4 The evaluation of the study

The empirical research of organizational phenomena can be divided into two basic alternatives: the statistical and the case study approach. The statistical approach tries to test the hypotheses, which are deduced from theory. The case study approach studies a few objects at a time, and the aim is to stress the interpretation and deep understanding of the phenomenon. Both approaches

have similar problems concerning the generalization of the results (see Lukka and Kasanen, 1995, 71 - 90).

Usually a qualitative case study approach compensates for the impossibility of statistical analysis by broadening the theoretical and empirical study of the meaning of the study object, the deepness of analysis and interpretation and the triangulation of research methods.

There seems to be three different opinions about the generalization of case studies:

- (1) generalization is not possible,
- (2) generalization is not needed, or
- (3) high quality case studies can be generalized.

In this thesis the approach is made according to the third alternative; case study results can be generalized (Lukka and Kasanen, 1995, 71 – 90).

In this context generalization can be made in several different ways:

- (1) by argumentation that the results would be true in other cases,
- (2) by transferring structural homogeneity to external cases,
- (3) by finding broadly valid ways to describe certain phenomena
- (4) by identifying real causal mechanisms

This study is a multiple case study. The researcher had visited the case study enterprises several times before the actual field visits and evidence gathering. According to Curran and Blackburn single-firm and single-visit case studies are possible, even with one interview of the owner-manager and a brief observation of the workplace, although the ability to generalize from them is limited (Curran and Blackburn, 2001, 81). In this study the researcher interviewed both the general managers of the mines and two of their deputies in detailed interviews, and in addition to that gathered opinions from middle management in the form of a questionnaire, and complemented the information with different types of documentation. The case studies were advanced by a pilot study and several interviews with key informants and experts on the RMI. The ethnographic approach utilized in this study, where the researcher is a research instrument (mining executive - researcher-in-disguise) means that the researcher himself is an important carrier of cultural knowledge, and it enables the researcher to place the evidence into a larger cultural and socio-historical context.

One possibility for generalization is to elevate the level of discussion from empirical raw findings to meta-level observations, which then would include general elements that are true or suitable to cases other than the individual case study (Lukka and Kasanen, 1995, 76). This thesis utilizes the first alternative from the above list: to argue that the results would be true in other cases. Ugol was an example from the coal industry, Mineral from the non-metal mining industry. The findings support the assumption that the results

would be true in other cases, because the whole of Russian society changed so drastically, and the environment had such a crucial impact on the mining industry of the country.

When assessing the rationality of qualitative research there are certain criteria to be followed (Marshall and Rossman, 1999, 192 - 194):

- credibility
- transferability
- dependability
- confirmability

Credibility's goal is to demonstrate that the inquiry was conducted in such a manner as to ensure that the subject was accurately identified and described. Transferability means that the researcher must argue that his findings will be useful to others in a similar situation. Dependability means that the researcher tries to explain the changes in the phenomenon according to the increased knowledge made available. Confirmability captures the traditional concept of objectivity (ibid, 193 -194).

Concerning the field research there is a question about their reliability and validity. Reliability is concerned with the question of whether the researcher is obtaining data on which he or she can rely. Validity is concerned with the question of whether the researcher is studying the phenomenon he or she purports to studying (McKinnon, 1998, 35). According to McKinnon both of these can be achieved by using correct research strategies and tactics (ibid, 37). The strategies and tactics identified by McKinnon, e.g. length of stay at the research object, the use of multiple research methods and the behaviour of the researcher at the study object have been used in this study to improve the reliability and validity of research

Through the use of qualitative research methods and triangulation it is estimated that the research results of this study fulfil the above mentioned requirements for qualitative field research and the results of this thesis can be regarded as credible, and transferable to other Russian mines.

One issue which ought to be discussed is the ethics of the "researcher in disguise" mode of information gathering. As explained the researcher was executing scientific work in disguise, in a dual role as a businessman and a secret researcher conducting interviews with key informants without their consent. This kind of enquiry using the researcher as a research instrument can be questioned (see Murphy and Laczniak, 1992, 11).

However, all the information given by the key informants to the researcher-in-disguise was given to the representative of a foreign company, Sandvik, which had given permission to the researcher to use the received data in this study. Thus, the researcher did not intrude on any organization without the respondents knowing that he is, after all, a foreign businessman.

Furthermore, several interviews in disguise were made in the group mode so that there was more than one respondent to the questions of the researcher, and during some of the meetings the issue of the doctoral thesis of the researcher was discussed although not explicitly explained⁷. The information gathered by the “researcher in disguise” interviews contains general historical information from events that happened in the past, and its use in the general historical explanation of the mining industry’s development is, thus, supported.

Taking the above into account, it is not believable that the respondents would disclose secret information that would harm their company or their own country⁸. Also, the amount of information received through the “researcher-in-disguise” mode is not a significant amount in this research project when compared to the case studies both for the pilot study and for the actual cases the informed consent was received.

⁷ See also Katila and Meriläinen, 2002, regarding the researcher being both the object and subject of a research and its methodological consequences.

⁸ See also Kolobkov 2001, footnote 3, about Tacis researchers with its methodological implications.

3 NEW INSTITUTIONALISM AND INSTITUTIONAL CHANGE

The aim of Chapter 3 of this thesis is to build a conceptual framework through which Russian transitional development will be reviewed, and to build a model for institutional change. The basic concepts of New Institutionalism are defined and discussed below.

This study follows the principles of social constructionism, where empiricism replaces theoretical thinking (Aittola and Raiskila, 1991, 216). Thus, this study was begun without any theory to explain the changes that took place in the phenomenon studied.

Also, as abductive reasoning and theory bound analysis were used in this study, the main theoretical base for the study is organizational theory's "New Institutionalism". This theory was chosen after the field visit studies were made. As is typical in the social constructionist research tradition (see Aittola and Raiskila, 1991) information and knowledge taken from everyday life is regarded as more important than theoretical thinking.

3.1 Different types of New Institutionalism

New Institutionalism in organizational studies is based on three core articles: John Meyer's and Brian Rowan's "Institutional organizations: formal structure as myth and ceremony (1977)", Paul DiMaggio's and Walter Powell's "The iron cage revisited: institutional isomorphism and collective rationality in organizational fields (1983)" and Lynne G. Zucker's "The role of institutionalization in Cultural Perspective (1977)"⁹. The main difference between these three articles is that while the two first ones treat the environment of an organization as a source for institutions, Zucker regards the organization itself as a source for institutions. However, "new" institutionalism is not a new science itself; it is a paradigm based on the works of early institutionalists, and it contains some of the theoretical principles of the old institutionalism. Selznick, the father of (old) institutionalism in

⁹ Powell and DiMaggio (1991) also regard Scott and Meyer, 1983, as the fourth founding article of new institutionalism (see Scott and Meyer, 1983).

organizational studies, himself questions the sharp line drawn between the two forms of institutionalism in organizational studies (Selznick, 1996).

Based on the three initial articles New Institutionalism has grown into one of the most popular approaches of open systems theories. Other theories included in the open systems group of theories are population ecology (Hannan and Freeman, 1977, Baum, 1996), network theory (Granovetter, 1992, Powell and Smith-Dorr, 1994), transaction costs theory (Williamson, 1975, 1985), resource-dependency theory (Pfeffer and Salancik, 1978, Burt, 1983, 1992) and structural contingency theory (Woodward, 1965, Lawrence and Lorsch, 1967, Donaldson, 1996). Powell and DiMaggio (1991) have tried to unite the basic fundamentals of New Institutionalism, as well as further develop the theory of New Institutionalism. Scott (1995) has shown the historical development from Old Institutionalism to New Institutionalism in organizational studies. Scott's work can also be seen as an attempt to group the different strings of New Institutionalism in organizational studies into a comprehensive theory.

After the initial articles of New Institutionalism by Meyer, Rowan, DiMaggio, Powell and Zucker there have been attempts to unite the two traditions of institutionalism in organizational studies with the concept of neo-institutionalism, i.e. by bringing these two paradigms, Old and New Institutionalism, together (see Greenwood and Hinings, 1996). On other hand some scholars call the New Institutionalism of Meyer, Rowan, DiMaggio, Powell and Zucker neoinstitutionalism (Ruef and Scott, 1998), as do Powell and DiMaggio themselves (DiMaggio and Powell, 1991, 27).

Furthermore, there are strings of research when dealing with the study of organizations, which base themselves on Old or New institutionalism in economics. For instance Burns and Scapens use old institutional economics to conceptualize the change of organizational practice in the accounting of firms (see Burns and Scapens, 2000). Schneiberg utilizes both new economic and new organizational institutionalism by combining them together when explaining the institutional change in American Property Insurance (see Schneiberg, 2005).

Similarly, Ingram and Silverman have defined New Institutionalism as a "pan-disciplinary literature that seeks to explain the conduct and performance of individuals, organizations and states" (Ingram and Silverman, 2002:1-2). Their work is based on the ideas of Coase, "the godfather of new institutional economics" (Scott, 1995:5). Their "choice-within-constraints" new economic institutionalism is not the same as Meyer's and DiMaggio and Powell's New Institutionalism in organizational studies. While Ingram and Silverman hypothesize that the actors in organizations have the possibility for action within some constraints, Meyer, DiMaggio and Powell stress the cognitive

dimension of action; the actors are so embedded in their old ways of action, that they do not consider taking other choices of action unless the outside environment leads them to adopt new practices.

Both economic Old and New Institutionalism should not be mixed with organizational New Institutionalism. To clarify the somewhat mixed concepts we are going to use the term “New Institutionalism” or “institutional theory” in this thesis as defined originally by Meyer, Rowan, DiMaggio, Powell (and Zucker). Having said that we need to note that there are research traditions that follow each and every founding member of New Institutionalism in organizational studies. The aim of this study is to utilize New Institutionalism as it was originally presented by DiMaggio and Powell. In particular, their idea of “institutional field” and processes of institutionalization, deinstitutionalization and re-institutionalization is focused upon.

3.2 Institutions

The basic concept of New Institutionalism is an *institution*. This concept can be traced back to the late 19th century, when scholars both in the USA and Europe started to use it to reflect upon social phenomena, which were both external (to a certain individual) and coercive (backed by sanctions) (Scott, 1995:10.) These institutions were the Durkheimian “social facts” (Durkheim, 1901). Weber called the phenomenon an “iron cage”, which restricts the rational behaviour of individuals (Weber, 1978).

These “external and coercive social phenomena” are defined in many different ways. Political science defines them in a different way to institutional economics or scholars of organizational science. Furthermore, historically the word “institution” has been defined differently in different decades in the same disciplines (compare Old vs. New Institutionalism).

The work of the founders of New Institutionalism in organizational studies, Meyer, Rowan and Zucker, is based on the definition of an institution given by Berger and Luckman (originally Berger and Luckman wrote *The Social Construction of Reality* in 1966), who stress the cognitive dimension of institutions. Scholars before Berger and Luckman (Merton, Selznick, Parsons, etc. scholars of Old Institutionalism) had emphasized the normative dimension of institutions.

Berger and Luckman’s institutions are defined as being typifications of habitualized actions (Berger and Luckman, 1991, 72). These typifications are institutions only if the typifications are reciprocal and both the actions and the actors are typical in the institution in question. The authors themselves

acknowledge that their definition of institutions is broader than the then prevailing definition (that of the middle of 1960's).

The definition given by Berger and Luckmann is the basis for New Institutionalism in organizational studies¹⁰. It has a very strong cognitive flavour¹¹, and the institutions of Berger and Luckmann manifest themselves in organizations as “procedures, practices, and their accompanied shared meanings (Zilber, 2002, 234) or “imitation, scripts, schemas, accounts, routines, typifications and cognitive models” (DiMaggio and Powell, 1991, 27). Berger and Luckmann themselves talk about “taken-for-granted routines” (Berger and Luckmann, 1991, 75) and according to them they appear themselves “in the same way, as given, unalterable and self-evident” (ibid, 77) or “this is how these things are done” (ibid, 77).

Institutions are born by the process of habitualization (Berger and Luckmann, 1991, 71). “They imply historicity and control. Reciprocal typifications of actions are built up in the course of a shared history. They cannot be created instantaneously. Institutions always have a history, of which they are the products.” Furthermore, “institutions control human conduct by setting up predefined patterns of conduct, which channel it in one direction as against the many other directions that would theoretically be possible” (ibid, 72).

Scott has broadened the definition of institutions (Scott, 1995, 33). He has divided them into cognitive, normative and regulative pillars (Scott, 1995, 35 - 45). Each of them elicits three bases of legitimacy: the regulative emphasis is conformity to rules (“*legally* sanctioned); the normative conception stresses the moral base (“*morally* governed”) for legitimacy; and the cognitive view stresses the legitimacy that comes from adopting a common frame of reference or definition for the situation (“*culturally* supported”).

The challenge with Scott's approach is that we then seem to have a different basis for the ontology of the three pillars. This leads to the ontological anxiety of the New Institutionalism (see DiMaggio and Powell, 1991, 27). Scott acknowledges this himself by explaining that some theorists that focus on the regulative pillar are more likely to embrace the *social realist ontology* and theorists that emphasize the cognitive pillar are more likely to work from a *social constructionist ontology*, while theorists that stress the normative pillar fall somewhere between these camps, but closer to the cognitive position

¹⁰ But see Zucker, 1991. She quotes Hughes (1936), who had written: “The only common to all usages of the term “institution” is that of some sort of establishment of relative permanence of distinctly social sort”.

¹¹ Compare with Sociology of knowledge and constructionism as research methodology, where the information of everyday life is regarded as more important than theoretical thinking (see Aittola and Raiskila, 1991).

(Scott, 1995, 49). As said earlier this study is placed into the social constructionistic ontology and stresses the cognitive pillar of institutions.

When these institutions diffuse into the social field, we are talking of institutionalization (or the diffusion of institutions). Berger and Luckmann state: “institutionalization occurs whenever there is a reciprocal typification of habitualized actions by types of actors” (Berger and Luckmann, 1991, 71). They continue: “The more conduct is institutionalized, the more predictable and thus the more controlled it becomes” and “the more, on the level of meaning, conduct is taken for granted, the more possible alternatives to the institutional “programs” will recede, and the more predictable and controlled conduct will be” (ibid, 80).

The institutions, once born, do not automatically transfer to other actors. For this purpose they must be continued or legitimated. According to Berger and Luckmann the legitimation means “ways by which it (institution) can be “explained” and justified” (Berger and Luckmann, 1991, 79). “It follows that the expanding institutional order develops a corresponding canopy of legitimations, stretching over it a protective cover of both cognitive and normative interpretation” (ibid, 79). When a new generation of actors does have compliance problems, “its socialization into the institutional order requires the establishment of sanctions” (ibid, 80). Thus, the legitimation process consistently maintains the institution over individual attempts at redefinition and change.

Although, consequently, inertia is evident in New Institutionalism, institutions are not immortal or unchangeable. Berger and Luckmann note: “institutionalization... is not an irreversible process, despite the fact that institutions, once formed, have a tendency to persist¹². For a variety of historical reasons, the scope of institutionalized actions may diminish; de-institutionalization may take place in certain areas of social life” (Berger and Luckmann, 1991, 99).

Thus, the conclusion on the theorizing of institutions as a concept is based mainly on Berger and Luckman’s concepts, i.e. institutions are born (institutional formation), they are transmitted (institutional diffusion), maintained (legitimation) or continued, and they may die, when they are not needed anymore (de-institutionalization). Furthermore, they can be re-institutionalized, which represents an exit from one form of institutionalization and entry into another institutional form, organized around different principles or rules (Jepperson, 1991, 152). Following Figure 2: The development phases

¹² Georg Simmel called the persistence with German word “Treue”; in English: faithfulness/trustworthiness. Source: Berger and Luckmann, 1991, 223.

of institutionalization is an illustration, made by the researcher, to clarify these processes.

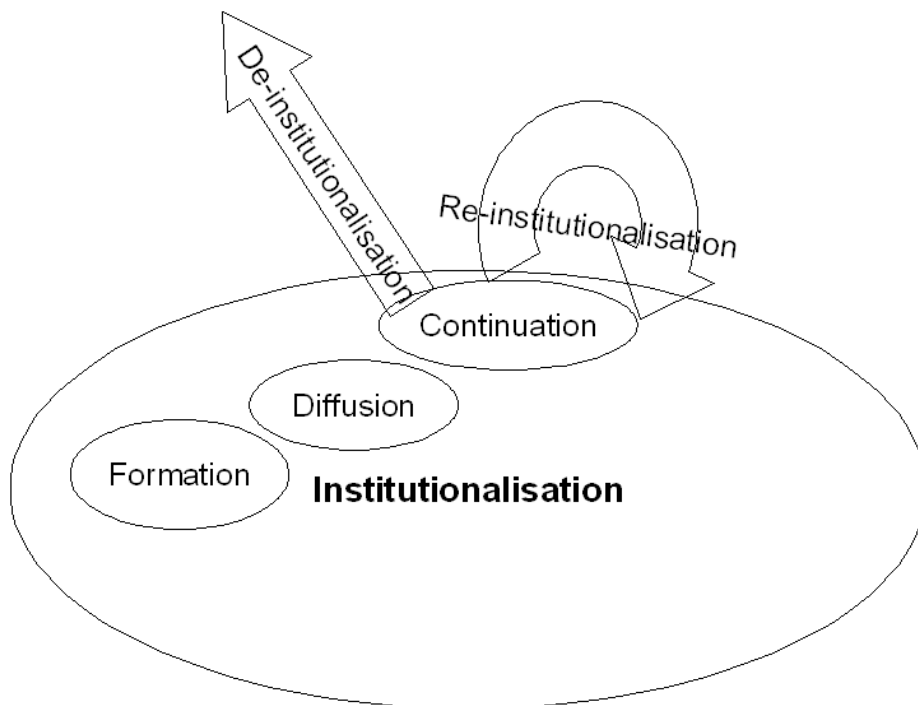


Figure 2: The development phases of institutionalization

The oval, in Figure 2: The development phases of institutionalization, illustrates the process of institutionalization as theorized above. Institutionalization is formed out of an institution's formation, diffusion and continuation (legitimation). If an institution is no longer needed, it falls out of the scope of institutions through the process of de-institutionalization, or it is changed through the process of re-institutionalization into a new institution, which can be of another form than the original institution. One example of re-institutionalized institution could be priesthood of women, which changed the form of priesthood in the Lutheran Nordic countries in the late 1900's, or marriage in Soviet Union in the early 1920's, when the Communist Party first tried to ban the institution of marriage. Seeing the banning of marriage as impossible they accepted the old institution, but created their own marriage practices instead of religious church weddings. In both of these examples the old institution was changed from the original one. In this thesis that we call re-incarnation, the old institution, the organizational mesostructure of vertical integration, returned back; it was reborn after some years of non-existence.

3.3 Institutionalism

The second basic concept, a derivative of institution, is “institutionalism”. It is a paradigm of organizational science, which studies institutions and their impact. There are several branches of science, which call themselves institutionalism. In this study we are going to follow the institutional theory of organizational studies, the so called New Institutionalism.

Max Weber, the father of organization theory, saw organizations as shaped through rationality, which expresses itself in bureaucratization (see Weber, 1978). A number of sociologists (Cooley, Park, Hughes, Freidson, Abbott, Parsons, Durkheim, Mead, Mannheim¹³) picked up where Weber left off, creating a point of view which has come to be known as “institutional theory” or *institutionalism* – concerned with the institutional pressures an organization faces in its environment, from other organizations and from the pressures of being an organization (Strategy Safari, 1998, 294). Institutionalism in organizational studies has, because of these historical reasons, a distinctly sociological flavor (Powell and DiMaggio, 1991, 11). This sociological flavour, especially with the so called New Institutionalism is close to Berger and Luckman’s constructive sociology and their definition of institutions which stresses the cognitive dimension (see Berger and Luckman, 1991).

Although institutions were identified already in the 19th century, modern research on organizations can be traced back to the period of 1937 to 1947, when the first publications on organizational studies appeared in the USA and the concept of an organization was distinguished (Scott, 1995, 16). Today, institutionalism is one of many popular open system approaches in organizational studies (Houtsonen, 2002:41). The term institutionalism is also used in other sciences, for instance in political science, economics and the science of law (see Houtsonen, 2000). Although the content of the theory of institutionalism varies in these sciences, the term institution is defined in all of them to mark some kind of “external social phenomenon” that constrains or enables in some way the behaviour of the actor. Based on this, social action becomes organized and has regular modes (Houtsonen, 2002, 42).

Institutionalism in organizational studies is usually divided into *Old* Institutionalism and *New* Institutionalism. The old institutionalism is often cited as having its roots in Selznick’s “Leadership in Administration” (Selznick, 1957), in which Selznick postulated a distinction between “organization” and “institution”: “As an organization is “institutionalized” it tends to take on a special character and achieve a distinctive competence or, perhaps, a trained or built-in capacity” (Selznick, 1996). The Old

¹³ Source: Scott, 1995, 8

Institutionalism highlights the organizational “shadow land of informal interaction” including patterns, coalitions and cliques, particularistic elements in recruitment or promotion, both to illustrate how the informal structures deviated from and constrained aspects of formal structure and demonstrate the subversion of an organization’s intended, rational mission through parochial interests (Powell and DiMaggio, 1991, 13).

As noted earlier New Institutionalism is based on three core articles: John Meyer’s and Brian Rowan’s “Institutional organizations: formal structure as myth and ceremony (1977), Paul DiMaggio’s and Walter Powell’s “The iron cage revisited: institutional isomorphism and collective rationality in organizational fields (1982) and Lynne G. Zucker’s “The role of institutionalization in Cultural Perspective (1977)”¹⁴. The main difference between these three articles is that the first two treat the environment of an organization as sources for institutions, whereas Zucker regards the organization itself as a source for institution. There are traditions of research based on both strands of New Institutionalism. Meyer’s, Rowan’s, DiMaggio’s and Powell’s followers form the *macro institutional* tradition of research, Zucker’s *micro institutional* (Bresser and Millonig, 2003, 223).

Scott has defined four approaches of research (Scott, 1987) in institutionalism:

- institutionalization as the process of embedding values (e.g. old institutionalism; Selznick, 1957)
- institutionalization as the phenomenological process of creating reality (Zucker, 1977)
- symbolic systems as the basis for organizational environment (Meyer and Rowan, 1977, Scott and Meyer 1983)
- institutions as the fields of action of societies (Friedland and Alford, 1987)

This study will follow the founders of New Institutionalism, and we will treat the environment of an organization as a primary source for institutions. The work of DiMaggio and Powell (1983) on institutional fields is especially emphasized in this thesis. The RMI is regarded as an organizational field and vertical integration as an archetype for organizing an enterprise group.

¹⁴ Powell and DiMaggio (1991) regard also Scott and Meyer, 1983, as fourth founding article of new institutionalism (see Scott and Meyer, 1983).

3.4 New institutional theory in organizational studies

The core of New Institutionalism is contained in the above mentioned articles of Meyer, Rowan, DiMaggio, Powell and Zucker. The approach of Zucker differs somewhat from the approach of Meyer, Rowan, DiMaggio and Powell, and thus, New Institutionalism can be divided into two paradigms: macroinstitutionalism and microinstitutionalism.

The main assumptions of *macroinstitutionalism* are based on the work of Meyer, Rowan, DiMaggio and Powell.

Meyer and Rowan (1983) claim that “institutionalized products, services, techniques, policies, and programs function as powerful myths, and many organizations adopt them ceremonially” and that the “formal structures of many organizations...dramatically reflect the myths of their institutional environments instead of the demands of their work activities” (ibid, 41). The organizations build gaps between their formal structures and actual work activities. The source for such a structure is described as being myths, which are embedded in the institutional environment (ibid. 41).

DiMaggio and Powell (1983) claim that “organizational change occurs as the result as of processes that make organizations more similar without necessarily making them more efficient” and “homogenization emerges...out of the structuration of organizational fields”. The source for such homogenization they indicate as being the “state and professions, which have become the great rationalizers of ...the twentieth century”. Furthermore, “individual efforts to deal rationally with uncertainty and constraint often lead...to homogeneity in structure, culture and output. (ibid, 64). This homogenization they define as “isomorphism” (ibid, 66). Philips, Lawrence and Hardy point out that collaboration between organizations is a potentially important context for the process of structuration upon which institutional fields depend (Philips, Lawrence and Hardy, 2000, 23).

DiMaggio and Powell define three mechanisms of institutional isomorphic change. They are coercive, mimetic and normative isomorphism (ibid, 67). Coercive isomorphism stems from political influence, mimetic isomorphism from standard responses to uncertainty, and normative isomorphism from professionalization (ibid, 67).

The basis for DiMaggio and Powell’s idea of organizational field comes from the structuration theory of Anthony Giddens (Giddens, 1979). Giddens states: “as a leading theorem of the theory of structuration, I advance the following: *every social actor knows a great deal about the conditions of reproduction of the society of which he or she is a member.* [...] There are various modes in which such knowledge may figure in practical social conduct. One is unconscious sources of cognition: [...]. More significant for

the arguments developed in this book are the differences between practical consciousness, as tacit stocks of knowledge..., and what I call “discursive consciousness”, involving knowledge which actors are able to express on the level of discourse. All actors have some degree of *discursive penetration* of the social systems to whose constitution they contribute” (Giddens 1979, 5).

Giddens also defines, what he means by structuration. He says it is: “Conditions governing the Continuity or transformation of structures, and therefore the reproduction of the systems (ibid, 66). This is the basis for DiMaggio and Powell, when they state that “Bureaucratization and other forms of homogenization emerge [...] out the structuration (Giddens, 1979) of organizational fields” (DiMaggio and Powell, 1983, 64). DiMaggio and Powell also specify what they exactly mean with this:

The process of institutional definition, or “structuration”, consists of four parts: an increase in the extent of interaction among organizations in the field; the emergence of sharply defined interorganizational structures of domination and patterns of coalition; an increase in the information load with which organizations in a field must contend; and the development of a mutual awareness among participants in a set of organizations that they are involved in a common enterprise (DiMaggio and Powell, 1983, 148).

Anderson and Hinings (1993)¹⁵ suspect that the general outline of thought of DiMaggio and Powell does not comply with the original propositions of Giddens. However, Barley and Tolbert have proposed to unite these two theories. They state that institutional theory is based mainly on empirical agenda and Giddens’ structuration theory is a process theory with few empirical studies. Furthermore, they note that institutional theory lacks research on how institutions get reproduced, while on the other hand structuration theory focuses on the dynamics of how institutions are reproduced or altered. The fusion of these two theories would enable institutional theory to advance significantly and to become a process theory (Barley and Tolbert, 1997, 93 – 117).

According to Greenwood, Suddaby and Hinings (2002) the notion of structuration, captures the process of gradual maturity and the specification of roles, behaviours and the interaction of organizational communities. They leave the possibility for change in these boundaries and behaviours, saying that they are not “fixed”. Pozzebon also comes to the conclusion that “structurationist arguments decrease the deterministic role of institutional forces” (Pozzebon, 2004) enabling the more voluntaristic approach to actors’ actions.

¹⁵ Source: Pozzebon, 2004.

Houtsonen is concerned with the dichotomies between structure vs. agency, material structure vs. symbolic structure and the rational actor model vs. the institutional actor model which are embedded in institutional theory. To solve these unsolvable dichotomies he proposes using the Bourdeian¹⁶ structuralist analysis (Houtsonen, 2002, 40) to advance institutional theory.

It should be noted here that this study is not going to draw on structuration theory proposed by Barley and Tolbert, nor on Bourdeian structuralism as proposed by Houtsonen. As stated earlier the approach taken in this study is strictly based on new institutional theory as originally presented by Rowan, Meyer, DiMaggio and Powell. As said earlier, only the organizational history approach is used in this study as a methodological tool to assist new institutional theory.

The organizational field defined by DiMaggio and Powell represents an intermediate level between organization and society (Scot, 1995) and it consists of organizations that constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products (DiMaggio and Powell, 1983, 64-65).

¹⁶ see Bourdieu, 1990

A draft figure of an organizational field is presented as follows in Figure 3: The organizational field.

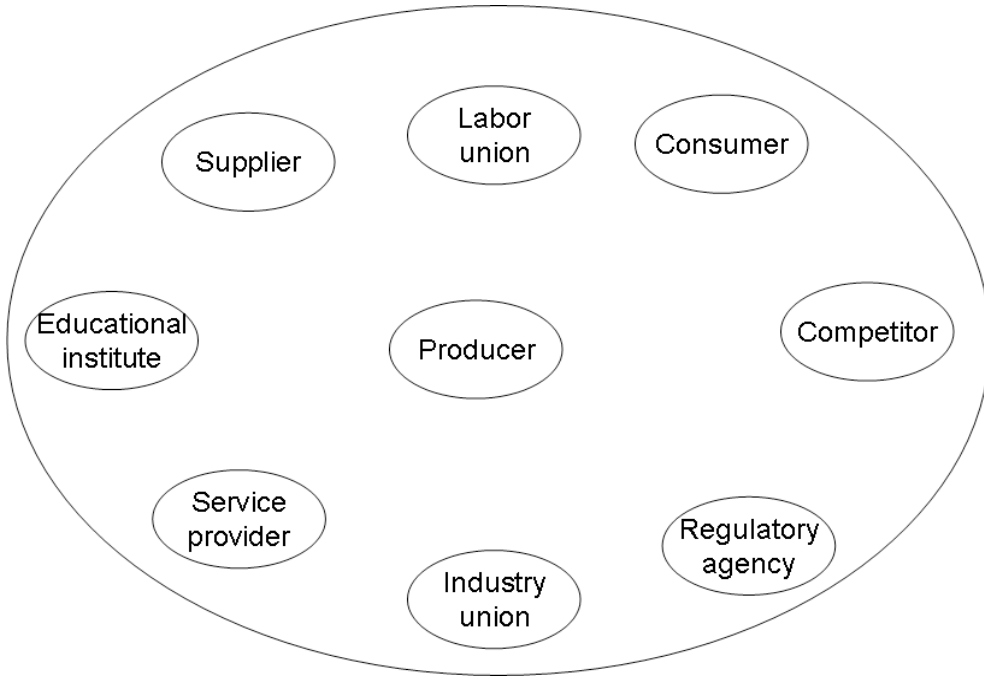


Figure 3: The organizational field

The schematization of the organizational field in the figure shows some possible but not all the collective actors of an organizational field. The actors in Figure 3 are presented, for simplicity's sake, in single units, in reality it would be necessary to have plural amounts of producers, competitors and other key actors. This model of an institutional field will be used later in this study, when analyzing the RMI.

