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Initial Analyses of the Institutional Framework of the Russian Forest Sector

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Foreword

IIASA, the Russian Academy of Sciences and several Russian governmental agencies, have in agreement carried out a large-scale study on the Russian forest sector. The overall objective of the study is to focus on policy options that would encourage sustainable development of the sector.

The first phase of the study concentrated on the generation of extensive and consistent databases for the total forest sector.

In its second phase, the study encompassed assessment studies of the greenhouse gas balances, forest resources and forest utilization, biodiversity and landscapes, non-wood products and functions, environmental status, transportation infrastructure, forest industry and markets, and socio-economics.

Through these assessment studies, it has become clear that a changed institutional framework is a prerequisite for achieving sustainable development of the Russian forest sector.

This report describes the results of initial analyses of the institutional framework of the Russian forest sector and outlines future research needed in this field.

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Chapter 1

Institutional Analysis of the Russian Forest Sector

Lars Carlsson and Mats-Olov Olsson

The Soviet Union no longer exists and the Russian people are faced with the tremendous task of reorganizing their society. Literally out of the “ruins” of the old system they have to create something new and this “new” should be accomplished rather soon. This is the belief of many western observers but it is also a wish among all those who suffer from the present situation and for whom the “blessings” of the market economy still are to be enjoyed. However the challenge to reorganize society does not only entail the introduction of a market economy. In reality, the task contains three sub-tasks that must be handled simultaneously, namely, 1) to restructure the economy, 2) state-building, and finally, 3) nation-building, i.e., to establish Russia as a nation (Breslauer, 1995).

The magnitude of this challenge cannot be overstated but, at the same time, significant progress has already been achieved in some parts of the economy. The fact that Russia, with its vast forest areas, possesses a significant economic resource has raised, or perhaps even inflated, the general expectations of the economic contribution from this sector. Since forest resources are enormous so is the economic output from the sector, especially after the introduction of “a market mechanism.” So goes the argumentation.

However, the statement that Russian forests are a significant resource only reflects a common sense attitude. There is no one-to-one relation between the size of a natural resource and its economic, or its utility, value. The situation in a great number of developing countries, as well as the situation in Russia, illustrate this fact. Developing countries often possess significant resources, but due to political, organizational and technological factors their resources are not contributing to the well-being of their people. Accordingly, forests are not resources *per se*. Only within a framework of institutional arrangements can a forest resource be regarded as an asset in an economic sense.

Generally, in the literature, a resource is something that is considered useful and valuable in the condition it is found (cf. for example Randall, 1987: 12). However, the attraction of a resource cannot be defined instantly or once and for all. Two other features are necessary for making a natural resource a valuable asset. The first is *technology* and the second is the *institutional structure* embedding the resource (Kant & Nautiyal, 1992). Technology within forestry, as well as within all other sectors, is defined by the state and the quality of physical capital, but also by the human capital that is involved in the activities related to the resource. The structure, usefulness and appropriateness of

technology are closely related to the other general features of a resource, namely, the *institutional arrangements*. Without adequate institutional arrangements any technology might be completely worthless (Kant & Nautiyal, 1992: 7).

Institutions are “the rules of the game” (North, 1990), and without them no economic or social activity can take place. Institutions facilitate the interaction between people and organizations. Systems of rules – well developed and configured – are a basic prerequisite for markets to run smoothly (Milgrom *et al.*, 1990). Institutions provide stability, they regulate and safeguard trade, and they make economic and social action foreseeable. Accordingly, institutions are essential to keep transaction costs on a socially acceptable level. With easy access to reliable institutional arrangements, costs for contracting and conflict resolution are kept on a low level, compared to a situation where such arrangements are loose or absent.

Thus, in order to become a valuable economic asset the Russian forest resources are dependent on the existence of close relations between technological development and institutional reconstruction. Massive investments in forest technology, for example, are not fruitful if such a technological renewal takes place in an institutional vacuum unable to accommodate the process. Stable institutional arrangements are required for such transactions to produce expected results.

In a market economy businesses are used to taking risks. Earning and losing money is something that is built into the very system of a market economy. On the other hand, under the umbrella of a well functioning market economy, actors, such as entrepreneurs, banks, and traders, try to share some of the risks associated with their behavior. The system also gives the actors the possibility of insuring themselves against some of the possible market failures they might encounter. Security for loans, arbitrage, and developed and accepted procedures in case of bankruptcy, are some of these insurance mechanisms.

However, while enterprises might be used to taking business risks they cannot handle “political risks,” i.e., the risks associated with qualities of the political system. Eliasson, *et al.* (1994: 13 ff.) distinguish between three types of political risks: collapse of the entire political system, breakdown of the economy, and unpredictable behavior by governmental authorities. Political risks “are ‘systemic’ in the sense that rules governing economic transactions can be abolished, or changed, without enforcement possibilities” (Eliasson *et al.*, 1994: 15). However, entrepreneurial behavior and long-term financial commitments in the Russian forest sector would require that firms mainly have to bother with business risks, those emanating from mistaken decisions, bad calculations, misjudgments, and so forth. Therefore, it is “*the task of political authorities to minimize or eliminate political risks as a means of achieving economic growth*” (Eliasson *et al.*, 1994: 13). The empirical reality behind this statement contradicts a widespread idea that the introduction of a market economy automatically would mean the same as having a passive state (Hodgson, 1989; Eggertsson, 1990: 59 ff.). In conclusion, what is needed to make the Russian forest sector work is a well-functioning institutional framework that has a quality that allows business actors to concentrate on business activities while at the same time forest resources are treated in a sustainable way.

More precisely, when referring to institutional arrangements relevant for forestry, we mean, among other things, the existence of market information systems, rules, technology, and so forth. We also refer to the clarity and simplicity of rules of trade, financing, contracting, etc. Finally, we refer to a whole cluster of variables related to property

rights, e.g., ownership, usufruct rights, monitoring and sanctioning of infringements, etc.

The old institutional arrangement, which has its basis in the specific property rights regime developed during the socialist period, is neither possible nor desirable to keep. Socio-economic development requires new institutions to facilitate the processes. The forestry sector can be expected to play a substantial and significant role in this development. Trade, transport, management, marketing, etc., and, in the end, the *sustainable utilization* of the entire Russian forest resource, is dependent on the establishment of such a framework.

Lack of Theory and Knowledge

The reconstruction of the former economies in Eastern Europe and the former Soviet Union (FSU) has thrown new light on economic theory and its usefulness has been questioned. In fact, it seems that we lack good theories of how such a reconstruction can (or should preferably) be performed. As Benham *et al.* (1995: 1) puts it: “While economic theory expounds upon the workings of a market system, it does not tell us how to build one.” The same goes for mainstream political theory with its focus on formal political structure. Traditional political theory, which presupposes an already existing state, does not provide appropriate guidance for on-going or desirable activities aimed at building such a system of governance.

Institutional arrangements are *path dependent*, they either reside in or are ultimately dependent upon a local context to work and survive (Putnam *et al.*, 1993; Kaminski, 1992; Benham *et al.*, 1995; Ostrom *et al.*, 1994). Therefore, they are also hard to change through a top-down approach. By providing particular incentives public policies might discourage or encourage specific types of behavior. But, the basic structure of the local context is hard to change, and it is in this environment that local actors operate. Institutional arrangements are formed by the daily activities performed by those who are involved in the business. However, as Benham *et al.* (1995) argue, most economic reform proposals are based on a top-down approach. At the same time neo-institutional economics tells us that institutions are evolutionary products, and that they are developed primarily from below.

The lessons of history also underpin the necessity of a credible state (North & Weingast, 1989) which can serve as an ultimate guarantor for property rights. But, in the long run, the state cannot guarantee anything without the support from lower level institutions – formal or informal – upon which its authority is based. Therefore, it is quite logical to argue – as Behnam *et al.* (1995) do – that the major task for Eastern Europe is to try to move away from old sets of norms, rules and mental models. This will be done through the creation of new institutional arrangements based on and, at the same time, guiding local activities. Such a task is definitely relevant for the forest sector as well. The crucial question is, however, how such a development can be accomplished?

The Role of Institutional Analysis in the IIASA Forest Project

During the course of the IIASA Sustainable Boreal Forest Resources Project significant knowledge has been accumulated concerning different aspects of the Russian forests

(Nilsson & Shvidenko, 1997). During the conference “Dialogue on Sustainable Development of the Russian Forest Sector” in Moscow, November 12-14, 1996, the idea of expanding the project deliberately to include institutional aspects was presented. The purpose of this presentation was to launch the project idea and to discuss its contents with the community researchers and official stakeholders involved in the project. A further aim was to establish contacts with qualified and interested Russian collaborators. Two broad questions were discussed as a possible guideline for a future institutional analysis of the Russian forest sector:

- 1) What is the exact configuration of the present institutional framework related to Russian forestry and its historical roots? How do central characteristics and features of this framework correspond with the possibility of a sustainable exploitation of Russian forests?
- 2) Compared to the forestry sectors in other countries (e.g., Sweden, Finland, Canada, etc.), to what extent are crucial characteristics different or lacking? In what respect are such characteristics and prerequisites for markets already established or on their way to evolving?

It was also argued that it would be desirable to conduct a number of case studies in different parts of Russia and that the result of these studies should fertilize the Russian discussion about how to reorganize the forest sector. Based on previous experiences, where a similar methodology has been used (Duinker *et al.*, 1993), a number of “policy exercises” should be organized. This idea is still on a future agenda.

From Idea to Reality

In the spring of 1997, IIASA initiated a pilot study explicitly concentrating on institutional aspects of the forest sector in Tomsk oblast (Carlsson & Olsson, 1998). In order to contribute to this new angle of the IIASA Sustainable Boreal Forest Resources Project three students were accepted in the institute’s Young Scientists Summer Program (YSSP) of 1997 to work with institutional issues. During the course of the summer Tomas MalmLöf, Barbara Lehmbruch, and Olga Mashkina all worked with different topics related to the institutional aspects of the Russian forest sector. The results of their work is presented in this volume.

In the next chapter, *The Institutional Framework of the Russian Forest Sector, A Historical Background*, Tomas MalmLöf gives an overview of the historical roots of the current organization of the Russian forest sector. MalmLöf describes the long history of Russian forestry and how the Czar and his later successors have looked upon the forest resource. He also emphasizes that the open access quality of the Russian forests has a long tradition and that the emerging Soviet State could encapsulate this tradition. This, in combination with the existence of vast forest resources, fostered a behavior that has been labeled the “legacy of overuse” (World Bank, 1997), i.e., an unsustainable forest management. This behavior is a good example of what we earlier referred to as path dependence, namely, that institutional features have a tendency to survive or even be recreated under new historical circumstances. MalmLöf ends his chapter by listing a number of policy issues that must be considered in order to achieve sustainability in the Russian forest sector.

Barbara Lehmbruch’s contribution, *Ministerial Spin-Offs and Economic Transformation in the Russian Timber Industry, 1992-1996*, deals with new sectoral governance patterns

emerging after the collapse of the Soviet Union. Focus of the analysis is what Lembruch calls “ministerial spin-offs”: new timber industry entities created after 1992 with former ministerial staff and resources and often based on broad regional membership. The emergence of such patterns of interorganizational relationships can be explained by weaknesses in the macroinstitutions, such as the legal and regulatory system. Given uneven implementation, collective action of any sort thus becomes largely futile and is replaced by particularistic strategies. This, Lembruch concludes, is not a transitional problem, bound to disappear as new post-Soviet institutional arrangements and resource distribution patterns stabilize. Rather, it is firmly rooted in institutional weaknesses that go back to Soviet-style socialism and its disregard for rational procedure.

While Malmlöf’s study is performed on a rather general level and Lembruch deals with the central industrial branch level, the focus of Olga Mashkina’s contribution, *Measuring Attitudinal Diversity through Q-analysis – an Illustration of a Research Approach*, is the individual manager and policy maker. Mashkina makes the assumption that a transformation of the Russian forest sector goes alongside with attitudinal change. By using a limited set of data she suggests and also demonstrates how Q-analysis could be used for further investigations concerning individual attitudes related to the restructuring of the Russian forest sector. Through the use of the methodology she extracts two possible profiles among Siberian policy makers. Members of the first tentative group, the “Demand Accusers” are unified by a tendency to blame the general lack of demand of timber for the shortcomings in the forest sector. The members of this group also emphasize the necessity of governmental demand.

The members of another group, the “Realistic Entrepreneurs,” believe that most problems are due to a number of rather common business variables, such as the availability of financial resources and entrepreneurial behavior. Aware of the fact that the material is rather small, Mashkina hypothesizes that the differences in attitudes can be attributed to regional circumstances, such as industrial profile, etc. The conclusion is that this form of analysis may contribute significantly to the understanding of the transformation of the Russian forest sector.

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Chapter 2

The Institutional Framework of the Russian Forest Sector

A Historical Background

Tomas Malmlöf

Due to environmental factors, its sheer size and low population density, Russia is endowed with abundant forest resources. With a forested area of 764 million hectares, or 45% of the territory, it is the biggest forest holder in the world. In fact, Russian forests make up no less than 22% of the forests of the whole planet (World Bank, 1997). This circumstance has always played an important role in the design of the forest management and forest use in Russia.

Compared to other European countries, a property rights system of open access prevailed much longer in Russia, as there was no awareness of forests as a limited resource. During the 19th century, there was a sharp increase in the demand for wood as a consequence of the development of the physical infrastructure. Steamers and steam engines consumed huge amounts of fuel wood, and the construction of the railway net required wood as construction material, etc. The first factories that were established during this period used wood as their source of energy and owing to the improved communications they were not dependent on local timber but could buy it from far away. All this led to a local scarcity of timber in several places in the Russian heartland. This in turn resulted in a rise in prices on local markets (Filonenko, 1993).

At the end of the 19th century, the deforestation of European Russia had gone so far that it began to have a severe impact on the river systems and on the climate. Without the protecting forests, the microclimate in several places in central Russia was destroyed. Chilly winds from the north devastated orchards and cultivations. Due to decreasing water levels, the main rivers used for transportation became unnavigable during summertime as a result of the vanished system of waterholding forests along the riverbanks (Filonenko, 1993).

It seems that most of these problems were taken into consideration in the modern forest management system that developed after the Second World War. For instance, areas that were over-harvested during the 19th century or devastated during the war were later subjected to special measures and harvesting methods in that they were transferred to a

special management group. Forest resources that were open for exploitation were carefully examined, and sensitive sub-areas were excluded from final harvesting.

A significant part of the Russian forest resources is found in remote areas, which makes it difficult to exploit them. During the course of Russian history, there has been a tendency to move the forest industry to the east, but now it seems that this development has been halted. With increased transportation costs exploitation in some areas in Siberia has become directly unprofitable. Russia's factual forest resources are thereby substantially less than what might be indicated by the volume of the State Forest Fund¹. Two parallel lines of development are noticeable. First, it has become more important than ever that the commercial forests are managed in a way that allows a future exploitation. Second, the pressure to harvest in exploitable but sensitive or protected areas is rising.

In 1988, the forest industry contributed 5% of total industrial production in the Soviet Union². Since then, however, the output of forest products has dramatically declined, especially after 1992.

Table 1: Output of Forest Products in Russia in 1988 and 1995.

Product	Unit	Russia		
		1988	1995	1995/1988
Wood	mln. m ³	354.0	115.0	32.5%
Sawn wood	mln. m ³	84.0	27.0	32.1%
Plywood	mln. m ³	1.7	0.9	52.9%
Particle board	mln. m ³	5.5	2.2	40.0%
Fiberboard	mln. m ³	1.6	0.7	43.8%
Wood pulp	mln. ton	10.4	5.4	51.9%
Cellulose	mln. ton	7.2*	4.2	58.7%
Paper	mln. ton	5.3	2.8	52.8%
Cardboard	mln. ton	3.2	1.3	40.6%

* The data for Cellulose in 1988 is extrapolated as an average of the production data for 1980 and 1990.

Source: The State Statistical Committee of Russia, based on World Bank 1997, p.189.

The production fall in the Russian forest sector may be traced back to two main causes. The *first* one is related to the special preconditions of Soviet statistics. The behavior of workers and managers was guided by a production plan. As monitoring of the accuracy of statistics became less rigid over the years, and while the incentives to distort data

¹ In Russian terminology the State Forest Fund stands for Government-owned forest and non-forest lands that are managed by the authorised forest management agencies, primarily by the Federal Forest Service in Russia (World Bank, 1997).

² Most of the timber industry was located in the RFSSR, i. e. on the territory that presently makes up the Russian Federation. Therefore, all other parameters the same, one may assume that the forest industry output in Soviet Union in 1988 and in the Russian Federation in 1992 are roughly comparable with each other.

prevailed³, statistics became more and more unreliable. However, the whole decline can not be explained as a result of unreliable statistics. The *second* cause for the production fall in the forest sector is the receding domestic demand. For example, construction activities declined by 43% between 1990 and 1993, and new housing construction fell by 32%. Consumption of paper and paperboard declined to 14 kilograms per person, one of the lowest rates in the developed world (World Bank, 1997).

As somewhat of a contrast, exports seem to have recovered fairly well from the decline during the first years of transition. Exports of wood products have constituted a substantial portion of total output and have been a significant source of foreign currency earnings. Logs, the main export product, are shipped to 40 countries, while lumber, pulp and paper, and furniture products are shipped to some 70 countries. Reported export earnings fell sharply between 1990 and 1992, from \$3.87 billion to \$1.49 billion, with the adjustments in the foreign exchange rate accounting for most of the decline in export earnings (World Bank, 1997). Since then, there has been a recovery and even some growth in timber export volumes. In 1995, the total value of forestry product exports had risen to \$4.2 billion, which is partly a result of the growth in export volumes, and partly a result of doubled world market prices. Even without an increase in export volumes or rising world market prices, a further increase in export incomes is to be expected as the Government deliberately tries to increase the share of high value added wood products in exports at the expense of roundwood and sawnwood. One question of concern, however, is the soaring transportation costs. Transport in Russia is currently economically viable for a distance of up to about 1,000 km for logs, and 2,500 km for sawnwood, while the distances from many wood supply areas to the nearest seaport exceed 5,000 km (World Bank, 1997).