Also, the influence of one actor on another actor in the field can vary. Peng, Lee and Wang have created a concept to describe the order of importance between organizations called, institutional relatedness (Peng, Lee and Wang, 2005, 623 – 624). We will use this term later in the study to describe the order of importance between different actors of the organizational field of RMI.

In organizational fields collective beliefs are seen as emerging from the processes of repeated interactions between organizations (see Berger and Luckmann, 1991). Organizations develop categorizations or typifications of their exchanges, which achieve the status of objectification and thus constitute social reality. Organizations comply with this reality to avoid ambiguity and

uncertainty. Reciprocally shared understandings of appropriate practice permits ordered exchanges. Over time these shared understandings, or collective beliefs, become reinforced by regulatory processes involving state agencies and professional bodies, which normatively or coercively press conformity upon constituent communities.

Thus, the “central tenet of the institutional perspective is that organizations sharing the same environment will employ similar practices and [...] become “isomorphic” with each other” (Kostova and Roth, 2002, 215). Organizational field is then an “intermediate level between organizations and society and it is instrumental to processes by which socially constructed expectations and practices become disseminated and reproduced” (Greenwood et al., 2002, 58).

Zucker (1977), the founder of *microinstitutionalism*, changes the focus from environment as the source for institutions to organization as a source for institution. She uses the ethno-methodological approach to explain how institutionalized social knowledge exists as fact and as part of social reality, and it can be transmitted directly on that basis. “It is sufficient for one person simply to tell another that this is how things are done” (ibid, 83). She states that three aspects of cultural persistence are directly affected by institutionalization: transmission, maintenance and resistance to change. “Institutionalization is thought to increase all three” (ibid, 87).

Scott and Meyer (1983) have brought into the discussion a similar definition to that of DiMaggio and Powell (1983). They introduce “societal sector”, which would include all organizations within a society supplying a given type of product or service together with their associated organizational sets: suppliers, financiers, regulators, and so forth (ibid, 108). Since the societal sector is regarded by definition to be close to an organizational field’s definition, this study will treat these two terms as synonyms. The article by Scott and Meyer (1983) can be regarded as the fourth initial formulation of New Institutionalism (see Powell and DiMaggio, 1991).

In a nutshell, new institutional theory states that organizations tend to become homogenous over time because their exogenous institutional pressures, and their formal structure, which resembles the myths and legends of their institutional settings and is different from their operational structure. By doing that they legitimate themselves and at the same time increase their possibilities for survival (DiMaggio and Powell, 1991).

3.5 Institutional change

Institutionalization is thought to increase resistance to change (Zucker, 1983, 87). The same applies to institutions (Berger and Luckmann, 1991, 99). It

seems possible that institutional processes may, for a time, give an organizational field the appearance of stability (Greenwood et al., 2002, 59). “Differences of interpretation and emphasis may be temporarily resolved by socially negotiated consensus” (ibid, 59).

However, the notion of change is embedded into institutional theory (Jepperson, 1983, 152, Greenwood et al., 2002, 59). “Institutions change over time, are not uniformly taken-for-granted, have effects that are particularistic, and are challenged as well as hotly contested” (Dacin, Goodstein and Scott, 2002, 45). Change is viewed as a “relatively continuous, converging process in which the drivers of change are strong extraorganisational norms about what constitutes appropriate organizational goals, structures and processes” (Newman, 2000, 605).

Isomorphic convergence implies change, e.g. movement from one position to another. Thus, change in contemporary new institutional organizational theory can be of two origins: isomorphic or non-isomorphic (Greenwood et al., 2002, 59). While isomorphic change is always exogenous in its character, non-isomorphic change can be both exogenous and endogenous (ibid, 60).

3.5.1 Isomorphic institutional change

Exogenous isomorphic change is embedded into the basic assumptions of institutional theory (DiMaggio and Powell, 1983), where isomorphism as a reaction to powerful actors’ actions is essential and their institutions or organizational practices are copied into other organizations.¹⁷ Isomorphic change can be mimetic, coercive or normative.

The role of mimetic isomorphism is explained as a response to an innovation in an industry. The innovation, which has institutional roots, and is not based on rational analysis is diffused to an organizational field by the example of opinion leaders, the example of which is consciously or unconsciously copied by other members in that organizational field (see Abrahamson 1991, Haveman 1991, Greve 1995). When an increasing number of companies adapt the opinion leaders’ initiative, it becomes institutionalized (Burt, 1987) and more and more firms feel the pressure to adapt to the initiative.

Haunschild and Miner have further divided mimetic isomorphism into three distinct modes: frequency imitation, trait imitation and outcome imitation.

¹⁷ Olivier proposes an alternative model of strategic responses of organizations to institutional processes: they can acquiesce, compromise, avoid, defy or manipulate them (Oliver, 1991). She clearly sees that organizations have the possibility for their own agenda with regard to actions and that they do not blindly have to comply with exogenous sources for change in their own practices.

Frequency imitation means the inter-organizational copying of very common organizational practices. Trait imitation is the copying of practices of other organizations with certain features, and outcome imitation is imitation based on a practice's apparent impact on others (Haunschild and Miner, 1997, 472).

The state is seen to be of the source of coercive isomorphism. The laws, rules and other normative orders given by the state bring both stability, but also enforce change (see Fligstein, 1983, 314). If the state decides to sell its government owned industries, the outcome is not controlled by the managers of the governmentally owned businesses. Sometimes the actions of the state provide shocks to the system that bring about unexpected consequences (ibid, 314).

Professional associations are the source for normative isomorphism. Their role has been seen as a conservative one in reinforcing existing prescriptions for appropriate conduct (Greenwood et al., 2002, 59). They can also be seen as regulatory agents (ibid, 58).

3.5.2 Non-isomorphic institutional change

Non-isomorphic change, which can be both endogenous¹⁸ and/or exogenous, is conceptualized by Greenwood et al., (2002, 60), and they also present a model for non-isomorphic change (ibid, 60), which is presented in Figure 4: A model of institutional change (source: Greenwood et al. 2002).

Their model presents the view that non-isomorphic change is possible through events or jolts, which destabilize established practices. The drivers of change can be of different sources. Olivier (1992) proposes the following three sources: functional, political and social. Functional pressures are those that arise from perceived problems in the performance levels of institutionalized practices. Political pressures result from shifts in the interests and underlying power distributions that have supported and legitimated existing institutional arrangements. Social pressures present themselves for instance in changes regarding social expectations that then go on to hinder the continuation of a practice (Dacin et al., 2002, 46-47).

The jolts, or drivers of change, may take the form of social upheaval, technological disruptions, competitive discontinuities, or regulatory change (Greenwood et al., 2002, 59-60).

¹⁸ The endogenous change aspect has been neglected in institutional research (Schneiberg, 2005, 94)

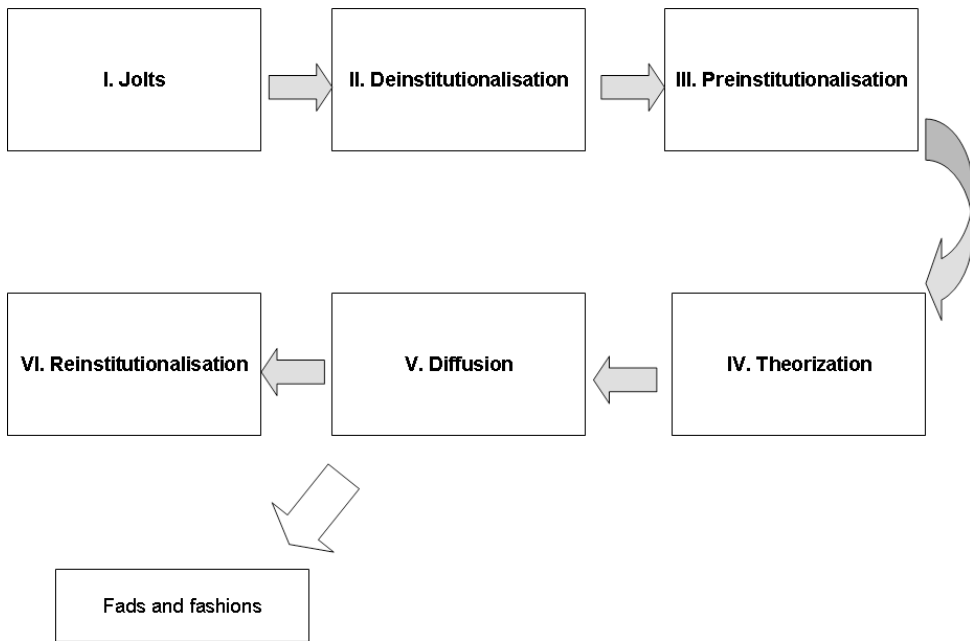


Figure 4: A model of institutional change

The jolts prescribed in Phase I of the institutional change process precipitate the entry of new players, the ascendance of existing players or local entrepreneurship. Thus, in the next phase (phase II) of the change model or in the deinstitutionalization phase, their effect is to disturb the socially constructed field-level consensus by introducing new ideas, and consequently the possibility for change.

Pre-institutionalization, or Phase III in the change model, denotes the innovation stage, where organizations independently look for technically viable solutions to their local problems. Pre-institutionalization becomes a theorization phase or phase IV when organizations develop and specify abstract categories and elaborate chains of cause and effect. The purpose is to simplify and distil the properties of new practices and explain the outcomes they produce.

Thus, when new ideas are compellingly presented as more appropriate than existing practices then diffusion, or Phase V of the change model occurs. A prerequisite for diffusion is a successful theorization phase. One of the main carriers of diffusion is mimicry. The final result of Diffusion is legitimacy.

Re-institutionalization occurs in Phase VI. The new ideas have been accepted by the organizational field, and they achieve cognitive legitimacy, the ultimate form of legitimacy. If, however, cognitive legitimacy is not achieved, the new practices fail and disappear and are regarded as if they were

only the temporary fads or fashions of organizations (Greenwood et al., 2002, 59-61). However, new institutional theory does not include any explanation and neither do Greenwood et al., although they do state how some institutions become fads and fashions and how re-institutionalization takes place.

3.5.3 The complementary approach to institutional change

In addition to the stage model as presented in the previous chapter institutional change can also be studied through different aspects of institutions. Such a research approach is new to institutional theory and it would focus on the change and consistency of aspects of institutions such as cognition, norms and actions (Jonnegård et al. 2005, 119). This approach includes the long-term study of institutions, and the identification of the institution in question as well as the cognition, norms and actions connected to it (ibid, 119).

The basic assumption of this complementary approach is that these different aspects of institutions are either loosely coupled or disconnected. Consequently, they can change at a different pace. Contemporary research in institutions has produced some studies, which have given evidence of such processes (see Townley, 2002 and Zilber, 2002).

3.5.4 The theoretical model of institutional change

The following Figure 5: A model for institutional formation and development shows the theoretical framework of the institutional change process which is used in this thesis. This new stage model is a combination of the Greenwood et al. and Jepperson models presented earlier in this thesis. The new model consists of both endogenous and exogenous sources of both isomorphic and non-isomorphic change.

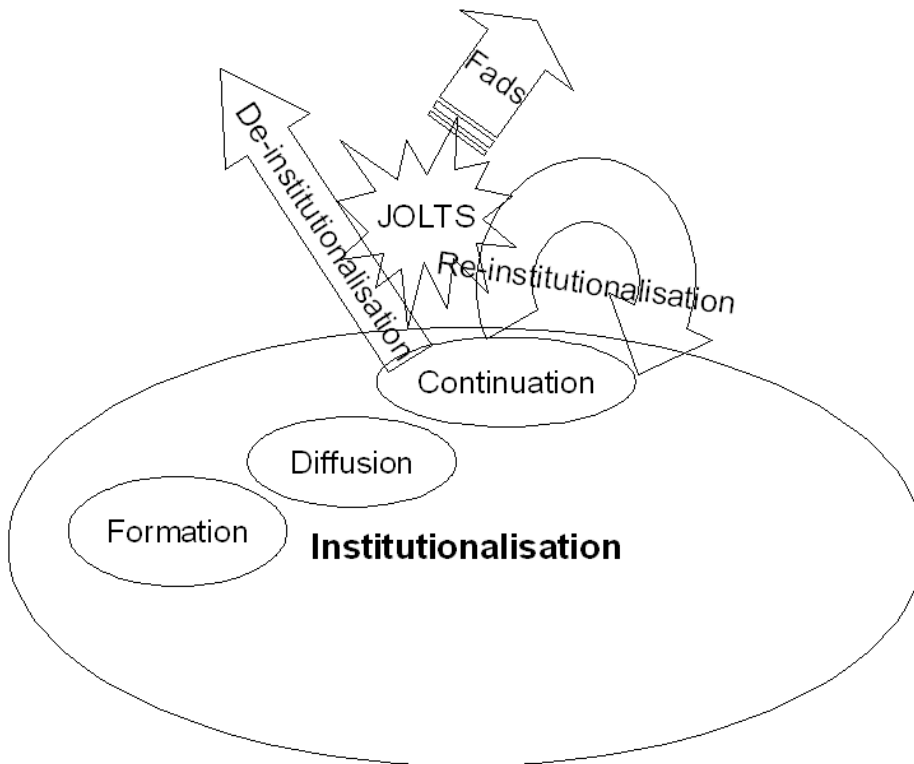


Figure 5: A model for institutional formation and development

Compared to Figure 2: The development phases of institutionalization, where the general outline of the institutional development was presented, Figure 5: A model for institutional formation and development also includes exogenous shocks or jolts, which can cause change processes within organizations, and also fads, which represent organizational practices, which are temporary, and do not achieve the status of an institution in the cognitive minds of the actors. These fashions fade away after a short-lived use.

This new model will be used to explain the changes that took place in Russia during the transitional period. The jolts are obviously the societal changes, which originated in the process of changing the political and economic system of the country; among them liberalization, stabilization, privatization, and other political processes.

The change model, formed as an outcome of this thesis, consists of six stages. At first institutions are born, they are formulated. This stage is called the Formation stage, or stage I of the change model. Institutions formed during this stage can have either endogenous or exogenous roots, e.g. organizations can either initiate them themselves, or get an idea from other actors in the organizational field. Basically, there must be a reason for a new institution;

one of them can be the unsuccessful operations of the enterprise. Secondly, the institutions are diffused through the organizational field (mainly with mimetic exogenous isomorphism). This stage is called Diffusion or stage II. Thirdly, institutions can continue their appearance as taken-for-granted methods continue to behave in legitimated and cognitively accepted forms. In this study this stage is called the Continuation stage (as per Jepperson Development or Elaboration, or as per Berger and Luckmann the legitimation) forming stage III of our change model. Together stages I to III can also be called institutionalization.

If an institution, once diffused and accepted as continued in a taken-for-granted practice, fails to correspond to its original meaning, it can be terminated. Thus, stage IV is called the Termination stage (or de-institutionalization). Alternatively, such an institution can be re-institutionalized. This stage is called Re-institutionalization or stage V. Once an institution has been re-institutionalized, it means that it has also been diffused through the organizational field, and it will continue its existence. Thus, an arrow connects the Re-institutionalization to Continuation stage in the change model. Institutionalization is part of the re-institutionalization process including the institution's formation, diffusion and legitimation.

This proposed change model shows a process of change. New institutions are formed through the institutionalization and re-institutionalization processes. If an institution is no longer needed by an organizational field it is terminated. The process will continue over time, and evolving change is present all the time in every organizational field.

The main mechanisms for Termination or Re-institutionalization are jolts. These jolts can either be endogenous or exogenous to the organizational field. One form of exogenous jolt would be a regulatory change. Theoretically, such a regulatory change would be of a coercive origin. On the other hand, if there would at the same time exist a normative and cognitively accepted institution, with which such a regulatory and coercive change would be in dispute, the actors must decide how to react. In theory organizations could in such a situation choose from several reactions. Olivier proposes the following alternatives: acquiesce, compromise, avoid, defy or manipulate them (Oliver, 1991, 152). According to the founders of New Institutionalism, Meyer, Rowan, DiMaggio and Powell organizations would choose the first alternative to improve their chances for survival. They would formally acquiesce to this new rule.

If later such a regulatory change is reversed, and what was banned by the regulatory rule is once again possible, the organizations must once again choose what to do; to comply with the rule or to return to the old institution, which once was cognitively accepted and shared by the organizational field.

It is also possible that an old institution, for instance an organizational form, after having become de-institutionalized, enters the organizational field once more and becomes popular. This is one form of re-institutionalization (Rövik, 1998, 19).

If the organizations would return to the old, but temporarily (by the state) banned, cognitive institution, it would mean the re-birth or re-appearance of a “taken-for-granted” practice. Conceptually, and more precisely, since “taken-for-granted” modes of conduct are cognitive models, they stay in the minds of the actors, although normative or coercive processes might repress these methods of action in practical life. When such coercive restrictions no longer prevail, the minds of the powerful elite actors may bring back a repressed cognitive model and infuse reality with that model. This possibility will be called in this thesis the reincarnation of an institution. It would theoretically be one form of re-institutionalization, too.

The example we are going to show in this thesis is the organizational mesostructure of the RMI, which resembles in great detail the old Soviet structure, the so called vertical integration model. The process that led to this “new but old” structure will show us that the formal structure of the old institutional field of the RMI had been completely broken up by Russian President Boris Yeltsin’s government in the beginning of the 1990’s and when after privatization the consolidation process started, it resulted in almost exactly the same organizational mesostructure, i.e. an organizational field from the Soviet era. The point here is that the Western mining industry, of which the Russian oligarchs had a lot of knowledge did not become the model for the RMI, instead the oligarchs chose the old way, the taken for granted approach, and organized their mining companies as before. This re-birth as conceptualized in this study is regarded as one form of re-institutionalization as defined by Jepperson (Jepperson, 1991, 152).

Greenwood et al. (2002) also present the possibility for fads and fashions, which are organizational practices that do not get their organizational field’s legitimation, and thus, are not continued as cognitively accepted templates or models of behaviour. These short-lived practices disappear after their innovation. They are shown on the change model as stage VI, the Fads and fashions stage. In other words they are novel organizational practices, which are abandoned after short-term usage, because they do not achieve the cognitive acceptance of the actors within the organizational field.

3.6 The transitional development of Russia and institutional change

The theoretical concepts of new institutionalism as described in this thesis are used with reference to the RMI's transition in the following context as shown in Table 3: The concepts of New Institutionalism.

Table 3: The concepts of New Institutionalism

| | |
|--------------------------|---|
| Institutions: | Archetypes (organizational practices like bookkeeping). Templates (organizational structures like vertical integration). |
| Institutional formation: | External jolts or the internal problems of an organization boost the formation of new institutions |
| Institutional diffusion: | Isomorphism (coercive, normative, mimetic) distributes the new institutions to the organizational field Organizations tend to become homogenous. Organizations try to please the environment. |
| Legitimization: | Legitimate formal structures contribute to the survival of an organization |
| Institutional inertia: | Old institutions resisting change. |
| Organizational field: | RMI (consisting of Ferrous, Non-Ferrous, Coal, Uranium, Fertilizers and Other Minerals' production enterprises like mines, processing plants and other actors in the organizational field). |
| Institutional change: | De-institutionalization, re-institutionalization or the reincarnation of an organizational form/structure e.g. vertical integration. |
| Jolts: | Political, economic and social upheaval like liberalization, privatization, state default, Yeltsin re-election, and Putin election to President |
| Fads & fashions: | Organizational practices e.g. the use of Western management consultants ¹⁹ . |

¹⁹ Gilbert reports on the growing consultancy fatigue of East Europeans concerning the use of Western management knowledge in solving problems (Gilbert, 1998, 1).

4 THE TRANSITION OF THE RUSSIAN MINING INDUSTRY

This Chapter reviews the path of the Russian Mining Industry as it adapted to becoming part of a market economy. The historical path of the industry is conceptualized by forming a framework to illustrate the development. Also, the development of the hierarchical mesostructure of the RMI is studied together with the development of the mining industry's organizational field, a concept from new institutional theory, which was presented in Chapter 3 of this study. The present trends of the RMI, as well as its international cooperation are discussed, too.

4.1 Russia's general transition to the market economy

Gorbachev's perestroika policy, which was begun by the Communist Party in 1985 and was the last attempt to save the hard core Soviet ideology by adjusting the centralized economy (Zweynert, 2006, 169). It was the final attempt in a series of bids to save the communist construction of a new society drafted by Lenin, and continued by Stalin (see Gregory, 2004). President Yeltsin started the transition with his shock therapy reform in early 1990's.

The purpose of the Russian transition process in the early 1990's was to liberalize, stabilize and privatize the whole industry (World Bank, 1996). In other words the aim was to dismantle this heavy organizational structure, free its trade from the state control, annul export and import regulations and privatize the companies, e.g. change the corporate governance of the enterprises.

The original aim of the transition was the exit of the state from the economy. Sutela states: "Socialism was supposed to remedy [the faults of capitalism] by bringing the economy and politics together. In practice this meant that all the major economic decisions were made by politicians, on political grounds. The transition from central management to a market economy can thus be seen as a re-separation of state from the economy. In this sense, the transition must mean a (even if only partial) withdrawal of the state from the economy" (Sutela, 2004, s. 28).

Putin's policy in the 2000's has been to continue the so called reform policy, but there have been signs of a return to state control (Aris, 2004, 130).

This has been evident especially in conjunction with the Yukos case, and some reports point out a deliberate policy change with regard to, for instance, the mining industry (Interfax, 15.12.2005). The Putin government seems to be building state owned oil, gas and metal conglomerates (Niinivaara, 2006).

At enterprise level the reform policy of the early 1990's entailed two major policy initiatives: the creation of a private sector via privatization and the entry of new enterprises, and the establishment of markets as the main mechanism for resource allocation (see f.ex. World Bank, 2002). Before the transition period the production and transportation costs, and the sales price of final products f.ex. iron ore was not an issue. The only thing that the production entities had to worry about was keeping up with the production quota demanded of them by the central authorities. A mine was rewarded if it exceeded the "plan" and punished if it did not fulfil it. The iron ore was shipped, often without charge to the producer, to the often-predetermined customer, and money was rarely exchanged (Hellmer and Nilsson, 2000, 145).

All of the phases of transition in Russia can be seen as sources, jolts or drivers of institutional change. They can be seen as jolts or upheavals that could start a process of exogenous change process. Researchers have especially studied privatization as a "shift from one institutional template to another" (Johnson, Smith and Codling, 2000, 572). In this thesis we will define the main jolts of change as presented in Table 4: The main jolts of change.

Table 4: The main jolts of change

| | |
|--|---|
| <u>Liberalization</u> (in conjunction with stabilization) in 1992 – 1993 | Central governmental authorities were abolished, and the enterprises started to cope with a changing environment independently i.e. without any help from the state. On the contrary, the old Soviet demands for social security were left on the shoulders of the enterprises (Economist, 1998). |
| <u>Privatization</u> in 1992 – 1995: | New owners appeared. The new corporate governance model started to change the organizational practices of the enterprises. |
| <u>Consolidation</u> of enterprises into industrial groups from 1995 to 2005 | Enterprises were grouped into holding companies. |

Minor jolts that also had their impact on the operations of the enterprises are presented in following Table 5: The minor jolts of change.

Table 5: The minor jolts of change

| | |
|-----------------------------------|--|
| Yeltsin re-election in 1995: | In order not to reverse the reform policy, Yeltsin started a major privatization policy just before his first term as president ended. |
| Russian state default in 1998: | The subsequent drastic devaluation of the Russian rouble drove away foreign companies from the domestic market and enabled Russian companies to become profitable. |
| Putin election to President 1999: | Putin brought stability to Russia. High oil prices positively influenced the government's ability to finance reforms, although the course of the reforms was partly reversed |

It is worth noticing that this is not the first time that the Russian economy is experiencing groundbreaking turbulence. Already during the Tsarist era the Russian economy went through drastic economic policy changes. For instance, Peter the Great first privatized and then nationalized the mining industry at the beginning of 18th century (Malyhin, 2000, 35). The same happened with the Communist Party at the beginning of 20th century, when Stalin nationalized the whole economy including the mining industry.

Spubler has demonstrated that there have actually been three major economic transformations in Russia from the 1860' up to the year 2000 (Spubler, 2003). The first transition, under Tsarism, involved the partial breakup of the feudal framework of land ownership, and the move towards capitalist relations. The second followed the Communist revolution of 1917, which brought to power a system of state ownership and a command administrative system. The third transition, which is a main point of focus of this thesis, started in the early 1990s with its aim to change the Russian socialist centralized economy into a market economy. The three transitions originated within different settings, but with a similar primary goal, namely to change the economy's ownership pattern in the hope of providing a better basis for subsequent development.

4.2 The Development of the Soviet Mining industry

The mining industry was an important part of the Russian economy long before the communist revolution in October (November) 1917 (see Malyhin, 2000 and Bakka and Inchenko, 1995). Imperial Russia was one of the world's biggest producers and exporters of iron, and other metals. It is interesting to note that the mining industry had been both a government and private owned industry during the Tsarist era. By Tsar Peter the Great's imperial decree from 1739 state owned mines were banned, and all state owned mines were transferred to private ownership. Later on, this decree was cancelled, and the state once again started to exploit new mines (Malyhin, 2000, 10 – 72). Thus, the RMI had been both privatized and nationalized before the 20th century.

What the Communist Party did under the leadership of Yosif Stalin, was, however, different to Peter the Great as they nationalized the whole economy, including the mining industry. After the NEP period, starting in 1928, no private mines existed in Russia.

In implementing Stalin's administrative-command system the Soviet state got involved in running the different industrial branches of the country. The administrative-command economy can be organized, as historical experience has shown, either by industrial branch or by region (Gregory, 2003, 177). Throughout most of Soviet history, the industrial-branch principle prevailed. Orders for production and delivery of output originated in industrial ministries and in their branches' main administrations. The 1930s began with one industrial ministry, the Supreme Council of the National Economy, and ended with twenty-two industrial ministries in 1941 (ibid, 177-178). The Supreme Council of the National Economy was split up into three industrial ministries in 1932; those were: the Ministry of Heavy Industry, the Ministry of Light Industry and the Ministry of Forestry Products. The Ministry of Heavy Industry (NKTP) was also responsible for metal production, and the main Administration of Metals Industry (Gump) was formed already in 1931 "for the strengthening of the economic and technical management of the metallurgical industry". Gump's formal report of June 1933 simply declared it was responsible for plan fulfilment and technical management ("extracting optimal indicators") of enterprises producing ferrous metals, iron ore, coke-chemical and fired bricks (ibid, 159).

Once appointed as head of a ministry, glavk, or enterprise, one became personally responsible for its results according to the Soviet principle of one-man management, called *yedinonachalie*. The founding document of NKLP (The Ministry of Light Industry) cotton procurement and processing glavk (the main administration department) of February 2, 1935 reads: "The glavk director, acting on the basis of yedinonachalie, bears full responsibility to the

minister for the technical and economic condition of trusts, enterprises, and organizations subordinated to the glavk for the fulfillment of their plans, the directives of the government and those of the minister (Gregory, 2003, 162).

Gump, which was initially the sole producer of metallurgical products, was further developed by spinning off new glavks from it. It seems that metals that employed different production methods were spun off like the Non-ferrous Metal, Gold, Platinum and Rare Elements Glavk in 1932 and the Special Steels and Ferrous Alloys Glavk in 1937 (Gregory, 2003, 181).

Karnouhov divides the developments of the RMI during the Communist Party rule into seven different phases. These phases are presented in Table 6: The phases of the development of the Soviet & Russian Mining Industry in the 20th Century (Source: Karnouhov, 2004. 2 -3) as follows:

Table 6: The phases of the development of the Soviet & Russian Mining Industry in the 20th Century

| | |
|-------------|--------------------------------|
| 1917 – 1920 | War and early Communist period |
| 1920 – 1928 | New Economy Policy period |
| 1928 -1940 | Collectivization period |
| 1940 – 1945 | World War II period |
| 1945 – 1985 | Re-construction period |
| 1985 – 1990 | Perestroika period |
| 1990 → | Transition period |

In this study the focus is on the transition period, during which, according to Karnouhov, a new way of taking care of industry began. Unfortunately, and especially during the first half of this phase, a lot of destruction took place in the RMI (Karnouhov, 2004, 3).

However, for the purposes of research into this transition phase the Gorbachev perestroika policy from 1985 till 1990 is also important. Especially the two three first years of this phase, which were characterized by attempts to find new ways to solve economic and social problems in the Soviet economy, including the mining industry. By the end of this phase (1990), when the Soviet Union was broken up, it became clear that new ways to take care of the mining industry must be found (Karnouhov, 2004, 3).

Before Gorbachev's Perestroika policy the Soviet Mining Industry was managed by several industrial branch ministries. The main Mining ministries were: the Ministry of Ferrous Metallurgy for the Production of Ferrous Metals, the Ministry of Non-Ferrous Metallurgy for non-ferrous metals, the Ministry

of Medium-Heavy Machine Building for Uranium Production, the Ministry for Fertilizers, which oversaw the excavation of phosphates and other minerals to be used in soil fertilization, the Ministry of Construction Materials, which took care of the production of aggregates, stone blocks and other construction materials, and the Ministry of Coal Production (Gondusov, 1999). In accordance with Figure 6: The mesostructure of the Soviet mining industry at the end of the 1980s (Source: Gondusov, 1999) the structure of the mining industry at the beginning of Gorbachev transition policy is presented. Note that all six ministries had similar internal structures.

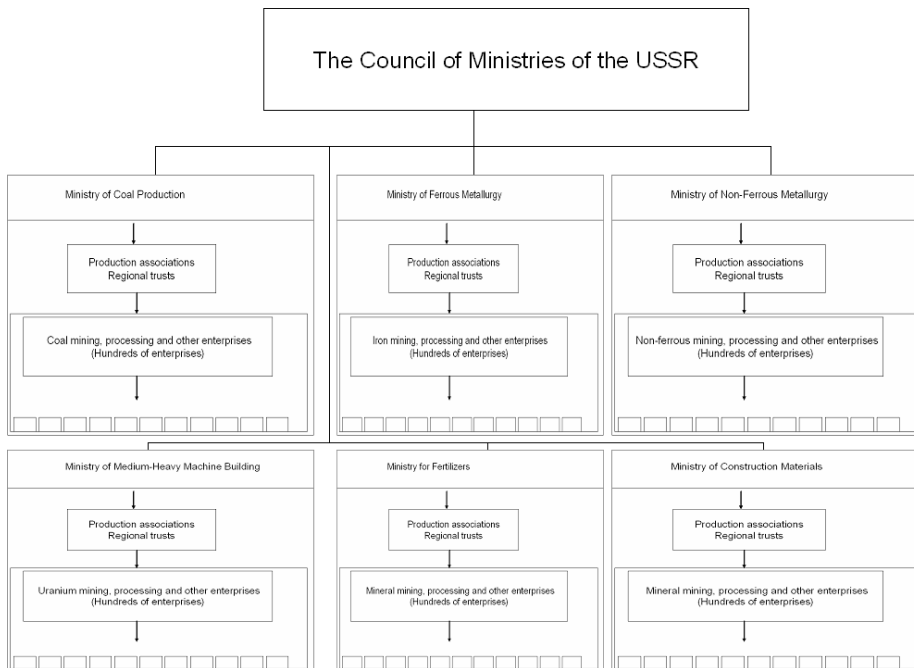


Figure 6: The mesostructure of the Soviet mining industry at the end of the 1980s

All the ministries of the Soviet Union were subordinate to the Council of Ministries, and Gosplan, the country's planning organization, coordinated their production. All the different ministries of mining were organized according to the principle of vertical and horizontal integration (Gondusov, 1999).

Vertical integration meant that all of the minerals and metal ores of the whole country were produced so that one ministry was in control of one metal's production. Thus, The Ministry of Non-Ferrous Metallurgy was in charge of excavating all copper ore in the Soviet Union, as well as its subsequent processing into final products like slabs, tubes, strips etc. The production system was monopolistic (Galchenko, 1999).

The Soviet Mining Industry was also arranged according to the principle of horizontal integration, meaning that all enterprises on the same level of the value chain were owned by the state, and that there was no competition between the different producers of metals or minerals. Thus, there were no secrets between the enterprises, and all production methods and practices in-between the enterprises were similar (Gondusov, 1999).

The Communist Party planners of Soviet society had contradictory ideas about vertical integration during the decades of communist rule in Russia. In the 1930's vertical integration, which during that time was very typical in Western societies was seen by Russian planners as a source of technological backwardness (Silver, 1984, 62). However, this approach was changed later on, and the Soviet firms came more and more to adopt an extreme degree of vertical integration that came to be called "universalism" (ibid, 62). Universalism in practice meant that all the parts and components of the end-product of a firm were produced in-house. No sub-contracting plants existed (ibid, 118).

Vertical integration can be seen as static or dynamic according to its nature (Punkka-Sihvonen, 2000, 12). Static integration means the extent to which the enterprise engaged in in-house production. Dynamic vertical integration can be divided into two directions: backward integration moves toward the production supplies, and forward integration towards distribution (Wu, 1992, 5).

A reason for vertical integration can be uncertainty (Suominen, 1991, 155). In Soviet Russia cooperation between different ministries and Glavks proved to be so difficult that the different ministries started to become self-sufficient by means of vertical integration (Silver, 1984, 119). Thus, they were avoiding the uncertainty that came with the malfunctioning of the planned economy. In a market economy vertical integration has been linked to oligopoly in the mesostructure of an industry.

Looking at the Soviet Mining Industry through the glasses of New Institutionalism one can say that until 1990 the Mining Industry's organizational field was extremely institutionalized, and there was strict isomorphism between the different enterprises due to the Soviet State monopoly, and vertical and horizontal integration. Furthermore, as Fortescue states, the branch ministries closely controlled every detail of the activities of their subordinate enterprises (Fortescue, 1992, 121).

The policy of Perestroika from 1985 gave more authority to enterprises, and reduced the power of bureaucracy (Gregory, 2003, 245). Gorbachev's government undertook two changes that, in effect, destroyed the planned economy system. The landmark enterprise law of July 1987 freed enterprises from ministry tutelage, although some administrative controls remained. With

the passage of enterprise law, the industrial ministries and regional authorities no longer controlled enterprises. The end of the leading role of the Communist Party dates to the Politburo's September 1988 resolution eliminating the sectoral departments of the Central Committee and the "divorcing of the party from the economy" (ibid, 245).

The two pillars of administrative allocation, the tutelage of enterprises by ministries and interventions by party officials, were liquidated without creating an alternative allocation mechanism. Prices were set by state agencies; property was still owned by the state. Gorbachev created the worst of all worlds – a headless monster without direction left to stumble around on its own – without the ministry or the market. The economy went into free fall (Gregory, 2003, 246). This, on the other hand, could be seen as the jolt which started the de-institutionalization of the old structure of society.

In consequence, the earlier highly institutionalized Soviet society became less normatively institutionalized due to absence of governmental guidance.

4.3 The development of the Russian Mining Industry

4.3.1 Phases of transition

The phases of the transitional development of the RMI from 1990 onwards used in this thesis are: autonomy, privatization and consolidation. Out of these terms the privatization period is self-explanatory; it is the phase in the early 1990's when Russian enterprises were privatized. Autonomy, on the other hand is a new term; it is regarded as comprising the Russian liberalization and stabilization phases of transition together with the preceding privatization. Finally, consolidation is regarded as the post-privatization phase of transition, when Russian industry was grouped into bigger entities (Galchenko, 1999).

The initial situation in the RMI right after the collapse of Soviet Union was similar to other industries; the whole industry was centrally led, as were all other Soviet industry branches. All of the mines and metallurgical factories in the Soviet Union were owned by the state. The production ministries were at the same time the central management and acted as the owners of the mines (cf Fortescue, 1992, 122). Iron ore mines were owned by the Ministry of Ferrous Metallurgy, the non-ferrous mines by the Ministry of Non-Ferrous Metallurgy, the coal mines by the Coal Ministry, phosphate mines by the Ministry of Fertilizers, stone block and aggregate mines by the Ministry of

Construction Materials and uranium mines by the Ministry of Medium Heavy Machine Building²⁰ (Gondusov, 1999).

In the internal structure of a production ministry production was arranged either according to the mineral excavated or the region where the excavation took place. For instance, the Ural iron ore production was arranged at a regional base; the “Uralruda” regional production trust ran iron ore production in the Ural region. The management of “Uralruda” reported to a Moscow based all-union production entity for the whole country’s iron ore production. In the non-ferrous ministry the “Sojuznikel” all-union production entity was responsible for the whole nickel production of the country. Thus, the management of Norilsk Nickel reported to the head of “Sojuznikel” (Galchenko, 1999). The same applied for all other producers of nickel in the Soviet Union. Furthermore, the nickel smelters and other factories producing feinstein, nickel slabs and other products were in the same “Sojuznikel” organization meaning that production was arranged according to the vertical integration principle (ibid). The same method was used by Finland’s “Outokumpu” in the 1980’s, when they wanted to explain how they were producing both raw material and end products (see Kuisma, 1985)²¹.

The Soviet era meso-organizational structure of the RMI Ministry is presented in Figure 7: The Mining Ministry’s structure during the Soviet era. The Figure is made only for demonstrative purposes, and several departments are missing. The main idea of the Figure is to show the vertical and horizontal integration of metal (in this case nickel) production in the Soviet Union. By vertical integration it is meant that the mine called Severnyi delivered its ore/concentrate to a Pechenga-nickel complex, which smelted the ore/concentrate and produced the nickel slabs for the use of Soyuznikel. Furthermore, the slabs of Soyuznikel were delivered to different industries within the Soviet Union. With horizontal integration all other nickel mines of the Soviet Union were closely linked to the Severnyi mine. This is because they were all part of the Soyuznikel-department of the Ministry of Mining. There was no competition, because of the central price authority Goskomsen²² (Gondusov, 1999, Galchenko, 1999).

²⁰ Nom de guerre to confuse and hide the real purpose of the Ministry.

²¹ Today, Outokumpu has abandoned the vertical integration strategy, and concentrates only on the smelting and rolling of stainless steel sheets and the developing and marketing of technology (see internet site: www.outokumpu.com).

²² Goskomsen (Государственный комитет по ценам) was the governmental authority for all prices in the Soviet Union (Gondusov, 1999).

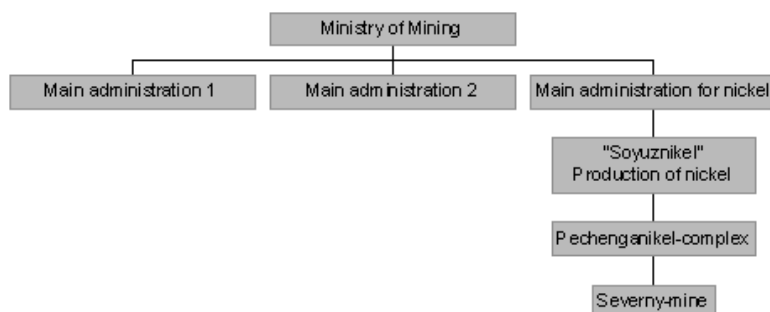


Figure 7: The Mining Ministry's structure during the Soviet era

The whole Soviet Union was at the same time also used horizontal integration. The same Ministry of non-ferrous metallurgy produced all nickel slabs or copper pipes in the country. There was no competition; prices were fixed by the governmental price committee (Gondusov, 1999, Galchenko, 1999). The possibilities for management flexibility were minimal, but existed to some extent (see Liuhto, 1999).

In the production system of the Soviet Union's mining industry the mines were the producers of ore and metal concentrate. They delivered low value raw material to other production facilities of the same ministry, usually to a smelter. The price of the mine output was set by the government. The ore or/and concentrate were further processed into metal slabs, which were sold to a processing plant, for instance the automobile industry or the defence industry (Gondusov, 1999). Furthermore, the end products of a smelter were also export items. When the researcher was working in Moscow in from 1985 to 1988 as chief representative of "Outokumpu", an all-union Soviet foreign trade company called "Raznoimport" sold certain metals to Outokumpu but imported others.

Ore or concentrate was not usually sold to Western countries. Some Soviet concentrate from Kursk Anomaly²³ was exported to other COMECON-countries. Similarly, ore or concentrate was not usually imported to the Soviet Union, with the exception of Mongolia and its Erdenet copper mine, which was set up as a joint venture for the whole COMECON-block. Erdenet concentrate was imported from Russia, because there was no smelter in Mongolia (Rutskoi, 2005).

²³ Kursk area mining region including Lebedinsky GOK, Mihailovski GOK, KMA-ruda and Stoilenski GOK.

One of the first changes in the Soviet Mining Industry happened during Gorbachev's Perestroika policy period from 1985 to 1991. For instance, during that period the Ministry of Non-Ferrous Metallurgy was merged with the Ministry of Ferrous Metallurgy. At the same time as the ministries were merged the so called governmental orders started to diminish, and in some cases disappeared totally. For the mines this was crucial because their final product (ore or concentrate) was suitable only for domestic use. Some Western companies (Glencore, Finenco) started to trade concentrates on barter or swap terms. In some cases the Russian mine sold concentrate to these trading companies, who paid for the concentrate with Western mining equipment (Rutskoi, 2005).

On the whole the adaptation to a new economy was easier for the smelters, because their product was easier to adapt for export. Ore or concentrates were low value materials, and transportation costs were very high. However, metal slabs were easy to transfer, and their quality was closer to Western standards (Galchenko, 1999).

On some occasions the mines and the smelters cooperated in such a way that they shared the money the smelter got from the sales of the metal, or alternatively the mines got the payment of the concentrate directly from the metal traders, who then paid separately to the smelter (Galchenko, 1999).

Until privatization the main trend in the RMI was to follow the traditions of the Soviet Mining Industry. The party organization did not interfere with production as earlier, but the local regional authorities continued to work with the mines as they used to do during Soviet times. In many places today the local mining towns are totally dependant on the infrastructure of the mine. The mine is often the main employer of the people in the town, and at the same time the major donator to the local city budget. During Soviet times the town's power station, electricity plant, hospital and children's home might be run by the mine (Rutskoi, 2005).

The Soviet administrative-command system emphasized rituals, such as May Day parades on Red Square, five-year plans promising a better future, party congresses, and the myth of party omniscience up to its last days. Producers were therefore more likely to obey orders they regarded as legitimate; workers were more likely to sacrifice if they believed the vision of a better future (Gregory, 2003, 271). Maybe this is the reason that many Russians were ready to work without pay in the early days of transition; they just came to their working places day after day, even then when there was no

work to be done. In some cases the workers even took over the working place; they just took control of it into their own hands²⁴.

The path of the RMI and the reconstruction of the industry can be conceptualized as shown in Figure 8: The phases of transitional development. The phases of transition are: autonomy, privatization and consolidation. The lines on the figure show the estimated length of each reconstruction phase. For instance, the privatization period, which started at the beginning of 1990 lasted until 1996, and up to the beginning of 1996 about 125.000 enterprises had been privatized (Klevtsov, 2004, 12). The tempo of privatizing the industry has diminished from the early days of privatization, but even today privatization still occurs. The main bulk of the Russian mining enterprises were already practically privatized before the year 2000 (Gondusov, 1999).

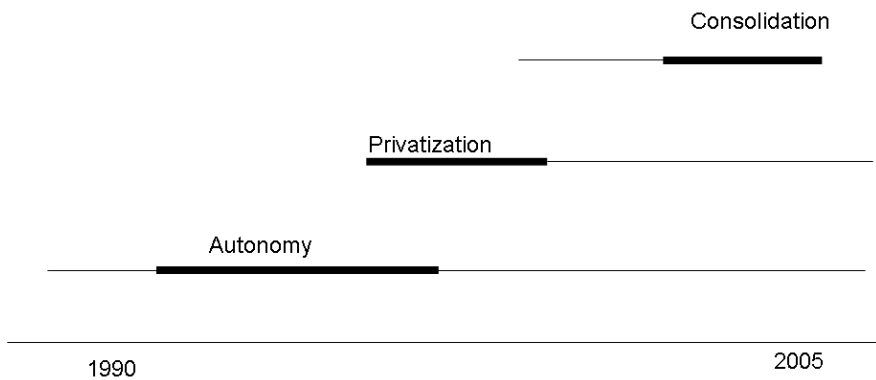


Figure 8: The phases of transitional development

For the whole Russian of industry, as well as for the mining enterprises autonomy was a direct result of Gorbachev's perestroika and Yeltsin's liberalization policies. The autonomy phase took place from 1990 until about 1994. Starting already in Gorbachev's time and continuing during Yeltsin's liberalization period the Soviet ministerial structure was turned around, and all previous mining ministries were abolished. This era is characterized by the weak and passive ownership of the state through Regional property committees (Gondusov, 1999).

²⁴ See Helsingin Sanomat 3.11.1998: *The Johannes, today the former Soviet pulp factory, taken over by workers in the vicinity of Vyborg has stood still over five weeks. This relatively new factory was bankrupt last year, and got a new owner in December. The local strike committee has informed, officials that it will not let the new owner's representatives into the administration building until the wages due have been paid. The workers have elected themselves a new general director, who does not get any pay at all.*"

As an example of the above, the mining companies received during this period the possibility to independently buy materials and equipment abroad. For instance Pechenganikel (now a member of Norilsk nickel group), a nickel mine from the Kola Peninsula signed its first ever direct purchase order No. 0001 dated December 19, 1989 with Tamrock Oy, a Finnish company (on behalf of which the researcher, then a sales executive, signed the contract). Earlier all independent foreign trade activities were prohibited, and they remained under central government authority until 1989 (Gondusov, 1999).

In this study the Privatization phase is the period during which the mining industry's enterprises were sold to its first private owners. These might be the management, the "red managers", sometimes together with the personnel, or it might be private businessmen or privatization funds etc. or other outside owners of the industry (Galchenko, 1999).

The privatization of the RMI will be divided in this study into two phases as follows: First order privatization and second order privatization. First order privatization refers to the sale of the mine from the state to a private owner. Second order privatization is the sale of the mine from the first order private owner to another private owner. The period of first order privatization took place from 1992 to 1995 (especially before Yeltsin's re-election in 1995) and second order privatization from 1995 onwards to today.

The privatization of the RMI happened in several stages and according to different schemes. In many cases the personnel received privatization vouchers or mine shares. The biggest mining company of the country, Norilsk Nickel, was privatized in a scheme of shares matched against a loan. When the Russian government could not pay the loan, The Interros group took this mining giant under its control (Duncan, 2004).

In practice Interros bought the old Soyuznickel department of the Non-Ferrous Metallurgy of Soviet Union along with Norilsk, Pechenganikel, Severonickel and other enterprises. The group that bought it had the old Soviet internal structure, and production was arranged according to the vertical integration model (Rutskoi, 2005, see also Rautio, 2003).

The ownership of the personnel in the mining companies in Russia, which they got through the voucher privatization, can be regarded as a temporary phase of the privatization process (Galchenko, 1999).

As a result of the privatization phase of transition almost all Russian Mining enterprises had new private owners up to the end of the old Millennium. There are still some government owned mines like Alrosa (diamonds) or Tvel (uranium). Some analysts predict that Alrosa is facing nationalization (Helmer, 2004-1) due to the increased buying of Alrosa shares by the Russian government (Prime-TASS, 2005). This increasing interest of

the state in the mining industry can also be seen as an indication of a wish to return to the past Soviet structures.

The third phase of transition, which has been identified in this study has been going on since the end of 1990s, and is the process of consolidation (see Global business Report, 2005). The owners of the industry have started to enlarge their assets by purchasing new mines, and are consolidating them into mining houses. As a result, the once sporadic spread of hundreds of gold, diamond, precious stones, iron ore, and coal mines in the mining sector has been consolidated and is now dominated by dozen giant holdings (Global Business Reports, 2005, 34).

Furthermore, the consolidation can mean two different forms of development: vertical integration or entering the independent raw material business. A vertically integrated mining enterprise is an intracompany raw material producer for the processing plants of the same owner and resembles the Soviet form of organizing an industry. An independent raw material producer is a member of a group of companies, who produce raw material for sale outside of the group's buyers (Butrin, 2004).

It would also seem that, following the consolidation, a new and fourth phase of transition has begun: modernization. Modernization refers to new managers, new production equipment, new bookkeeping etc. Such changes are the result of the new owners' strategic wish that their company would work according to the business standards of the rest of the Western world. Modernization as a consequence of consolidation is occurring and most probably it will significantly change Russian mining companies in the future (see Tredway, 2005).

The processes shown on the figure No. 8 above are overlapping and continuous. Privatization is still occurring in some parts of the mining industry, for instance in the Kuzbass area the local government is actively looking for new owners for old and unprofitable coal mines. The same thing applies to other CIS-countries, for instance Georgia, which announced its mining industry's privatization program in autumn of 2005 (see Boldnisi, 2005). Furthermore, the privatization process in Russia is not over. Russian Regional Property Funds are offering their assets for buyers in auctions (see Interfax, 2005-01-28).

On the other hand there is some evidence that de-privatization, or nationalization as described above, has begun with the Yukos/Chodorkovski case. De facto, Yukos, a privately owned enterprise ended up in the hands of the government, and a fight for Alrosa's shares is going on between the Federal authorities and local Sakha republic's government (see Interfax 9 September 2005). The Russian government seems to have plans to increase its shares in Alrosa, and possibly even make it the beginning of government

mining dynasty. This dynasty could be enlarged by purchasing Norilsk Nickel (WPS: What the Papers Say 17 January 2006).

The remaining private owners of RMI are proceeding with the consolidation process (Gorelov, 2001). What is happening is that the first private owners of the mines are selling their property to large groups, concerns and holding companies, who are grouping their assets in mining companies within their current structures. Most probably the consolidation will continue, for instance, more than 550 companies in Russia are involved in gold mining but only around 30 of them have today the capacity to produce more than one ton a year of the precious metal (MosNews, 2005). In effect consolidation means the loss of autonomy for many Russian mines, which could run their businesses independently at the beginning of 1990's.

According to Boiko (Boiko et al. 1999) the amount of private companies in the mining sector (coal, ferrous and non-ferrous metals) rose from 1028 in 1992 to 3337 in 1996. Privatization increased the number of enterprises in Russia. When consolidation started that development moved in the opposite direction: For instance, SUEK, a major Russian holding company in mining business, is a creation of the acquisitions of more than 160 assets (Global Business Reports, 2005, 36). Thus, 160 private mines or mining enterprises have disappeared since the SUEK consolidations.

Similar development can be found in other branches of the industry. Both Gondusov and Makarov report on the increasing amount of both coal (Gondusov, 1999) and gold (Makarov, 2002) producing enterprises at the beginning of the transition and their diminishing trend as a consequence of consolidation during the second half of 1990's.

The Russian corporations formed as described above own several unrelated business areas. The corporations are not only vertically integrated; they consist of mining, machine building, agriculture and other sectors, which do not have any common features. Such an organizational form was typical in the USA in the 1980's, but since the 1990's this form has been deinstitutionalized (Davis, Diekman and Tinsley, 1994, 547).

4.3.2 The development of the hierarchical mesostructure and the institutional field

In this chapter we will look at how the mesostructure and the organizational field of the RMI have developed during the transition period. The organizational field is defined here to be as originally defined in New Institutionalism by Powell and DiMaggio, and presented in Chapter 3 of this study. The organizational mesostructure is here defined according to Boiko et

al. as being the hierarchical structure, which controls an industry in a country (Boiko et al. 1999).

The following series of figures will show how the mining industry's mesostructure and the organizational field have developed. In this case the Coal Mining Ministry is focused on. Other mining ministries of the Soviet Union went through similar process. The analysis is two directional: on one hand the focus of the analysis is the hierarchical mesostructure of the mining industry (left side of the Figure), on another hand the focus is the organizational field of the mining industry (right side of the Figure).

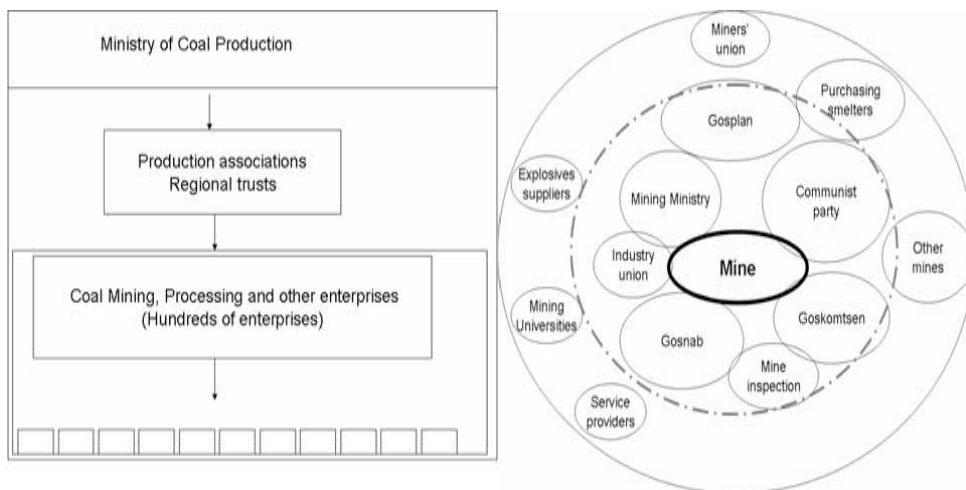


Figure 9: The mesostructure and institutional field of the Soviet/RMI at the beginning of the transition process in the early 1990s

Figure 9: The mesostructure and institutional field of the Soviet/RMI at the beginning of the transition process in the early 1990s shows the initial situation of the Russian Coal Ministry's transitional development (Gondusov, 1999, 6).

The hierarchical Soviet mesostructure is presented on the left side of Figure 9. The same structure in the form of an organizational field is presented on the right hand side of the Figure. The dashed circle on the right side of the organizational field part of the Figure shows the dominant organizations, which were regulative in connection with the mine. One can theorize that the institutional relatedness of the mine is very high in these organizations (Peng, Lee and Wang, 2005, 623 – 624). Such organizations were the mining ministry to which the mine in question belonged to, Gosplan (the country's planning administration), Goskomsen (Soviet price authority), Gosnab

(Soviet supply organization), Mine inspection, Communist Party, and Soviet industry union (like Sojuznickel etc.) (Galchenko, 1999).

Other actors on the organizational field were for example service providers, mining universities or other mines and smelters. Their institutional importance to the mine is thought to be smaller than the dominant actors’.

The liberalization policy of the Yeltsin administration freed the mines from the ministries by abolishing the ministries as well as other governmental structures like Gosnab, Gosplan, and the Communist Party etc. Figure 10: The abolition of the Mining Ministry and other government authorities shows the consequences of such major change.

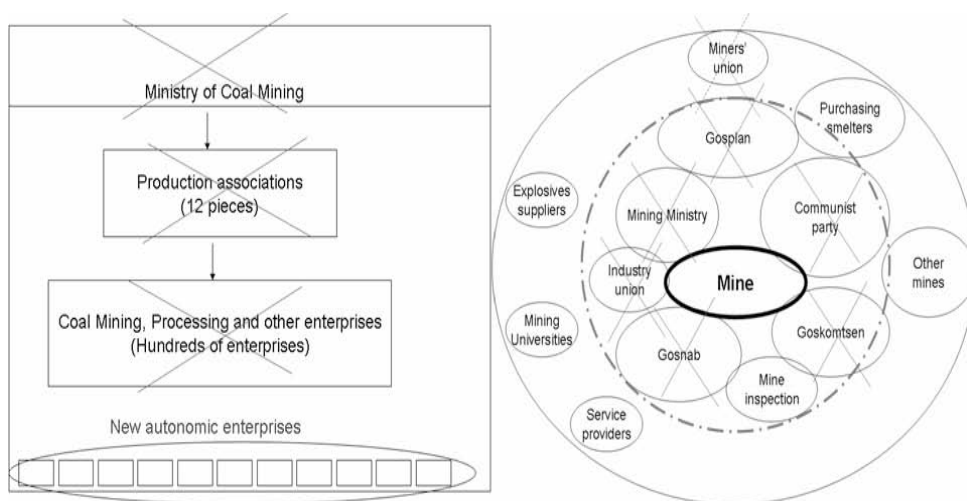


Figure 10: The abolition of the Mining Ministry and other government authorities

The abolition of different mining ministries removed the hierarchical power structure of mining enterprises. The organizational field suddenly had wide open spaces in which to operate. Mines and processing plants became independent and left without any support from the government. This phase has been called the autonomy phase of transition in this thesis. Instead of the Mining Ministry there was Rosimuschestvo Fund, a governmental department, similar to the German Treuhand Fund, which owned the East-German enterprises after they were privatized (Edwards and Lawrence, 1995, 57). Rosimuschestvo did not try to run the enterprises; it was only a silent owner without any financing possibilities (Galchenko, 1999).

Figure 11: The autonomy phase of the mining enterprises presents the organizational field, which emerged just after the abolition of governmental offices. Rosimuschestvo although in the picture, played the role of a passive owner. The responsibility for operations was in the hands of the mine

managers, who tried to run their businesses as best they could. Mine inspection was one of the rare surviving governmental authorities that continued its existence in spite of the changes. There were no instances of major governmental support for the mines, and the new market economy did not yet function (Rutskoi, 2005).

Furthermore, the abolition of the ministries and other controlling organs meant the increase of the power of the mines' directors. Since no more administrative control existed the *yedinonachalie* of the managers increased (Chugayevski, 2001).

Although the Communist Party was abolished the local city/town/oblast administration remained in place. Usually this local administration was occupied by old communists, who tried to replace the party as one member of a mine's organization. In addition, the miners' union, the old style Soviet organization faced a new rival force, the Independent Miners' Union (Rutskoi, 2005).

From 1992 to 1994 the government started a rapid privatization process, during which more than 20,000 firms were registered as joint-stock companies and made 147 million Russian citizens eligible to purchase vouchers worth 10,000 roubles (Honkkila, 2000, p.4). When the firms, were privatized the local state property commissions became the majority owners (Karelsky Okatysh 1998)²⁵.

From the point of view of the whole RMI the biggest problem in the beginning of the transitional period seemed to be the end of the so called governmental order, which meant that domestic demand collapsed. The army did not buy any more tanks, the factories producing tanks did not order any more steel and the smelters did not need concentrate. The mines, concentrators and the smelters were left alone to find a solution to their problems (Galchenko, 1999). This phenomenon will be regarded in this study as a jolt according to the framework developed in the previous chapter based on new institutional theory, which has had a significant impact on the mines' operations.