A general impression given both in western and Russian sources is that the forest sector since long lacks adequate funding, which hurts the domestic sector as well as the foreign sector. Sawmills, as well as pulp and paper mills are in a poor state and are facing serious difficulties. In sawmills Russian frame saw lines without any higher accuracy are used. As kiln-drying facilities are often unavailable, most sawnwood is shipped green or incompletely air-dried. Usually it is delivered unsorted as well. In the pulp and paper industry, 65% of the machinery and equipment is old and badly worn out. The industry has caused severe environmental damage, and most of the sulfite pulp mills have been closed or are forced to operate at severely reduced production levels (World Bank, 1997).

Thus, it can be concluded that the Russian forest sector has a greater potential than what is indicated by current production volumes. An increase in output for the domestic market is highly dependent on the general economic performance of Russia. Considering an expansion on foreign markets, one has to allow for the high transportation costs and the poor quality of the processed timber.

³ Reporting a slight overfulfillment of the plan provided, for example, a bonus payment. The impact of this factor has not been controlled for in the data given. Therefore, the indicators for 1988 may have been exaggerated to a certain extent.

The Social Functions of the Russian Forest Sector

During the Soviet period the state-owned enterprises had to take on a social responsibility for all their workers and other people affected by their activities, which is unthinkable in a market context. Almost as a rule, enterprises were obliged to answer for housing, the building and operation of day-care centers, schools, community centers, shops, homes for old people, and so on. As logging in Russia mostly occurs in remote areas with very few other activities around, this tendency became very strong in the forestry sector.

One very important task in the ongoing restructuring process of the Russian economy is to transfer the social infrastructure to local or federal authorities. The enterprises are often more than happy to get rid of their social obligations, but due to the weak financial position of local authorities, the latter are quite reluctant to shoulder the burden. This means that significant groups of the Russian population today live in a social limbo, a gray-zone that is managed neither by the enterprises, nor by the local authorities. In a forestry context, there are especially three groups that are affected by the development: the *aboriginal* peoples, the *indigenous* peoples, and the workers in the forestry sector.

There are some 190,000 people in Russia who consider themselves as members of aboriginal groups (World Bank, 1997). The term *aboriginal group* refers to the first settlers in the northern and eastern parts of Russia. These groups are engaged largely in subsistence fishing, hunting, and reindeer herding, and since the 1920s they have enjoyed certain privileges.⁴ Usually the aboriginal peoples view their way of life as the only means of survival for a culture distinct from the larger, multiethnic community.

The so-called indigenous groups arrived after the aboriginal peoples.⁵ These groups consider semi-traditional occupations like hunting and fishing as an essential part of their cultural heritage, but unlike the aboriginal peoples they do not view modern practices or occupations and assimilation into modern society as threats to their cultural identity (World Bank, 1997).

The threats that these groups now face come from two sides. Declining wage incomes and employment rate in the forestry, mining, oil and gas sectors force newcomers and workers in these sectors to rely increasingly on wildlife resources for their livelihood. This means that the demand for forest and non-timber resources has increased, thereby exposing the aboriginal and indigenous peoples to a higher degree of competition than before (World Bank, 1997).

The second threat originates from the land use of various industrial enterprises. Land is being spoiled or destroyed by ecologically improper management of certain enterprises or because the land use pattern of the enterprises upsets the established patterns of land allocation agreed upon among the local population prior to the creation of the enterprise. However, few aboriginal or indigenous groups protest against the misuse of land. As is the case in the forest sector, the logging enterprises provide these groups with badly needed jobs, transport links to district centers, and they supply goods for local shops.

⁴ Aboriginal groups are also known as “small-in-number peoples of the North,” and were classified as “primitive and underdeveloped” under the establishment of the Soviet Union.

⁵ Khakas, Yakuts and Russian “old settlers” are usually considered as indigenous groups. The indigenous status makes a group eligible for free hunting and fishing licenses and land allocation free of rent or tax.

The pattern can be recognized in other parts of the world where aboriginal peoples have to face the challenge of the encounter with the developed world (World Bank, 1997).

The workers in the forest industry have also been severely hit by the reconstruction of the Russian economy. In the former Soviet Union, forests provided employment to more than 7% of the country's workforce and directly affected the lives of around 10 million people, of which some 18% lived in remote logging communities (World Bank, 1997; Blandon, 1983). The impact of transition on these forest communities has been severe. In the past these communities relied on heavy government subsidies in order to provide transportation, food, and salary premiums for qualified health and education professionals, for instance. Their isolation and low population density now raise the cost of providing social services, and with the phasing out of subsidies, many of these remote communities have been left even more isolated from the outside world, and lack basic supplies and services. The inhabitants often find themselves to be in a hopeless situation: on the one hand life in the logging community has become insupportable, on the other, they are unable to move as their working skills and experiences are of no use anywhere else.

As was stated before, the local authorities are now taking over the responsibility for the social infrastructure from the timber companies. This process is becoming even more difficult due to the fact that forest enterprises are often so-called *gradoobrazuiushchie predpriiatia*, or city-building enterprises, around which the whole local society initially was created. In fact, it was the foundation of the enterprise that gave the local society an economic reason to exist. In theory, the local administrations are supposed to finance the provided services at least in part through payroll taxes collected from enterprises. Unfortunately, in many of the remote communities where forest enterprises are located, enterprises have had to shut down operations or are operating at a loss and so are unable to pay salaries to their employees or taxes to local administrations. As a rule, there are no other strong tax payers from which to collect taxes.

To sum up, the economies of the aboriginal and indigenous peoples are highly dependent on the Russian forests. The forest industry itself is in a poor state, and it is doubtful that it can deliver value added wood products that meet international demands for quality. Harvesting patterns also show that the more valuable coniferous forests are over-utilized, which means that ecological sustainability is at risk (Blandon, 1983; Barr & Braden, 1988; World Bank, 1997). Especially the aboriginal peoples see every threat to the forests as a threat against themselves and their cultural identity. On the other hand, these groups cannot live without forest exploitation either. Forest enterprises, as well as oil and mining companies bring with them badly needed work opportunities that will make the income last longer and, in addition, they also bring some of the infrastructure of a modern society.

The workers in the forest sector are even more affected by the actual fall in production. The logging communities have been hit the hardest, but the depression has also caused serious drawbacks to workers of sawmills and pulp and paper industries. Unemployment, wage arrears, deterioration of the physical and economic infrastructure is the price workers in the forest sector have had to pay for the years of transition.

In short, Russian authorities have a very delicate task in setting policy goals for the re-born Russian State. They have to guarantee ecological and economic sustainability and simultaneously balance the different interests of affected social groups against each other. At the same time the forest sector has to carry some of the burdens from the past.

The sector is still affected by an organizational pattern that was developed many hundred years ago, i.e., long before the establishment of the Soviet Union.

Russian Forest Management, a Historical Overview

The purpose of this historical overview of the Russian forest sector is to give an idea of the general pattern of development and how this process might influence the present day forest sector. The section is divided into three main blocks, covering the czarist, communist, and the post-communist periods of Russian history.

The Forest Management System in Czarist Russia

During the European Middle Ages there was no awareness of forests being a limited resource in the way that we understand it today. However, in most countries a property rights system developed that protected the forests of the Crown and of the landlords. The peasants were usually obliged to use forests that no one else claimed as theirs, and as most of them lived together in villages, different kinds of common property systems developed among them.

An enforced property rights system embracing the forests in Russia emerged much later. Here peasants, landlords and the Crown alike harvested timber where it was most convenient at the moment – no matter who was the formal owner. (Filonenko, 1993: 15). Actually, the existing mix of private and state forest property turned into a *de facto* open access system, the only constraint on which seems to have been the technical equipment used for felling and transportation.

Under Peter the Great, attempts were made to enforce property rights. Czar Peter wanted to challenge the growing military powers in Europe and needed to strengthen and renew Russia's armed forces. As a part of this belligerent agenda, the Russian Navy was founded in 1696, and now the forests suddenly turned into a resource of strategic importance for an expanding state power (Filonenko, 1993). Already in 1698 Peter conferred upon the Judicial Board for Public Lands and Funds to look after the preservation of forests and, wherever possible, to plant all sorts of useful "things" (Filonenko, 1993: 17). Later, in 1703, Peter promulgated the first forest *ukaz* of national significance. According to this decree, forest lands at a distance less than 50 *verst* from big rivers and less than 20 *verst* from small rivers received the status of nature reserve.⁶ Logging activities in these areas became strictly regulated. Oak was to be cut only if it was needed for ship construction, and offenders of this rule were faced with the death penalty. Later the punishment for unauthorized oak cutting was changed to flogging, the cutting of one's nose and imprisonment with hard labor. Logging of other species was regulated according to the tree diameter and those not following these rules were fined. However, even under this regime, lime-trees could be harvested without any limitations, probably because they were assumed to be of no commercial or strategic value (Filonenko, 1993).

Altogether, Peter the Great was to issue more than 200 forest *ukazy* during his time as czar of Russia. However, as more than six million hectares of forests disappeared under Peter's reign, it follows that the rules were not effectively implemented, in spite of the

⁶ One verst corresponds to 1066.8 m., which means that the outer borders of Peter's natural reserves were situated about 21.3 km and 53.3 km from small and big rivers respectively.

harsh punishments of offenders (Filonenko, 1993). None the less, Peter founded a management system that in its mature form survived well into the first decade after the revolution in 1917. In 1718, he ordered the governor in Kazan to set up a forest inspection, and within a year, all *gubernias* had followed Kazan. This organization was the embryo of the German-inspired Russian Forest Department, which was created in 1798 by Czar Pavel I (Borbov, 1997). Under the supremacy of the Russian Forest Department, the forests were managed by provincial forest departments, which in turn were divided into forest management units (Sheingauz *et al.*, 1995: 1). From its foundation until 1811 the Forest Department fell under the jurisdiction of the Admiralty, and consequently, its first two directors were former Admirals and even war heroes. (Borbov, 1997). In the light of the strategic importance of the forests for the Navy, this can be of no surprise. In 1811, the Forest Department was reorganized as the Forest Division in the Department of State Property under the jurisdiction of the Ministry of Finance (Borbov, 1997).

However, with the death of Peter the Great, his *ukazy* lost their legal force. As his successors on the Russian throne in general paid much less attention to the forest sector, it retarded into the old system of open access. Local scarcity of timber caused a significant price variation between different regions of Russia. Probably in order to derive advantages from the situation, local landlords tried to claim their property rights by introducing a payment for logged timber. However, since it was forbidden to charge for the timber itself, they had the appropriators pay for the number of axes used. The normal charge was from twenty copeks to one rouble per axe, whereby the appropriator got free access to the forest for a period of one year (Filonenko, 1993).

During the 19th century, with the development of new physical infrastructure, the demand for timber reached such levels that it began to have a severe impact on the climate and river systems in the central parts of Russia. It soon became clear that the prevailing open access system was unsustainable, and that the situation had to be solved on a macro level. At the same time forest science gradually gained influence and esteem in the eyes of society. Special forest exhibitions were held, and among these one organized in 1885 at the Manege square in the very center of Moscow is considered to have been one of the most important “forest events” at the time. The theme of this exhibition was forest management; its exhibits came from 16 different counties, and 9,600 paying visitors attended it. One of the practical results of the event was that some counties started to organize special “holidays” for schoolchildren to help with tree plantation.

In 1894, the Russian minister of agriculture, Aleksey Sergeevich Yermolov, initiated the “Survey Expedition of the Springs of the Main Rivers in European Russia.” The purpose of the expedition was to chart the connection between the river system of the Russian heartland and the surrounding forests, whereby a new forest policy could be developed on scientific grounds (Filonenko, 1993: 75). The staff members of the expedition were the most distinguished scientists in Russia representing a wide spectrum of different scientific disciplines. They set about their work in all seriousness, but it was not until 12 years later, in 1908, that the five volumes of the conclusions of the expedition were ready for publishing (Filonenko, 1993: 129). However, in the meantime *ad hoc* recommendations, concerning felling practices, reforestation and so on, were issued. Probably under the influence of the expedition, the first Russian forest tax was imposed in 1898. Henceforth logging companies harvesting state forests were either charged to reforest the area cut, or to pay to the Crown the estimated costs for reforestation.

The significance of this law could best be evaluated by looking at the situation before and after it gained legal force. In the 20-year period before the October Revolution, more than 700,000 hectares were artificially reforested after logging, which should be compared to those 180,000 hectares which had been reforested during the previous 200 years. However, during this 20-year period, more than 10 million hectares were harvested, which also should be compared to the 58 million hectares that were logged during the same earlier period of 200 years (Filonenko, 1993: 118).

The Beginnings of the Soviet Forest Management System

According to the pre-revolutionary agenda of the Communists, forests were to be transferred to the poor and needy in analogy with the transfer of agricultural land to the peasants and the factories to the workers. However, the redistribution of forests never became a popular catchphrase although it sometimes appeared in newspaper articles. A probable reason for this was that not much had changed in practice, i.e., the system of “rules-in-use” (Ostrom *et al.*, 1993) regulating the forest sector since Medieval ages prevailed, no matter what kind of laws had been adopted or how severe the punishment of offenders had been. Usually, “a half-quarter of vodka to the forester could settle most problems,” and as no political party wins sympathy by promoting a system that is already in use, the Communists did not emphasize this question before the revolution (Filonenko, 1993: 138).

After the revolution in 1917, Lenin seems to have been among those revolutionaries that understood the necessity of establishing some kind of *modus vivendi* with the intelligentsia and different experts of the old regime – at least for a transitional period⁷. A general dismissal of foresters and forest experts would not have been of any use to the forest sector, and the local Soviets were informed that “it was impossible to exchange forestry experts for others without causing great harm to the forests, and, therefore to the Soviet people itself.” Forestry was considered to be a sector that no one could enter without having “special technical knowledge” (Filonenko, 1993: 141).

However, these statements were not followed by any practical change of the prevailing property rights regime, and therefore the uneasy alliance between the forest experts and the new authorities did not last for long. All forests were “transferred” to the people through expropriation and nationalization, whereby the old habit of *de facto* open access just continued.⁸ Individuals logged for fuel and the nationalized timber companies logged in order to fulfill the goals set in the first five-year plan that was adopted by the Communist Party in 1928. At the same time, foresters and forest managers of the “old school” struggled to save as much as possible of the sustainable forestry management

⁷ It is significant that the Bolsheviks after the revolution tried to come to terms with army officers, engineers, physicians, scientists and other groups who filled important functions in society. In order to keep their positions, only some kind of declaration of loyalty towards the new regime was required. Many communists distrusted this development as they felt that this heavy reliance on experts from the old regime betrayed the revolution. With NEP the Bolsheviks even gave away their economic initiative, whereby the only way to restore the Party’s leading role in society, and once and for all crush all independent elite, was through the purges that Stalin initiated during the 1930s. See for instance Kaminski (1992).

⁸ The first forest law of the Soviet Union was the Forest Decree of 1918, which declared all forests to be common national property. Between 1923 and 1925 the republics of the Soviet Union adopted their own forest codes (Sheingauz *et al.* 1995, p. 1).

system that had gradually developed during the last decades. What they did in fact was to strive for the implementation of scientifically founded recommendations and to influence forest policies by issuing warnings about the critical state of the Russian forests. However, the conventional wisdom was that “the foresters as former Czarist civil servants did not allow the representatives of the working people to fell timber where they wanted to” (Borbov, 1997). The situation was unstable, and the Government had to choose which leg it should stand on. It chose to break with the forest experts.

The great attack on the Russian forest science began in 1929. One of the executive managers of the National Board of Forestry, M. G. Zdornik, was allowed to set the agenda for the future forest management: “As long as we need forests we will harvest them in accordance with our needs without any theoretical discussions; we can not stop this attack on the forests” (Filonenko, 1993: 144). At the same time this statement was issued, the achievements of the forest science during the 19th century was called into question. In the communist terminology, a “forest front” was opened in the on-going struggle for power between the different social classes.⁹ In short, forest experts of the “old school” were accused of being reactionaries and of giving shelter to bourgeois thinking by stressing the importance of continuous forest management. According to the Communists, the regeneration argument only applied to a past era in the Russian history. Who was to profit from a continuous forest management if landlords and forest owners no longer existed as a social class? The goal of these groups had been to achieve a lifelong, continuous yield, which was of little use in a society officially made up of only workers and peasants, ruled by a regime that, in the name of the people, had nationalized all forests and which called itself *the dictatorship of the proletariat*.

Thus, without any landlords and forest owners, the only production parameter that had to be considered in the Soviet Union was the available transport capacity. Besides fitting into the common Russian apprehension of Russian forests as being inexhaustible, this conception also fits into a more general ideological framework of marxist-leninist thinking, where man is supposed to be involved in a perpetual struggle with the elemental forces. The purpose of the battle is that, submitted to the will of man, nature should be conquered, forced to reveal its secrets.¹⁰

In the late 1920s, the management system inherited from the Czars went through its first changes. Regional forest codes were declared obsolete, and from this time until 1977, when the Soviet Union got its first Forest Code, forest management was practiced without any special forestry laws. Instead there were resolutions of the Central Committee of the Communist Party, the USSR Council of Ministers, and the Republics’ councils of Ministers, as well as regulations issued by individual departments within the administration.¹¹ Not even the pre-revolutionary forestry management organization pleased the

⁹ Contrary to Marxist thinking, Stalin was of the opinion that the class struggle would intensify after the revolution when the bourgeoisie realised that they were in fact losing ground. This opinion was of course very convenient when the system of “democratic centralism” should be implemented, as it made up the logic fundament of the show-trials and the purges of oppositionary Communists and the old intelligentsia during the 1930s.

¹⁰ Compare, for instance, with Khrushchev’s attempt to grow cotton in the Central Asian republics with their low rainfall or the discussions during the 70s to change the direction of the Siberian rivers from south-north to north-south.

¹¹ The extent of the centralization of the forest policies is indicated by the level where resolutions were taken. Of a total of 65 documents 60 were approved at the Union level and only 5 at the republic level (Sheingauz *et al.* 1995, p. 1).

communists. The organization was split up, and the responsibility for forest management was distributed among several different departments on an all-union as well as on a sub-union level. However, in 1947, the USSR Council of Ministers adopted a resolution, which again resulted in a unified forest management system for the whole Soviet Union (Sheingauz *et al.*, 1995: 1).

Forest Management after 1947

The decision to split up the responsibility of forest management among different authorities may be interpreted as an attempt to destroy the old system, to weaken the positions of foresters and forest experts, while at the same time strengthen the centralist system of government. By analogy, the reconstruction of the forest management might be seen as a restoration of the old system, but with one important exception: This time, the recreated forest management system was a “tamed” organization, an obedient tool that was to implement orders from above instead of devoting its time to critical thinking of its own.

However, the reestablishment of a unified forest management system may even be interpreted as a rehabilitation of the old school, the recognition of “bourgeois forest science” as a fundament for forest management. This was a pragmatic adjustment to the new post-war reality: Among all countries fighting in the Second World War, the Soviet Union no doubt paid the highest price in terms of human lives and material devastation. The need for housing and repair of old houses was acute, and the demand for timber as a construction material reached new levels. At the same time, as a result of warfare, local forests in the western parts of the Soviet Union were in a miserable condition – if they had survived the war at all. In such a situation, there was no longer any use for a utopian “socialist forest science school.” From now on, even socialists had to follow the mainstream of forest science.

For the purpose of securing future timber production and restore devastated “green shields” along roads and water bodies, tree plantation was introduced on a greater scale than before. With a minimum of bureaucracy, people who volunteered for tree-plantation could get fire-wood and timber for repair straight from the local forest authorities without any interference from other authorities (Filonenko, 1993: 197).¹² This system of payment in kind seems to have been rather successful, as both the forest service and the rural population benefited from it. Usually, hay was provided in exchange for help with tree plantation. In order to get access to fresh milk products and fresh meat, which were scarcities in most shops, many dwellers in the countryside kept private cattle even after the collectivization and *dekulakisation* during the 1930s. The fodder needed for feeding cattle was supplied from the forest authorities while a “planter” was guaranteed hay harvested from an area as big as the one he had planted with trees (Filonenko, 1993: 203)¹³. In this way, local dwellers learned to know their forests, and they even knew which of their neighbors had planted a specific area. One may even presume that through their involvement in the forest management people were

¹² Usually, requisitions for fire-wood, timber and forage for privately held cattle had to pass through the *Oblispolkom*, the Regional Executive Committee.

¹³ The alternative to legally obtaining forage from the forest authorities was to steal it from the kolkhoze where one usually worked.

prepared to take on a greater responsibility for their local forests. Thus, they got a better understanding for the mechanisms ruling the health of a forest ecological system.

Soviet Forest Management under Khrushchev and His Successors

In 1961, the system of tree planters working for payment in kind ended as a side effect of circumstances external to the forest management system. As an attempt to raise food production at the country's *sovkhozes* and *kolkhozes*, Khrushchev "dekulakized" the countryside a second time in that he forbade privately held cattle. However, the reform did not succeed, and what was worse for the forest sector, the rural population had lost its incentive to participate in any further tree plantations. From then on plantations had to be carried out by hired workers (Filonenko, 1993).

During his time in power, Khrushchev also carried out experiments with a decentralized government. With the exception of the most vital ministries dealing with nuclear engineering and armaments, all other industrial ministries were abolished in 1957. The All-Union Gosplan and the union-republican Gosplans together with the new – for this purpose specially founded *sovmarkhozy*, or regional economic councils – became the new executives with the duties of the former ministries divided between them (Brown *et al.*, 1994: 395). The main purpose of the reform – a better overview of the planning process as a basis for better planning – was not obtained, which eventually resulted in the re-centralization process that began in 1962 (Brown *et al.*, 1994).

Khrushchev's organizational reforms did not survive his ousting in 1964. The re-establishment of the centralist order in forestry management meant that even more decisions from here on were to be made by central bureaucrats. As an example, foresters were now deprived of their rights to allow willing local settlers to log certain trees for household requirements as a part of sanitary cutting or thinning (Filonenko, 1993). It is possible that this development increased the transparency of the forestry system for central planners and policy-makers, but at the same time it was a further step away from a system where local and specific circumstances could be taken into consideration in the daily management.

The Soviet Union reached its "mature" form in the beginning of the 1970s. Essentially, from this time and henceforward three types of parties interested in the Russian forests can be identified: the first type is concerned with the management of forest production, the second with production of forestry products, and the third with forestry management and environmental protection.

In 1977, the Soviet Union established its first Forest Code, finally making it possible to deal with the forest management system as a whole. In principle, the law did not entail any fundamental changes for the management practices that had evolved over time as a consequence of normative resolutions. In short, the administrative structure of the forest legislation was divided into a legislative, a general executive and a department level. The USSR Supreme Soviet together with the soviets of the republics were in charge of all legislative actions, whereby general executive actions were implemented by the USSR Council of Ministers, the Union and Autonomous Republics as well as by the provincial and municipal executive committees. Actions were usually carried out by different departments, both at the union level and at its sub-levels (Sheingauz *et al.*, 1995: 2-3).

According to Sheingauz *et al.*, the Forest Code from 1977 had some major flaws that made it incomplete and inefficient as a guideline and a tool for an effective and sustainable forest management. The first imperfection was that the Code did not provide for a mechanism by which the legislative decisions made by executive and departmental authorities could be implemented. Even if this was the most significant shortcoming of the Code, it was not the only one (Sheingauz *et al.*, 1995).

A *second* drawback had to do with the hierarchical top-down order that affected the forest sector. In practice, it turned out to be difficult to bring about the co-ordination between the legislative, general executive, and department levels that the Code presupposed. Those in the upper levels of the system were ignorant of local forest specifics, principally as a result of lack of information about and understanding of these conditions. What made matters worse was, that the Communist Party from time to time intervened in the system, in order to guarantee production output at any cost. This, in turn, resulted in “a depletion of forest resources and the neglect of environmental impacts” (Sheingauz *et al.*, 1995).

A *third* problem was the exaggerated role that subsequent, departmental regulations came to play within the framework of the Forest Code. As stated above, the responsibilities of the executive authorities were thoroughly defined from the USSR Council of Ministers down to the local Soviets. Since the provincial level in many cases did not have any executive authorities; different departmental organs often took over the responsibilities that was reserved for the executive authorities. Thereby, the departmental authorities came to take decisions for which they were not qualified (Sheingauz *et al.*, 1995).

The Forest Management System in Post-Communist Russia

The break-up of the former Soviet Union in 1991, the new Russian constitution in 1993, and the continuous move towards a market economy have brought radical political, legal and economic changes that have shaken all sectors of the economy, including the forest sector. As stated above, some of the results of these dramatic changes have been a general production decline and social hardship for different population strata in the Russian Federation. The old production concepts of the central planning system have become obsolete, unsustainable and non-functioning. The forest sector, particularly the remote logging communities of Siberia and in the Far East, have had to face significant economic drawbacks and accompanying social problems.

Russian authorities in the forest sector have tried to overcome the disadvantages affecting the sector by phasing in new legal concepts concerning management and utilization. To provide interim ground rules for forest management and utilization, the “Principles of Forest Legislation of the Russian Federation” were enacted by the Parliament and signed into law in March 1993 to replace the old Forest Code.

Although the interim Principles were generally in line with current international, social, economic, and environmental thinking about sustainable forest development, in crucial parts they lacked in specificity. “The wording in the 1993 law is a mixture of old propositions and passages taken directly from the 1970s law” (Sheingauz *et al.*, 1995: 9). As forest utilization in the wording of the law only referred to forest harvesting, many of the non-wood functions were not considered at all. In administrative and fiscal proc-

esses the principles vested many interested parties with control over forest resources without properly defining their responsibilities (Sheingauz *et al.*, 1995).

The adoption of a new permanent forest code has not been an easy task. Work on drafting the new code began already in 1994, but as subsequent major changes in other branches of the legal framework – such as changes in the Civil Code or new environmental laws – were made at the same time, the new Forest Code was significantly delayed. Another major obstacle has been the lack of consensus on other legal issues. Under the interim Principles, some subjects of the Russian Federation¹⁴; the republics of Karelia, Udmurtia, Bashkortostan, and *Leningradskaia oblast'* for instance, managed to pass their own forest laws (Kostyok, 1997). Unfortunately, these regional codes were often inconsistent with federal laws. Especially in those cases when they declared that forests were the property of the actual federal subject, they created tension between the center and the periphery. As a matter of fact, the new Forest Code now in force was passed by the Duma already in the summer of 1996, but as it contains a provision declaring all forests of the State Forest Fund to be federal property, the Federal Council, where all the leaders of the federative subjects are seated, rejected the Duma's draft for its non-compliance with the Constitution and environmental legislation. In short, the new proposed Forest Code became another issue in the ongoing struggle for power between Moscow and the subjects of the Russian Federation, and it was not until the spring of 1997 that the new Forest Code finally could be signed into law.

Constitutional Rules Affecting the Forest Sector

The historic overview above has shown how the Russian forestry system has worked under different types of political and economic regimes. Under Peter the Great a mercantilist system developed in that the Crown formulated rules based on its own strategic interests. Among other policies, forests situated close to waterways became more or less confiscated and subjugated to detailed harvesting and management rules. The system was very centralized, and, under the threat of severe punishment, firms and individuals were obliged to serve the interests of the Crown. At least in theory, the Crown had a monopoly in setting the collective choice rules and the operational rules. However, the severe punishments show that the state's ability to enforce its rules probably was limited. The state did not have information about all activities on its territory, and it could therefore just hope that a few severely punished offenders would work as a warning to others. As this implementation strategy is quite unreliable, one may expect that local rules-in-use not sanctioned by the Crown nevertheless developed. A further indication that this in fact was the case, are the above-mentioned six million hectares of forests that disappeared under the reign of Peter the Great alone.

In the capitalist system that gradually developed in pre-revolutionary Russia, the state had to accept private property rights, thereby also accepting other actors on the scene. Consequently, the Crown had to rely upon more subtle ways of governing. Instead of brute force, tax regulations and information campaigns became more commonly used tools for governing.

¹⁴ According to the constitution, there are 89 subjects in the Russian Federation, divided into republics, oblasts, krays and autonomous okrugs depending on their size, population, political significance, ethnicity and historical circumstances.

Under socialist rule, the forest sector became re-centralized. All forests and all forest enterprises were nationalized in the name of the people, and – as Valery Shubin, the director of the Federal Forest Service of the Russian Federation (*Federal'naiia Sluzhba Lesnogo Khoziastva*), puts it – no one questioned the directives that came from the center but interpreted them as laws (Kostyok, 1997: 22).

Today, according to Shubin, there still exists a very broad consensus that forests should remain state property (Kostyok, 1997). What has been questioned is the distribution of responsibility between the federation and its subjects. In the new Forest Code, forests are declared to be federal property, but with part of the management responsibility delegated to the federal subjects. In principle, Moscow decides the harvesting volumes in order to prevent river sources from being deforested or reproduction areas from being devastated. The federal subject, in turn, decides who may harvest the forest. Moscow's concern for the low stumpage fees has also been taken into consideration in the new Forest Code. In order to prevent the emergence of special interests or corruption, Moscow decides the minimal stumpage fees, which have to be paid to the federation. If a foreign firm wants to achieve concession rights, the federal subject can not arbitrarily make a decision on this matter (Kostyok, 1997).

Collective Choice in the Forest Sector

The historic overview also showed that before Peter the Great, collective choice rules in the form of forest policies were poorly developed. The only forest policy that was in use for centuries in the sparsely populated Russia was that everyone could fell timber everywhere no matter to whom the forest belonged (Filonenko, 1993).

Peter the Great monopolized the right to issue collective choice rules. Under his reign, forest policy was based on the security interests of the state, whereby, as stated above, tree species were protected or harvested according to their usefulness for the Russian military in general, and for the Russian fleet in particular.

The Czars after Peter the Great did not take any genuine interest in the forest sector. Initiatives for a more sophisticated forest policy came from the landlords who had an economic incentive to claim their property rights by limiting access to privately owned forests. It was not until deforestation began to have a severe impact on the climate, thus causing great harm to people's living conditions that the state again interfered in a more resolute manner. This time, the state tried to anchor its forest policy in a scientific perspective. Forest science gained in esteem and played a crucial role in formulating a policy of sustainable forest management.

The first years after the revolution were as chaotic to the forest sector as to other branches of the Russian economy. Forest experts no longer had any legal ground to issue policy recommendations or to implement them. At the same time, Lenin recognized their importance and protected them against the more radical elements of the first Communist leadership. The end of NEP nevertheless meant the end for the forestry experts' efforts to achieve a sustainable forest management. According to the new forest policy, only economic and logistic parameters had to be considered.

After the Second World War, forest science again gained in esteem, but now it had been fully incorporated into the state organs and completely lost its independence. Nevertheless, the balance between economic and environmental demands were in some respects restored and better considered in the production plans than before the war.

With respect to policy issues, the historic overview finally showed that not much has changed in the Russian forestry management system since the fall of the Soviet Union. Moscow keeps its initiative in policy questions according to the power-sharing scheme outlined in the Forest Code in force. The federal subjects, in turn, are reduced to act according to frame laws that have been issued by Moscow.

Forest Management

The operational rules in the forest sector have been very much dependent upon the development of transportation and harvesting techniques. For centuries, an axe was the main tool for felling timber and floating the main transportation method for longer distances. It is not surprising then that early policy makers tried to change the rules of the game for these variables when trying to implement new policies. Two examples have been mentioned above: The confiscation of the more accessible forests on behalf of the Crown under Peter the Great, and private landowners' charging for axes used for forest harvesting.

The development of the physical infrastructure made it possible to exploit forest areas that had earlier been unexploitable due to difficult transport conditions. However, the new physical infrastructure *per se* also raised the demand for timber, which was needed both to develop the railway network and to be used as fuel for steamboats and steam engines.

The dawn of Russian capitalism also brought about some major changes in the operational rules due to alterations in the structure of the population. The technical development made the Russian feudal economy obsolete, and the manors lost in importance. Serfdom was finally abolished in 1861, and for those parts of Russia where serfdom had been present, the abolition meant that a historical continuity was broken, as the liberated peasants henceforth were denied access to forests belonging to the manors. Until then, both peasants and landlords had regarded these forests as commons. This forest enclosure movement can best be understood in the light of the growing Russian capitalism and the industrialization, whereby the forests in the course of time got a clearer and more distinct market price. A rising class of timber capitalists – with no historical ties to the forests – bought up the forests belonging to the manors and organized forest harvesting according to industrial principles. They also developed special provisory timber communities, to which timber workers were hired during the winter months. The working conditions in these communities were dreadful, and among others, Lenin complains about them (Lenin, 1967). Even on a more general level it seems that the timber communities were mostly outside the control of the Russian authorities.

In accordance with what has already been mentioned about the forest exploitation during the 19th century, one may also assume that profit was the main driving force that determined the harvesting patterns. Because of this, until the revolution in 1917, forests in some areas were exposed to a ruthless exploitation on a scale never experienced before.

Reorganizing the Forest Industrial Sector

The Soviet Union reached its peak of development in the beginning of the 1970s. From this time essentially three types of “forest actors” can be identified. The first is con-

cerned with the *management* of forest production, the second with *production* itself, and the third type with *forestry* and environmental protection.

The organizational framework governing forest production underwent administrative changes during the last decades of Soviet rule. In 1968, the USSR Ministry of the Pulp and Paper Industry and the USSR Ministry of the Timber and Woodworking Industry (*Minlesprom*) were created out of one major ministry, the USSR Ministry of Timber, Pulp, Paper and Woodworking. The reform was initiated as an attempt to raise production, but did not bring any success. After years of arguments between the ministries, and attempts to distribute blame for production shortfalls, the two ministries were recombined in 1980 into one ministry, the USSR Union-Republic Ministry of the Timber and Paper Industry, *Minlesbumprom* (Barr & Braden, 1988: 19). In the beginning of the 1980s, *Minlesbumprom* controlled about two-thirds of the logging operations in the Soviet Union, and its timber industries' section organized more than 3,000 enterprises and organizations all over the Union.

Until 1971, there were five levels of management in the forest industries. The first level was the ministry itself, which, in turn, managed a number of *glavki*, which administered one line of production each. The third level consisted of the so-called *ob"edinenie*, or groupings of enterprises working in a specific geographical region. The fourth level was made up by smaller combines or state trusts, and finally came the individual enterprises themselves (Blandon, 1983; Barr & Braden, 1988). This system had serious drawbacks, mainly due to an overburdened administrative apparatus. Production plans had to be broken down four times before they eventually reached the final enterprise. In the same way, the provisional plans that the individual enterprises drew up as the first part of the planning process were aggregated many times before they reached the ministry. Thus, in both directions a considerable loss of information occurred that all parties involved suffered from (Blandon, 1983; Barr & Braden, 1988).