Fortescue has analyzed the changes of the RMI from the point of view of the adaptation strategies that the mining sector used during the transition period. He divides the strategies available into three categories: survivalist, reactive adaptation and dynamic adaptation (see Fortescue, 2000).

The conclusion made by Fortescue on the development in the 1990s is that most of the companies in the mining industry have been using the survivalist adaptation strategy, basically a "do not do anything new" strategy. A dynamic

²⁵ According to the 1998 annual report the Governmental Property Commission of the Karelian Republic was the founder of Joint Stock Company of "Karelsky Okatysh" dated March 15th, 1993.

strategy has been used only by a very few companies; Fortescue names one of them as Rusal's Oleg Deripaska with his ambitions to enlarge his company into new areas (Fortescue, 2000). These observations were made by Fortescue in 2000, just around the time when the consolidation process of the RMI started. According to the analysis of this study it seems possible to say that after the mining industry was privatized the new owners brought with them a strategic view on the situation, and the industry started to plan its future, but major changes started with the consolidation of the industry into larger groups.

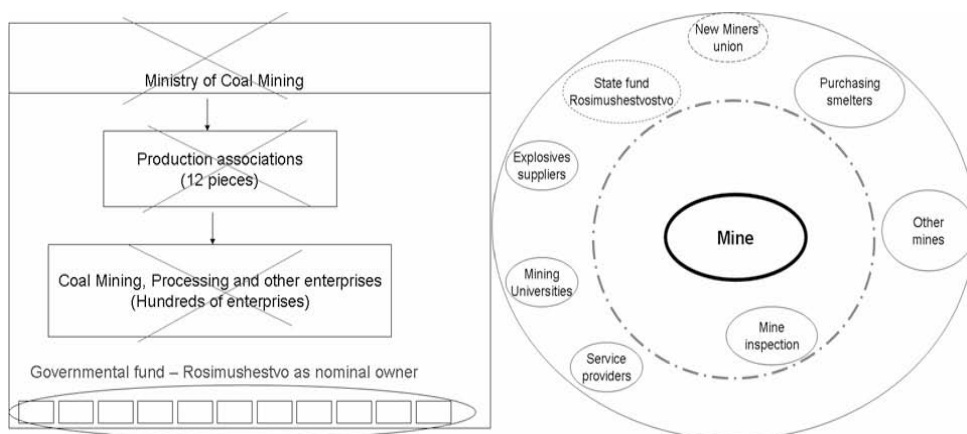


Figure 11: The autonomy phase of the mining enterprises

During the autonomy phase of the transition, the organizational field of a mine was filled with newcomers. Market forces started to fill the gaps in the organization field. New banks, insurance companies, foreign companies appeared, and started to market their services to the mines (cf. Zanini, 2002, 49). Accordingly that meant the mines had to organise along Western business lines. The changes brought about included financial departments, purchasing departments, sales department etc., which were not “needed” in Soviet organizations (Chugayevski, 2001, Grigoryev, 2001). This new organizational field is presented in Figure 12: The autonomy phase of an organizational field.

The new contacts in the mines learned new ways to work. They brought with them new organizational practices. Some of the old Soviet practices were de-institutionalized, and new institutions were born in the dealings between the autonomous mine and its new business partners. On the other hand some old organizational practices, institutions, which had been in place since the Soviet era, continued their existence with relation to contacts with “old” partners e.g. with Gosgortekhnadzor, the mine inspectors (Rutskoi, 2005).

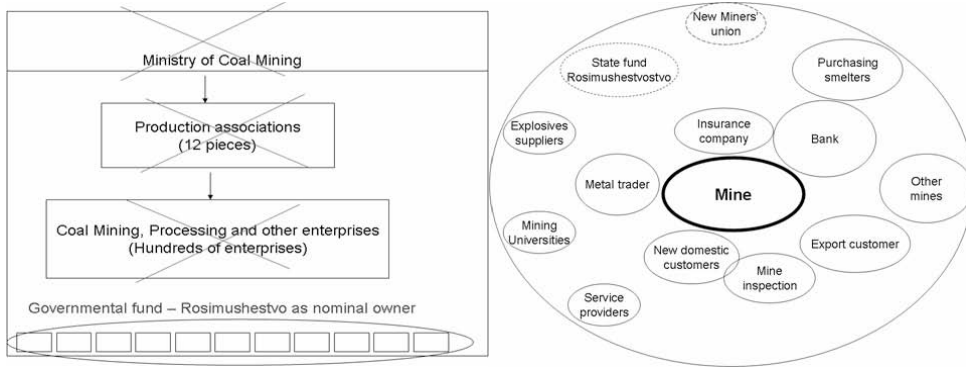


Figure 12: The autonomy phase of an organizational field

The autonomy phase of transition ended with privatization. Usually this meant the sale of enterprises to new private owners from outside. Mines, processing plants or smelters, which had earlier formed a vertically integrated organizational structure were broken into pieces, when they were sold separately to new owners. Rosimushestvo was replaced by several new actors in the organizational field (Rutskoi, 2005). This phase of transition is called in this study first order privatization. An illustration of this phase of transition is presented on Figure 13: Privatization (first order)..

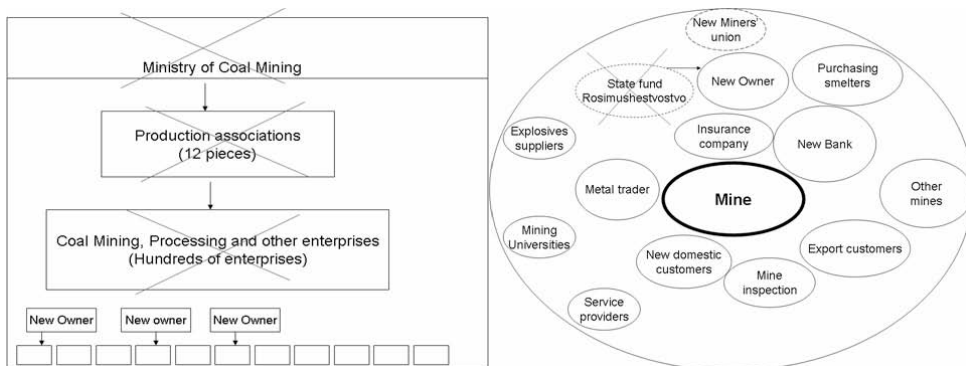


Figure 13: Privatization (first order).

The first order privatization process continued for some years. At this time there were both government owned autonomous enterprises, privatized mines, and mines that were not eligible for sale. Such mines not eligible for sale were either very close to bankruptcy or they were producing uranium, diamonds or other strategic minerals that the government did not want to sell (Gondusov, 1999). The corporate governance structure of the mining's organizational field was quite diversified.

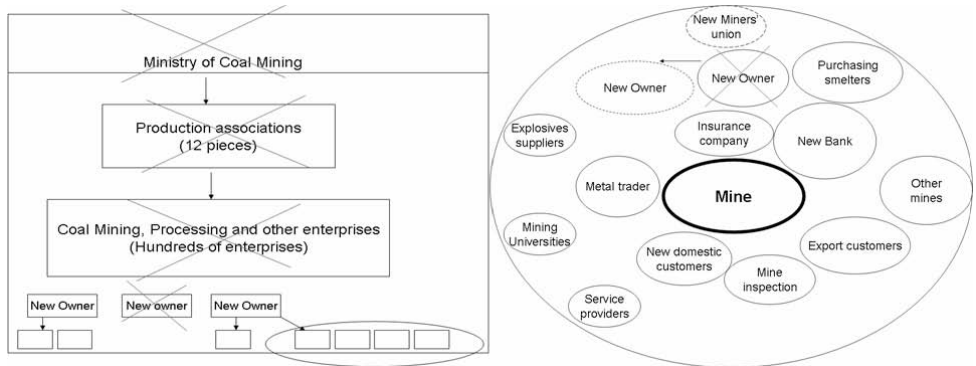


Figure 14: Privatization (second order).

There were also some new owners that did not succeed with their mining enterprises or just wanted to exploit “rob” the resources by emptying the enterprises of their resources within a couple of years. When the interest of first order private owners disappeared, they either cancelled the production, or sold to second order private owners (Gondusov, 1999). This, second order privatization brought onto the scene new owners, and this can be regarded as the beginning of the consolidation process, the organizational field of which is presented in Figure 14: Privatization (second order). and in Figure 15: The consolidation of the mining enterprises.

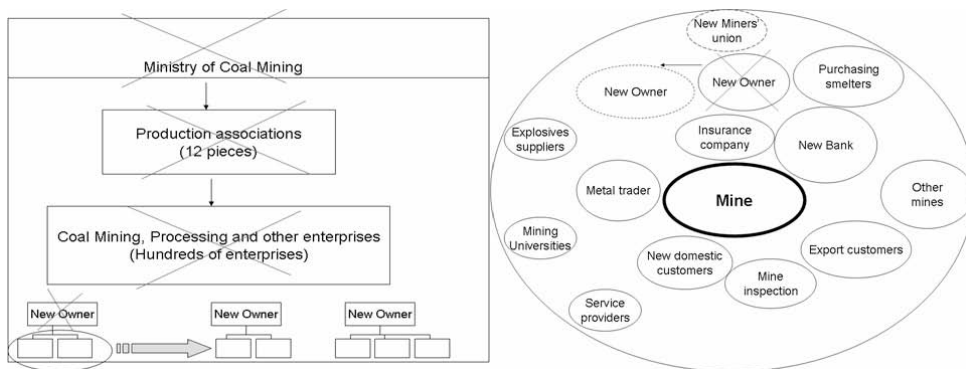


Figure 15: The consolidation of the mining enterprises.

In some cases the new owners started a legal battle over an enterprise. If agreements were breached and subsequent court orders did not solve the dispute, a physical take over was possible. Ferguson (1998, 459) writes:

On the morning of 16 February 1996 armed security guards took over the Kuznetsk Metallurgical Combine (KMK) in Novokuznetsk, one of the two major steel plants in the region. All entrances to the administration building were blocked and the director and all senior staff prevented from entering. The guards had not come far. They were employees of the Novokuznetsk Aluminum Factory (NKAZ) only a couple miles away and were accompanied by a senior NKAZ director, court officials and interior ministry police.

One special feature of the Russian Industry's development is the strong position of corporations. The state initialized the birth of these concerns by adopting in 1995 the new law of "Financial and Industrial Corporations" (Klevtsov, 2004, 5). These corporations have developed, since the passing of the law favourably, and some of them have developed into oligopolies (Venäjän yritystoiminnan...2001, 76). Consequently, the production of metals began to be concentrated into a few big corporations (ibid, 78).

In some cases the new owners acquired their mining assets by replacing the loans of the enterprises with shares. The Interos era in Norilsk Nickel began like this. Evraz acquired its first assets in similar way. According to an Evraz document, which was written by bankers at Morgan Stanley and lawyers from Cleary Gottlieb Stein & Hamilton, the Evraz conglomerate was founded in humble circumstances in 1992 "by a group of Russian scientists and engineers led by Alexander Abramov". His "original group" was good at mathematics, and the sums they did led them to supply raw materials like iron-ore, coking coal, and electricity to steelmills, and take steel products for sale in return. "As a result", comments Morgan Stanley and Cleary Gottlieb, "these traders

became the largest creditors of the mills. They then put the owners of the bankrupt plants out of their misery, swapping debts for equity” (Helmer, 2005, 1).

With the strategic planning process the new owners started to consolidate their assets in the mining industry. The industry was in many cases arranged as previously in the Soviet Union, i.e. as vertically integrated entities, which is similar to the Japanese Keiretsu trading houses. The Russian owners use holding companies to control their industry branches (Klevtsov, 17).

There has also been a trend of vertical integration in other Russian industry branches e.g. in the car industry (Reers and Kumm, 2006, 22), the carbon and graphite industry (Metal Bulletin, Jun 2005, 13), natural gas (Quast and Locatelli, 1997, 125), the petroleum industry (Nefte, 2003, 5), the agricultural industry (Struck and Strubenhoff, 2003, 1), and the agricultural products market (Serova and Khramova, 2001, 12). This process has been favoured by the policy makers (Struck and Strubenhoff, 2003, 1) and President Putin has declared that Russia needs more vertical integration and horizontal links between elements of the state (Voskoboinikova, 2003, 1).

The roots of vertical integration in the Russian industrial structure are twofold: industry-led, or government-led (Lembruch, 2001, 215). The industry-led integration has taken place on a formal level by conglomerates through backward or forward vertical integration. The government-led vertical integration has stayed informal, and usually on the level of regional governments, where the politicians of a certain region have wanted to gain dominance over local industries. This government-led integration has also been called regional “feudalism” (ibid, 215).

Sinelnikov presents a possible reason for vertical integration, when analyzing the situation of Russian stone block and tile production industry and its transition (Sinelnikov, 2005, 5 – 8). He states that the old traditions are so rooted in the minds of the industry’s executives, that they do not see any other possibility for the production arrangements than the production of the final end product, e.g. the tiles, not the stone blocks. According to their “taken-for-granted” beliefs only tile production can be profitable. Thus, they ignore the experience of some highly-industrialized countries like Italy, Sweden, Norway, Finland and Spain, where block production is very profitable and there are numerous firms, which only produce the blocks, e.g. the raw material. These countries then export their blocks to countries, where other companies are producing the final end product, e.g. tiles (for example the USA and Japan) (ibid, 8). Global Business report (2005, 36) states that the vertical integration model in Russia has a Soviet background due to the fact that the processing plants were designed for specific types of raw material, which were produced in certain mines. Consequently, during consolidation the new

owners wanted to merge together both the raw material mine and the processing plant, which could use the raw material coming from the mine in question (*ibid*, 36).

Also, there are numerous politicians and political movements in Russia, who opposed the participation of Russia in global trade as a raw material producer (Institut, 2006). These organizations and individuals raised their voice against Russia becoming like Africa, a poor producer of raw material for Western countries.

The strategic planning process of the mining holding companies has brought investments and modernization to the mining enterprises (cf Fortescue and Rautio, 2005, 56). For instance Severstal has a strategic investment plan for Komiugol, their coal mining asset in Northern Russia for 10 years to come worth 1.3 billion euros. The price that the mining enterprise has to pay for this investment is that they have had to halve the personnel of the mines from 21,000 to 11,000 people. One can say that Severstal saved the mines, but lost a lot of human capital (Helsingin Sanomat, 2005, p. B9).

The new holding structures, which are mostly situated in Moscow, can be regarded as remnants of the past. As during the Soviet era when “Soyuznikel” ran the whole of the country’s nickel production in a vertically integrated fashion, it is now Norilsk Nickel, which is doing the same. Power has returned to Moscow, because the key personnel of these enterprises are located there, and they have the authority to sell the metals and buy equipment for them (Popov, 2005).

When looking at this on the basis of New Institutionalism the fact that the holding companies have similar structures means that some form of homogenization of the organizational field has happened, and as the structures of the companies are isomorphic it suggests they have copied the “correct” organizational structure to cope with the demands of the environment.

The consolidation process has affected the mines so that they are now parts of big companies, who control them from their head offices. The mines’ role has diminished, and they employ a position of the production unit. The new organizational field is presented in Figure 16: Consolidation according to two different principles. This shows that the mine has lost its direct contacts with banks, insurance companies and other structures, and the holding company’s head office has taken charge of such operations. Furthermore, the sales of ore and purchases of equipment have usually been transferred to the head office of the concern (Popov, 2005).

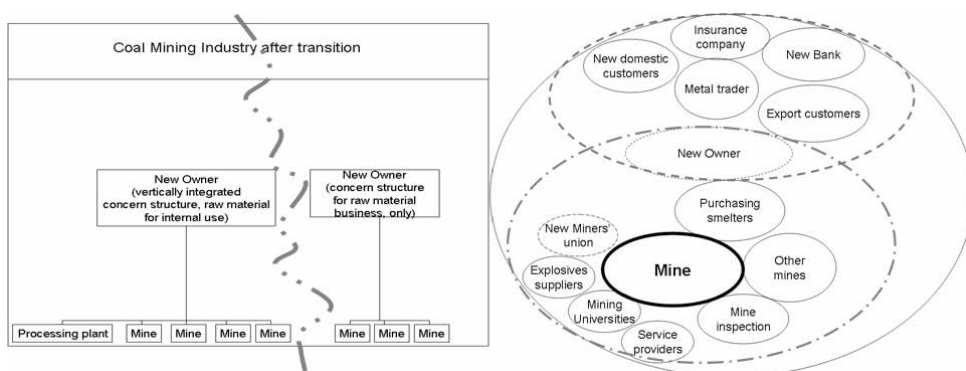


Figure 16: Consolidation according to two different principles

The lower dashed circle in Figure 16: Consolidation according to two different principles presents the closest partners of a mine. Direct contacts with banks and other organizations have now disappeared. The owner's holding company head office takes care of such operations (Fortescue and Rautio, 2005, 56). The mine has close contacts with other mines belonging to the same holding, but not to other competing mines. The processing plants in its own holding company are its closest partners. The local authorities have also taken up a very important position in the organizational field for the mine in question. The dashed upper circle consists of organizations within the influence of the holding company, the owner. Compared to the autonomy phase of transition the autonomy or independence of a mine has shrunk significantly (Popov, 2005).

The new owners of Russian mines have consolidated their assets according to two different principles: either by the solely intra-group production of raw material or by producing raw materials for other businesses (Butrin, 2004). The curved dash line that goes through the left side of the Figure 16 presents the division of the mining industry into these two principles. These different approaches will be explained in next sub-chapter.

4.3.3 Two contradictory directions of development

The ongoing consolidation of the RMI is twofold; there are two directions which are contradictory (Butrin, 2004). The first direction is vertical integration as per the old Soviet System. A typical example of this would be the UMMC (Ural Metal and Metallurgy Complex) owned by the mining tycoon Iskander Muhamedov and his allies. UMMC is a vertically integrated business, where the mines owned by the group produce ore and/or concentrate for the smelters of UMMC, only. The slabs produced from the smelters are

then used in the polyproducts production of UMMC. Mining is regarded as an intracompany source of raw materials for the group's own factories.

Another direction of the RMI is to regard mining as an independent raw materials business (Butrin, 2004). A typical example of this would be the Russian iron ore mining enterprises of Mihailovski and Lebedinski, who as privatized companies trade only with their own raw materials selling them to processing plants, which are owned by separate business groups. No vertical integration exists there.

The examples above are from non-ferrous and ferrous mining. There are similar examples within other mining branches. The dynamo of the coal industry's drive to independence, SUEK, now Baikal Coal, has kept its focus on mining activities not power generating, while its main rival RAO EES has both coal and power plants, and uses vertical integration. The same applies to Severstal, who now own Komi Coal and several iron ore mines as well as steel factories, and use Komi Coal's coke coal in the group's production of steel (see Butrin, 2004 and Global Business Report, 2005).

Butrin states that the independent raw materials business has become the norm in other industries than non-ferrous, ferrous and coal mining industries (Butrin, 2004). He presents some examples from silver production (Polymetall) and the non-metallic mineral market (PIK-group). Furthermore, he points out that some companies having the vertically integrated structure as an axiom from Soviet times can have new mining projects, which are separated from that group's vertically integrated business structure. This is evident in SUAL's Srednetimanskoye bauxite project, production which SUAL are ready to sell to the group's external sources.

The Russian vertical integration holdings structure has not proved to be very effective (Butrin, 2004) and one can say that it is against the global practices of Western mining companies (Global Business Report, 2005, 38). It is common practice in Western countries to concentrate on the core activity, and everybody prefers to outsource (ibid, 38). The Russian mesostructure with vertical integration has a Soviet background, and the vertical integration model in use in Russia today is a very specific model of vertical integration (ibid, 36).

The further development of the RMI is at the crossroads of these two trends. Most probably the increasing interest of Western mining companies in Russian mining assets will lead to a shift in the focus of the independence of mining as business.

In the following sub-chapter we take a closer look at what today's RMI looks like.

4.3.4 The Russian Mining Industry today

The consolidation process of the RMI has led to its oligarchic ownership. The lion's share of the mining industry is now in the hands of a few business giants that are financially independent and ready for international cooperation in order to develop new, riskier mining projects in and outside the Russian territory (Global Business Reports, 2005). The main players in the RMI today are as follows (although rapid changes are continuing) (sources: Gorelov, 2001, Global Business Report, 2005):

Ferrous metals:

EURASHOLDING owns enterprises in coal and iron excavation as well as processing plants: coal mines (Kuznetskugol, Kuzbassrazrezugol), iron ore mines (Kachkanarsky Mining & Dressing Plant), steel production plants (West Siberian Steel Corporation, Kuznetsk Steel Plant, and Nizhny Tagil Steel Plant). It is also involved in the production of ferrous metals (Serovsk Ferroalloys Plant) and the production of special steels (the Serov, Zlatoust Steel Plant).

The MDM Group is also a holding company, which owns coal mines (Chitaugol, VostSibUgol), iron ore mines (Kovdorsky Mining & Dressing Plant), has ferrous metals production (Kuznetsky Ferroalloys Plant) and produces industrial pipes (Volzhsky Pipe Plant, Seversky Pipe Plant).

SEVERSTAL-INVEST is a holding company, which has companies throughout the wholly vertically integrated enterprise structure, e.g. the production of coal (Komiugol), iron ore (Olenegorsky Mining & Dressing Plant, Karelsky Okatysh), steel production (Severstal), metal products fabrication (Cherepovets Steel Rolling Plant) and steel pipe production (Izhorsky Pipe Plant).

The MECHEL group consists of companies, that specialize in coal production (Yuzhny Kuzbas, Kemerov Coke Plant), the production of wrought iron (Tulachermet, Kosogorsk Metallurgy Plant) and the production of steel and rolled steel (Mechel).

The UNITED METALLURGICAL COMPANY (UMC) is one of the biggest producers of steel pipes in Russia. This holding company

consists of three pipe factories (Vyksa Metallurgy Plant, Chelyabinsk Pipe Plant, and Chusovoy Metallurgy Plant).

UNICOR is a holding company, which is owned by Alisher Usmanov and his partner Vassili Anisimov. They own some iron ore mines (Mikhailovsk Mining & Dressing Plant and Lebdinski Mining & Dressing Plant).

Non-ferrous metals:

Russian Aluminum (RUSAL) is one of biggest producers of primary aluminum (10% of world production). The group owns three mining companies (Achinsk Alumina Plant, Nikolaev Alumina (Ukraine), Ordynia Alumina Plant (Romania)), three processing plants (Krasnoyarsk Aluminum Plant, Bratsk Aluminum Plant, Sayan Aluminum Plant) and has production of rolled aluminium (Samara Metallurgical Plant, Belaya Kalitva Metallurgical Plant, Sayansky Foil Mill, ROSTAR, Kanakersky Plant (Armenia)).

SUAL-Holding is a holding company, which owns bauxite mines²⁶ (Ural Bauxite Mine, Bauxites Timana), has production of primary aluminum (Ural Aluminum Plant, Irkutsk Aluminum Plant, Bogoslovsky Aluminum Plant, Kandalaksha Aluminum Plant) and a group of factories producing final aluminum products (Kamensk Uralsk Metallurgy Plant, Mikhailovsk Metallurgy Plant, KirsCabel, Irkutsk Cable).

METALLURG is a holding company, which consists of small producers of alumina²⁷ (Pikalevsky Alumina) and producers of primary aluminium (Volkhovsky Aluminum Plant, Volgograd Aluminum Plant).

Norilsk Nickel is the biggest mining company in Russia. Its main asset is Norilsky Mining and Metallurgy complex in Siberia, which produces nickel and copper. Lately they have acquired the biggest gold company in Russia called Polyus, and are now in the process of uniting Polyus with another asset they have bought in South-Africa called Gold Fields. Furthermore, Norilsk own American platinum producer Stillwater.

²⁶ Bauxite = mineral consisting of aluminium

²⁷ Alumina = one form of aluminium

Ural Mining and Metallurgical Company (UMMC) is a company located in the Urals, uniting a group of small copper producers and making it the second biggest copper producer in Russia after Norilsky Nickel. UMMC has ownership of the following mines and factories: ZGRK, Svyatogor, Gayansky Ore Mining Plant, Uralelectromed, SMPZ, Safyan Copper, and the Karabash Cooper Plant.

The Russian Copper Company (RMK) is a privately owned copper producing company located in the Urals and has mining sites both in Russian and Kazakhstan. The group is owned by Igor Altushkin. RMK combines a number of major mining and smelting enterprises in the Orenburg, Chelyabinsk, Sverdlovsk region and Novosibirsk regions, the Russian-Kazakh joint venture RosKazMed, a non-ferrous scrap procurement division, and the Urals Reconstruction and Development Bank and Sverdlotsbank.

The coal mining industry:

Sibirskaya Ugolnaya Energetitsheskaya Kompania (SUEK) is a major coal producer, now called Baikal Coal. They own Krasnoyarskugol, Chitaugol, Khakasugol, Vostsibugol and ten other companies.

Russian Coal own a fair number of power-generating coal production assets in the Rostov region, Kemerovo and the Far East.

RAO EES is a Russian government owned power producing company that owns UK Kuzbassrazrezugol, the biggest producer of coal in the Kemerovo region.

(Some major coal producers are presented above in the ferrous metallurgy section (Severstal, Mechel).)

Other mining sectors:

ALROSA is the major producer of diamonds in Russia and owns huge deposits in the Sakha republic of Russian Federations. The company is owned by the federal government (37%) together with the government of the Sakha Republic (32%), the management of the company (23%) and the Sakha district (8%).

TVEL is a government owned (Minatom) producer of uranium in Russia. They run both the mines and the further dressing of the uranium ore.

There are also several smaller holding-companies that own mining assets as well as foreign companies. The second biggest gold producer of the country is foreign owned (Kinross) Omolon Gold Company. Other foreign companies actively developing their Russian mining assets are: Bema Gold, High River Gold, all mining gold. In other minerals there are Gips Knauf and Basalt AG in the construction materials mining business. Base metals like copper, nickel or iron have not attracted foreign investors.

The RMI has consolidated itself into groups of companies, and in many instances into groups of companies which are vertically integrated. These companies are quasi-monopolies like Norilsky Nickel, who produce 60% of the country's copper and 95% of its nickel, RUSAL 70% of all aluminium, and UMMC 35% of all copper (Global Business Report, 2005). They are both excavate ore, as well as produce slabs from it. In some instances they have companies outside mining and metallurgy. Furthermore, there are virtually no longer any independent mines in Russia. Almost all of them are parts of bigger companies, usually holding companies.

The Russian government has not, yet, tried to increase its share of the ownership of the mining industry, although it runs the uranium mining and milling enterprises through TVEL, and Russian diamond production through ALROSA. However, the state already exercises considerable control over the metals sector; the only large Soviet-era sector the Kremlin has left to market forces. Through industrial regulation and heavy taxation, the state's leverage over the sector is immense (Lavelle, 2005, 1).

Figure 7: The Mining Ministry's structure during the Soviet era showed the old Soviet mesostructure of the Severnyi mine. The new organizational structure of the same mine in question, Severnyi, is presented in Figure 17: The new organizational mesostructure of the Severnyi mine. The resulting similarity of these two mesostructures is surprising: Severnyi is today as it was 15 years ago, i.e. it produces nickel on the Kola Peninsula, and the only difference is that now it belongs to private Norilsky Nickel mining company instead of the Soviet Mining Ministry.

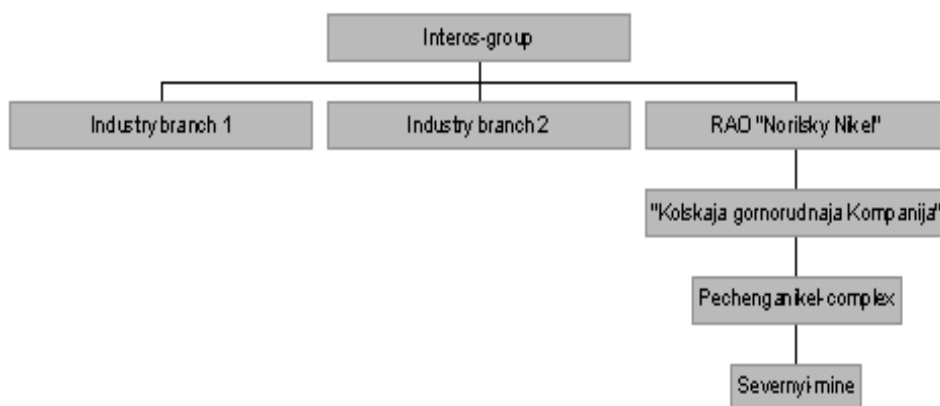


Figure 17: The new organizational mesostructure of the Severnyi mine

When comparing the two structures it is possible to say that the structures are identical. The new owner of Severnyi-mine, the Interos group has exactly the same mesostructure in its organization as a Soviet Mining Ministry. Theoretically it is possible to ask, if this kind of a result is based on a rational response to the challenges of the industry, or on old cognitive models?

One interesting and very much Russian feature (accepted by the country's legislation) in today's mining industry in Russia is the use of so called management companies to run the business. In Figure 17 "Kolskaya Gornorudnaya Kompaniya" is a subsidiary of the owner. Sometimes similar middle-level organizations or companies have been formed under the juridical form of an independent management company. These, so called UKs (Управляющая Компания, Управляющая Компания, Management Companies) are legal companies, which do not own the mines reporting to them. The mines report to the UKs, which might own a mining licence, but the actual running of the mine is carried out by the mining complex, which is owned by an offshore company. This structure enables the owners of the mine to secure their ownership of the mine in case the government has ambitions to take over the mine from its Russian owners. The idea behind this kind of arrangement is that the UK is owned by private people, close to the owners of the mine. Under the law the responsibility for any errors by the management lies with the UK. Thus, if charged by the tax authorities the mine with its legal owners cannot be punished nor confiscated by the state; it stays under the control and ownership of the Russian businessmen behind the offshore companies. The UK's would bear the consequences of legal sentences. These structures started to appear at the time of Yukos court case (Subbotin, 2005). One example of a UK is the RUSAL organizational structure (see www.rusal.ru).

Such a structure could be regarded as the owners' strategic attempt to oppose the dictate of the state, and guard against attempts of the state to nationalize the company as happened in the Yokos case. The formal structure of a UK is allowed in Russian legislation.

Figure 18: The management company's structure illustrates the structure of a UK company with regard to the owner of the mine, and to the mines themselves.

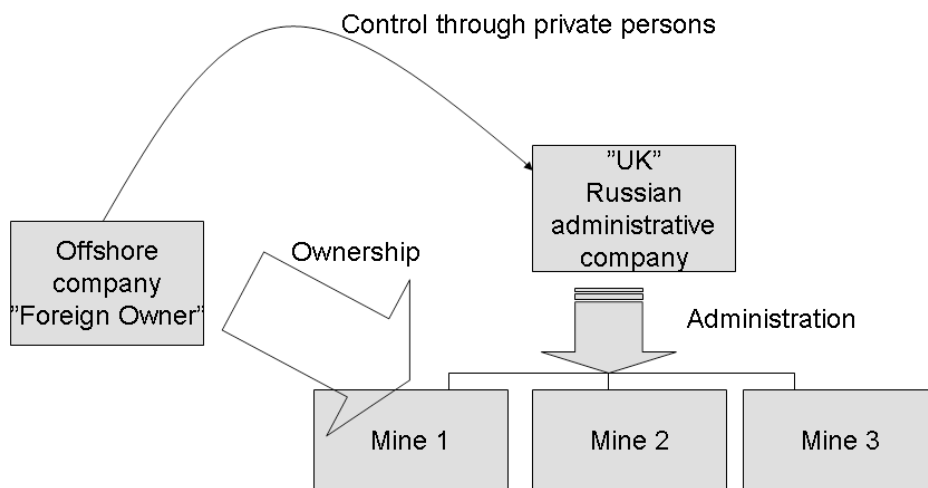


Figure 18: The management company's structure

An organizational field of this structure looks like that presented in Figure 17: The new organizational mesostructure of the Severnyi mine. The formal structure is different to that of a joint stock company, but the operational structure and the organizational field have not changed.

4.3.5 Current Trends in the Russian Mining Industry

The break-up of Soviet Union left Russia at the beginning of 1990's with huge diversified industries, large factories and a production system based on branch monopolies. The general privatization policy of the state and the foundation of limited companies lead to the division of enterprises and the dissolution of monopolies (Venäjän yritystoiminnan...2001, 74). The majority of the new

enterprises experienced great difficulties, and still at the start of the new millennium a lot of the companies were in an economic downturn (ibid, 75) although the recovery of the Russian enterprises started in 1999 (ibid, 75), just one year after the 1998 collapse of the monetary system (the default of state finances).

Gilbertson has defined five current trends in the RMI as follows²⁸ (Treadway, 2005): renewal, consolidation, partnership, diversification, and international valuations. These trends, among others, will be discussed below.

The first of Gilbertson's five trends is **renewal**. According to Gilbertson, Russian companies are tightly held by a small number of shareholders that are all trying to build better and stronger enterprises. "They recognize that many of the production facilities are old, and in need of upgrading and replacement to meet modern environmental and production efficiency standards" (Treadway, 2005).

The need for renewal is also stated by other Russian Mining Executives. When the researcher interviewed Oleg Mihailov, the general director of "Karelsky Okatysh" (iron ore producer in the Karelian Republic in the town of Kostomuksha), he noted that the Russian state finance default in 1998 sent the wrong signal to many enterprises because it gave them profitability on false pretences. Generally, there were no structural changes in the mining enterprises in the 1990s, and those changes should have been made at the end of 1990s when the mining enterprises experienced good profitability following the Russian rouble devaluation (Mihailov, 2001). Earlier in this thesis we have used the term "modernization" to describe this phenomenon.

Second in the trends in Gilbertson's list is **consolidation**. "There are of course major mining companies in Russia, with Norilsk and Rusal immediately in mind, but the consolidation process that characterized the emergence of the Western resource majors has yet to be played out" (Treadway, 2005). In this study this trend has been identified to have started after the privatization period of transition.

Partnerships is the third trend. Along with the almost signed Memorandum of Understanding, MoU, with Rusal, Gilbertson says the opportunity also exists for local or international partners in the new smelter project and other major ventures (Treadway, 2005). In particular, the law regarding mineral resources pushes foreign partners to cooperation with Russian mining companies (see Norilsky Nickel, 2006-1).

The fourth trend is **diversification**. "Ten to 15 years ago, large institutional investors in the West wanted "pure plays", or single commodity companies,

²⁸ Brian Gilbertson, President of RUSAL, major Russian aluminium producer, and previous President and creator of BHB Billington, world's biggest mining house.

and even single geography companies, from which the investor could mix and watch his ideal portfolio. Today, the global majors are all diversified by commodity and country” (Treadway, 2005).

The final trend according to Gilbertson is **international valuations**. “Often, assets that are not well known in the Western capital markets, particularly in developing countries, are accorded low valuations despite being of high quality” (Treadway, 2005).

One may also note that Gilbertson, a foreigner, is CEO of a Russian mining company. Hiring foreign executives is quite a new phenomenon in the RMI, although this might cause unexpected difficulties for them as in the case when Western oil company’s executives were regarded as spies, because they might have looked at oil field maps that are classified information according to Russian security officials (see Kaurala, 2005).

Furthermore, there are not many private foreign owners of Russian mines, but there seems to be a growing interest in Russian mining assets (Luciw, 2005). Earlier, there have been attempts in the world wide mining community to start mining businesses in Russia, but because of their negative experiences, there has been much caution when investing in the RMI (Helmer, 2004-2).

One peculiar aspect in the RMI’s development trends was not mentioned by Gilbertson. That is the alliance of the mining business and local power structures. According to “Delovoi Kuzbass” magazine three mining enterprises of the Kuzbass region signed a cooperation agreement with the local regional (oblast) government on April 15th, 2005 (Delovoi Kuzbass, 2005). “Yuzhkuzbassugol” already signed this agreement for a second consecutive time with a regional government, and “Sibuglemt” with “Raspadskaya ugolnaya kompaniya” joined them. According to this agreement both the enterprises and the town, where the companies work will be developed according to agreed principles. Furthermore, before these companies a group of local companies had already signed similar cooperation agreements. According to “Delovoi Kuzbass” among them were: SUAL, Mechel, Kuzbassrazrezugol, Sibirsky Delovoi Soyuz, Severstalresurs, Prokopyevskygol and Belon, i.e. practically all the producers of coal in the region.

Similar information can be found in other regions. Interfax reports from Chita on April 12, 2005 that the administration of Russia's Chita region, which is home to the giant Udokan copper field, and Arctic mining and smelting giant MMC Norilsk Nickel had signed a cooperation agreement. Ravil Geniatulin, the region's governor, and Maxim Finsky, Norilsk Nickel's deputy CEO, signed the deal, which covers mineral development, the drafting of wide-ranging environmental programs and the creation of favourable terms for attracting investments and putting them to effective use. Norilsk Nickel

reiterated its willingness to provide financial support for social programs in the Chita region and the region's administration pledged to monitor the use of the company's funds (Interfax Hungary, 2005).

Both of these agreements reveal a very interesting state of affairs in Russia. Local regional governments use the RMI to pay off the social programs the region cannot afford. In other words these are examples of the social responsibility of the RMI, often being the only local industry in remote locations with sustainable and constant profitability.

At the same time, according to new institutional theory, such phenomena can be regarded as the result of political pressures. They stress the need for legitimation from exogenous sources of power. In giving in to such pressures the enterprises will be supported and legitimated by existing institutional arrangements. The enterprises agree for instance not to lay off people, and thus, carry out their social responsibility.

This is confirmed by interviews with both Oleg Mihailov, general director of "Karelsky Okatysh" and the same company's commercial director Vladimir Nikandrov in 2001. Although the general productivity of "Karelsky Okatysh" is five times less than its western competitors (Nikandrov, 2001) there is no possibility to lay off people; only natural attrition is feasible because of "social responsibility" (Mihailov, 2001).

There are also some visible signs of organizational changes starting to happen in the RMI. Norilsky Nickel was first to announce on September 8th, 2005 that it has launched a programme to reorganize its management structure and bring it in line with current requirements for the management of large-scale international corporations. The company will be comprised of industrial sectors entrusted with significant powers within the framework of existing corporate standards and strategies (Norilsky Nickel, 2006-2)

Furthermore, Norilsk Nickel Mining and Metallurgical Company has been awarded certificates for the development and implementation of its Integrated System of Quality Control and Environmental Management (ISQCEM) in accordance with international standards ISO 9001:2000 and ISO 14001:2004 in the area of "Management of Production and Projects, Marketing and Delivery of Products (nickel, copper, cobalt, precious metals, sulphur, selenium and tellurium)". The system is accredited by the international accreditation bodies UKAS (Great Britain) and Road voor Accreditatie (Netherlands) (Norilsky Nickel, 2006-3).

Some mining companies have started IPOs, initial public offerings, e.g. stock issue sales in foreign exchanges. Evrazholding was one of the first to plan to do that in London (Helmer, 2005, 1). One of the reasons for such actions could be the fear following the Yukos case of the owners losing control of their assets to the Russian government. There are reports that the

state is planning to increase its involvement in mining enterprises, and even reports about plans to nationalize the whole industry (Gornaya Promyshlennost, 2006, 4).

4.3.6 International cooperation and the Russian Mining Industry

The track record of foreign investment into the RMI during the transitional period is generally poor. The failures of Star Resources at Sukhoi Log, Pan American Silver at Dukat, Archangel Diamonds at the Grip pipe in the Verkhotina field (see Helmer, 2000), Celtic Resources at the Neshdaninskoye project in Yakutsk (Wade, 2002, 1) and Norsk Hydro at the Rasvuchorr mine in Kirovsk on the Kola Peninsula are not encouraging for the foreign mining companies, who basically are not afraid of the risk of mining in Russia, but of unfair treatment by Russian authorities towards foreigners (ibid, 1).

There are, however, some successful foreign investments into Russia's mining industry. Such stories include Bema Gold at the Julietta mine, High River Gold in Buryatzoloto, Kinross Gold in Kubaka and Harmony Gold in Mnogovershinnoye (Wade, 2002, 2). The Kubaka investment cost 250 million US dollars, and one of the major reasons for its success was the special ukaz (decree) by President Yeltsin, which gave the mine the possibility to sell its gold directly abroad, if Russian central bank reserves did not buy the gold produced by Kubaka (Koponen, 1999, 1). The difference in organizational efficiency compared to Russian mining enterprises is significant as noticed by the Russian working on the mine. There are no endless cigarette smoking breaks at work as in Russian owned mines (ibid, 1).

Investment has not been one way though as Russian companies have also begun their global advancement (see Liuhto, 2003). For instance Norilsk Nickel has bought Stillwater palladium mine in the USA (Redman, 2003), and Gold Fields in South Africa (Aaltonen, 2004, 1, Interfax 1.10.2005). The purpose of such purchases is not to protect Russian capital by moving it abroad, but to secure both distribution and supply systems to provide palladium to the U.S. auto industry and, thus, virtually control the world's palladium market (Bregman, 2003, 63).

Furthermore, the new law on raw materials has boosted international cooperation within Russia. Norilsk Nickel and Rio Tinto, an international mining major, announced exploration and joint venture development in Russia on Friday, 27 January, 2006. The companies signed a co-operation protocol establishing the formal terms governing the joint venture. The agreement entails the establishment of a joint venture exploration and development company, owned 51 per cent by Norilsk Nickel and 49 per cent by Rio Tinto.

Initial exploration efforts will concentrate on opportunities in the Siberian and far-eastern federal districts of Russia (Norilsky Nickel, 2006-1).

5 RESTRUCTURING THE MINING ENTERPRISES

This Chapter will present the case studies made in the field. The subjects of these field studies were two mines in Russia. The Ugol mine, in sub-chapter No. 5.1 produces coal, and sells all coal produced as raw material to extra-group buyers. It is an example of the raw material group of companies in the RMI.

Mineral, in sub-chapter 5.2, is, in contrast, an example of an enterprise, which is a part of a holding company, it produces raw materials for intra-group purposes. The group has its own processing plants for producing final products.

The analyses of both case study objects are presented in Chapters 5.1 and 5.2. Both analyses contain approximately the same kind of information, e.g. the mine's story in the form of a narrative, as told the researcher, the quantitative development of the mines in terms of production, personnel and productivity, the development of the mines' organizational fields under transition, and the results of the interviews and the Critical Incident Method. Finally, all of the parts of the field trips are drawn together, and an analysis of the individual mine's development is presented.

Based on the methodology of the theory bound approach utilized in this study, new institutional theory in organizational analysis was chosen as the framework for the study of the transitional development of the RMI. Organizational history was chosen to accompany new institutional theory. This was done in the form of narratives, when writing up the Ugol and Mineral stories.

5.1 Case 1 – Ugol

5.1.1 The path to the company's current situation

This is Ugol's history as a narrative written by the researcher:

Ugol is a company located in Siberia, which produces coal. The mine was founded in 1965, and during the Soviet era it was a part of local coal

producing trust. The trust reported to the Moscow Ministry of Coal Production.

The person, who most probably contributed the greatest amount to the development of today's Ugol, was nominated as director of Ugol in December 1985. This new director, Zamotin, received a serious admonition from the local party organization in May 1986, only six months after being nominated as mine director, for non-fulfilment of the production plan.

The local newspaper wrote quite openly about this case after receiving a letter of support from the workers of the mine. They strongly opposed the punishment of Zamotin, and told the reporters, that the new director is the first honest director in the mine, who was trying to correct the mistakes of the old management, who had now become local party leaders. Paradoxically, those that had led the mine to the difficult production situation were punishing their replacement!

The letter of support from the miners explained that the mine had been fulfilling an unrealistic production plan for years, and the preparations for mine enlargement had not been fulfilled. They had in other words dug a hole in the ground so deep that they could no longer safely produce more coal. In order to continue they would have to widen the hole in the ground before more coal could be produced.

The local party official explained to the newspaper, that the reason for the punishment was not only the non-fulfilment of the plan itself, but the fact that Zamotin was openly talking about unrealistic plans for the whole region and especially for Ugol. "How can we motivate the workers to produce more and more, if their leader is saying that the plan is unrealistic?"

The problems of Zamotin with the local city party organization continued, but he was able to hold his position as the mine manager (and a member of the party) throughout the perestroika policy until the beginning of the 1990's. By then the mine had enlarged the mining area so that they were producing more coal than earlier, and the perspectives on mining were kept in balance with production. In other words, the bottleneck created by the previous management was eliminated.

The coal industry of the Russian Federation was privatized by decrees ("po prikazu"). The government gave decrees and the mines got their independence. Zamotin, the mine manager, was well informed, and he started Ugol's privatization.

At first this happened through a rental arrangement. By 1990 Zamotin had formed an organization, which rented the Ugol mine itself, the local enrichment plant, aggregate producing quarry and auxiliary products department. As a matter of fact, the renting company consisted of the same departments as the Ugol mine earlier, but the organization now rented the

facilities from the government. Zamotin was the Chairman of the Board of the renting organization.

From 1985 to 1991, there were a lot of changes in the management structure of the coal mines due to the perestroika policy and the strikes of coal miners in the Kuzbass region. For instance Ugol gained a license to export coal abroad. At first this happened through trading companies, but later on independently. Consequently, the money received from abroad was kept in a bank in their own account, and the import of refrigerators, sewing machines and other electronic appliances for workers was begun.

The “rent-commercial” company of Ugol was cancelled and in its place the collective of the mine formed a limited company “Ugol” in December of 1991. The workers of the mine together with the management were the new owners of the company, which also broke away from the local coal mining trust to become the second independent mine of the region.

In order to finance the purchase of shares the mine took a 4 MRUR loan from the local bank, and gave that sum to the workers. The workers gave an additional 7 MRUR, and the financing needed for the independent mine was achieved.

Despite the new independence, the mine management soon noticed that they did not have the money to finance the purchase of modern mining equipment. They started to look for foreign companies, who would be willing to invest in their production. In May 1992 the financial director of Ugol told the local newspaper that the mine has been in contact with Austrian, Korean and American companies. Three companies from these countries had informed Ugol of their interest in investing in it.

The involvement of foreign companies was not implemented, instead Russian private companies and persons started to purchase shares from the workers. The two main parties in this were: a Moscow based company “Trade” and a local businessman called Feodorov, who in 1996, when Ugol had difficulties in selling their own coal, because of low prices, came to Zamotin and offered to purchase shares from Ugol, about 16% of Ugol shares were owned by the company. Zamotin accepted Feodorov’s proposal, and the mine received the money to pay the salaries of the workers.

The delay of salary payment happened during the summer of 1996 and lasted about 6 months, thus, the workers were no longer happy with Zamotin. Suddenly, Zamotin, got tired of the company and left it. He never returned.

The main reason for the problems of Ugol was the non-payment of domestic customers. Ugol only received from 9 to 13 % of its sales in the form of cash. The remaining 87 - 91% was barter, voucher and other payments. In order to survive without bankruptcy the mine needed money for salaries (13%) and taxes (16%).

Feodorov solved the acute financial problems of the mine, but he did not get along with the next director of Ugol, who was the previous chief engineer. This replacement by the chief engineer was normal practice during Soviet times as the next in the line of command was the mine's chief engineer; thus, he automatically became the new director. Tihonov was a good engineer, but for him the financing part of the business was unfamiliar.

The conflict with Feodorov began when he refused to accept the validity of the 16% share Feodorov had bought from Zamotin. According to Tihonov the shares were bought illegally. He was ready to take them back, but he did not want to pay anything for them. Feodorov began to cooperate with "Trade" from Moscow, who together bought more and more shares. Feodorov even appeared at the mine and invited all the workers to the auditorium of the mine and offered to purchase the shares. There were no shares printed on paper, but every owner had a small book like a bank savings account book where the shares were marked. Feodorov took away the book, gave cash to each owner, and in that way together with Trade was able to achieve more than a 50% share of Ugol.

This was not accepted by the new general director (Tihonov), who instead found a new partner in Moscow called "Mokim". Ugol and Mokim made a secret agreement to cooperate, and divide the company's shares so that Mokim would have 50%, and two other companies, controlled by Tihonov, would also have 50% (20 + 30%).

There were also during this time (autumn of 1998) rumours in the local press that the Governor of the region was trying to bankrupt the company, because he had raised the electricity price retroactively. The workers accused the governor of this and wrote in the local press that the mine was being forced into such a situation that they had to either choose Trade or Mokim as their partners. Angrily the Governor denied such allegations, and published the secret cooperation plan, in which Ugol and Mokim agreed to bankrupt Ugol, and after that found a new company, which would take care of the mine. These papers the Governor had received from the police, who had made a house search at Tihonov's home.

Mokim and Tihonov were never able to bankrupt Ugol; instead, a legal war was pursued. There were more than 200 lawsuits between Mokim, Trade, Ugol and others. Mokim and Tihonov had their shareholders' meetings, Trade and Feodorov theirs. They chose different directors, different boards etc. However, the actual mine was under the control of Mokim and Tihonov. Different courts all over the country gave their decisions, but always the other party, who had lost the case there, made an appellation to higher courts, and intermediate decisions did not gain any lawful power.

The final battle over Ugol's ownership was solved outside the courthouse. As a matter of fact the winner was decided by the local Governor, who started a lawsuit against the owners of Mokim alleging that they had tried to assassinate him. The main owner of Mokim left the country. On December 22, 1999 the Governor ordered the police to attack the main administration building of Ugol. About 700 police took control of the building and brought out the old management, and opened the way for the new management to come in.

After seizing power in this way Feodorov and Trade immediately appointed the Chairman of the Miners' Union as the Director General of Ugol. At the same time they appointed as Chief Operative Officer, Kolos, a long time veteran of the coal industry, who had previously worked in the neighbouring mine as a deputy manager. Kolos had joined the Feodorov and Trade group earlier, and was nominated in one of the shareholders' meetings as the Director General of Ugol, but since Mokim and Tihonov were in charge, they did not accept the appointment.

The dual structure of the top management meant the workers accepted the new owners. This was difficult, because according to Kolos some female workers were spitting and hitting him when he walked at the quarry because they were loyal to the previous owners. Some men were arrested and taken away from the mine.

The production of the mine was stopped for three days. During these three days Kolos went to each worker and tried to convince them individually to continue to work. He stayed day and night and talked constantly so much so that he lost his voice. His strategy was to go to old workers who had worked with him on other mines. After getting their support Kolos asked them to start to work. Younger people started to follow their older colleagues, and step by step the whole mine started to function once again.

The new management's main task was to start the production properly. The new owners guaranteed investments, but in order to get the money the mine had to work. The same was requested by the Governor, who personally received the new Chief Operative Officer (COO) Kolos, and requested that the mine found stability and brought tax revenue into the region's and towns' budgets.

Discipline was the key issue after the takeover. Thieves and drunks were dismissed from duty. Property was dirty, and it was cleaned and later renovated. As Kolos was the COO the nominal Director General of Ugol, Eliseev, helped him to cope with the personnel. As the Chief Executive Officer of Ugol he was the assistant to the COO.

One of the biggest things in getting the mine running profitably was international exports, which were taken care by Trade. They had connections

in the world coal markets, and started to promote Ugol abroad. During Tihonov and Mokim's time exports accounted for 25%, but one year after the takeover it was 50%. With the help of the currency income the mine started a renovation program. For instance during the first half of 2000, the mine spent 6 MUSD on foreign equipment. As a consequence of that production efficiency rose and so did productivity.

The cooperation between Feodorov and Trade has continued since the Ugol takeover. The mine owners have become loyal partners of the Governor. A corresponding formal agreement of cooperation between the region and the Ugol group has been signed, as it has been by the other main coal mining enterprises of the region. The key issues in these agreements are: investments and subsidies from enterprises to enhance local social welfare. Even the increase in salary is fixed in some of these agreements. In return for these agreements the companies receive free scope to run their businesses without excess pressure from the Governor's office.

As a result of this regional cooperation Ugol has bought some other companies outside the mining business with the help of the governor. Ugol is now a concern consisting of several branches. In addition to the Ugol mine, they own now another mine, Coal, in the region and a local machine building factory. Furthermore, the Ugol concern has founded an insurance company, a bank and a restaurant. At the special request of the Governor, the Ugol concern has taken control of the local airport an activity which it is running and developing. Altogether, the Ugol holding company owns, to date, about 90 companies in the region. The top management of Ugol calls the local Governor by the nickname "Papa" (the Father).

A special line of cooperation between the local authorities is the subsidies, which the Ugol concern donates to the local town, region and administration. These subsidies are additional to the taxes defined by the law. Today, by the request of the region's Governor, Kolos is also the Mayor of Ugol town. He runs the mine as a Chairman of the supervisory board and at the same time he is officially the Mayor of the Ugol town. He spends about half day at the mine and half day working for the town council. The former Ugol mine's Financial Director is now the Town Treasurer.

According to Kolos cooperation with the Governor is "obligatory". If they didn't cooperate the Governor could use his control machinery to create difficulties for the local business community. Thus, everybody who wants to avoid trouble from the authorities cooperates and donates money to the needs of the region.

5.1.2 Ugol's operational development during the transition

Figure 19: Russian coal production development during the transition shows the production of coal in Russia from 1988 to 2001. The following comments can be made: The production of coal has diminished from 391 MT to 270 MT, meaning a 31% drop in production. Underground coal production has fallen from 206 MT to 96 MT, e.g. 53%. Surface (open pit) production has come down from 185 MT to 174 MT, e.g. 6%. The lowest production figure for the whole country came in 1998, 232 MT, but from then on production has gone up by 16%, from 232 to 270 MT. Underground production has gone up by 15%, surface production by 16%.

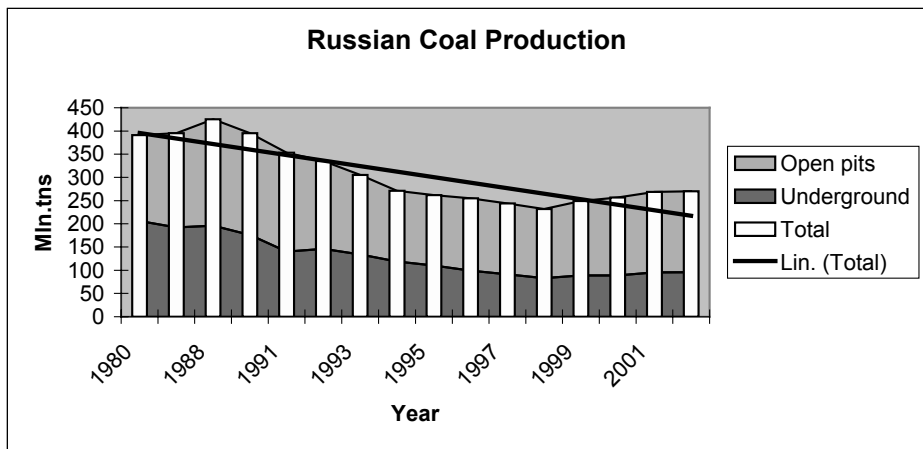


Figure 19: Russian coal production development during the transition

Ugol has had the following development of production as presented in Figure 20: Coal production at the Ugol mine.

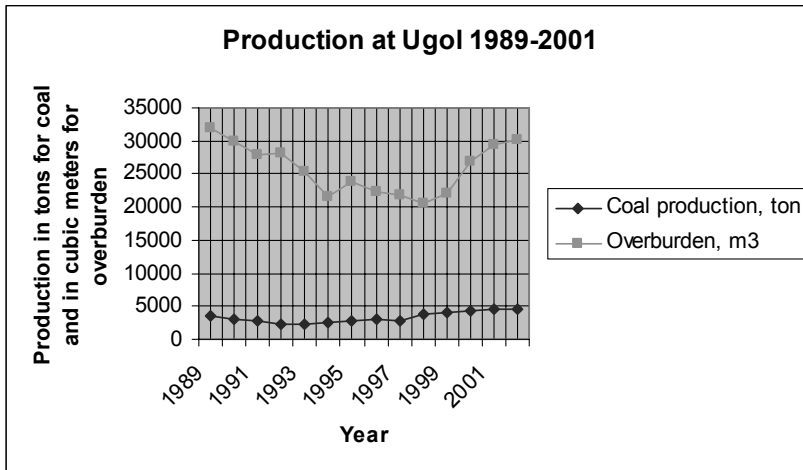


Figure 20: Coal production at the Ugol mine.

The above figure confirms the claim of the new management that the production of the mine started to rise after 1998. Both the overburden and coal production have grown since then²⁹.

It is worth while mentioning that up to 84% of the sale of coal is now conducted in cash. Earlier barter and crediting has ceased and only some smaller local power stations get cooking coal against special payment agreements. Such arrangements were made at the request of the local Governor.

The personnel development of the mine during the transitional period is presented in Figure 21: Ugol's personnel development.

²⁹ Overburden = rock that must be taken away from the mine in order to excavate the coal. Overburden plus coal is the total excavation of the mine, out of which only coal brings revenue. Overburden in waste material.

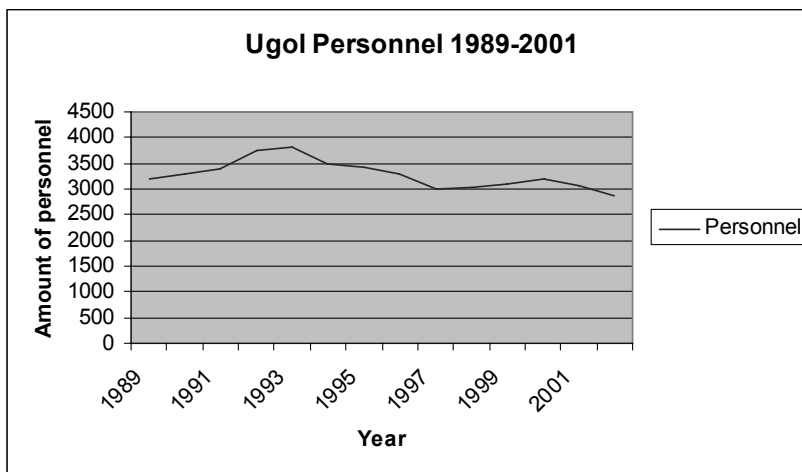


Figure 21: Ugol's personnel development.

The amount of workers rose at the mine in the beginning of 1990's, then started to diminish, and in 1997 dropped to 3004 people. Then the number of personnel rose somewhat, before it came down to 2882 people. The amount of workers is going to fall further in the future alongside the modernization program. However, there will not be any major changes, because the mine has obligations to the local regional government not to increase local unemployment.

Based on the above figures we can calculate the work productivity of the mine. It is presented in Figure 22: The Ugol mine's productivity development. Both the overburden and the coal output are presented as mine production.