The strictly vertical information flow itself also led to undesired side effects. Enterprises that physically were quite close to each other might have had an interest to co-operate or to complement each other's production, but did not do so as they were under the jurisdiction of different *glavki* and therefore lacked information about each other (Blandon, 1983; Barr & Braden, 1988). The lack of horizontal information still seems to be a very relevant problem in Russian forestry – a part of the Soviet legacy (Kizilova, 1996).

Besides these problems, the forest industry also suffered from the general problem of asymmetric information in Soviet industry. Enterprises tried to hide their real capacity in order to receive production plans that were relatively easy to fulfill, which further distorted the basic data needed for the planning process (Blandon, 1983).

In 1971, measures were taken in order to simplify the hierarchical structure and diminish the number of management levels to three. Under the ministry a layer of different *ob"edinenie* was formed. This layer consisted of industrial associations, and under this layer followed the companies themselves. However, in some areas the fourth level with state trusts – *kombinaty* – was still maintained. As some of these combines were put directly under the ministry, they effectively became a kind of *ob"edinenie* in their own right. In the beginning of the 1980s, there were a total of 25 *ob"edinenie* and combines under the control of *Minlesbumprom* (Blandon, 1983: 54). This re-organization might have made planning somewhat easier, but the organization was still too hierarchical to effectively deal with local problems.

The actual production level of the logging enterprise was organized in the following manner: Each *ob"edinenie* consisted of a number of *lespromkhozy*, individual logging enterprises. Usually, each *ob"edinenie* or combine organized between 15 and 40 *lespromkhozy*, and in all, there were about 600 of them in the country. Under the jurisdiction of a *lespromkhoz* there were a number of *lesopunkty*, normally 2 to 4, attached to each *lespromkhoz*, which carried out actual logging operations. As the *lesopunkty* had their own equipment, workers, infrastructure and specific logging areas, they are best understood as independent economic units of a specific *lespromkhoz* (Blandon, 1983).

Gosleskhoz

Forestry – or silviculture – was administered by the USSR State Forestry Committee, or *Gosleskhoz*, which had a union-republic structure.¹⁵ It was formed in 1966, but, as previously stated, its roots can be traced back to 1798 (Barr & Braden, 1988: 20; World Bank, 1997: 149). During the Soviet period examined here, *Gosleskhoz* administered 94.6% of the state forests¹⁶, controlled about 2,500 organizations concerned with various silvicultural operations, mostly *leskhozy*, and supervised about 20 research institutes (Blandon, 1983: 84; Barr & Braden, 1988: 21).

Gosleskhoz' silvicultural operations can be divided into four main fields. In its *first* role – being in charge of the overall forest management in the Soviet Union – *Gosleskhoz* had a responsibility to survey the forest resource and assemble data concerning its constitution in order to achieve a rational management.

The *second* role, to attend to forest reconstruction, was its main as well as its most resource-consuming task. In short, *Gosleskhoz* collected seeds from desirable tree species, prepared plantations and grew seedlings and tended both plantations and areas with a natural regeneration in order to regenerate stands after logging or establish new plantations (Blandon, 1983: 85). In the European parts of the Soviet Union, more forests were planted than the area of forests that were felled, thereby increasing the total forest area, whilst in Siberia and the Far East artificial regeneration in most cases was not carried out at all. As broad-leaved species usually are the first to occupy a harvested area – at the expense of coniferous species – this means that the species structure in Siberia slowly underwent degradation from both an ecological and an economic point of view.

The *third* task that *Gosleskhoz* had to attend to was timber harvesting. This activity differed from the one carried out by *Minlesbumprom* since most of the logging activities of *Gosleskhoz* were related to thinning operations and sanitary cuttings.

Finally, *Gosleskhoz* had jurisdiction over the establishment of forests that were managed for the benefit of agricultural concerns. Apart from these main fields of activity, *Gosleskhoz* was responsible for protecting the forests from fire, insects and disease.

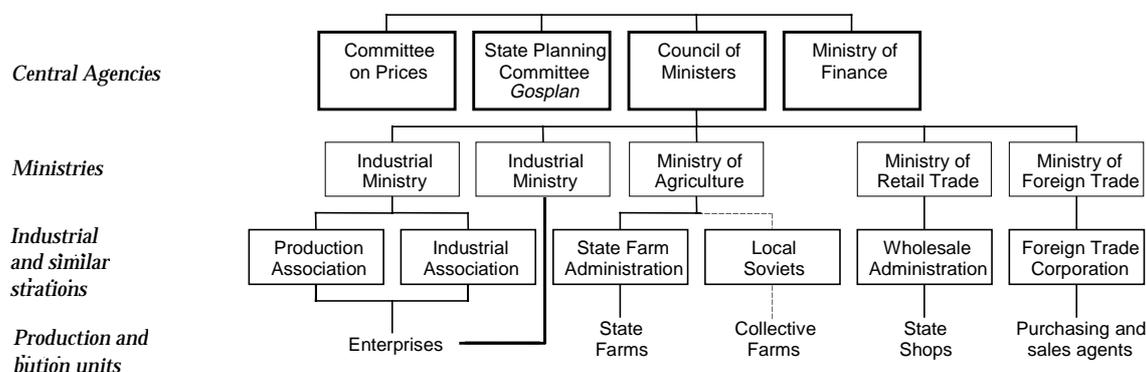
¹⁵ *Minlesbumprom* was also involved in silvicultural operations. These operations were limited to clearing of the area logged over from brush and logging waste in order to increase the likelihood of regeneration by the most desired species, and also to decrease the fire risk. During the 1970s these operations were questioned by Russian forest scientists as being counterproductive. However, with an increasing demand of timber, there is a need to utilize all the timber growing on a particular site, including what might once have been considered as waste. Therefore, one may expect that this practice may even be intensified in the future (Blandon 1983, p. 84).

¹⁶ The remainder was administered by collective farms, 2.3%, and other administrations, 3.1%.

Gosleskhoz co-operated with the Council of Ministers of Union Republics in order to coordinate the work of the republican ministries of forestry.¹⁷ These ministries undertook forestry activities in the republics and supervised the *krai* and *oblast'* forestry and the ASSR ministries of forestry. The republic ministries and their subordinate administrations controlled various forestry enterprises and combines.

From the outline above, it is clear that the forest sector followed the general patterns of industrial organization in the Soviet Union. The top of the pyramid, in economics and politics alike, was the Politbureau. The next in rank in the party hierarchy was the Central Committee of the Communist Party, and its economic departments also played an important role in policy-making. The actual party policy was then carried out by the above-mentioned Council of Ministers (Brown *et al.*, 1994: 422). The Council of Ministers – together with the State Planning Committee, *Gosplan*¹⁸, the Committee on Prices and the Ministry of Finance as well as special party agencies – made up a part of what in Soviet parlance was called the *nadvedomstvennyye* agencies, i.e., those standing above the sectorally specialized agencies (Fortescue, 1997: 14).

Figure 1: Organization chart of the command economy, 1973-91.



Bold lines mark the co-ordination and planning between the central directive agencies. Normal lines shows the lines of subordination in state sector. The broken line indicates that there was no legal subordi-

¹⁷ In order to avoid confusion, a short recapitulation of the federalist system in the Soviet Union may be useful. The Union of Soviet Socialist Republics was a federative construction made up of 4 levels. Under the all-union level of USSR, came a union-republic level with 15 SSRs, socialist soviet republics, among which the Russian Soviet Federative Socialist Republic or RSFSR was the biggest. All but the smallest union republics were divided into provinces, some 150 in all. The 20 autonomous republics, the ASSRs, were equal in size and powers to the 123 *oblasti*, but besides these, the province level was even made up by 8 autonomous regions, ARs, 10 autonomous areas, AAs, and 90 cities of Republican subordination. The fourth level consisted of 902 towns, further divided into urban wards, and 3,225 counties subdivided into 1,184 towns, 3,992 urban settlements and 42,411 villages (Brown *et al.* 1994, p. 348).

¹⁸ The State Planning Committee, *Gosplan*, headed by a deputy premier was the co-ordination planning agency, responsible to the government. Its task was to ensure the coherence and balance of plans both in the long and in the short term; it was also responsible for allocating key materials and products to the principal users. In this it was assisted by the State Committee on Material-Technical Supply (*Gossnab*), also headed by a deputy premier. By the method of “material balances” available supplies of the more important goods were related to estimated requirements, thus identifying the need to increase supplies or to cut utilization (Brown *et al.* 1994, p. 422). It is a common misunderstanding that management was told exactly what to produce. With respect to the sheer number of different products – 12 million according to a 1977 Soviet estimate – this was an impossible task, whereby it was only about 48,000 core products that were submitted to the central planning process.

nation in the collective sector, but that the Ministry of Agriculture imposed procurement quotas and that local authorities had certain supervisory powers. Source: Brown *et al.*, 1994.

Under the *nadvedomstvennyye* agencies followed the *vedomstvennyye* agencies, those with sectoral specialization. The most important of these were the industrial branch ministries. In 1979, there were 31 ministries classified as all-Union, and 22 as Union-republican. The union-republican ministries had counterparts in the various republics and most administered their enterprises through some kind of *ob"edinenie*. As indicated above, Minlesbumprom and Gosleskhoz were to be found in this group.

The Forest Sector in the Soviet System of Sectoral Specialization

There is no consensus among analysts about how the relationship between the *nadvedomstvennyye* and *vedomstvennyye* agencies should best be described. Two models seem to be the most prevalent. The first one draws the picture of a state-run command economy in which direct state management of the economy predominates, and the second one describes a sectorally negotiated economy, and its related politics, in terms of domination by major sectoral groups (Fortescue, 1997).

According to the first model, the Politburo and the Central Committee Secretariat were strong political authorities that were able and willing to impose policy relatively autonomously. To their disposal they had the central administrative agencies with the capacity to control flows of financial and material resources according to the policy set by them. The political and administrative center was then in control of the middle-level structures that implemented its policies through the exercise of day to day control over the enterprises. This was the role that was played by the branch ministries and their *glavki*.

According to the second model, it was the institutional representatives of the dominant sectors of the economy in the middle-level structures that set the agenda for resource allocation. As individuals from these dominant sectors were recruited to the sectoral departments of the apparatus of the Central Committee and Council of Ministers, of Gosplan and of others, they were able to take control of the decision-making process. Because the essential nature of decision-making in the sectorally negotiated economy was the negotiation of the distribution of resources among narrowly defined and highly specialized sectors, a premium was put on the ability to argue a narrow and specialized case. Thus, as a whole, coordinating links came to dominate over hierarchical links in this *ekonomika soglasovanii* – economy of agreements (Fortescue, 1997: 3).

Which of the two models is applicable to the forest sector, and what impact did the actual institutional structure have on forest management? To a certain extent it seems that both models are applicable. The split of the Ministry of Timber, Pulp, Paper and Woodworking in 1968 and the merger of the two ministries thus established into Minlesbumprom in 1980 shows that responsibility for the organizational design was reserved for the *nadvedomstvennyye* agencies. During the split, both the Ministry of Timber and Woodworking and the Ministry of Pulp and Paper had difficulties in meeting the production demands, which indicates that they had no influence on the planning process of the *nadvedomstvennyye* organs.

On the other hand, it is also possible that the decisions on organizational design were made on the basis of information collected by the industrial ministries themselves, and

thus influenced by these. According to the same logic, the failure of the forest sector to set the production demand or to obtain more financing for modernization and restoration for its establishments, may also indicate that the sector participated in a process of sectoral negotiation (*ekonomika soglasovani*), but that the rewards were modest as its bargain position was weak in comparison with other sectors of greater significance to the Soviet economy. In 1987, for instance, forestry was just the 7th most important industrial sector in the Soviet Union¹⁹ (Huber *et al.*, 1996: 5).

Nevertheless, it seems that Minlesbumprom or its precursors always played the dominating role towards Gosleskhoz or environmental authorities.

Policy Goals in Russian Forestry

An economic sector or branch of business, like the Russian forest sector and its related units is always affected by different factors in the surrounding environment, at the same time as it fulfils a number of functions that can not be considered as being strictly economic. On a micro-level, individual firms hardly pay any attention to these circumstances, but on an aggregated level, they have an impact on the performance of whole regions and countries. Therefore, in most countries, the government tries to influence the decisions of individual firms by setting the rules of the game in form of a battery of laws, regulations, recommendations, information campaigns, taxes, charges, subsidies, and so on. These tools are the result of more or less coherent governmental policies, which are, in turn, formulated upon the Government's perception of reality and its ambition to either bring about a positive development for society as a whole, or to bring about advantages for its own members or other powerful groups in society.

In the economies of transition in Eastern Europe and in Russia, old policy goals are now coming under severe pressure. In some cases, they have to be totally abolished, as they are no longer desirable and obsolete in a society that has changed. In other cases, the goals prevail, but the means to implement them have to change. In yet other cases, the priority between policy goals has to change as a result of financial limitations. Whether or not the country is in a stage of transition the significance of policy-making is considerable.

There can be no surprise then that the World Bank thinks that the most important area for the Russian Government in its efforts to rebuild the forest sector and setting it on a sustainable path is "to establish and enforce an enabling policy and regulatory framework that ensures sustainable management of forest resources and helps maximize the benefits from utilizing and conserving forest resources" (World Bank, 1997: 2-3). Russia's current forest policy framework does not adequately support the Government's international environmental commitments and it makes private investors hesitant to enter the potentially lucrative forest sector. It also presents obstacles to Russia's environmental, social, and economic development as well as to the fulfillment of its forest resource management objectives.

¹⁹ Calculated as percentage of total industrial output, the list of the most important industrial sectors was as follows: Machine building and metal works industry 31.01%; food industry 12.87%; light industry 12.55%; fuel industry 8.78%; chemical and petrochemical industry 7.27%; ferrous metallurgy 5.76 %; forestry, wood processing, paper and pulp industry 5.71%; non ferrous metallurgy 4.94%; electric power industry 4.45%; construction material industry 3.84%; flour-grinding, grouts and mixed food industry 2.55%; and glass and china-pottery industry 0.32% (Huber *et al.* 1996, p. 5).

In order to create such an enabling policy and regulatory framework, the World Bank identifies four issues as especially critical. The *first* issue concerns the legal and regulatory framework governing ownership and management of forest land. The *second* refers to promotion of forest resource sustainability and maintenance of environmental integrity. The *third* is about restructuring of the sector to ensure economic sustainability and viability. Finally, the *fourth* hints at the strengthening and reinforcement of the social safety net for the most threatened communities, as well as the development of alternative employment opportunities and the maintaining of propitious conditions for the continuity of traditional communities and economies. How then, and with what measures, can all this be achieved?

Towards Forest Sustainability?

The domestic Russian market for timber products is potentially very large. The export market is good already, but could be even further developed as Russia can supply the market with high-quality wood from slow-growing trees from its northern regions. The question that has to be answered then is whether or not forest activities are carried out in such a way that economic sustainability is guaranteed in a longer perspective. This problem can be examined from at least three different angles. The *first* refers to the annual allowable cut system in force, the *second* relates to the resource pricing system that the processors have to bear, and the *third* alludes to the value added to timber products before sale.

The annual allowable cut is a measure of the average volume of wood that may be harvested annually under sustained yield management during a ten-year period (World Bank, 1997). It roughly equals the amount of new growth produced by the forest each year minus deductions for losses to fire, insects and diseases, and is made up of four different formulas in which the growing stock of mature and maturing forest and estimated growth are independent variables. The annual allowable cut is calculated at the district or ranger district level and then aggregated to yield the regional annual allowable cut. Although the present system for calculating the annual allowable cut is reasonable, in practice, according to the findings of the World Bank, it has a number of defects that can lead to distortions and long-term adverse consequences for the sustainability of the forest resource (World Bank, 1997):

Table 2: Estimated biological forest potential for various regions of Russia. (The forest harvesting is measured in thousands of cubic meter.)

Region of Russia	Total annual allowable cut	Conifers	Deciduous (hard)	Deciduous (soft)
Siberia	233,286	187,720	-	55,566
Far East	98,546	81,853	4,187	12,506
Europe/Urals	197,575	49,554	5,043	132,978
Total	529,407	319,127	9,230	201,050

Source: Based on State Forest Account of 1993 and obtained from the Federal Forest Service of Russia, 1995, as reported by the World Bank 1997, p. 42.

The absence of local participation in the preparation of management plans results in a lack of public commitment to the plans and difficulties of implementation. This is a severe shortcoming especially in areas where the forest is the main source of income or

where forests are close to population centers. Consultation is critical for integrating conservation and protection objectives into the plan.

Despite the fact that it is required by regulations, conservation and protected areas are often not appropriately taken into account in calculating the annual allowable cut. Although each district manager is supposed to follow an annual allowable cut for the individual district, there are indications that regionally aggregated annual allowable cuts are sometimes applied instead, so that some areas become severely overcut while others, – those that are less accessible – are underutilized. This means that the local logging community will have to move to new areas, or at least to send their workers to more remote logging areas. In the long run, this is of course not economically sustainable, as the remoteness will have a severe effect on the economic profitability of the sector.

To maximize production, each stand should be harvested as close as possible to its optimum rotation age. The present methods of estimating the annual allowable cut are probably biased downwards, because the sustainable supply is based on a relatively small area by assuming that a normal age distribution should be obtained in the long term. This underestimation of the forest growth will also reduce the calculated annual allowable cut.

International experience shows that a competitive forest industry requires a resource pricing system that makes processors bear the full cost of timber production. Many forest-rich countries, Russia included, have subsidized their industrial sectors by keeping the costs of timber artificially low, either by energy or transportation subsidies to the timber industry or by different trade barriers. In Russia this has led to large inefficiencies in processing, uneconomic location of processing capacity, excessive industrial capacity and low investment in resource management.

The most significant source of inefficiency is the stumpage system. In most stumpage systems the rent accruing to the resource owner is the residual amount after operating costs and enterprise profits have been deducted from the sales price. In Russia, stumpage fees are too low, nontransparent, and levied only on timber removed from the forest rather than on all timber cut. As minimum stumpage fees are the same all over Russia, enterprises with lower operating costs or better-quality wood are favored at the expense of others. This system of underpricing of timber was a part of the Soviet model for economic development, transferring wealth from agriculture and forestry to the industrial sector in order to finance the industrialization process. Today this system has become completely obsolete. A properly designed stumpage system could provide powerful incentives for improved efficiency and sustainable forest management. Resource pricing can be designed to motivate resource users to optimize resource utilization on a sustainable basis.

Another aspect of economic sustainability is the value added to wood products. As Russia as a whole recovers from the first years of transition and the agricultural and industrial sectors start to work normally, real wages will rise in all branches. In order not to lose trained and skilled workers as well as competent managers, wages in the forest sector will have to follow this development of the economy. However, there is an upper limit for wages in the forest sector, which is basically set by the value of timber on the international market. When the stumpage value approaches the “red numbers” as operation costs increase, imports will be substituted for wood production, and domestic output will turn insignificant. This is one of the classic traps that strike most providers of raw material. The likewise classic solution to this dilemma is to enhance the value

added of the product, that is, to increase the average productivity of each worker. If the government fulfils its declared intentions in this field, it would mean that Russia can maintain or even increase its export earnings from forest products, while, at the same time, reduce its raw wood requirements and strengthen local economies by increasing exports of value-added processed timber rather than raw logs.

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Chapter 3

Ministerial Spin-Offs and Economic Transformation in the Russian Timber Industry, 1992-1996

Barbara Lehmbuch

Introduction

This project studies post-Soviet transformation on an industry level. Why industries, rather than larger overarching sectors, regions, or individual enterprises? For one thing, industrial branch – *otrasl'* – was a decisive organizational category in Soviet times. Not only were enterprises, throughout most of Soviet history, administered by specialized branch production ministries, but even the Central Committee Apparatus itself, along with the planning organization *Gosplan*, was largely organized along sectoral industrial lines. Industries thus formed established organizational fields with a relatively clearly defined identity and outer boundaries. The industry level therefore is a potentially very fruitful unit of analysis in studying the ongoing process of transformation. This becomes all the more important given the historical record of branch agencies: Generally throughout the Soviet period, while formal organizations remained fluid and were characterized by permanent restructuring, merging and splitting up of individual organizations and the introduction or abolition of middle administrative layers, under the surface there was substantial personal as well as task continuity. This makes it all the more challenging to investigate their fate under radical economic and political transformation.

Methodologically, this project has been inspired by a growing number of interdisciplinary studies of what has been described as, variously, “business systems,” “governance of economic sectors” or yet other terms. In this context, the subtle differences between these concepts need concern us less than the commonalities. Unlike the industrial organization tradition of economic research that restricts itself to explaining degrees of aggregation and disaggregation among a population of firm-level actors, sectoral governance approaches try to capture patterns of interaction between private and public actors, firms and collective organizations within the context of a given industry. In a further divergence from orthodox economic approaches, markets are not assumed as a natural state. Rather, they are created in a historical process and compete for dominance with other forms of governance such as hierarchies, networks or clans and formal associations. Both of these assumptions can be uniquely helpful in studying post-communist transformation processes which are faced with precisely the problem of creating gov-

ernance structures from scratch. The breakdown of Soviet-style central management in this perspective does not automatically lead to the emergence of markets (as has indeed become increasingly obvious in the past few years): Many other possible arrangements are at least imaginable, even if not desirable in terms of their economic efficiency. Careful empirical study is needed to discover the actual governance structures that have emerged since 1991.

Since the sectoral governance perspective has as its arena industries in their entirety, empirical research faces specific methodological problems. Clearly, analysis has to go beyond the purely micro-economic. Economic transformation at the enterprise level is of course crucial. Surveys of enterprise directors are beginning to yield valuable insights into whether and to what extent Soviet-style enterprises are becoming firms and hence, strategic actors, rather than the mere accounting units they were in Soviet times. But this is not the whole story. Enterprises (as yet, probably still a minority of them) may increasingly abandon their old paternalistic role vis-à-vis the workforce; they may restructure production and begin paying attention to their balance sheets (again, not necessarily in a majority of cases). However, while such changes would be very indicative, they cannot offer conclusive evidence on the predominance – or not – of market regulation. While many Russian enterprises may tend to concentrate on either a market-oriented or rent-seeking strategy at the expense of the other, there remains something spurious about the distinction, as Western firms – perfectly happy to combine market strategies with calls for subsidies or access restriction – have amply demonstrated.

Rather than the purely micro-economic level, hence, we need to form a picture of a complex set of relationships encompassing the interplay of government policy, various intermediary bodies and regional actors in both the economic and political realm. This, of course, is a broad organizational field hard to capture in its entirety. The strategy I have chosen here is to focus on a subset of organizations I have called “ministerial spin-offs.” The abolition (at least in name) of the huge sectoral bureaucracies after 1991 left thousands of former administrators out of work. Not surprising, therefore, a variety of new organizations has formed in Moscow – and to a lesser degree in regional capitals – all of them in one way or another drawing on former ministerial resources such as staff, knowledge, connections and all too often also material assets. I believe such spin-offs can be useful indicators; what form and functions they assume is deeply connected with the particular governance logic emerging in the post-Soviet period. Ministerial successor organizations may really be ministries in disguise, while in a market-oriented context the more obvious course for them will presumably be to take up commercial intermediation of one kind or another.

Three developmental scenarios

In what direction, then, is the Russian timber industry evolving? I would like to propose several alternative scenarios of possible transformation, based on, respectively, institutional inertia, marketization, or a far-reaching devolution of power to the regional level. The first scenario is based on the high resilience that branch production bodies have traditionally shown in Soviet history. Thus, for instance, in the “Sovnarkhoz” reforms of the Khrushchev period the branch principle of administration was temporarily abandoned in favor of regionally based management encompassing different industries. However, this attempt failed and after the fall of Khrushchev branch ministries were restored – remarkably, in spite of the eight-year period elapsed since their liquidation,

with top leadership much the same as before the reforms. There are some indicators of similar trends in the post-Soviet period. While privatization has given enterprises formal independence, many of them at least nominally have remained members of overarching Moscow-based organizations. These bodies, according to their charters, are devoted to industry-wide coordination and information issues (some of the former tasks of branch production ministries); they often play an important role in foreign trade negotiations. This scenario implies a strongly path-dependent form of development. While radical change does occur in it, there is also a considerable underlying continuity. The names and legal form of the organizations are more or less radically modified and their tasks are adjusted to conform to the larger changes going on in the overall economy (indeed they may even be phrased in the language of the market). However, they do retain a basic organizational integrity.

An alternative scenario would be that of a successful transition to the market. Formal rules governing economic behavior have changed radically over the last decade; it is reasonable to assume that, over time, adaptation or new entry will create organizations capable of benefiting from the environmental changes. Firms as strategic actors, thus, should gradually emerge from Soviet-style enterprises, either through privatization and reform or in the form of various enterprise spin-offs or joint ventures with foreign firms. As to the main focus of this investigation, ministerial spin-offs can be expected to evolve to form the backbone of a class of commercial intermediaries such as trading houses, banks, commodities exchanges, and above all, all sort of consulting services. Furthermore, if we widen the narrowly neoclassical analysis to a more socially embedded view of market economies, one would also expect to see various non-profit intermediaries such as professional and business organizations. Indeed many such bodies have emerged in name at least, and analysts have interpreted their appearance as an inevitable component of democratic and market transformation. Fragmented and weak though they may be at present, business associations are expected to consolidate over time; they are viewed as a partial reemergence of civil society. Soviet-style top-down branch management organs, on the other hand, may so far have managed to survive as organizations, but one would expect their role (if indeed they still play one at all) to diminish rapidly as Soviet-style enterprises become fully-fledged firms and start developing their own strategies, rather than relying on central guidance.

While the first scenario stands for basic organizational continuity, or minimal change, and the second one for a market-oriented development, yet another, third scenario is imaginable, and indeed frequently encountered in the literature. Both the previous scenarios operate on a national level; spin-offs take on different roles depending on the character of the system. A third approach would have to emphasize the growing regionalization of once-centralized Russia. Central organizations – post-Soviet dinosaurs and adaptive market creatures alike – in this view no longer have their former decisive impact on political and economic life in the country's provinces; as a proponent of this school of thought put it succinctly (Vorozheikina, 1994: 115), "local, authoritarian mini-regimes have emerged whose power is based on the virtually uncontrolled distribution of resources." More often than not, such regimes are hesitant modernizers. Regional regimes are often described as regressive and traditionalist; in Russia itself in particular medieval images ("regional suzerainties," "feudalization") have been much evoked.

In order to facilitate meaningful discussion of the above scenarios, I will begin by presenting a narrative section detailing the institutional development of the timber industry roughly from 1992 to 1995 and introducing the main organizational actors and their in-

terrelationships. This will be followed by a second section describing one particular political event that took place in 1996: the creation of a State Committee for the Timber Industry. This episode, as the analysis will show, is particularly well suited to shed light on the peculiar logic of center-regional and state-society relations dominating the post-Soviet timber industry. A concluding section reexamines the initial three scenarios based on the empirical evidence introduced in the main part.

Organizational Transformation in the Russian Timber Industry, 1992–1995

The collapse of the old Soviet system of branch administration did not happen overnight; in the majority of cases, this process extended over several years. Curtailing the central bureaucracy had been a stated goal of *perestroika* policies; a crucial element of this was the 1987 Law on State Enterprises which greatly extended the powers of enterprise managers. This became the starting point for a wave of ministerial reorganizations, beginning in 1988, which transformed entire ministries or their subunits into state-owned “concerns” or “associations.” Compared to other cases, the transformation of the timber industry was both slower and less successful. Ministerial documents from 1988 are still dominated by traditional Soviet-style tinkering with hierarchical levels. The crucial step towards corporatization was taken only in 1991 with the creation of a “state corporation” called *Rossiiskie lesopromyshlenniki* (Russian Timber Industrialists).¹ Headed by a former deputy minister, Igor Sankin, this entity in Sankin’s (10/10/96) own words “took up the flag of the ministry,” retaining basic managerial functions (*vlastnye funktsii*) with regard to enterprises in the industry. However, it did not outlast the end of the year and even during its short existence was undermined by secession.²

The Year Zero: 1992

After the demise of the old Soviet Union, the reformist policies of the young Russian government soon affected the forest industries. As in other sectors, managerial rights proper were transferred to the newly created State Property agency. *Rossiiskie lesopromyshlenniki* was abolished as a state corporation, becoming instead the nucleus of a Timber Industry Department (again headed by Sankin) within the new, encompassing Ministry of Industry.³ This new agency, however, did not last long, as the Ministry itself was liquidated in July 1992 after an existence of only nine months (Sankin 10/10/96).

¹ It is not quite clear whether this was more a top-down or bottom-up process, and who initiated it. Western observers tend to consider corporatization as a ministerial survival strategy, essentially a defensive reaction by the central bureaucratic economic apparatus to hostile government policies. However, the slow speed of this development in the timber case could also indicate a transformation forced upon an initially disinclined bureaucracy. As outlined above, ministerial *prikazy* in 1988 still display very traditional ideas. A later (October 1989) *prikaz* first envisages broader change, demanding a structural transformation of the industry based on a clear separation of state administration and direct economic management (*gosudarstvennoe upravlenie* and *neposredstvennoe khoziastvovanie*), but only with the 1991 corporatization do we see a hesitant step in this direction, soon to be overtaken by events.

² According to Tatsiun (1996, p. 25), the corporation was deserted by the Arkhangelsk conglomerate “Severoles”, the paper concern “Bumaga”, the Bratsk Timber Industrial Complex and the *ob’edinenie* “Irkutsklesprom.”

³ On the continuity of these two organizations, see Tatsiun (1996, p. 20).

Although other departments regained organizational independence in some form or other, no successor organization was ever formed for the timber industry. This did not mean the complete abandoning of the branch principle in this sector: specialized timber industry units continued to exist within major economic agencies (the Finance and Economics Ministries, in particular). However, it meant the end of a specialized branch management body, in conformity to official government policy whose stated aim, then as now, was the creation of functional instead of branch agencies. Little complied with in almost all other cases, this policy did indeed succeed in the timber industry, perhaps – as was occasionally suggested to me – in order to demonstrate Russia’s readiness for market reforms to international lending agencies. But paradoxically, this abolishment in no way signified a lessening of state intervention in the industry. Export regulations remained in place, state subsidies – in particular, seasonal loans for logging enterprises – continued to play an important role, and just a year or so down the road detailed state intervention even rose significantly with the advent of mass industrial privatization. In the absence of other organs familiar with technical and firm-by-firm details, something of a vacuum seems to have been created.

Precisely why the timber industry experienced a sharper organizational break than other industries is still unclear. What *is* clear is that nobody, not even the old ministerial apparatus, put up much of a fight to preserve branch management. Former ministers and deputy ministers had more important irons to grind: Many of them were busy setting up their own commercial organizations. Igor Sankin, head of the ill-fated state corporation, set up a commercial organization almost identical in name with the former monopolist. Continuities between the two organizations, I was told, go far beyond the name only. In my interview with him, Sankin affirmed that his new joint-stock company had taken over a fair number of former ministerial workers, but denied any other continuities. However, as I learned from other sources, the new company did indeed inherit some substantial material assets, in particular the former ministry building itself – a prime chunk of real estate right in the center of Moscow (Stepanov, 10/10/96)⁴. Rent payments, in consequence, became an important source of income for *Rossiiskie lesopromyshlenniki*; other income came from the provision of various services, in particular in the areas of foreign trade and of engineering services. The joint-stock company thus clearly built on the expertise and connections of the old ministerial staff.⁵

Sankin’s was not an unusual case; there are several other cases in which former high ministry officials set up shop on their own. Mikhail Busygin, a Brezhnev-era minister,

⁴ I have no information as to the mechanics of this transfer; one reasonable assumption might be that the joint-stock company, in a classic example of insider privatization, “bought” the building at an artificially deflated price.

⁵ Interestingly, in spite of its obvious commercial success, the company’s leadership seems hesitant to embrace market principles. Sankin, talking about the organization’s early period, felt compelled to justify its creation with a conspiracy theory involving both the evil government and evil foreign capitalists; the founders of “Russian Timber Industrialists”, he asserts, were trying simultaneously to make a profit (*zarabotat’ sebe nazhit’*) and to “resist government attempts to liquidate the industry” (all interview 10/10/96). The alleged liquidation policy, according to Sankin, consisted of government attempts to break up larger technological complexes and thus to disrupt production. The underlying motivation for this supposedly lay in the desire to benefit foreign competitors. Details, in this theory, become somewhat fuzzy: When asked to expand, Sankin identified possible foreign beneficiaries of such a policy as mainly Scandinavian, yet at the same time explained the Russian government’s willingness to conspire to their advantage with pressure from U.S. institutions. The inconsistency of this scenario did not seem to fully register.

came to head the foreign trade association *Vneshles*, while Busygin's successor as minister, Vladimir Melnikov, was president of the joint-stock company *Soiuz lesopromyshlennikov*.⁶ Around these, and often connected through cross-holdings or overlapping membership, a variety of other organizations emerged: a timber industry insurance company, a "Timber Bank" (*Lesnoi bank*), a specialized timber commodity exchange, and other, similar bodies.

This sort of organization-building was not restricted to the commercial sector proper: two separate timber industry associations were also set up in mid-1992. The "Union of Timber Exporters" (*Soiuz lesоекспортеров*) was set up in July 1992; a "Union of Timber Industrialists" (*Soiuz lesopromyshlennikov*) followed months later. Just like other 1992 startups, these two bodies were created by old ministry insiders. However, there were crucial differences between them with regard to numbers, functions and above all, coalition politics. *Soiuz lesоекспортеров* has been operating mostly independently although – as will be outlined later – it had allies in part of the state apparatus. As already indicated by its name, from its very beginning it was a more narrowly targeted organization, with fairly high dues and a purely organizational membership encompassing large regional timber industry conglomerates and trading firms; it clearly identified itself as *asotsiatsiia predprinimatelei*, or business association (Stepanov, 9/30/96). *Soiuz lesopromyshlennikov*, in contrast, operated under the more traditional Soviet label of *obshchestvennaia organizatsiia* ("social organization"). In public statements, the *soiuz* presented itself as a professional rather than as a business association; its chairman Lipman in an interview once described the organization's clientele as "those working in our industry." Membership, although based on collective instead of individual membership, went far beyond producers to include, for example, forestry research institutes. Regional governments from timber-producing regions also played an important role; from newspaper reports, it seems that almost a third of delegates at national *Soiuz* conferences had been nominated by regional governments and not by enterprises (Levina, 1995b). So far, I have little information on the political circumstances surrounding the association's founding; in the years to come *Soiuz lesopromyshlennikov* was to be firmly associated with the resurrection of central branch administration that began to take place from 1993 onwards.

The Emergence of Roslesprom

What is striking about this wave of start-ups is the way in which they all emerged within months, if not weeks, of each other. This suggests that what went on in 1992 may have had less to do with the emergence of a market infrastructure from under the ministerial rubble (a process that by its nature should have been more gradual), and very much more with old bureaucrats frantically trying to create new organizational roofs for themselves. Most of the new "commercial" bodies were closely allied with state structures.