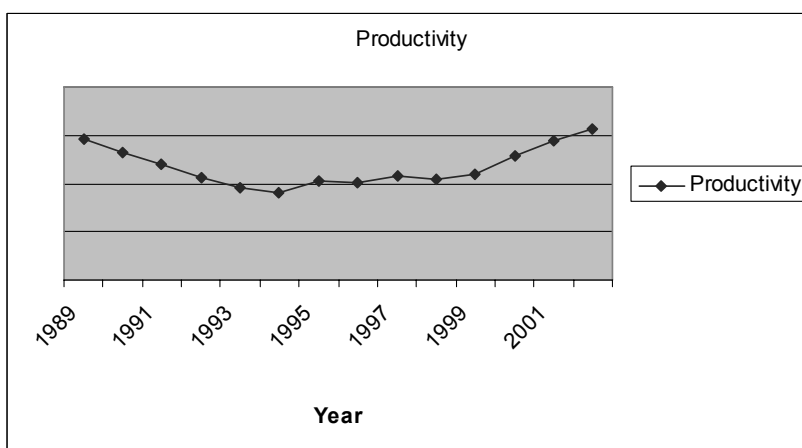


Figure 22: The Ugol mine's productivity development

It is quite clear that the productivity of the mine has started to rise since 1998. The mine management thinks that productivity rose for three reasons: mine modernization, the local Governor's help and the Russian Rouble's devaluation. According to the mine's Director General the biggest individual reason was the Governor's nomination in 1996.

Ugol today is a part of a holding company called SDY. Figure 23: SDY's holding structure shows the principal organizational figures of the new holding.

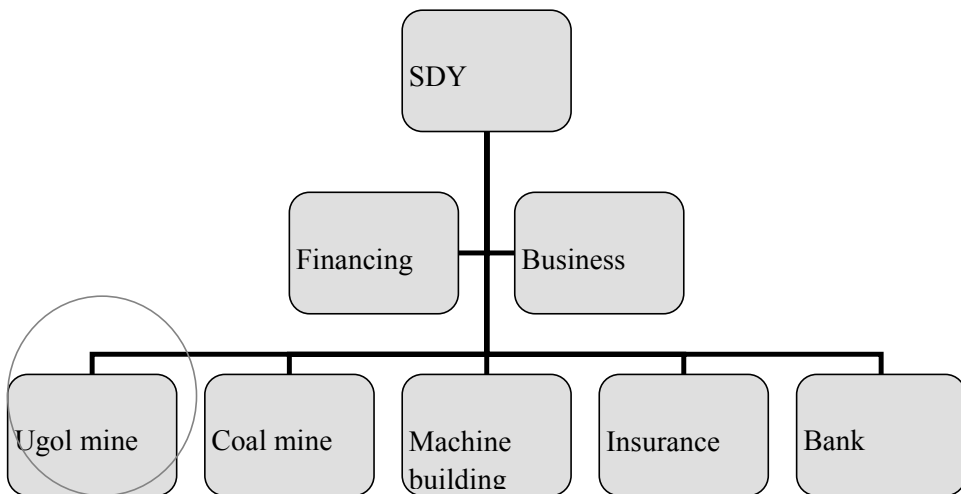


Figure 23: SDY's holding structure

The chairman of the board of SDY is the main owner of the holding company, Feodorov as indicated in the Ugol's history in Chapter 5.1.1. He is also the Chairman of the board of each subsidiary. The holding company cooperates with Trade, who mostly sell the coal to end users abroad and partly domestically. Trade also finances some of the equipment purchases of the company through its own leasing company.

Ugol as an enterprise is only involved in the raw material business. They do not have any own processing plants and their organizational structure is not vertically integrated. The coal produced by Ugol goes to domestic and foreign processing plants, which use Ugol coal for power stations.

5.1.3 Ugol – an analysis of its organizational field

When Ugol's history started in the early 1990's, the organizational field of the company resembled the field of hundreds of other Russian mining companies. The initial organizational field of Ugol is presented in Figure 24: The organizational field of the Ugol mine in 1990. The most influential authorities (governmental ministries, glavk and political authorities), circled by a dashed oval, were closest to Ugol, and Ugol's main task was to "give to the country the coal the country needed". Less influential actors in the organizational field are positioned on the outside the dashed oval circle.

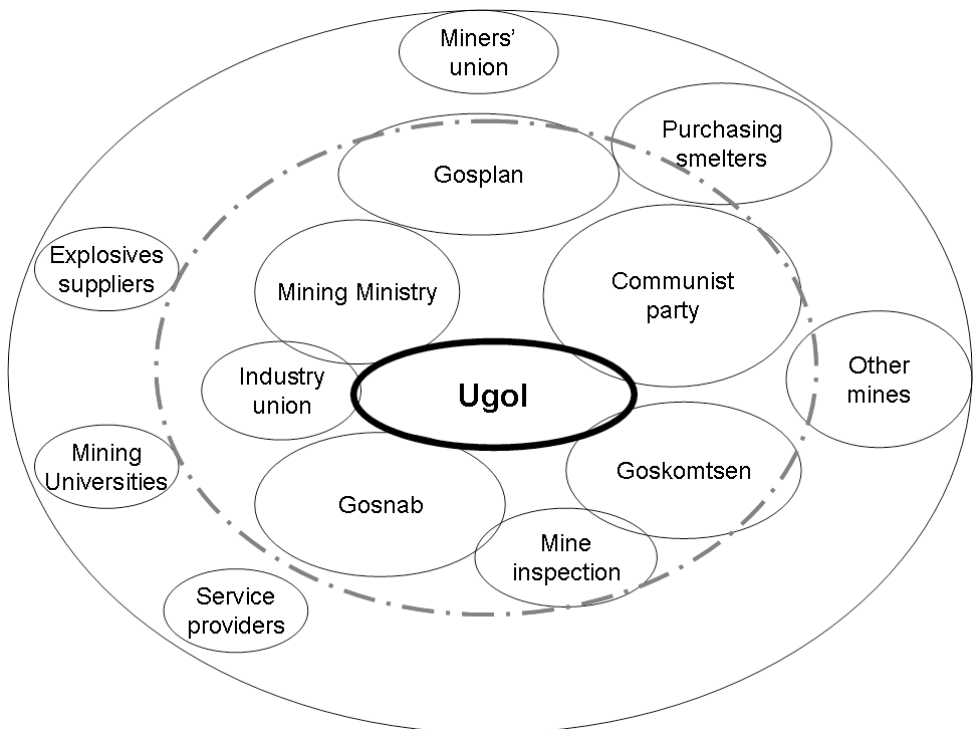


Figure 24: The organizational field of the Ugol mine in 1990

The autonomy phase of the transition gave Ugol independence from the central authorities. Figure 25: The autonomy phase of the Ugol mine presents the organizational field of the independent Ugol mine. All governmental authorities have disappeared, and the mine is runs its operations at an autonomous level. Mokim the new owner prospect/operational partner had appeared, but cooperation with Mokim at this time was restricted to partnership, because of the strong position of the management of Ugol.

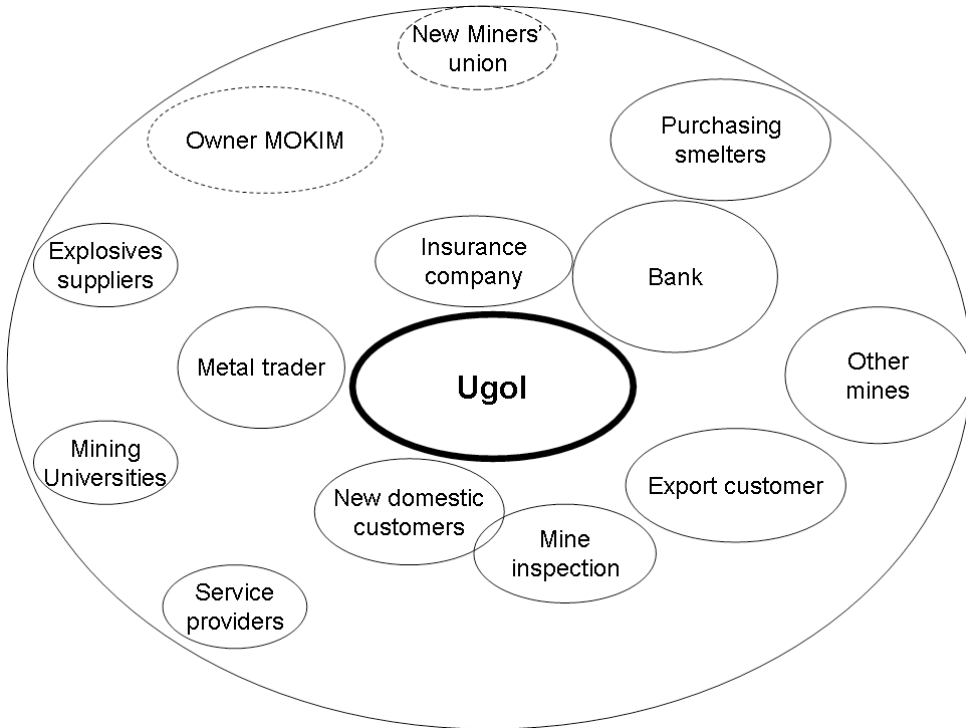


Figure 25: The autonomy phase of the Ugol mine

The developments in the 1990's and at the beginning of this century changed the organizational field of Ugol to that presented in Figure 26: The current Ugol organizational field. SDY has seized power, and sales, marketing and financial issues are solved within the holding structure. Ugol is now a production unit for the holding company.

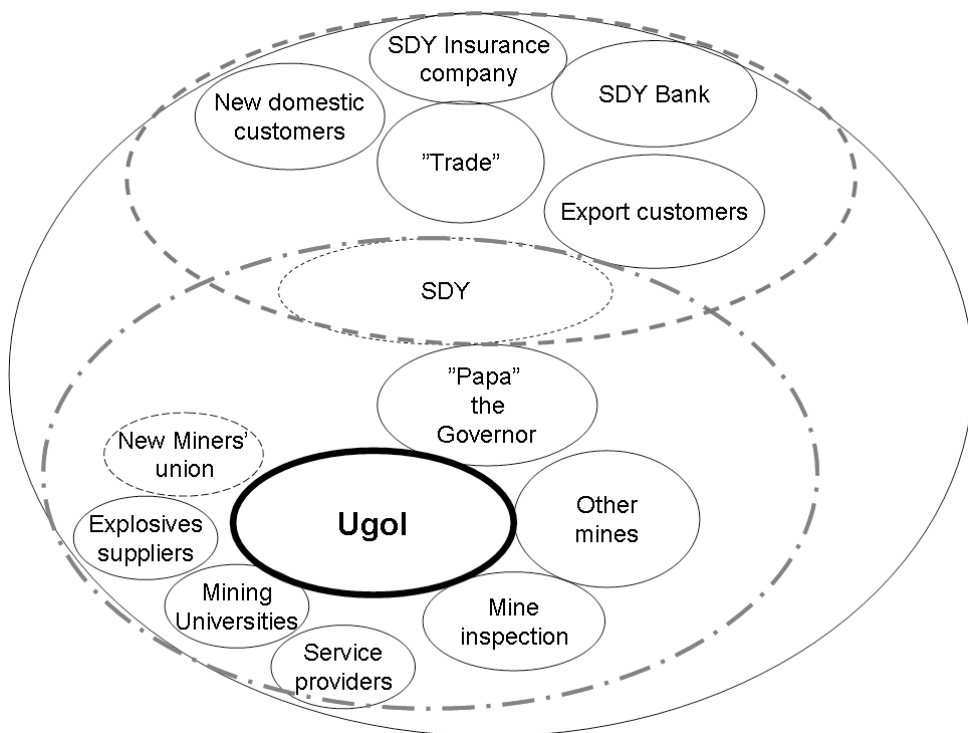


Figure 26: The current Ugol organizational field

In Figure 26: The current Ugol organizational field the dashed oval circle surrounds the closest actors to Ugol. Within the dashed upper oval circle there are actors, which are either run by SDY, or with whom Ugol now works through SDY, the holding company.

In the current Ugol mine a special feature seems to be its close cooperation with the local governor. The mine tries to please the Governor in order to avoid any local “problems” in its operations.

5.1.4 Ugol – an analysis of the changes during the transition

The results can be grouped into three areas: structural changes, work quality and improvements in workers’ lives.

There are several structural changes First of all the company is now independent, which is stressed in many interviews. Ugol is relatively free from earlier restrictions (note that the respondents compare the enterprise to Soviet times). Thus, it appears that the mine is able to operate freely. Secondly, there have been several structural changes in the organizational structure of the company. There are new departments like marketing, sales, purchasing, which

were all missing during the Soviet era. Furthermore, the maintenance function must have been developed due to the influx of new western equipment bought by the company after the start of investment program.

Work quality is also seen to have improved throughout the company. Production methods have improved, the management system has developed and mechanization and automation have raised the level of quality. The personnel have more pride in their own work.

Finally, the life of the average worker has improved. This is partly due to the new equipment, but is also due to investments in the working place. For instance, the mine's own restaurant has been fully renovated, and now serves higher quality food with professional chefs preparing it. At the same time the company invests money in the company's own recreational facilities so that workers can spend weekends and evenings using the company's sauna and swimming pool.

The main reason for the above mentioned changes seems to be the new way of life in Russia and its market economy. The mine's independence and the struggle surrounding that led to the need to restructure the company. The owners request profits, and without profitability there is no future for the company. Planning is an essential fact of life (as it was in the Soviet Union) and the strategy of owners is of central importance. However, the plan today is about creating profit rather than calculating the amount of coal needed to be produced, as it was in Soviet era.

Quite clearly it was the new owner and the top management of the mine that were the main sources for implementing the changes that occurred. In addition the local regional government was seen as instrumental in providing help, as well as in finding foreign suppliers of equipment and giving new insights to mining methods.

There are a lot of things remaining that need to be improved and changed. However, it seems that the cultural and political environment of the mine does not allow these needed changes. Inertia from the state, region and even equipment suppliers does not support these required changes. Furthermore there is a lack of money for investment in new projects.

The changes needed are required for the production system of the company. They need new equipment for the mine and, in addition to that, less bureaucracy from the authorities.

The main reason stopping the new improvements is a lack of money. The secondary reasons are interference from the local authorities and the lack of a world class management team.

5.1.5 The conclusion of the Ugol story

Development during the autonomy phase of transition at Ugol was a fight for survival. They had to make structural changes because otherwise they would not have survived through the period. The changes made have been mainly of a reactive character; they are responses to the liberalization process and the Yeltsin government's stabilization process, which can be seen as the jolts towards creating institutional change. The structural changes identified mean the birth of new institutions. New templates for organizing the enterprise were born. New archetypes for behaving within the enterprise and within its business environment were developed. At the same time old institutions like cooperation with the Coal Ministry and other Soviet organizations disappeared, e.g. they were de-institutionalized.

New organizational practices started to influence the enterprise. The institutional changes, which were made during the autonomy phase of transition, were at first ad hoc changes just to survive, but later on the mine started to copy other mines in the organizational field, and also to strategically plan its own future. Some new institutions were created by the mine itself (open office space), or copied isomorphic from the outside world, for instance from the supplier of imported equipment. The mine started to become homogenous with other coal producing mines, with other members of the organizational field, because of these isomorphic changes.

Once the mine was transferred from Mokim to SDY, second order privatization had occurred. This change led to a new organizational structure; the holding company structure. The new corporate board started to plan the future of the mine, and the whole holding company. Cooperation with the players in the business environment, in this case with the local Governor, was the key issue for the mine's prosperity. Although they had to pay some additional "voluntary" taxes to the local administration, it was worth while, because then the administration did not put too much pressure on the mine. It was better to please that business environment because then you could do what you wanted to in the business. Thus, legitimate formal structures contributed to the survival of Ugol.

Although there have been some structural changes, there are still some old Soviet institutions in place. One of them is the use of the "selector" phone negotiation system. This means that every Monday morning all the managers of different departments report to the mine manager what has happened in the production recently. Additionally, the individual departments hold their own selector meeting regularly.

Institutional change, which can be identified in the Ugol case is either in the

form of institutional formation (new structural departments), de-institutionalization (the death of old organizational practices) or re-institutionalization (the local Governor's status as the local Communist Party leader). In a way the position of the governor, who allied himself with SDY, is comparable to the position of the old local Communist Party leader. Thus, the local influence of the Governor over the enterprise resembles the old structure, and we can speak of the re-institutionalization of this institution.

As for fads & fashions there was a short-lived experiment of the enterprise to purchase commercial goods for the workers of the mine in the beginning of 1990. The mine bought micro-wave ovens and other similar goods from abroad and delivered them to the mine's workers. Such appliances were not available for the workers in Ugol region, and in order to support the workers this organizational practice was started. However, this organizational practice did not last for long.

All of the three transition phases defined in this study, e.g. autonomy, privatization and consolidation can be noticed in the Ugol case. The autonomy phase lasted from 1989 till 1998, when Mokim took over as the new owner. Right after privatization they started to the modernization programme, which was based on the new Ugol development strategy devised by Mokim. This short period was interrupted at the end of 1999, when Trade seized the company. Trade took over immediately and continued the mine modernization started by Mokim with the purchase of new equipment under new management.

The consolidation phase was also included in the Ugol case. However, this consolidation was only horizontal in its character, e.g. SDY owns other coal mines in the region in addition to Ugol, but no processing plants, e.g. power stations. This is explained by the strategic intent of the owners to keep the coal business as an independent raw material business. That is also why the concern did not acquire power plants to form a vertically integrated business structure. Later on the owners formed a concern out of Ugol by acquiring other assets like machine building factories and created banks and insurance companies, which now take care of the concern's internal and external financing. The new owners have brought into the company pro-active ways of behaving and strategy planning.

The organizational field in which Ugol is now a member has developed in several stages. At first, the Soviet ministries and industry unions were dismantled. Ugol lost its main partners, who had regulated its operations. The open space around Ugol during the autonomy phase of transition was filled by new enterprises and organizations, who took the place of the old Soviet structures. During privatization Ugol ran its operations together with Mokim, and only when SDY won the battle did the consolidation of the coal business

happen. The organizational field around Ugol was then filled by SDY departments or subsidiaries. Out of the old Soviet structures only the State Mine Inspection was able to secure its place in the changing organizational field.

5.2 Case 2 – Mineral

5.2.1 Mineral's path to its current situation

This is the Mineral's history presented as a narrative written by the researcher:

Mineral is a company located in the Arctic region of Russia, which produces a mineral. The mineral will not be named. The mine was founded in 1929 by the Soviet government. The first people to work in the mine under the management of expert miners were prisoners and people deported to the Soviet Gulags³⁰.

Since the mine was located in the Arctic area, and there were no people living there, all the infrastructure of the area had to be constructed. Roads, railroads, houses were to be ready before the actual mining operations and the transportation of the concentrate was possible.

When the Soviet Gulags were demolished a lot of people who had been deported to the mine area, stayed there, because the mine was regarded as strategic for the country. Khrushchev's government's policy was to pay an additional salary to those miners who worked in the harsh conditions of the Arctic. Additionally, the people did not have any place to return to. Thus, many of them stayed there and made their living in Mineral.

An interesting but seldom told fact of Mineral's mining methods is that there was a program in the 1960's to use nuclear³¹ explosives to produce mineral at Mineral mine. A new deposit was used for the test and a test mine was built there for a nuclear blast. It took a long time to develop and open the shafts, but when they were ready, a small directed nuclear explosion was arranged. After careful ventilation of the shaft the mineral was studied. The mineral had fragmented so well, that the primary crushing phase of the

³⁰ See Courtois et al., 2000, where detailed information about the use of prisoners in the RMI's development is given for instance in Kuzbass, Norilsk, Kolyma and Vorkuta.

³¹ Such projects were run in Donbass (The Ukraine), Sayane, in the Murmansk, as well as the Ural region. Academic Nikolai Borisovich Nifontov was the leading mining expert who ran the tests.

mineral production was not needed. The raw material went directly from the mine to the enrichment. This lowered production costs tremendously.

Only one negative side was noted. The building of the shafts and the ventilation of the drifts after the nuclear explosion took so long, that constant serial production of the mineral was not possible. The breaks in the production chain were ultimately considered to be too long and the use of nuclear explosives for mineral production was not continued.

Of course the production of mineral continued in Mineral's other mines during the nuclear test period. However, the mine that was used for the nuclear blast will never be reopened for mineral production.

In 1994 a limited company called Mineral was formed. This happened during the worst period in the mine's history, between 1991 and 1996. During those years the local Regional Property committee was the main owner of the mine, but they did not participate in the development of the mine. The committee requested that unemployment cease rising in the region, but was not able to arrange financing for the mine.

There were four reasons for the extremely difficult situation of the mine in 1994: The price liberation of 1992, which led to reduced working capital and the non-payment of the domestic buyers, high railroad tariffs, which in some cases were higher than the production costs of the mineral, a lack of export to the COMECON-countries³², and the drop in demand for the mineral due to lack of overall demand for the metal in Russia.

Consequently, the mine started to export concentrate to Western countries to earn money. This was difficult in the beginning because the Western processing plants had different material standards than Mineral. The mineral concentrate only suited Soviet style smelters. By launching a concentrate improvement plan Mineral was able to start to export the concentrate.

Despite the increased export of the mineral concentrate the mine ran up a large debt to, e.g. the Russian railroad network and the future for the enterprise became uncertain due to the non-payment of those debts.

At this time, in summer of 1994, new private owners became involved with Mineral. At first they acquired a 20% stake in the company, which was privatized by a decree of the Russian government. According to the contract the new Moscow based owner, Wave, was to invest a significant sum of money in the development of the enterprise and the local mining town over a period of two years in exchange for the right to purchase said 20% stake in Mineral.

³² COMECON e.g. Council of Mutual Economic Assistance was the Eastern bloc equivalent to European Economic Community.

According to Mineral's General Manager, Petrov, Wave saved Mineral from bankruptcy in 1994 as they paid off most of Mineral's debts and duly implemented a new strategy of improved production efficiency.

The new strategy was implemented at the request of new owners consisted of three major strategies, and four auxiliary strategies. The three main strategies were: a product strategy, a process strategy and a personnel strategy. The four auxiliary strategies were resource, competition, quality and systems strategies.

The technical and social policy of the enterprise supported these strategies. In the product strategy the main issue was to define the amount of production for the coming years from 1996 to 2005. This estimate of future production was based on the production infrastructure, exploration and internal logistics. The process strategy was aimed at optimizing the company's behaviour in the marketplace. This was based on the product range, advertisements, sales organization and external logistics. The personnel strategy's target was to find the right people for each level of organization including the optimization of the amount of personnel, a policy for the development of young managers, education, training and the rotation of personnel and the motivation of the personnel.

The resource auxiliary strategy was aimed at the use of ore resources, purchasing resources, financing resources and intellectual resources. The competition auxiliary strategy's objective was to produce competitive products and analyze competitor policies. The purpose of the quality auxiliary strategy was to ensure of the correct product quality. Finally, the systems auxiliary strategy was to define the relations of the company to the government, to the owners, to the political parties and to the people.

The new strategy made it possible to define all the goals of the company and achieve the chosen goals in an agreed time period, as well as foreseeing the use of resources, and delegating responsibility to the personnel.

In the strategy the social dimension is very important. It ensures the stable development of the mine at the same time as ensuring the constant payment of taxes to the regional and federal levels of government.

The main issue in the development of Mineral was the debt restructuring agreement, which was made with the help of local governor in 1997. When Wave took over the mine they nominated a new manager from Moscow to run the company. Together these two things, debt restructuring and new management and of course the new strategy turned around the bankruptcy directed development of Mineral. The debt restructuring program, agreed with the governor, also included a commitment from Mineral that unemployment would not further increase in the region.

Further development of the company took place in 1999. Then the owners of Mineral, Wave, were able to purchase the some Russian smelters, which had been processing mineral concentrate, and in that way they were able to form a holding company with a vertically integrated structure. Mineral had been a raw material producer for the processing plants, the products of which were exported from Russia. Mineral continued to export part of its concentrate, but the strategic path of the holding company requested that the raw material be processed at the holding's own factories in Russia.

At the same time the local Governor was nominated Honorary Chairman of the non-profit based association for the continued development of cooperation between the producers and processors of "Mineral's" mineral. He also continued to work as the Governor of the region.

As a result of the changes in Mineral, the stabilization of the company has been achieved, a new generation of managers has taken over the company and Mineral supports the local social policy. Additionally, the vertical integration of mineral production has been completed.

5.2.2 The operational development of Mineral

The factual production of Mineral has developed according to Figure 27: Mineral's production from 1988 to 2002.

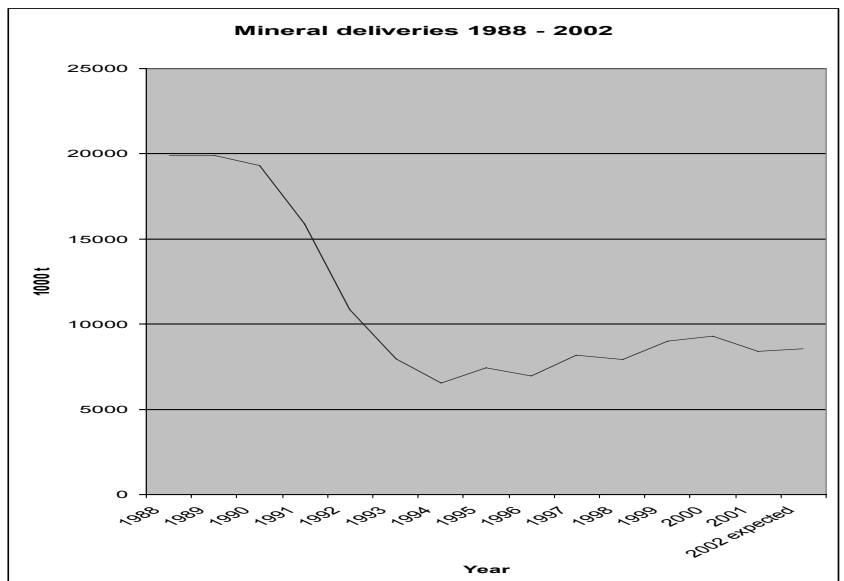


Figure 27: Mineral's production from 1988 to 2002

Production went down drastically from its 1988 level of 20 million tons down to 6.5 million tons by 1994. After the sudden drop from 1988 to 1994 production started to pick up and the expected production for 2002 was 8.5 million tons. According to the top management of the mine this is the result of a new strategy and investment program run by the leadership of Wave.

At the same time the personnel of the company has diminished in line with production. Figure 28: The development of Mineral's personnel from 1988 to 1999 shows the amount of personnel at the mine during that time.

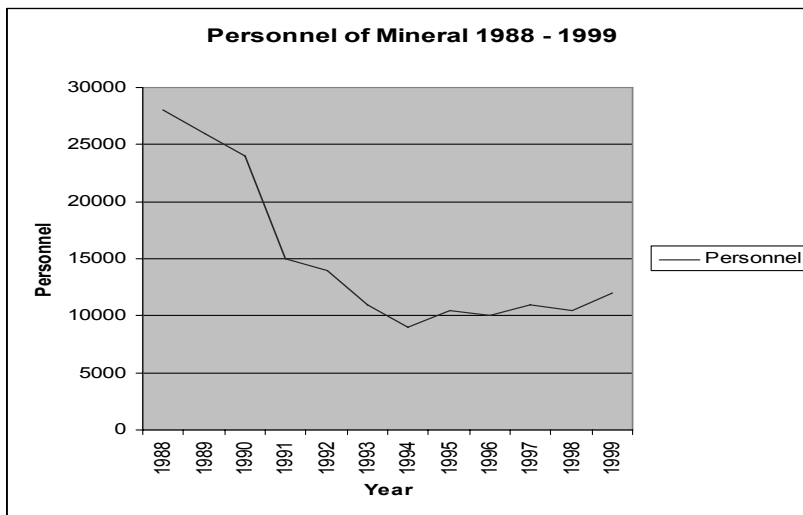


Figure 28: The development of Mineral's personnel from 1988 to 1999

Based on above figures we can calculate the development of the productivity of Mineral per person. The productivity is presented in Figure 29: The productivity of the Mineral mine.

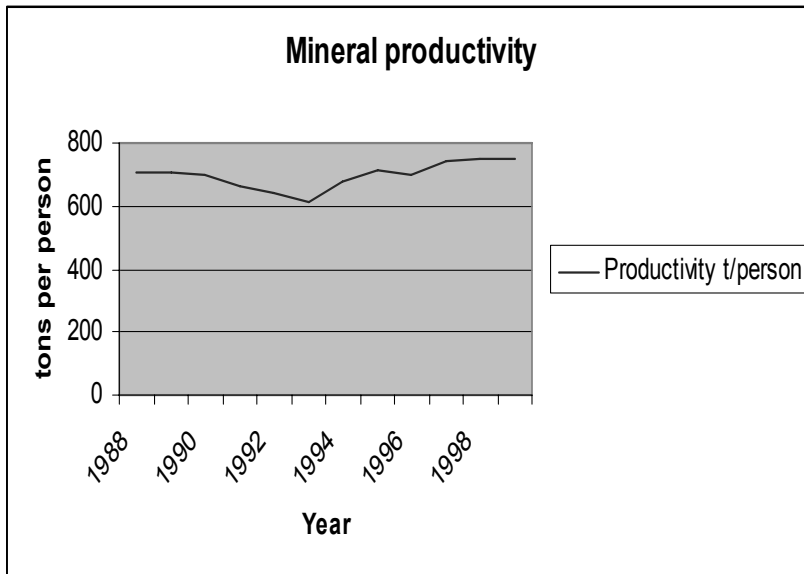


Figure 29: The productivity of the Mineral mine

The productivity of the mine decreased somewhat during the first half of the 1990s. The high decline in mineral production is offset by a similarly high rate in the reduction of the personnel. The lowest level of productivity occurred in 1994, exactly the same year when the production of mineral was at its lowest together with the lowest amount of personnel at the mine.