Only in December 1992, when the main spoils were already divided, did a government resolution create yet another, minor organization devoted to the humdrum task of science funding and research coordination: Roslesprom, the nucleus of the later state committee. Different from the more profitable joint-stock companies set up by the ministerial top brass, this was headed by a young man, Miron Tatsiun – then in his mid-

⁶ This latter organization should not be confused with the almost identically named interest organization headed by David Lipman.

thirties – who had never worked for *Minlesprom*. *Roslesprom*'s subordinate status was confirmed by the politics of space: According to its founding documents, the organization was not assigned to the main ministerial building on Telegrafnyi pereulok, but to a secondary location on Bolshoi Kiselnyi which had, under Brezhnev, housed auxiliary organizations to the ministry.⁷ Formally, *Roslesprom* was a public company (*gosudarstvennaia kompaniia*); its chairman was to be appointed by the State Property Committee, and *Roslesprom* itself was to be an economically independent, profit-making entity. In terms of substance, it seems to have been intended to deal with some of the less pleasant, less profitable coordination needs that could not be immediately privatized, leaving the ex-nomenklatura bosses free to make money. However, such a view underestimated Tatsiun's extraordinary political skill; it was not long before *Roslesprom*'s role was to change dramatically.

In a process beginning just months after its creation and continuing into 1994, *Roslesprom* succeeded in acquiring a whole series of important functions theoretically in the domain of the "functional" ministries. To name just some of the most important, an agreement with the Finance Ministry made *Roslesprom* the official intermediary for government loans and subsidies to the industry, and the Economics Ministry gave it authority to allocate export quotas ("Ekspertnoe zakliuchenie..." 1996). *Roslesprom* was also empowered to administer the government shares in fully or partly state-owned enterprises; as a result, its representatives became board members of some of the main timber conglomerates, as well as infrastructure organizations such as ports.

While the formal side of this process is well documented, the inside story is harder to reconstruct. It is clear that Tatsiun was very skillful at building alliances with key figures in government: among others, Aleksandr Shokhin, Vladimir Panskov, and Oleg Soskovets⁸ threw in their weight behind his agency. How Tatsiun managed to secure their support is bound to remain inside information. However, there is revealing evidence in at least one case: Igor Shurchkov, the former head of the State Committee for Industry, *Goskomprom*, which also had delegated substantive rights to *Roslesprom*, years later came to head a *Roslesprom* daughter company in Boston.

A Russian-Style Quango

Roslesprom had become a quasi-state committee. As such, it developed the usual activities associated with such a body: In cooperation with the unions, it took part in the formulation of labor safety measures and of a new (largely theoretical) industry-wide wage agreement. It also, in 1995, published a "Federal Program for the Development of the Timber Industry" – one more in a growing series of industry-specific programs (devoted to goals as diverse as the survival of Russian aerospace and the development of fast-food restaurants) more remarkable for their world view and language use than their contents. To read speeches by *Roslesprom* officials, this program was to be a major step towards a government industrial policy for the forestry sector; however, it was drawn up haphazardly, with very little preparation going into it. It is fairly obvious that *Roslesprom*'s real resources and energy were spent elsewhere.

⁷ Cf. *Roslesprom ustav*; also *Minlesbumprom* phone directories 1980 and 1984.

⁸ Then, respectively, economics minister, finance minister, and deputy prime minister.

Besides taking on a regulatory role, *Roslesprom* also expanded the purely commercial side of its operations, often using its newly acquired gatekeeper position in order to take over potentially lucrative activities or existing firms. In the most visible of these cases, *Roslesprom* took over the network of foreign representative offices belonging to the former Soviet timber trade organization *Ekспортлес*, incorporating them into its own commercial daughter company, *Roseкспортлес*. It also created, or took over, an industry-specific insurance company intended primarily to cater to timber workers. Its standards body, *Lessertika*, has been trying to monopolize export certification, and its latest business venture, *Lestorgtrans*, founded only in 1995, is a commercial intermediary in the transport sector.

Empire-Building and its Limits

The two different aspects of *Roslesprom*'s activities – the regulatory and the commercial – were never clearly separated. Examples of the abuse of its regulatory/allocative powers for commercial profit abound. It was not uncommon, for example, for *Roslesprom* to demand that enterprises, which were allocated subsidized loans or export quota, conduct their export through the *Roslesprom* subsidiary, *Roseкспортлес*. The commission charged for such deals by *Roseкспортлес* often significantly exceeded the market rate (by as much as a whole percentage point). Such practices were widely criticized within the industry; *Roslesprom* officials, however, not only did not see any harm in them but on the contrary considered them as beneficial for the industry. Thus, in an interview published in 1995, *Roseкспортлес* General Director Kazikaev (1995) openly criticized the allocation of government loans to some of Russia's largest timber mills on the grounds that they were refusing to export through his agency: "I have to say that such a policy is not conducive to a growth of export volumes, nor to its enhanced efficiency."

Monopoly, in this perspective, is equated with efficiency, and the interests of the industry are seen as identical with the interests of *Roslesprom*. This sheds a different light on the company's stated aim, repeated in many speeches and official documents, to assist the formation of market institutions in the timber sector.⁹ "Market infrastructure" in *Roslesprom*'s parlance, does not imply the competitive exchange relationships normally associated with the term. Rather, it seems to refer to the construction of the commercial empire just described above: the "*Roslesprom* system," a sectoral monopoly complete with its own "market" organizations such as banks or insurance companies, yet devoid of competitive elements.¹⁰ *Soiuz lesopromyshlennikov* – Tatsiun's tame business organization – was another part of this setup, as will be shown in the following.

Monopolization was pursued particularly vigorously in the regions. Under the catchphrase of "restoring governability" *Roslesprom* pursued a policy of recentralization, attempting to restore overarching governance structures that would encompass producers in the regions. The main instrument towards this goal was the creation of timber industry *kholdingi* – regional holding companies (often based on old regional administrative

⁹ After *Roslesprom*'s rebirth as *Goskomlesprom* (see next section), "assistance in the creation of a market infrastructure" was one of the most frequently stated goals in its charter. This, incidentally, also applies to the ustavs of other state committees which may have inspired the much later *Goskomlesprom* document. (See Fortescue, 1997.)

¹⁰ See on this the description in *Trud*, May 21, 1996, "Est' li vykhod iz 'debrei' lesnogo kompleksa?"

units) that were transferred some of the remaining state shares in enterprises under privatization. But while the topic rated high on *Roslesprom*'s agenda and indeed for a long time came to very much dominate the company's official statements, a sober assessment shows that its attempt to remonopolize the industry had essentially failed – at least as far as stated policy goals go.¹¹ Holdings had indeed been formed on paper, but none of them held controlling shares in the enterprises they comprised. As far as corporate governance goes, enterprise management seems to have largely ignored them.

Empire-building efforts on the Moscow level also encountered difficulties. Above I have described some of the success stories, such as, in particular, the very public takeover of *Eksportles* assets. Other attempts fared less well. An attempted takeover of *Rossiiskie lesopromyshlenniki* ended ambiguously.¹² *Roslesprom* also tried to integrate the existing independent business associations into its "system." This was a complete success with the "Timber Industrialists Union," *Soiuz lesopromyshlennikov*, which for all practical purposes became a *Roslesprom* subunit. As of 1995, *Soiuz* membership had been boosted to around eight hundred, mainly because it had been joined by many subsidiaries of *Roslesprom*-sponsored *kholdingi*. The *Roslesprom* mother organization itself also became a member. Interlocking board memberships were a further factor integrating the two organizations.

As far as policies went, the *Soiuz* agenda was consistently controlled by *Roslesprom*. Leading *Roslesprom* officials occupied key policy-making positions within the *Soiuz*. In one case, a deputy *Roslesprom* chairman was simultaneously heading the Committee for Timber Export of *Soiuz lesopromyshlennikov* – supposedly in his civilian persona (Levina, 1995a). Even *Soiuz* chairman Lipman, in interviews published in the quasi-official *Lesnaia gazeta*, made no bones about *Roslesprom*'s decisive influence on his organization's policies. Far from stressing his agency's independent weight, he on the contrary emphasized Soviet-style interorganizational harmony, claiming that "we work in close contact with [...] *Roslesprom*. Together we are defending the interests of the industry on the federal level" (Levina, 1995a). According to Lipman, federal decisions benefiting the industry had most often been initiated by *Roslesprom*, while the role of *Soiuz lesopromyshlennikov* was one of "active participation in preparing and promoting them." Once decisions had been formally taken, it furthermore fell to his organization to oversee their implementation on the enterprise level (Levina, 1995a). This is remarkably reminiscent of Soviet institutional arrangements, when a main function of, for instance, the trade unions had been to act as a transmission belt within enterprises. Today, although forms were adapted to suit modern times, the spirit has remained much the same. In another example of such adaptation, the *Soiuz* has under *Roslesprom*'s guidance been

¹¹ Of course, it is far from clear whether *Roslesprom*'s main concern in promoting the *kholdingi* actually coincided with its stated aim of "restoring governability" and reuniting technologically linked production chains. In the (improbable) case that one could obtain the data, the whole story could possibly be retold focusing on corruption and rent-seeking and the such. Holdings, in many cases, served as conduits for government funding; this circumstance was an important incentive for their creation. Romanov (1995) argues that some regional governments supported holdings precisely because they were sponsored from Moscow and hence could be expected to channel resources into the region – whether they would actually reach the enterprise level is another question.

¹² The background for this takeover attempt apparently lay in the fact that *Rossiiskie lesopromyshlenniki* owned the former ministerial building. In the end, the takeover target formally retained its independence, but according to rumors it had to cede substantial numbers of its shares to *Roslesprom* chairman Tatsiun personally.

participating in pseudocorporatist exercises on the federal level, such as the Tripartite Commission. Following models from Western industrial democracies, this Commission has sought to bring together employers, labor and governmental institutions, however with – predictably – limited effect; its main *raison d'être* likely has been as a public relations exercise designed to confer legitimacy on the new Yeltsin-era institutions (cf. Fortescue, 1997; Urban, 1997).

Much as their mutual relationship suited the interest of both *Roslesprom* and the Union, it was marred by the fact that *Soiuz lesopromyshlennikov* did not possess a representational monopoly in its field. Its rival, the Union of Timber Exporters, was closely oriented towards a type of economic and export issues in which *Roslesprom* itself had a direct interest. For example, *Soiuz lesoeksporterov* was among the initiators of bilateral industry-to-industry talks with Finland and Japan about the pricing of certain categories of wood exports.¹³ In subsequent years, however, *Roslesprom* came to increasingly dominate this and similar fora. Its motives for this were probably twofold: For one thing, by getting involved in international talks *Roslesprom* could hope to raise its legitimacy vis-à-vis both its basis and a government on which it was dependent for resources and status. On a more materialistic level, involvement also gave *Roslesprom* the chance to establish a gatekeeper position in yet another field; further down the line this might enable it to exploit this position in order to channel business to its commercial subsidiaries. How well such aspirations would mesh with the spirit of voluntary talks is another question. And indeed, after *Roslesprom's* takeover the climate of the talks shifted markedly away from negotiation and compromise. *Roslesprom's* attempts to dictate final outcomes drew angry protests from Scandinavian participants, allegedly leading to a complaint with the Council of Europe. Detailed information has been hard to come by so far; however, what concerns me here is not so much the precise character and significance of the talks process itself as the internal Russian rivalries manifested by the occasion.

For *Roslesprom* to achieve its ambitions required sidelining *Soiuz lesoeksporterov*. The strategy it employed in pursuit of this goal was quite aggressive, aimed not so much at a takeover as at a complete extermination of the enemy (who, incidentally, in the *Roslesprom*-dominated press was never mentioned by name). The Timber Producers' Union, *Soiuz lesopromyshlennikov*, was renamed to "Union of Timber Producers and Timber Exporters" (*Soiuz lesopromyshlennikov i lesoeksporterov*). A separate Timber Exporters' Union, this clearly signaled, would henceforth be superfluous. More seriously, a number of separate new trade bodies – dubbed "flying associations" by their opponents – were set up to handle questions of export to specific countries. The initiative on their creation was taken from above, by *Roslesprom* leadership. On May 24, 1995, the *Roslesprom* extended board (*razshirennaia kollegiia*) took the decision to create two new associations, dedicated to trade with, respectively, Scandinavia and Japan. At the same meeting founding committees (*orgkomitety*) were set up. They contained the usual circle of *uchrediteli* – founding enterprises – from both regions and the capital, many of them *Roslesprom* allies.¹⁴ Konstantin Prodaivoda – a former *Minlesprom* deputy minister and by then the Timber Producers' Union vice-president for exports – was chosen to

¹³ At least according to its chairman (Stepanov 10/8/96). I have yet to locate written sources confirming this information.

¹⁴ That assumes *orgkomitet* members and *uchrediteli* are identical: I have data on the former for the Japan and on the latter for the Scandinavia trade association.

head the clumsily named “Association of Exporters of Timber to Scandinavian Countries” (*Assotsiatsiia eksporterov lesomaterialov na rynek skandinavskikh stran*).¹⁵ His first interview in this new capacity – without ever mentioning the competitors – announced that his organization would “[coordinate] price lists on timber with the Scandinavian customers” and “report them in advance to Roslesprom and Soiuz lesopromyshlennikov.”

Ultimately, Roslesprom’s annihilation strategy failed. To be sure, *Soiuz lesоекспортеров* emerged from the confrontation much weakened. At the time I conducted the bulk of my interviews in 1996, it was widely regarded as having lost much of its former importance. It had lost members, or in some cases expelled them for nonpayment of dues; by 1996 it was down to sixty from an initial ninety-odd (Stepanov, 9/30/96). A sizable loss, certainly. Viewed differently, though, it was no mean achievement for the *Soiuz* to hang on to two thirds of its membership in spite of its overall loss of authority, the turmoil of post-Soviet transition, and the high fees (\$5,000 p.a.) it was charging members. Even at the height of public hostility between the two organizations, it had retained its public standing: For example, it was still included in Russian delegations to trade talks abroad. Most importantly, it was still doing well enough to pay its rents and support a staff of six¹⁶ (Stepanov, 9/30/96). To what extent, then, did it still offer an alternative to Roslesprom? Before answering this question, I will first explore the overall pattern of interorganizational relationships in the industry as they had developed by that time.

Two Camps? The Logic of Multiple Membership

As we have seen, *Roslesprom*’s empire-building efforts, while effective in many respects, were no unqualified success. Paradoxically, they may even have unintentionally united the opposition. *Roslesprom*’s all-out warfare and the vicious attacks and counter-attacks in the press had led to a wide-spread public perception that two opposing camps had formed in the industry. A Russian journalist characterized the situation in 1995 as the not-so-peaceful coexistence of two “fairly clearly formed verticals”: one of them “semi-state” (*polugosudarstvennoe*) – encompassing *Roslesprom* itself as well as the “holdings” and subsidiaries under its control – the other a “purely marketized system” built around *Rossiiskie lesopromyshlenniki* and *Eksportles* (Solodov, 1995).

Such a description, however, leaves much to be desired. It evades the issue of what united the members of a camp: ownership ties, political or commercial interaction? Furthermore, it suggests a degree of stability and exclusiveness of the two groups that, on careful examination, did not correspond to reality. The exact boundaries of the two “camps” were unclear: depending on one’s interlocutor and varying also across time, organizations were assigned now to one group, then to the other. Pillarization, moreover, seemed to be completely absent. A thorough look at the respective camps’ membership (in particular on the regional level) reveals an astonishing amount of overlap, which is hard to reconcile with the image of two competing systems based on different governance modes. It is interesting to examine membership lists for *Soiuz lesоекспортеров* from 1993 and 1995. Members were primarily mainly composed of big

¹⁵ *Lesnaia gazeta*, July 11, 1995, p. 1, “Sozdana Assotsiatsiia eksporterov lesomaterialov na rynek skandinavskikh stran.” Prodaivoda was deputy minister under Brezhnev bringing him up to retirement age at the time of his appointment in 1995.

¹⁶ There were plans to cut the staff by one or two.

regional conglomerates and trading firms (such as *Severoeksportles* and *Dal'les* in the Russian Far East); many of these firms were at the same time also associated with *Roslesprom*. For example, one of the *Soiuz* members was *Sakhalinlesprom*. Thus publicly associated with *Roslesprom*'s opponents, this conglomerate from the island of Sakhalin simultaneously occupied a very influential position within *Roslesprom*. Its chairman, Boris Maslii, was a member of the *Roslesprom* board¹⁷; *Sakhalinlesprom*'s economic achievements have been widely touted in *Roslesprom*-friendly publications such as *Lesnaia gazeta*, and the company was given special assistance in preparing investment projects. One could probably find similar information on other *Soiuz* members.

These findings suggest that the timber industry was not so much characterized by two "camps," but rather by opposing leadership groups working for an almost identical basis. Such multiple membership patterns raise a host of very interesting theoretical questions, which I will elaborate on in a later section. For now, however, I will return to my earlier question, made all the more urgent by these latest findings: Given its diminished policy role and widespread dual enrollment, what makes it worthwhile for members to maintain paid membership in *Soiuz lesоекспортеров*?

The answer to this question has to be sought on the level of organizational networks. Since its creation, *Soiuz lesоекспортеров* was closely connected with the Ministry for Foreign Economic Relations (MVES). The reasons for this can be found in the MVES' own survival strategy. From 1992 on, the gradual extension of foreign trade liberalization began to threaten the institution's very existence. In response, MVES helped organize a number of industry-specific foreign trade associations. Henceforth, then, the agency's new role would be to assist the self-organization of industry. *Soiuz lesоекспортеров* was one of the earliest such associations. This is not to say it was actually set up by MVES; rather, the two organizations' interests coincided, making them pursue a strategy of mutual support. MVES would thus gain a new and alternative source of legitimacy, while the *Soiuz* could expect benefits for its members' export operations. This was true especially of the early post-Soviet years: With trade liberalization proceeding in a slow and haphazard fashion, MVES could be an important (if not the only) source of export quotas, recognition as "special exporters" or similar privileges. By 1995/96, of course, foreign trade interventionism had been greatly reduced (even if change in practice has tended to lag significantly behind change in formal rules), and MVES had lost much of its former weight. Accordingly, the perks it could offer to its exporters' associations were also less attractive than in previous years. However, considerable benefits remained. MVES, for instance, still had a network of foreign representative offices in place, and access to those and their services would have been highly valuable. The same was true of its potential role in gathering general market information. MVES had also retained a role on the diplomatic level – in all likelihood it was due to MVES connections that *Soiuz lesоекспортеров* continued to participate in Russian delegations abroad.

Soiuz lesоекспортеров thus owed much of its survival to the Byzantine division of responsibilities among Russian government agencies. Export quotas are a case in point: As outlined above, a 1993 inter-departmental agreement gave *Roslesprom* authority to allocate timber export quotas. However, *Roslesprom* was not alone: Similar authority rested with a veritable host of other agencies and office-holders both in the center and the localities including, at one point, all members of the Russian cabinet (cf. Rahr, 1993:

¹⁷ "Sostav kollegii Rossiiskoi gosudarstvennoi lesopromyshlennoi kompanii Roslesprom," *Lesnaia gazeta*, February 9, 1995, p. 1.

7). Similar examples can be found in other spheres. *Soiuz lesoeksporterov*, thus, in a sense profited from the fragmented character of the Russian state itself. I will return to this argument in the concluding section; the next pages, however, will be devoted to further elaborating on the role of *Roslesprom*.

The Creation of Goskomlesprom

This section analyzes one specific episode, the short-lived creation of a State Committee for the Timber Industry, or *Goskomlesprom*. Created in the run-up to the 1996 Russian presidential elections, *Goskomlesprom* was not destined to reach a respectable old age: Controversial even at the time of its foundation in June 1996, the organization was only given a proper charter in September of the same year, only to be downgraded and integrated into the Ministry of Economics in March of the following year. The episode hence is interesting less for any practical and long-lasting policy implications, but for what it tells us about the underlying relationships between actors – in particular center-regional relations.

By late 1995, *Roslesprom* had reached an impasse. In the first three years of its existence, besides building up some fairly profitable commercial operations, it had successfully positioned itself at the center of public-private interaction in the timber industry. However, by the end of those three years *Roslesprom* found itself increasingly frustrated in its wider “system-building” ambitions. The attempt to remonopolize the industry by creating encompassing holding companies had essentially failed. The campaign continued into spring 1996, when *Roslesprom* put forward suggestions for the formation of a “Financial-Industrial Group” in the pulp and paper field, but it was not being pushed forcefully anymore. Foreign trade liberalization robbed *Roslesprom* of a major lever over enterprises since (at least as far as formal rules went) there now were no more quotas to allocate. Even worse, as the country’s budgetary crisis dried up government subsidy and loan programs, *Roslesprom* found its hold on industry lessening. Some of the new commercial organizations, like *Lesnoi bank*, had been drawn into the *Roslesprom* orbit because of its access to state funding; they now took a more detached stance.¹⁸ On the production level, a few stronger producers (for example, Arkhangelsk-based *Solombal’skii LDK*) treated the agency’s offers of assistance with increasing disdain. *Roslesprom* attempted to extricate itself from these problems in an admirably resourceful fashion, using its status as subcontractor on a U.S. *Eximbank* loan program negotiated by the Gore-Chernomyrdin commission. In spring 1996, *Roslesprom* representatives throughout Russia’s regions began soliciting additional export business for *Roseksportles*, in return holding out promises of U.S. loans; however, interest in the loan program remained low.

Public criticism of *Roslesprom*, its hybrid status and the resulting corruption was growing. By 1995, this had begun to go beyond specialized circles. Articles critical of *Roslesprom* were appearing in the mainstream press. Even if *Roslesprom* tried to shrug this off – its court newspaper, *Lesnaia gazeta*, dismissed the criticism as a concerted campaign initiated by a few business opponents – surely in the long run the polemics threatened to undermine the agency’s political standing. The status quo, thus, became ever harder to sustain, yet no clear alternative was in sight. To be sure, *Roslesprom* had long

¹⁸ Stepanov (11/15/96) claimed that *Lesnoi bank* was now primarily working with independent traders such as *Eksportles*.

been pushing to be awarded official government status, all under the slogan of “restoring governability.” But even with the support of some very high-placed government officials, those remained ritualistic appeals – pronounced at sectoral conferences and printed in industry publications, yet failing to resonate with a wider public.

Then, very suddenly, the situation changed. On June 15, 1996, just days before the first round of the presidential elections, Yeltsin signed a decree creating a State Committee for the Timber Industry (*Goskomlesprom*). The old *Roslesprom* would de facto be split, with regulatory tasks to be handled by the new State Committee headed by Tatsiun, while the commercial subdivisions would be administered by a residual *Roslesprom*. Even if this was not the ministerial status he had strived for, Tatsiun seemed to have fulfilled his wildest aspirations. But why now?

As I have argued in the introduction, it is hard to pinpoint objective factors necessitating this step at this time. A State Committee for the Timber Industry could have had a useful role in 1992 and after; by 1996, with export liberalized, subsidies much reduced and most enterprises at least formally privatized, the rationale for it had essentially disappeared. To be sure, one could argue that while Soviet-style central management is by now obsolete, even in a market economy a certain need for regulation remains. This of course is the *raison d’être* for their organization that *Goskomlesprom* staff give officially, and most of the forty-two articles in the agency’s *ustav* outlining its new tasks do indeed deal with regulation of some sort or other. In reality, however, “regulation” arguments do not lead very far in this case. Intervention in matters such as foreign trade, as already mentioned, had been much reduced (albeit not abolished completely). Resource and environmental regulation, on the other hand, could indeed provide a very convincing rationale for government intervention in the sector, were it not for the fact that those were already handled by a different agency, the Federal Forest Service (*Rosleskhoz*)¹⁹, with *Goskomlesprom* responsible only for forest industries proper.

In any event, even if one could make a convincing case in favor of government regulation of the timber industry, from the available evidence Yeltsin’s team took a different position on the issue. General policy trends in 1996 were once again sharply against branch management agencies, and some of them, including the powerful Metallurgy Committee, were merged into a resuscitated Industry Ministry in summer 1996. This makes the creation of *Goskomlesprom* even more surprising, especially considering the low weight the “Timber Industrial Complex” traditionally enjoyed in Soviet and post-Soviet politics. The decision, moreover, remained extremely controversial even after the decree was issued, and it was only a full three months later that Chernomyrdin’s government followed suit with the required resolution confirming the decree and assigning its tasks to the new agency. The new committee, thus, had to surmount formidable obstacles. The fact that it was formed anyway suggests that, in the eyes of the government, such a step offered benefits outweighing the damage done to policy credibility. What were those benefits? They were unlikely to lie in the future activities of *Goskomlesprom*. Two other interpretations are possible. The first of these would view Yeltsin’s decree in the context of the negative publicity surrounding the old *Roslesprom*. *Roslesprom* sleaze had become ever more prominent, and threatened to tarnish the government itself. Back in 1995, a panel of lawyers probably commissioned by the government (“Ekspertnoe zakliuchenie...” 1996) had examined *Roslesprom*’s hybrid status

¹⁹ Indeed one of the clearest organizational changes over the last few years was precisely the differentiation of *leskhoz*y and *lespromkhoz*y.

and found it to be unconstitutional. Splitting up *Roslesprom*'s commercial and public functions was definitely on the agenda. However, this need not have entailed conferring the coveted committee status on what was, in this interpretation, a discredited agency. Other moving factors, as well, must have been behind the Yeltsin decree.

Electoral Politics and Regulatory Capture

Such an alternative explanation is provided easily by a look at the precise timing of the decree which suggests efforts to please a constituency in the run-up to the presidential elections. This was not an isolated event. A few weeks before the *Goskomlesprom* decree another branch management organ, the State Committee for the Defense Industries (*Goskomoboronprom*) had been upgraded to a ministry; analysts at the time attributed this move to an attempt to strengthen Yeltsin's position in defense industrial regions like the Urals. Similarly, the first wave of branch committee creation in 1992 seems to have been constituency—rather than policy-oriented (cf. Fortescue, 1997).

What is puzzling about 1996 are the discrepancies in policy toward different sectors. While defense and timber industrial institutions were upgraded, others, as mentioned above, were down-graded shortly after the elections. That being said, there can be no doubt that winning support from the “Timber-Industrial Complex” was indeed a high priority during the 1996 campaign. Yeltsin himself made campaign trips to both Arkhangelsk and Krasnoyarsk, both major timber industrial regions, visiting enterprises and dispersing subsidies in the form of cheap loans. The *Goskomlesprom* decree, as well, can be viewed in response to longstanding demands from the regions: As far back as 1994, the creation of a timber ministry had been a main demand of an open letter addressed to Yeltsin by the political leaders of several timber industrial regions. The electoral perspective also accounts for the timing of further events. After the elections, *Goskomlesprom* unlike other committees was not merged into the Ministry of Industry – possibly because gubernatorial elections were still ahead in many of these regions.²⁰ In contrast, the recent massive governmental reorganization could afford not to heed such factors.

While the position of the government is thus easily explained, the very existence of a constituency for the *Goskomlesprom* decree bears further exploration. That regions, or enterprises in the regions, would lend their support to the restoration of central tutelage is, after all, far from self-evident. *Roslesprom*, with its widely known corruption, was far from popular down on the ground. At stake, besides, were not just regional (or firm) autonomy, but the direction of central funding as well. Regional government officials tend to resent branch-based funding programs for industry; based on what they claim is their greater familiarity with the needs of local industry, they would much prefer to administer such funds themselves. Regions, thus, jealously guard their rights vis-à-vis Moscow organs, yet at the same time extended support for *Roslesprom*, an otherwise disliked and distrusted agency. This indicates that the role of central branch agencies had changed. For all its rhetoric on “restoring governability” (a goal likely to be approved in theory, but resisted in practice), *Roslesprom* obviously was viewed less as a regulator than as a potential advocate. Try as it might to get into certification, trade regulation and other such issues, its real function seen from below was as an industry

²⁰ For example, gubernatorial elections in December 1996 in Arkhangelsk ended with the victory of the incumbent, a Yeltsin appointee.

mouthpiece in Moscow: somebody to talk tough with the railroads in an attempt to lower ruinous rail tariffs; to lobby tax exemptions; to advocate rouble devaluation. In sum, *Roslesprom*, first and foremost, had come to be a pressure group inside government. This, obviously, is not to say it always or even mostly succeeded in this task, yet it may very well play a useful role in many individual cases.

Conclusion: Institutionalized Uncertainty and Particularistic Problem-Solving

This section returns to the three scenarios proposed in the introduction. In as concise a form as possible, it will summarize the evidence pro and contra the different scenarios outlined above. As I shall argue, careful examination shows that certain elements of all three scenarios exist, but in no case sufficiently strongly to show a genuine pattern. I will then go on to propose an alternative interpretation.

The Inertia Scenario

I will begin by discussing the institutional inertia/path dependency scenario. The timber industry is an unusually good case for refuting this argument. Up to 1991, ministerial structures were slow in responding to calls (often from above) for institutional reform. This changed radically in 1992 with the arrival of the Yeltsin administration. Within a few months, branch administrative structures collapsed almost completely (different from many other industries which at least on the surface managed to preserve parts of the apparatus). Rather than fighting for the preservation of the status quo, former high ministerial staff began setting up organizations of their own – mostly in the form of joint-stock companies, but also different non-profits such as “social organizations” (*obshchestvennye organizatsii*) and business associations. However, these initial moves towards the emergence of market-based governance structures soon gave way to a gradual reestablishment of central branch administration through the back door. In late 1992, a state-owned company called *Roslesprom* was set up for the ostensible purpose of coordinating research funding in the timber sector. This humble function soon became secondary as the company was transferred one regulatory task after another, and within less than a year *Roslesprom* found itself handling governmental responsibilities such as the allocation of preferential government loans and export quota. Simultaneously, it sought to expand its commercial operations, often through subsidiaries acquired by exploiting its gatekeeper role. This remarkable rise to prominence culminated during the 1996 presidential campaign with the formation of a “state committee” for the timber industry, based on the former *Roslesprom*.

This sequence of events contradicts the “inertia” scenario in that there was no direct organizational continuity between the former *Minlesprom* and *Roslesprom*. Staff discontinuity was significant at both top and lower levels; *Roslesprom*’s chairman Miron Tatsiun – a young man in his mid-thirties at the time of his initial appointment – lacked prior nomenklatura experience but compensated for this with substantial political skill. *Roslesprom* was not created as a regulatory agency; rather, it gradually grew into this role. As I will argue, *Roslesprom*’s rise was to a large extent driven by demand from below, i.e., from timber-producing regions and large enterprises; the organization’s leadership skillfully exploited this demand in a prime example of political entrepreneurship. In spite of such successes, however, *Roslesprom* did not perform the same role

as a Soviet ministry, and its ambitious plan to resuscitate Soviet-style integrated regional production complexes failed dismally. Center-regional relations little resembled those under the old regime; while dependent on *Roslesprom* for certain resources, regions acted both as clients and sponsors of the organization, and regional representatives occupied prominent places on the *Roslesprom* board (*kollegiia*). As to the federal level, *Roslesprom* did indeed achieve quite a powerful position, but fell short of monopolizing control. Attempts to take over competing organizations were only partially successful.

The Market Scenario

While “inertia” arguments can thus be discounted, neither is the timber industry’s trajectory summarized adequately in terms of a transition to market democracy. Above, admittedly, I have used just such terminology to describe the 1992 start-ups. And indeed, ministerial successor organizations do perform certain intermediary services (e.g., supplying hitherto centralized information, transport services, etc.) that may be interpreted as necessary to the emergence of a market infrastructure: Knowledge of global markets, for instance, had in Soviet times been dismally low even among top-level enterprise management. The mere fact that such intermediaries are run by ex-apparatchiki does not automatically disqualify them as genuine market actors – always provided that there is, indeed, a new logic to interorganizational relationships necessitating a departure from old operating procedures. Precisely this, however, is questionable in this case. Rather than using superior knowledge, the new “market” organizations are mainly based on the old Soviet skills of exploiting informal relationships and their former or continuing insider status vis-à-vis different parts of the state apparatus. For example, the fact that many enterprises continue to depend on Moscow-based trade intermediaries for their exports has less to do with the latter’s superior marketing skills than with the fact that physical transport is extraordinarily hard to arrange without some sort of direct organizational interlock with port authorities – partial ownership or the creation of joint ventures. (Significantly, timber enterprises in a port city like Arkhangelsk, many of whom possess their own loading facilities on the Dvina river, are characterized by a much higher degree of marketization than their Siberian competitors). As to the *Roslesprom* story outlined above, as my analysis will show this reemergence of branch administration had little to do with the regulatory requirements of a market economy. The 1996 creation of a state committee in particular, was motivated not by functional considerations, but as an election gesture to win over *Roslesprom*’s constituency in the regions.

The Regionalist Scenario

To finally turn to the regionalist scenario: There are, certainly, regional fiefdoms in today’s Russia, but their strength varies substantially across regions. Furthermore, their influence is at least partially derived from circumstances other than those described above. In the model, regional fiefdoms are based on their considerable degree of control over local resources. This makes a great deal of sense, but it is not the whole story: As far as timber-producing regions are concerned, it seems that regional governments enjoy their greatest degree of control over producers precisely in those parts of Russia that also, for geographical and infrastructural reasons, depend most on post-ministerial intermediaries. Above I have described transport problems typically encountered by en-

terprises in foreign or interregional trade, and the role of Moscow intermediaries in coping with these problems. Such chains of intermediation often include regional governments acting as negotiators vis-à-vis Moscow entities or other regional authorities and, once agreements have been reached, also as guarantors (thus compensating for the weaknesses of contract enforcement). This means the influence of regional administrations is at least partly due to the dependence of the region as a whole on Moscow-based resources. It also explains why timber regions, in the *Goskomlesprom* episode, lobbied for a restoration of central branch administration. Aspects such as these can only be adequately captured by a perspective on the level of the nation-state, rather than of selected regions.

Particularistic Policy Patterns and the Corruption of Formal Organization

Such a nation-level description, however, is a task fraught with complexities. In fact, the most striking feature of the Russian timber industry today is the extraordinary fuzziness and fluidity of its organizational structures. As I have outlined, attempts at consolidation met with only limited success. In spite of *Roslesprom*'s best efforts, the observer is confronted with a fragmented field composed of a bewildering multitude of organizations – most of them spin-offs from different administrative or research bodies. Many of these bodies are small and easy to caricature as insignificant: As one Western analyst (Kubiczek, 1996: 35) quipped in reference to Ukrainian business associations, “many ‘groups’ appear to be no more than a former apparatchik, a secretary and a fax machine.” Such a reaction is apt, but it does not do complete justice to the situation; spin-offs cannot be dismissed quite as easily. The fact that – in spite of their fragmentation and lack of influence on policy-making – so many of them have survived is notable.