5.2.3 Mineral's organizational field development

The roots of Mineral's management system are in the Soviet Gulag management system. When the mine was founded in 1929 the first workers were prisoners, mainly the political prisoners of the Gulag. The Soviet Union founded a gigantic industry during the first two five year plans and the majority of the workers were prisoners, who did not receive any proper pay for their work. They created the Mineral mine free of charge with their work and in many cases with the loss of their lives.

The Mineral mine's organizational structure during Soviet times was standard for Soviet enterprise. The Director ran the business according to Stalin's *yedinonachlie* principle. He was responsible for everything that was going on at the mine. The organizational structure functioned with the smallest amount of delegation.

The current organizational structure of Mineral is presented in Figure 30: The organizational structure of the Mineral mine.

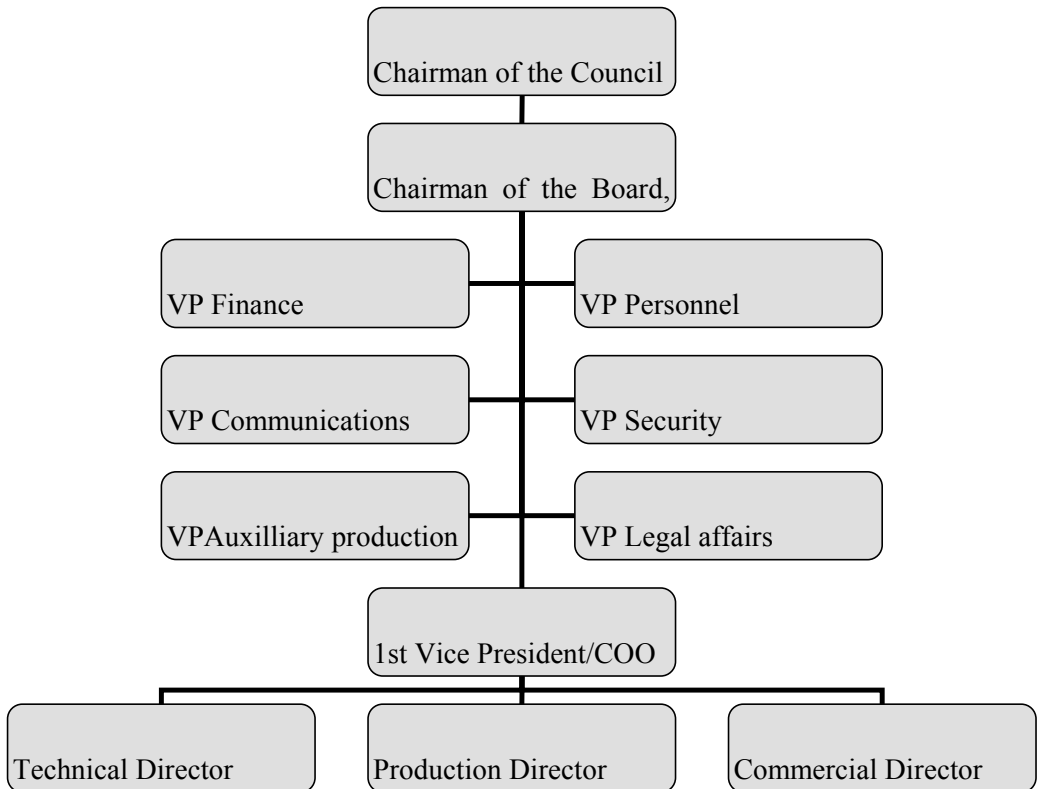


Figure 30: The organizational structure of the Mineral mine

The new organization is similar to the Soviet style of organization. It functions from the top down and the only change is that new departments have been added to the old structure. These new departments are for purchasing and sales, and for financing. No other major changes have occurred with the exception that the Chief Engineer has lost his position as automatic substitute for the Director General as was the case during the Soviet era.

The meso-organizational structure of the mine has ended up with vertical integration, and raw material is now produced for in-house purposes. There are some sales to outside sources, but the strategic aim of the management is to get rid of direct raw material sales to extra-group customers. The mesostructure of the group is presented in Figure 31: The mesostructure of the Mineral group.

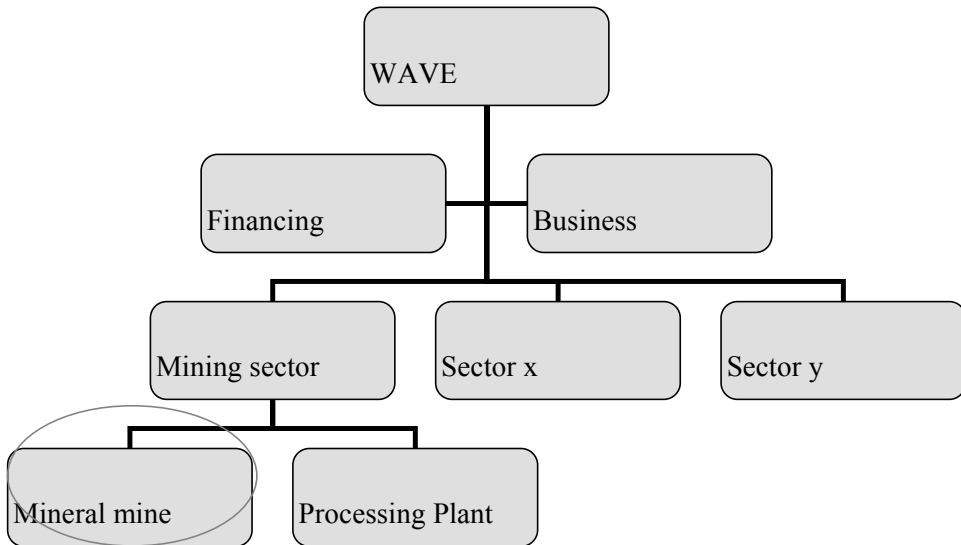


Figure 31: The mesostructure of the Mineral group

When Mineral's autonomy phase in the transition began in the early 1990s, the organizational field of the company resembled that of hundreds of other Russian Mining companies. The initial organizational field of Mineral is presented in Figure 32: Mineral's organizational field during the 1990s. The dashed oval surrounds the most influential partners of the mine. They are government authorities, who were able to give normative orders to the mine during socialism. Other actors in the organizational field are positioned on the edge of the bigger oval. They include suppliers, processing plants and other operational partners.

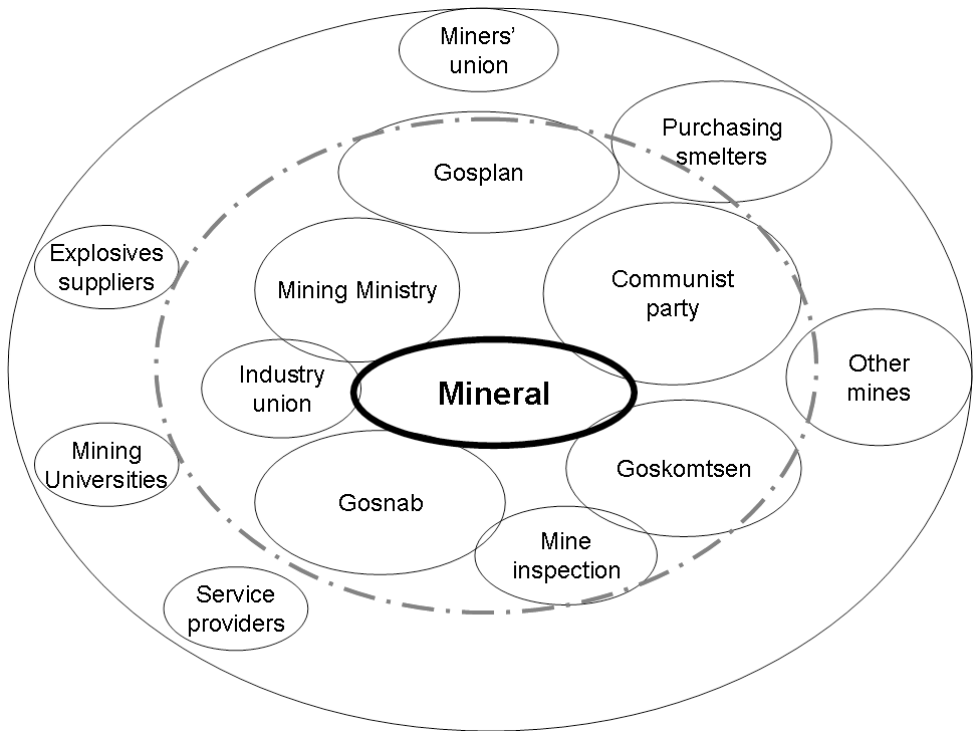


Figure 32: Mineral's organizational field during the 1990s

The autonomy phase of transition gave Mineral independence from the central authorities. Figure 33: The organizational field of Mineral during the autonomy phase of transition resembles the organizational field of the independent Ugol mine. The open space left by the old Soviet government offices has now been filled with new partners offering services, supplies or other assistance to the mine, as well as direct customers purchasing raw material from Mineral.

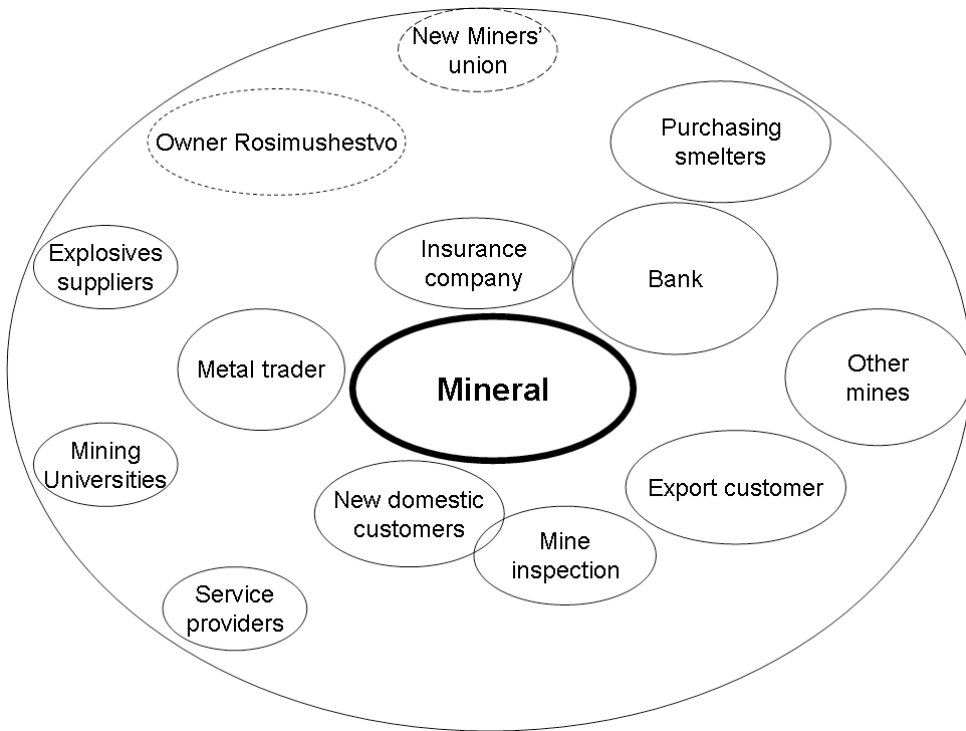


Figure 33: The organizational field of Mineral during the autonomy phase of transition

The developments of the 1990s and in this century have changed the organizational field of Mineral to that presented in Figure 34: Mineral's structure at the beginning of this century. Wave has taken its position as Mineral's central authority, and major operations go through it.

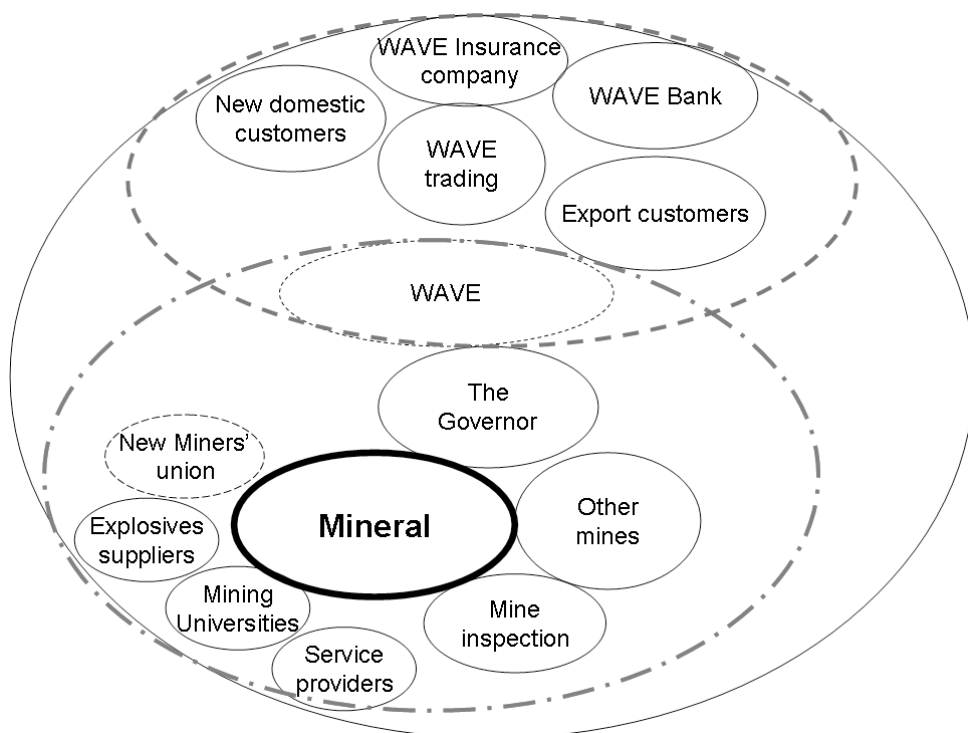


Figure 34: Mineral's structure at the beginning of this century

Wave takes care of the managing of the financing, sales and marketing of the goods produced by Mineral. Mineral no longer has direct contact with the banks, insurance companies or foreign buyers of its production. Mineral has lost its short-lived autonomy.

5.2.4 An analysis of Mineral's changes during its transition

The results of this study show that mainly structural changes occurred during the transitional period. These changes concern the organizational structure of the company through new marketing and sales departments, the application of new internal processes and new accounting practices. The key word according to our analysis is "plan". The company started to analyze what they are doing and started to plan what had to be done in order to thrive and applied new structures to achieve those plans. The enterprise has more freedom now than during Soviet times, but still needs to show loyalty, not to the communist party as during Soviet Union, but to the new owners, who finance the new working methods by investing money in those projects that increase the profitability of

the company. The agreement with the local regional Governor (regarding loan re-structuring) was the backbone of industrial peace. The bringing of new Western methods and equipment together with the re-training of the personnel has also improved the profitability of the company, which is essential in a market economy and in contrast to Soviet times when fulfilling the plan regardless of the cost and profitability was the main requirement of the mine.

The reason for such changes as explained above were the need to maintain the profitability of the company. It was so poor before the changes that were made that without the improvements the whole company would have collapsed. During the Soviet era you could run the business unprofitably but in a market economy that is not possible. It is now the new owner, who invested money into the company, who does not want to lose more money and demands a return on his investment that calls the shots. For instance, in order to increase sales, they had to find new buyers for their product. That was not possible without new marketing methods, new markets and sales departments.

The helping hand to pursue these changes was extended firstly by the local Governor and secondly by the new owner. The Governor's role seems to very important. It would seem that the new owner and the Governor have been cooperating to create a Wave group. The vertical integration has been both industry and government led. Furthermore, the new owner has been characterized as a new "ministry". They have taken the role of the old Mining Ministry in the minds of Mineral's staff.

Everybody seems to have wanted to change the company in some way, but the lack of money seems to have been a prohibitive element to that. There are ideas for further changes but financial restrictions prevent them. One interviewee commented that even today the company is run more from the production point of view and without a marketing department. This hints at the fact that marketing might be regarded as a function of distributing the products of the company, the amount of which are dictated by the production apparatus, not by the demand of the customers. Hence we can see the old Soviet way of thinking here.

The changes the respondents wanted to implement but were unable to due to those above mentioned financial restrictions were the need for modernization, e.g. the need to purchase efficient western mining equipment, which would be able to raise the productivity of the mine. Another aspect was to cut social expenditure by Mineral. For instance, the whole heating system of the mining town was run by the mine and all costs for that were on the shoulders of the mine. The mine needs to cut down on the social benefits it provides, which it inherited from the Soviet era. Furthermore, there is a need to start to motivate people either by increasing their salaries to a higher level

or making the salaries more dependent on the result of the company. This could be done through a bonus plan system.

The main reason for the lack of such changes is that there has been no money for such investment or incentives. The second reason is the prevailing old traditions whereby they still e.g. calculate their profitability with reference to the social benefits issue. There is a need for new ways of thinking both in accounting, social policy and in the marketing of the products.

5.2.5 The conclusion of the Mineral story

The changes, which occurred during the autonomy phase of transition, were reactive in their character. The mine reacted to the changes of the environment. The liberalization process and its balancing counter effect, stabilization, changed the environment of the mine so much and so fast that it merely reacted to those outside jolts. The mine adapted by creating new departments to take care of the functions, which had earlier been carried out by the Soviet system, and its actors, e.g. ministries. In essence old organizational practices were de-institutionalized and new ones were born.

Due to the isomorphic diffusion of new ideas and institutions the mine knew what it should do to improve operations but couldn't do that because of a lack of finance. When the mine was privatized, and Wave appeared as the owner, the financing to modernize the mine was available. An investment program and strategy was planned for the whole group, and Mineral was given the new equipment it wanted.

Together with Wave Mineral started to implement a new strategy, a new template of operations. This strategy is now planned in advance and the company is now seen as one production unit of a concern. The relative independence the company between 1988 and 1994 has been lost, and the company today functions as it did during the Soviet era, i.e. as a member of a vertically integrated concern (ministry). The new but old vertical integration of the company is a reincarnation of the old institution, and thus a form of re-institutionalization.

At the same time the profitability of the company has improved, and has allowed the company to maintain the old social benefits' program, although the top management of the company would like change that. However, due to the local regional Governor's decisive position in the company's structures, this does not seem to be possible for the time being. For Mineral it is safer to try to please the business environment it operates in. Thus, legitimate formal structures have contributed to the survival of the organization.

The inertia of the old institutions they still have, e.g. in accounting and in the social system are holding up Mineral's transitional development. Partly this has been caused by the local government, which opposes such a development and partly by old Soviet practices, which fight new practices and procedures on all fronts. The mentality of the people working at Mineral is also very hard to change, and the re-training of middle management is crucial for the future success of Mineral.

Currently the social benefit system is still partly run by the organization. However, the management of Mineral wants to get rid of this system step by step and if the governor allows it, this will be done.

The three phases of transition in Mineral as defined in this study are clear. From 1988 to 1994 Mineral was autonomous, but without any real direction or strategy. After privatization this strategy was brought into the company by the new owners, who started to consolidate the company into a vertically integrated structure. At the same time a modernization program was implemented. The key to the modernization program was financing from the new owners. Consolidation has brought into the company the proactive planning of the future operations.

Mineral's organizational field has changed dramatically. At first, the Soviet ministries and industry unions were dismantled. Mineral was cut adrift without its earlier main partners, who had regulated its operations. The freedom for conducting business around Mineral during the autonomy phase of transition was filled by new enterprises and organizations, who took the place of the old Soviet structures. After privatization Mineral ran its operations together with Wave, and shortly after privatization the consolidation of the business occurred and Mineral became a production unit for a vertically integrated holding company. The organizational field around Mineral was then filled by Wave departments or subsidiaries. From the old Soviet structures only the State Mine Inspection was able to secure its place in the changing organizational field.

6 DISCUSSION

The initial interest of the researcher was the transitional development of the RMI and its surprising lack of development (change) since the beginning of 1990's. The unchanging nature of the enterprises has been the abductive guiding principle of the study. For the enterprises studied during the field visit phase of this study the research shows that the poor profitability of the mines was the reason for their adoption of a passive strategy during the autonomy phase of transition. The liberalization and stabilization policies of the Yeltsin government were abrupt changes and the only thing the majority of the mines had the time and resources to do was to react to the enforced changes (cf Fortescue, 2000).

When the enterprises found new owners, through the privatization process the goals of future development were established, and a subsequent strategy for action was drawn (cf Beckert, 1999, 777). The passive reactive policy was altered and became a proactive policy initiated by the new owners of the mines with the aim of forming corporations according to Russian legislation. These corporations have themselves changed to become conglomerates, which consolidated their mines into mining groups within business concerns. In many instances these companies have become diversified firms where the mining business is only one of their divisions and their old organizational forms have been changed (cf Davis et al., 1994, 547, Thornton, 2002, 81). The proactiveness and the clear strategic intent of the new owners fits into the manipulative and heterogeneous propositions (where interest is based on rationality, selfishness, opportunism) of DiMaggio and Powell's (1983) New Institutionalism, but does not fit the passive and homogenous propositions (where interest is always institutional) of Meyer and Rowan's (1977) New Institutionalism.

As a result, the consolidation of the RMI resulted in either horizontal structures when the holding companies started to do business with raw materials, only, or vertical when the holding companies started to process the raw material their mines were producing and integrated their mining sectors vertically. The horizontal integration resembles the Western way of doing business in mining, and the vertical the Soviet (Global Business Report, 2005). Consequently, the mining industry of Russia has developed in two contradictory directions (cf Myllys, 1999). Such development is an anomaly in the existing new institutional theory, where organizational fields

are thought to develop a homogenous structure, culture, and output (DiMaggio and Powell, 1983, 64). However, the RMI, split into two groups and each has developed within these two groups towards isomorphism, e.g. organizations in each group resemble each other and show signs of mimetic isomorphism (DiMaggio and Powell, 1983).

In this study the development of the mining industry in Russia has been analysed, according to the New Institutionalism in organizational studies, as a changing organizational field (DiMaggio and Powell, 1983, 64). This organizational field was at the end of Soviet era highly institutionalized (both normative and cognitive). After the collapse of the state the organizational field faced immense institutional pressures to change. Old institutions were faced with the possibility of change by new institutions and some of them copied Western organizational practices. Most organizations in the organizational field resisted change and clung to the old (Soviet) institutions (cf Fortescue, 2000), and changed only those things that were imperative from the point of profitability of the enterprise. These were structural changes in the organization e.g. the financing departments or sales outlets etc.

In other words the formal structure of the organizations and their intra/extra organizational structure changed (see Meyer and Rowan, 1977, 363), but the actual/factual work within the organizations and between them stayed the same as before although there were some new actors like new banks, which were established following the abolition of governmental banks. The inertia (e.g. the stability of institutions, see Berger and Luckmann, 1991, 79, Zucker, 1977) found in this study in the RMI can be explained through the basic principles of the founders of New Institutionalism, e.g. Meyer, Rowan, DiMaggio, Powell and Zucker. Thus, it seems possible to use the “Western” new institutional theory in a transition study of previously planned economies.

Russian privatization began in the early 1990’s and was a process that brought some new actors to this organizational field. They started to implement their own archetypes of action and methods of organization in their organizations. The organizational field was split into two: one part of the industry was organized according to the vertical integration of enterprises, which was a direct copy of the Soviet method of organization (e.g. “universalism” see Silver, 1984, 62). In the group of Russian companies that chose the old vertical integration as their primary organizational form the old formal structures were reborn, even though there were no normative boundaries from the state. The other part of the industry chose the Western method of organization and conducted only raw material business. Once these new/old archetypes were taken into use once again, they were copied throughout the organizational field to other organizations by mimetic

isomorphism; in some cases the regional governments promoted such a development (e.g. regional “feudalism”, see Lembruch, 2001).

Some actors of the organizational field did not follow the example of the vertical integrationists and started working according to other industrial forms. They did not want to build vertically integrated industries but intended to function as individual raw material producers who made their product available for all purchasers (Butrin, 2004).

Thus, as a consequence, one part of the Russian mining organizational field is now organized and functions as it did during the Soviet era; the other part is organized and functions as in Western countries (Global Business Report, 2005). There is a struggle going on between these archetypes, but there are no winners, yet. The organizational field is still turbulent.

On the basis of my study I argue that an institution can be reborn after several years of non-existence. Based on this phenomenon a new concept is proposed for New Institutionalism and also for the processes of de- and re-institutionalization; this concept is called the reincarnation of institutions. This concept will be regarded as one form of re-institutionalization, and it means the re-birth of de-institutionalized institutions, which emerge from the cognitive minds of the actors and are implemented not because of any rational reasoning, but because they are rooted so deep in the minds of the actors that they cannot see an alternative to taking them back into use once again (see Jonnergård et al, 2005). Amis, Slack and Hinings noted that when the actors were opposed to proposed changes in Canadian amateur sports organizations, they entered into superficial conformity with the coercive pressures, but returned to the old values of the organization, when there was a possibility to do that (Amis, Slack and Hinings, 2002, 436). If they were congruent with the new values, they were willing to go for change in their archetypal design. Even though an institution consists of various aspects, these aspects do not necessarily change at the same pace (see Jonnergård et al. 2005, Townley, 2002, Zilber, 2002). Thus it seems possible to say that institutions have aspects and values that can change or disappear during a certain time frame and which would be different case by case. In this study it seems that vertical integration did not totally disappear from the cognitive minds of the actors as an aspect of an old Soviet institution, or as a value and thus it was reborn as an organizational structure when there no more were coercive political pressures. However, other actors adopted another institution, which replaced both the old Soviet vertical integration and the intermediate autonomous organizational mesostructure during the transition. So, for half of the mining industry the old institution has returned, for the other half it has been superseded by another one. Figure 35: The re-incarnation of an institution illustrates this and connects this new feature to the theory of institutionalization.

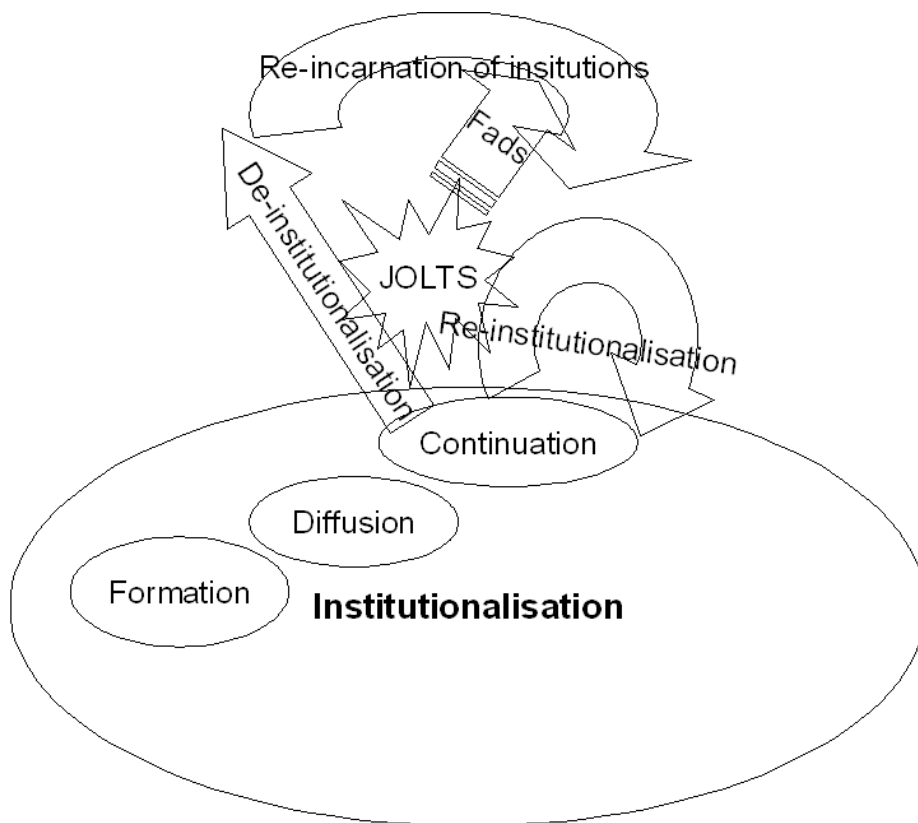


Figure 35: The re-incarnation of an institution

As argued above de-institutionalized institutions can be re-born. Theoretically, using abductive reasoning, it would also be possible that a fad or fashion (see Greenwood et al. 2002) is taken back into use, and consequently it could be institutionalized. Thus, in Figure 35: The re-incarnation of an institution, an arrow is drawn from the de-institutionalized institutions through the fads & fashions arrow to the re-institutionalization curve. Furthermore, one could theorize that all de-institutionalized habits, e.g. institutions or even fads & fashions build up a store of ideas from which new scholars, consultants or managers could draw new or old ideas for their own use when necessary. Thus, in addition to institutional formation from purely innovative processes it could be possible to think that part of the newly created institutions are remnants of old institutions, which can re-institutionalize themselves or even re-incarnate themselves (cf Røvik, 1998).

Drawing on new institutional theory it is possible to describe and explain the changes of the RMI during Russia's transition. Institutional formation,

diffusion and the continuation of institutions, as well as processes of de-institutionalization and re-institutionalization seem to function as described in the original new institutional theory (DiMaggio and Powell, 1983, Meyer and Rowan, 1977, Jepperson, 1991). Furthermore, the actual model developed for this study from institutional theory (and based on Jepperson, 1991, Greenwood et al. 2002) introduces the original theory of New Institutionalism to the possibility of jolts and fads & fashions (Greenwood et al. 2002), and the re-incarnation of old institutions.

Vertical integration, a Soviet mesostructure returned to Russia after five years of absence. One could argue on basis of Amis et al. that vertical integration as an aspect of an institution or a value never died, and that it stayed in the minds of the actors as a cognitive aspect. This aspect then resurfaced, when it became possible and there were no coercive pressures against it.

Taken-for-granted organizational practices, e.g. institutions, can hinder the pro-activity of organizations, but when practices change and correspond to the actual requirements of an environment they bring stability from the environment into the organization (see Meyer and Rowan, 1977). As a result the organization can run its own businesses as it chooses without considerable interference from the environment.

Very strong evidence was found in this study regarding the influence of the local governments' policies towards the formation of vertically integrated industrial groups. In both case studies the local Governor allied himself with the private owner who was most ready to cooperate with the Governor's office. This enabled the Governors to control the local industries, and made these industries loyal financiers of the regional budget. Thus, the central proposition of Meyer and Rowan (1977), regarding the formal structure as a myth was supported by this study.

On the whole this study shows that New Institutionalism as a "Western" theory can be used in the transitional research studies of non-Western business institutions. It also explains the development of the RMI. However, it has some aspects which could be developed by further research.

7 SUMMARY AND IMPLICATIONS

7.1 A proposal for further research

The results of this study concern two areas of research. Firstly, the main phenomenon is the transition from socialism to capitalism. Secondly, the main theoretical basis is new institutional theory. There are future research proposals for both of them.

According to the results of this study cognition as an aspect of an institution can remain hidden in the minds of an actor although the institution is no longer active. Furthermore, a hidden cognition can return to activity, when the conditions for a return are available. However, we do not know how long these cognitions remain in the minds of the actors, nor how they activate themselves for a return. Thus research on cognition could shed new light on this area.

Furthermore, in the case of RMI some actors started to implement the old institution, part of them did not. This is a paradox which led the RMI to two contradictory meso-structures and organizational models. What are the reasons for taking into use a new institution? And what are reasons for returning to the old reborn institution?

Also, new institutional theory struggles with the voluntary nature of the actors, and their strategic intent, especially if the researcher follows the propositions of Rowan and Meyer. Evidently, New Institutionalism requires further development. One proposal for future research could be the combination of strategy research and New Institutionalism. This might seem impossible at first sight because of their totally different approaches to ontological questions, but there are already proposals in this direction in academic publications (see Hitt, Ahlstrom, Dacin, Levitas and Svobodina, 2004; Baum and Dobbin, 2000; Webb and Pettigrew, 1999; Lewin and Volberda, 1999), although part of them come from new economic institutionalism. However, it would be beneficial for both paradigms to unite the strings of research.

Furthermore, an unresolved question in transitional research remains: Why did the organizational mesostructure designed during the Yeltsin regime not

perpetuate itself? Why did it not receive its ultimate and cognitive legitimation in the organizational field?

7.2 Managerial implications

The major implication of this study for managers is the fact that Russia is different: The old Russian and Soviet traditions affect the Russian business reality. There can be the illusion of a Russian mine (company) being similar to a Western one, but in reality the old institutions' mode of operation dominate. Thus old Soviet cognitive beliefs and Soviet traditions make Russian organizations different from Western ones. The Russian mines might be trying to be modern as in the West, but in their own Russian way, which means that they still use some old Soviet ways of organizing and managing companies.

Compared with Western managers Russian managers have different work practices. The Soviet "yedinonachalie" leadership style still shapes their managerial thought in the way in which they try to dictate decisions to their subordinates. The Russian subordinates, in turn, expect their superiors to have decision making abilities and give strict guidance with detailed instructions for action and they might be very passive if their superior does not tell them exactly what to do. The managers' power over the subordinate is significant.

Furthermore, there are some issues, including anti-Western attitudes - especially against the USA, which affect how far Western companies can penetrate and establish themselves in the Russian market. Central authorities and especially local governors must not be ignored during the penetration process. Without an understanding and an agreement between the Russian or foreign company and the Governor's office penetrating the marketplace can prove to be extremely slow or some time even impossible.

If a Western mining company would buy a Russian mining company the low productivity (see pilot study in Appendix No. 5) would force them to make changes in their effort to lift productivity to the Western level. This, on the other hand, could create opposition from the local authorities because unemployment and probable subsequent social unrest in the region in question could occur. Social services (day care centres etc.) are still financed and even run by local companies in the different regions of Russia. In many regions the companies agree to pay voluntary taxes to please the local Governor.

Also, the high rate of corruption (see Transparency International, 2005) and the possible disloyalty of the personnel can affect the profitability of the companies. Taking that into consideration together with frequent violence in business contacts can frighten Western managers and companies; sometimes even to such effect that they consider leaving the country. Thus, the use of

private security companies to protect Western and Russian managers is necessary.

Finally, the labour unions in Russia seem to have an insignificant role. Managers in Russia do not have to negotiate with the unions about employment contracts. Usually, the employees agree on the terms of work directly with the manager in question regarding their salaries and other benefits.

7.3 Summary

This longitudinal analysis shows in the end that the RMI has partly gone through a paradoxical transformation from the beginning of 1990's up to today and has been divided into two groups based on their attitude towards their own product. One group uses the raw material as a commodity for trade, another uses the raw material for its own intra-group use.

The original abductive guiding principle of this study was "unchangeability". Looking at the RMI one can say that a lot of changes have occurred, but a lot remain to be made. The original course of the transition was reversed by the birth of a vertically integrated industry structure, which in fact means a return to the past. During the Yeltsin era the industry took a giant leap into the future during the Putin era the industry has taken a small step back. However, parts of the original objectives of the transition, as set down by the Yeltsin government, have been achieved.

The country now has a partly private mining industry, which has its own strategic aims. The state has left the industry mainly untouched, so far, although there are some signs of increased interest in the government ownership of the mining sector.

There seems to be a lack of real structural change in the RMI (Mihailov, 2001). Some of the old institutions of Soviet Mining are still in place, and new institutions have not totally replaced them. Still today there exists governmental corporate governance control over part of the mining industry (uranium, diamonds). Furthermore, the government controls the mining industry through administrative measures such as export quotas for diamonds and not all mines are privatized.

Also the management style of the mines' managers is still similar to the Soviet style (Rautio, 2003, 90). There are signs of Soviet *yedinonachalie*, the managers' dictatorial method of leadership.

However, as president Putin has himself noted there is a "striking contrast" between the private mining companies and still state owned mines (Besserglik, 2002, 1). The initial passive reaction of the autonomous mines at the

beginning of transition has changed to pro-activeness and on the whole the RMI has changed tremendously since 1990.

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Appendix No. 2. THE LIST OF INTERVIEWS

| | | | |
|------------------------|--|---------------|----------|
| Batuyev, Mihail | Chief of ore production Ural Mining and Metallurgy Concern | Yekatirenborg | 05.03.01 |
| Bocharkev, Aleksandr | Chief of maintenance Pechenganickel combine | Zapolyarnyi | 11.3.03 |
| Chugajevski, Aleksandr | Director of firm Granity | Moscow | 20.03.01 |
| Galchenko, Sergei | Deputy head of the representative office | Moscow | 10.12.99 |
| Gondusov, Sergei | Mining consultant | Moscow | 13.11.99 |
| Grigoryev, Vladimir | Mine Manager of Uchalinski GOK | Uchaly | 27.03.01 |
| Gubaidullin, Zakaria | Chief engineer of Uchaly mine | Uchaly | 13.11.01 |
| Kolobkov, Oleg | Chief of the mining department of the Ural Mining and Metallurgy Concern | Yekatirenborg | 05.03.01 |
| Kurbanov, Sergo | Deputy director of Kuzbassrazrezugol | Kemerovo | 30.07.02 |
| Litvin, Oleg | Director Kedrovski razrez | Kemerovo | 30.07.02 |

| | | | |
|-----------------------|--|---------------|----------|
| Mihailov, Oleg | Director of firm Kareslky okatysh | Kostomuksha | 13.03.01 |
| Nikandrov, Vladimir | Commercial director of Karelsky okatysh | Kostomuksha | 13.03.01 |
| Pasynkin, Viktor | Deputy technical director Kedrovski razrez | Kemerovo | 30.07.02 |
| Plekhanov, Konstantin | Technical director of Ural Mining and Metallurgy Concern | Yekatirenburg | 05.03.01 |
| Popov, Sergei | Technical director of OAO "Kuzbass" | Mezhdurechie | 08.04.05 |
| Postukh, Aleksandr | Deputy director of the firm Granity | Moscow | 20.03.01 |
| Rutskoi, Yuli. | Director of Production Mihailovski GOK. | Zheleznyi. | 27.2.05 |
| Sarashkin, Aleksandr | Chief engineer of the Uchaly mine | Uchaly | 27.03.01 |
| Souplakov, Aleksandr | Commercial director of Ural Mining and Metallurgy Cocern | Yekatirenburg | 05.03.01 |
| Subbotin, Valeri | Director of the firm Resurs | Yekatirenburg | 07.02.05 |
| Wagner, Nikolai | Technical director of Kedrovski razrez | Kemerovo | 30.07.02 |
| Yaguguv, Marat | Purchasing Manager of | | |

Uchaly mine

Uchaly

27.03.01

Appendix No. 3 LIST OF INTERVIEWS FROM THE UGOL MINE

Top Management interviews:

General manager 25.07.02

Deputy General Manager 24.07.02

Deputy General Manager, Chief Engineer 26.07.02

Middle Management/Critical incident method:

Ugol-1

Ugol-2

Ugol-3

Ugol-4

Ugol-5

Ugol-6

Ugol-7

Ugol-8

These questionnaires were filled in during the period of 20.07.-27.7.2002

Appendix No. 4. LIST OF INTERVIEWS FROM THE MINERAL MINE

Top Management interviews:

General Manager 20.09.02

Deputy General Manager/Operations 21.09.02

Deputy General Manager, Chief Purchasing officer 23.09.02

Middle Management/Critical incident method/Development curve:

Mineral-1

Mineral-2

Mineral-3

Mineral-4

Mineral-5

Mineral-6

These questionnaires were filled in during the period of 20.09.-24.9.2002

Appendix No. 5. THE WORK PRODUCTIVITY OF RUSSIAN MINES (Pilot Study)

WORK PRODUCTIVITY IN RUSSIAN MINES

In general work productivity in transitional countries right after socialism was poor. For instance in 1996 the World Bank reported that one Ukrainian coal miner produces on average 112 tons of coal every year, one Russian coal miner 250 tons, one Polish coal miner 420 tons, one English coal miner 2,000 tons and one United States coal miner from 4,000 to 6,000 tons (World Bank, 1996). According to these figures the productivity of an American coal miner was 35 times the productivity of a Ukrainian coal miner five years after the beginning of the transition process

What is work productivity? In this report work productivity is regarded as the ratio of enterprise output and input (Rehnström, 1989 a and b). The output is defined as the production of the mines in tons, and the input the number of employees in the mine.

The chosen ratio is meant to be simple. One reason for this is the methodological problem on transitional studies. First of all, the finding of facts and knowledge in Russia is difficult, and secondly the validity of the knowledge acquired is difficult to define (see for instance Liuhto-Michailova, 1999).

There have been some attempts to describe the productivity of work between industrialized Western countries and countries in transition. Some Russian researchers have come up with the estimate that productivity in Europe and the United States is two-threefold compared with Russia (Boiko et al., 1999).

Of course, there are differences in work productivity inside the industry branches of the transition countries. Former Norilsk Nickel executive, Johnson Khagazheev, wrote in December 2000, that the company he manages has 19 times the productivity of the average work productivity of Russia (Khagazheev, 2000).

It is worth noticing, that Khagazheev is comparing his own mines' productivity to the average productivity of work in Russian industries, but not to other mining companies in Russia and Western countries. We are going to return to this dilemma later on.

WHAT IS WORK PRODUCTIVITY IN RUSSIAN MINES?

Norilsk Nickel is the biggest producer of nickel in the whole world. During the default of the Russian rouble in 1998 the company was close to bankruptcy. During that year the top management of the company sent 10 of its best workers to Canada. Their task was to get acquainted with the mines of Norilsky Nickel's competitors, Inco and Falconbridge. After returning back home the delegates told their colleagues that the Canadian miners earn about 4,000 USD each month. During this time the Norilsk average salary was a couple of hundred dollars every month. The Norilsk combine manager, Khagazeev, told the worker delegation, that the salaries in Norilsk will be the same as in Canada, when the work productivity is the same. Three years later Norilsky Nickel is one of the richest and most profitable companies in Russia. It has started a modernization program worth hundreds of millions of dollars. Although they have not reached the productivity of its Canadian rivals, there has been significant improvement. At the same time the salaries of the workers have risen to 700 dollars a month. The amount of workers has diminished, due to voluntary programs, by 35,000 people³³ and the company is planning to diminish the personnel by 20,000 more. The biggest hinderance to the modernization program is regarded to be managers who received their education during the Soviet era (York, 2001)

According to Norilsk Nickel's own internal studies the productivity between Norilsk and Canada is as follows:

Table No. 1. The productivity of mines in Norilsk and Canada (Source: Norilsk Nickel, 2001)

| Mine | Excavation 1.000 m ³ | Personnel | Work productivity m ³ /person |
|---------------|------------------------------------|-----------|--|
| 1. Stoyaby | 858,10 | 500 | 1,716 |
| 2. Crayton | 343,20 | 467 | 735 |
| 3. Thomson | 387,30 | 700 | 553 |
| 4. Crayg | 310,80 | 347 | 896 |
| 5. Oktjabrski | 1650 | 1,437 | 1,148 |
| 6. Tajmyrski | 828,60 | 757 | 1,095 |

³³ The total amount of personnel in the company was 70.000 in 2001.

| | | | |
|----------------|---------|-------|-------|
| 7. Komsomolski | 1420 | 1,782 | 797 |
| 8. Zapoljarny | 1238,20 | 1,067 | 1,160 |

In Table No. 1 mines 1 to 4 are Canadian mines owned by Inco and Falconbridge. Mines 5 to 8 are Norilsk owned mines in Russia. All the mines are underground nickel mines. Mining methods vary from mine to mine³⁴.

The biggest work productivity according to this comparison is at Stoylnby (Inco) mine. The excavation there was 1,716 cubic meters per person per year in the year 2000. Second, third and fourth places went to Norilsky mines Zapoljarny, Oktjabrski and Tajmyrski. Canadian Craig (Falconbridge) placed fifth, Norilsk Komsomolsk sixth and the remaining places went to Canada, to Crayton (Inco) and Thomson (Inco) mines.

Because of the different mining methods the comparison between mines can only be an indication. As one can see there are also big differences in the productivity of Canadian mines. Most probably the mining methods and metal content in the ore are the reasons for the differences in the work productivity. One can, however, conclude that the productivity figures presented by Norilsk are quite good.

It is quite difficult to start to make any generalizations out of the figures received from Norilsky Nickel, because it is impossible to say how the figures have been calculated, and how reliable they are. After all, Norilsk makes estimations about her own competitors and they might be too optimistic.

The plans of Norilsky Nickel are to improve work productivity further during the next ten years. Although there has been an improvement in work productivity, the modernization program of the mines is continuing as planned.

According to Norilsk plans the Zapoljarny mine productivity is going to be improved as follows:

³⁴ Production methods can influence the output of a mine. More about mining methods, see for instance Sandvik Tamrock Rock excavation handbook, 2001

Productivity of Zapoljarny mine

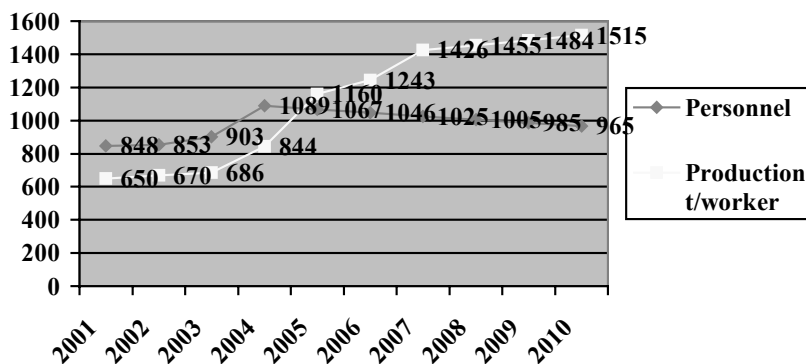


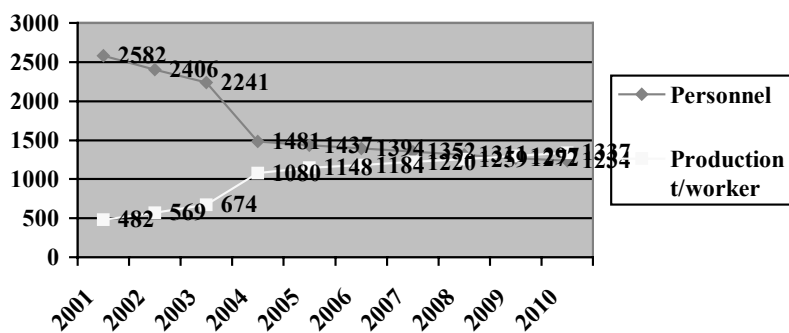
Figure No. 1. The productivity of the Zapolyarny mine (Source Norilsk Nickel, 2001).

Work productivity is going to be improved by increasing the production of the mine from 650 tons up to 1,515 tons per year/worker. In the first phase of the modernization the number of workers employed is going to grow, but after receiving new modern equipment and technology the number of personnel will diminish.

In the Oktjabrski-mine the improvement of work productivity is going to be as follows:

Figure No. 2 The productivity of the Oktyabrsky mine (Source: Norilsk Nickel, 2001)

Productivity of Oktjabrski mine



Work productivity is planned to be increased by raising the mine's output from 428 tons to 1,337 tons per year/worker. The amount of personnel in this mine is will diminish from 2,582 workers to 1,234 workers.

Concerning Taymyrski-mine the work productivity plans are as follows:

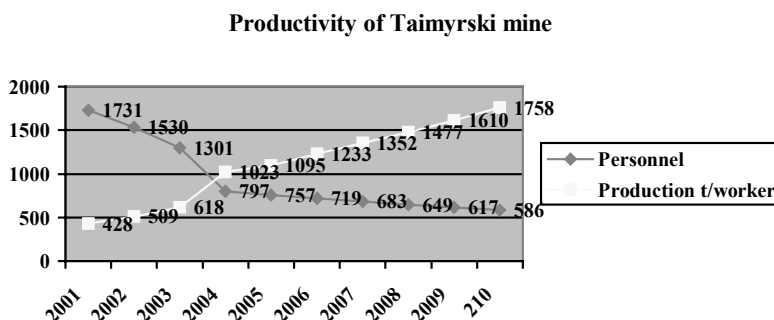


Figure No. 3. The productivity of the Taimyrsky mine (Source: Norilsk Nickel, 2001)

Work productivity is planned to be improved by increasing the production of the mine from 428 tons to 1,758 tons per year/worker. The amount of personnel will be reduced from 1,731 to 586.

The Komsomolsky mine has the following plans:

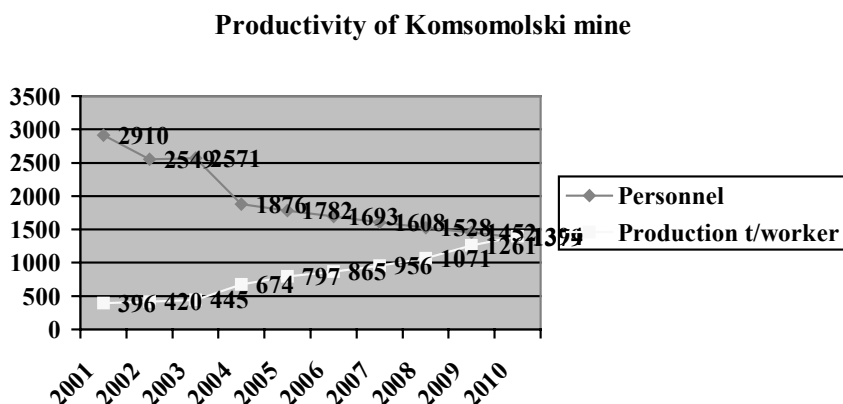


Figure No. 4. The productivity of the Komsomolsk mine (Source: Norilsk Nickel, 2001)

Work productivity is planned to be improved by increasing production from 396 tons up to 1,399 tons per year/worker. The amount of workers will decrease from 2,910 to 1,390.

The plans of Norilsky Nickel seem quite clear. The number of personnel will be reduced in all mines and at the same time there will be an increase in work productivity.

When work productivity increases the production costs should be reduced. The plans of Norilsky Nickel are as follows:

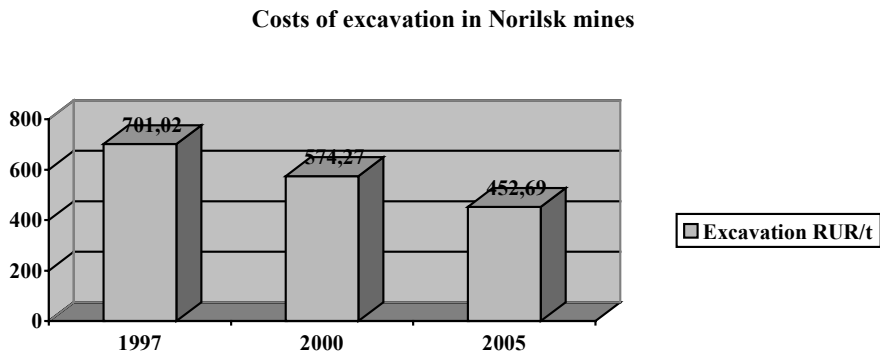


Figure No. 5. The cost of excavation in Norilsk's mines (Source: Norilsk Nickel, 2001)

The intention of Norilsky Nickel is to lower the production costs (excavation) from about 700 roubles/ton in 1997 to 450 roubles/ton. In percentage terms the decrease would be 34%.

The above presented Norilsky internal study raises several questions. How are the work productivity figures calculated? How reliable are they? What generalizations can you make from them? How much more profitable is Norilsk compared to its Canadian competitors?

To get some answers to these questions a comparison study between similar Russian and Western mines was made.

This comparison study was conducted in two mines, the first one in Russia, the second one in an industrialized country³⁵. The mines chosen to do the benchmarking were similar in size, excavated the same metal and used approximately the same mining methods³⁶.

³⁵ The identity is not revealed.

³⁶ Pulkkinen, 2001.

GENERAL INFO ABOUT COMPARED MINES

The mines' initial data is presented in Table No. 2.

Table No. 2. General info about the compared mines

| | Russia | | Western mine | |
|---------------|--------------|-----|--------------|----|
| Production | 1,5 | Mt. | 1,3 | Mt |
| Ore type | Sulfide ore | | Sulfide ore | |
| Metals | Copper, zinc | | Copper, zinc | |
| Metal content | | | | |
| Copper | 1 | % | 1,1 | % |
| Zinc | 4 | % | 2,1 | % |

The mines are about the same size, they produce the same metals and the content of metal in the ore is quite similar. Based on these figures the mines can be compared for work productivity (Kärnä, 2001).

WORK PRODUCTIVITY IN THE COMPARED MINES

The work productivity of the compared mines is presented in Table No. 3.

Table No. 3. Work productivity in the compared mines

| | Russia | | Western mine | | | |
|-------------------|--------|--------|--|--|--|--|
| Work productivity | 1,500 | 5,078 | Tons/person/year/whole personnel/year/mine | | | |
| | 2,206 | 1,1818 | Tons/person/year/whole personnel/year/mine | | | |
| Personnel | | | | | | |
| In Company | 1,000 | 256 | | | | |
| In mine | 680 | 110 | | | | |
| In administration | 95 | | | | | |

The overall work productivity in a western mine was threefold when comparing the whole personnel of the mine, and five times when comparing the number of workers in the mines themselves (Kärnä, 2001).

There were 1,000 people working in the Russian mine, 256 in the Western mine. In the mine itself excluding the crusher and concentrator there were 680 people in the Russian mine and 110 in the Western mine (Kärnä, 2001).

The biggest difference in the companies was the central administration of the Russian mine, which consisted of 95 people, who took care of administration at the mine. In the Western mine such an administration was totally missing; its tasks were run by the mine's management (Kärnä, 2001).

THE PRODUCTION METHOD AND EQUIPMENT

The production method in both compared mines was sub-level stoping. The stopes were backfilled with a mixture made out of concrete. The method at both mines was the same and it cannot explain the difference in work productivity (Kärnä, 2001).

Also the production equipment was similar, and partly supplied by the same company (Sandvik Tamrock). The production equipment of the Russian mine is presented below:

1 Cabolt 695, 1 Minibur S200, 2 Boomer 128 (Atlas Copco, Sweden), 1 Solo 1020, 2 Solo 1008, 1 Solo 605, 1 NKR-100 (Russia), 2 Toro 501, 2 Toro 1400, 1 Toro 40, 2 Toro 35, 6 MOAZ (Russia), 1 Charmec (Normet, Finland), Rammer E68 + boom, 1 Raise Boring gear (Ukraine). Additional purchases in 2001 were: 1 Toro 40, 3 Minibur and 1 Rammer E68 + boom³⁷ (Kärnä, 2001).

The Western mines main production equipment consisted of: 1 Robolt 320, 1 Robolt TPA-90, 1 Cabolt H, 1 Cabolt 530, 1 Para 305, 1 Axera 305, 2 Paramatic 305, 1 Solo H890RF, 1 Solo H689, 1 Solo 506 RTS, 1 Secondary drilling rig, 2 Toro 0011, 8 Toro 500, 4 Toro 40D, 2 Charmec (Normet), 1 Shotcreter (Normet), 1 road grader, 1 Toro 500 + Rammer S86, 2 Solo 1020, 17 Toyota pick-ups³⁸ (Kärnä, 2001).

The list of main equipment was very similar although the Western mine was a little bit more mechanized, but that was not regarded as bringing significant variation to the work's productivity (Pulkkinen, 2001).

PRODUCTION OVERHEADS

During the comparison date the production cost of one excavated ore ton was in Russia 7 USD and 20 USD in the Western mine. Thus, the production costs in Russia were about one third of the production costs of the Western mine.

³⁷ If not mentioned the producer of equipment is Sandvik Tamrock Finland.

³⁸ If not mentioned the producer of equipment is Sandvik Tamrock Finland.

The comparison figures concern only the cost of excavating one ore ton. In the production scheme of these mines the ore goes on to be crushed and enriched. The mine sales product in both cases is copper and zinc concentrate, which is further processed in a smelter.

The research failed to discover the production costs of the Russian concentrate. However, in the Western countries the cost of enrichment was about half of the excavation costs. Thus, if the Western mine's excavation costs were about 20 USD/t, then the costs for crushing and enrichment would be about 10 USD/ton. If the same applies to the Russian crushing and enrichment costs, then the comparative cost in Russia for crushing and enrichment would be 3,5 USD/t (Kärnä, 2001).

CONCLUSION

The Norilsk Nickel internal study seems to suggest that work productivity in Russia would be higher than in Canada. The results of the comparative benchmarking seem to indicate that the situation is not so.

When talking about Norilsky Nickel we have to note that this company is one of the biggest mining companies in the whole world. This company also had some special rights during the Soviet Union's era to purchase Western mining equipment. Norilsky Nickel had better and more modern equipment than the Russian mines have on average, which were forced to use Soviet made equipment and very often non-mechanized equipment (Pulkkinen, 2001).

However, Norilsky Nickel has started a modernization program. This seems to suggest that the top management is not happy with the current work productivity.

The anonymous Russian company in this study is, based on the quality of equipment, comparable to Norilsk mines. The mine is modern and the equipment similar, but its work productivity is worse than in Norilsk. According to expert opinion the Russian mine studied represents a better than average Russian mine and its work productivity is higher than the average for Russia (Pulkkinen, 2001).

The results of this comparison strongly indicate that the work productivity of Russian mines is lower than in Western mines. The results support Boiko et al's finding (Boiko et al. 1999) that productivity in Western countries is two to three times higher than it is in Russia.

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Appendix No. 6. THE AUTHOR'S INTRODUCTORY LETTER
FROM SANDVIK TAMROCK



28/05/02

Уважаемые господа!

Корпорация «Сандвик Тамрок» свидетельствует Вам свое почтение и настоящим подтверждает, что сотрудник нашей корпорации Вейкко Кярня имеет фирменное разрешение заниматься научной работой.

Вейкко Кярня является сотрудником нашей фирмы. Одновременно он является соискателем научной степени доктора в Высшей Школе (Университета) Коммерции г. Турку, Финляндия. В настоящее время он подготавливает диссертацию по теме развития менеджмента горных предприятий в условиях рыночной экономики. Считаем, что данная работа может благополучно влиять на развитие новых методов администрации горных предприятий.

Просим Вас, при возможности, способствовать осуществлению научной работы Вейкко Кярня.

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Appendix No. 7. THE LIST OF RUSSIAN MINES

Kuznetskugol,
Kuzbassrazrezugol
Chitaugol,
VostSibUgol,
Kovdorsky,
Komiugol,
Olenegorsky,
Karelsky Okatysh,
Yuzhny Kuzbass,
Mikhailovsk,
Lebdinski,
Achinsk,
Ural Bauxite Mine,
Bauxites Timana,
Pikalevsky Alumina,
Norilsky,
Polyus,
Pechenganikel,
Ural Mining and Metallurgical Company (UMMC),
Svyatogor,
Gayansky Ore Mining Plant,
Safyan Copper,
Russian Copper Company (RMK),
RosKazMed,
Sibirskaya Ugolnaya Energetitsheskaya Kompania (SUEK),
Baikal Coal,
Krasnoyarskugol,
Chitaugol,
Khakasugol,
Vostsibugol,
Russian Coal,
ALROSA,
TVEL,
Omolon Gold Company,
Bema Gold,
High River Gold

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