The phenomenon, then, is for real, yet it is hard to discern structure in it. In the context of modern industrial societies one would normally expect to find differentiation by tasks, membership basis or other criteria, the most basic being such distinctions as “private” or “public,” “commercial” or “non-profit.” All of these are highly dubious in this case, and official labels that a particular organization has taken on – such as that of “joint stock company” as opposed to “association” – are no great help. Officially, the spin-offs form a diverse population of very Western-sounding bodies: They all – or so it would seem on the surface – have carved out their own little niches enabling them to survive under the new market logic governing the industry. In fact, though, underneath the fancy labels are very similar activities and even organizational forms. Governmental bodies engage in private-sector entrepreneurship. Ostensible non-profits such as business associations moonlight as consultants and representatives for foreign firms. In short, many familiar distinctions in the post-Soviet context become rather spurious. Neither is it easy to construct such distinctions empirically by analyzing and comparing the main functions of different organizations, as there is a great degree of overlap and competition for the same tasks. Internal structures, as well, are often very similar: Whether “private” or “public,” “commercial” or “non-profit,” most of the new entities rely on a regional basis of “members,” “founders,” or shareholders; in other cases, such as *Roslesprom*'s, prominent regional representatives act as board members. Finally – and this is a crucial factor – the regional clienteles of different Moscow timber organizations overlap to a very high extent. Over and over again, membership or board lists show the same names, mainly those of big regional conglomerates and trading firms.

This leads me back to the three scenarios proposed originally. As the discussion has shown, elements from several of them can indeed be found; however, none of the scenarios is fully borne out by the empirical evidence. Central branch bodies have not survived thanks to their collective survival interest; rather, a modified form of branch administration was temporarily resurrected due to a combination of individual political entrepreneurship and demands from the regions. Commercial intermediaries appropriate to a market environment have emerged, but to a large extent they operate in a political, rather than economic market. The impersonality characteristic of genuine market mechanisms is largely lacking; neither, on the either hand, are there many signs of genuine collective action. As to decentralization and the role of the regions, undoubtedly much power has devolved to the provincial level, yet Moscow-based organizations continue to play a vital role. Actors, it almost seems, *play* with different varieties of formal organization. Organizational principles are borrowed from a variety of contexts: the old command economy and its emphasis on unity and “branch patriotism”; Western economics textbooks; finally, the ideology of regional self-determination. However, little of this goes beyond labels and official rhetoric. Indeed, those formal principles have little chance of operating on a deeper level. Much as state socialism in its late years, formal organization has been subverted from within through the widespread pursuit of particularistic strategies on all levels of the hierarchy. In empirical reality, strong institutions are sacrificed; instead of stable expectations, actors thus gain a multiplication of channels through which to pursue individualistic goals. Hence, even purportedly collective organizations, such as business associations, in practice are mainly engaged in various sorts of brokerage, rather than genuinely collective action. The significance of such patterns is hard to overestimate.

Regulatory Background and Outlook

The explanation for the predominance of particularistic patterns among Russian political and economic actors, I contend, has to be sought in the macro-institutions of society, or differently put, in an organizational environment that is itself characterized by fluidity and unpredictability. Implementation is neglected; often new legislation is passed without accompanying administrative guidelines to govern its application, without establishing proper monitoring procedures and without specifying sanctions for noncompliance. The regulatory framework itself is piecemeal, inconsistent, and often simply lacking. This means that regulatory and allocative decisions are rarely subject to formal rules, but – as in Soviet times – taken on a case-by-case basis. Under these circumstances, attempts at collective action become all but meaningless. Even if actors succeed in overcoming their collective action problems for the sake of some common goal – such as government assistance for the industry or favorable legislation – the pervasive regulatory problems mean that even a successful outcome may be of little practical benefit to anyone. To give just one example: The federal government has for years systematically ignored and underfulfilled the expenditures side of the federal budget, thereby creating a situation in which allocation decisions are made on a completely ad hoc basis by the Ministry of Finance or the presidential administration itself. In consequence, although there is an ongoing surface battle in the Duma that aims to increase budgetary assistance to the timber industry, in practice any such demands are doomed from the outset. Instead, enterprises are forced to resort to various alternative channels (*Roslesprom*, competing organizations, regional administrations, etc.) in order to influence policy implementation in their own particular case. The result is traditional Soviet-

style “corridor politics”: individual claimants woo individual officials in agencies such as the Ministry of Finance, the Tax Commission, or others. The success of this, obviously, depends largely on personal connections. Multiple membership hence becomes a rational hedging strategy from the point of view of members. As to the Moscow-based intermediators themselves, it also means that there is no particular incentive for them to consolidate; fragmentation can be expected to continue in the medium to long term.

If particularistic strategies are, as I have claimed, caused by deficiencies in the macro-institutions, then any attempts at long-term prediction depend largely on what it was that caused those deficiencies in the first place. Above I have given a descriptive account that so far stops short of offering any more detailed explanations. Two different approaches to this are conceivable. Regulatory problems may have been caused by the upheavals of post-communist transition. Much evidence points in this direction. The demise of the Communist Party, for so long the unchallenged authority in the country, has left a power vacuum that has only partially been filled by the new democratic institutions; this has helped the rise of organized crime. Low-paid officials have every incentive to overlook infractions – for a price; the more confusing the regulatory jungle, the better for them, and if there are no appropriate rules the victim can be accused of violating, they can always be made up. Transition from the socialist fiscal system to one adequate to a market economy has not yet been accomplished: hence the budget shortfalls that may have made cash flow budgeting practices all but unavoidable. Much new legislation yet remains to be written; at the same time the new Russian constitution has introduced a new set of problems by making president and parliament equally ranked sources of legislation, thus preventing the constitutional court from resolving the frequent contradictions between them. But for all that, such undeniable transitional problems make it all too easy to overlook how endemic regulatory problems have been in the *longue duree* of Russian history. To take just one example, Russian law faced problems of hierarchy centuries before the new post-Soviet constitution and continuing through the Soviet period. Cash flow budgeting practices – another example – may be inseparable from the present fiscal crisis, but they are also deeply rooted in Soviet planning practices which maintained Five-Year-Plans as a “rationality ritual” while actual resources were allocated not according to plan but to priority lists maintained by central planners. On a more abstract level, ultimately today’s lack of stable macro-institutions may have much to do with the fact that a Weberian rational state never became reality in Russia. Numerous studies of the tsarist period have pointed out the difficulties of institution-building in “undergoverned Russia.” Under Bolshevik rule, of course, the state’s coercive capacities were vastly extended, but again at the expense of procedural rationality which both in theory and practice was subordinated to mobilizational goals.

What outlook, then, for the future? As this analysis shows, particularistic strategies have become the only viable option open to individuals and organizations. The implications from this for policymaking are dire. Given the widespread pressures for individual rule adjustments, policy implementation from above is unlikely to become any more consistent – witness the repeated decrees issuing from the presidential administration which do little other than rehash previous decrees. Neither is self-governance through non-state collective actors a viable option. Some Western observers have taken phenomena such as the federal Tripartite Commission as grounds to suggest an emergence of a neo-corporatist political economy in Russia – with all the positive side effects, such as societal stability, that have been associated with similar policy-making structures in the West. Unfortunately, such an interpretation misses the basic character of the Russian

political system: In complete contrast to corporatist systems, Russian-style organizational multiplication and hedging strategies mean that none of the overarching organizations will be able to reach binding agreements on behalf of their members; compromise, thus, is discouraged. This leaves small-scale reform attempts on a regional level as the most realistic option.

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Chapter 4

Measuring Attitudinal Diversity through Q-analysis – an Illustration of a Research Approach

Olga Mashkina

The Siberian forest market is experiencing many difficulties in connection with the transition from a Soviet type command economy to a more market oriented system. There are problems of shortages due to consumers' limited ability to pay, monopoly prices, lack of information, existing government policies and the new forest legislation. This paper presents the results of an attempt to illustrate how an analysis of managers' attitudes to the problems besetting the Siberian forest markets might be conducted. In a time of profound and fast structural economic change analyzing key actors' attitudes to the change process is important. The purpose of such a study would be to identify the problems of the forest markets in some Siberian regions and investigate managers' attitudes towards these problems. This could be done through interviews with managers in the forest sector.

The present study outlines a design of a Q-methodological analysis of interview data that would be possible to use to identify the *types of attitudes* that prevail among the Siberian forest enterprise managers. The paper indicates a way of conducting such a study and illustrates in what way Q-analysis could provide conclusions that would be impossible to obtain through more conventional methods of statistical analysis. It should be emphasized that this is a *pilot study* intended to illustrate a scientific approach. Further studies based on a proper sample of respondents are necessary to provide reliable results.

The Problem

The Russian Federation accounts for more than 22% of the world's forested area, and 60% of all boreal forests. Until recently, Russia was second in the world in timber production, surpassed only by the United States. Timber production provided 3% of the GNP and it employed about two million people (FAO, 1996). During the transition period from a command economy to a market-oriented economy when market relations are being established and profound institutional changes are required, the Russian forest sector will have to overcome many difficult problems.

During the period 1989–1993 both production and consumption of forest products fell sharply in Russia. By 1995, the decrease of production began to slow down and for many forest products the production in 1996 was only 80% compared to the previous year (Backman & Blam, 1997). Employment in the forest industry has fallen. However, it never fell as steeply as physical output. A significant share of production in the Russian forest sector depended upon the export markets. Up to 14% of roundwood, 21% of lumber, 18% of panel, 21% of paper and 13% of pulp production was exported in 1990 (Backman & Blam, 1997). By 1993, many of the external markets (mostly in the “near abroad” countries and in the Baltics) collapsed leaving Russian producers with less than half of their traditional markets. However, by 1994, the “Far Abroad” markets again took an interest in Russian forest products and, despite the decline in the traditional markets, net exports amounted to nearly one-third of the wood supply (*Lesnaia gazeta* 21, 1997). Japanese, American, and other trading companies are seeking to expand their operations into the new regions as the demand for logs begins to grow (Taiga-News, 1995). The potential demand for lumber in Asian markets alone is tremendous. FAO projects that both China and Japan will remain net importers of wood products and that the Russian Federation could be one of the top global suppliers. (FAO, 1995). The demand for birch wood is increasing, especially in the countries of Northern Europe. The price of cellulose and cardboard is rising as well. All these factors can create positive long-term perspectives for the export of Russian forest products (*Lesnaia gazeta* 21, 1997).

Furthermore, prospects are becoming increasingly favorable for Siberian forest products because of the falling demand for tropical timber (FAO, 1996). Russia’s “near-abroad” countries are only able to satisfy some 20% of their demand for forest products through their own resources (*Lesnaia gazeta* 21, 1997). In 1990, the world deficit in forest raw materials amounted to between 60 and 80 million cubic meters and it is continuously increasing (*Lesnaia gazeta*, 1995). According to the FAO forecasts to the year 2010 annual average consumption growth rates may be 1.4-1.6%. The world production (according to FAO) may increase by 1.8% per year till the year 2000. However, according to other estimates (World Bank, IIASA and SRI) production growth rates will be more moderate, between 1.1-1.2% annually (Sedjio, 1990: 177). So, the demand for timber and other forest products might not be completely satisfied through the expected supply. According to the World Resource Institute increased demand for raw logs together with a declining supply in other parts of the world will continue to exert pressure to harvest the forests of Siberian and the Russian Far East (World Resources, 1996).

Siberia possesses about half of all Russia’s forests. It is, therefore, an urgent task to investigate the realism of the prospects for Siberia to ease this demand problem while at the same time achieve a sustainable development of its forest sector.

Such an investigation is, of course, a demanding task requiring a careful study of the existing market situation and the institutions regulating its functioning, as well as social and environmental consequences of policies aimed at modernizing the sector and increasing its marketable output. The transition entails profound value and attitude changes in society accompanying the large structural changes in the economy. Thus, a focus on attitude changes among the actors of the system in transformation seems well warranted since the ultimate success of the transition, which Russia is currently going through, is closely dependent upon people’s ability to change their values and attitudes.

Market investigations can be focused on qualitative as well as quantitative aspects of the behavior of enterprises and their customers. In the specific case of Siberia it is, however, often difficult to obtain true and reliable statistics about the market situation for Siberian forest products. Therefore, qualitative research of important actors' attitudes might contribute to a better understanding of the functioning of the Siberian forest markets. However, there are several peculiarities in conducting market attitude research in Russia compared to the situation in a developed western market economy. To some extent this is due to differences in actors' psychology and their long exposure to a political system favoring partly different behavior compared to what is normal in most western industrialized countries. (During Soviet times researchers doing qualitative research of people's attitudes had problems finding any diversity in the answers since everyone was expected to think the same.) Answers given by respondents to various questionnaires or interviews often did not, in fact, reveal what people really thought (this might especially be true about the opinions of enterprise managers) but rather what was considered by current ideology to be politically correct or what respondents believed best served their own future interests. Qualitative research is becoming a much stronger tool now when the old rules are changing and democracy is allowing people to think individually. However, for many people, especially the older generation, it is still hard to change the way they used to work all their life.

Thus, a basic problem for attitudinal research in the current Russian setting is to understand what people really think and whom they blame for the existing problems. It is very important to look at the diversity of opinions, to identify areas of common opinions and attitudes, as well as areas of conflict. Since all citizens participate in the process of transition in their capacity of consumers and producers it is essential to look at their subjective attitudes towards the emerging market mechanism. Their viewpoints and attitudes toward the current problems are important for a better understanding of the complex situation. Such a study should be useful in a management as well as a policy perspective.

During the transition period when the situation has become more complicated managers tend to put the blame on some external factor rather than on themselves, often causing misunderstandings in their work. As a result, some policies that might otherwise have been successfully implemented, fail because of conflicting attitudes among enterprise managers.

Goals and Objectives

To serve existing and to explore new markets is the most difficult challenge for managers during the transition period. Interesting insight into how this challenge is being met by enterprise managers in different subsectors of the forest sector and in different regions might be gained through attitude research. Using existing qualitative data is not viable for reasons already mentioned above. It can be expected that rules and laws during a transition period, like the one Russia is currently going through, play a comparatively less significant role than they do under normal market circumstances. Attitudes and opinions of economic agents (like enterprise managers) can be expected to play a correspondingly greater role for the performance of the system. Since existing qualitative data on the attitudes and opinions of enterprise managers are difficult to obtain and generically unreliable we have performed a questionnaire based attitudinal study of forest sector managers in four different regions of Siberia.

The data thus acquired were analyzed using the “Q-methodology,” a widely used attitude research tool that allows a relatively simple data collection. The Q-methodology accomplishes a grouping of people according to their attitudes, in our case their attitudes towards forest policy and management. It enables the identification of conflict areas and can point out directions for their solutions. Q-methodology has been successfully used in the area of psychology and political science and it has been tested under varying conditions in different countries like the U.S., Mexico, Brazil and Australia. The factor analytical techniques of Q-methodology provides a mechanism through which attitudes might be factored even when respondents have not explicitly revealed his/her true opinions.

The specific goals of the pilot study are:

- To examine the principal theoretical possibility of utilizing Q-methodology for the analysis of enterprise managers’ attitudes towards the market system which is currently being developed in Russia.
- To analyze the results of a relatively small number of interviews conducted with forest enterprise managers in Siberia with the help of Q-methodology.
- To provide suggestions for further studies of Siberian managers’ attitudes towards the market using Q-methodology.

Methodology

Since this whole study of managers’ attitudes is designed to be analyzed with the help of Q-methodology we will start out with a brief outline of the most important principles of the methodology. After that we will describe in more detail how the study was conducted.

As has been emphasized the Q-methodology has been widely used in the social sciences. More than 1,500 bibliographic entries contain the key words relating to Q-methodology (Brown, 1986). The investigation of Siberian forest markets and management practices that is set out to be done here is based on a study of personal attitudes towards problems, issues, and policies related to the Russian forest sector. The data for the analysis was gathered through a series of interviews during which the respondents (forest enterprise managers) disclosed their opinions towards a series of statements expressing specific views on various market issues and forest sector problems as well as forest sector policies. With the help of Q-methodology it was then possible to discern certain “attitudinal patterns” in the interview data.

In the “Q-process” individuals (respondents) are asked to sort statements expressing an attitude or opinion into a continuum of categories reflecting the extent to which they agree or disagree with that statement. As Brown (1986) puts it: “Only subjective opinions are at issue in Q, and although they are typically unprovable, they can nevertheless be shown to have a structure and form, and it is the task of q-technique to make this form manifest for purposes of observation and study.”

The opinions of managers working in Siberian forest markets are entirely subjective, like those of any other person. Nevertheless their attitudes might display a pattern or a structure. Q-methodology has been used to analyze data generated by a small number of

respondents and in-depth studies of a single case are quite common (McKeown, 1987). Thus, this aspect of the methodology makes it very convenient for a study like this one, where information is difficult to obtain. Even with a small sample (if it is representative) it is possible to generate a very precise picture.

In the works of Stephenson (1953) and Brown (1968) the philosophical, psychological and political aspects of Q-methodology are discussed. Numerous examples of the use of Q-methodology in political science and psychology are presented together with a complete description of the investigation process. The implementation of Q-methodology in different areas, including policy making and behavioral studies (Slovic, 1987), has shown that populations can be grouped according to their attitudes towards a certain subject. For example, studies have been made of Brazilians' attitudes towards agrarian reform, people's perception of linkages among environmental quality, economic development and local social policy, etc. (Peritore, 1990 and Clarke *et al.*, 1990). Q-methodology studies have often been used in areas where available quantitative data could not explain a certain phenomenon. For example, in Kurtz *et al.* (1988), Q-methodology was used to identify types of private non-industrial forest managers, and why they utilize their forests in the way they do. Durning and Osuna (1994) used Q-methodology to examine policy analysts' roles in creating a policy, and so on.

In all of these studies people's attitudes towards a subject were analyzed and a structure of latent opinions were found. Applying Q-analysis to the study of Siberian forest markets may provide information that is not possible to obtain in any other way. This application of Q-analysis might provide an identification and explanation of the problems and the background of some of the conflicting issues that prevail in the sector.

Data Collection

The purpose of the study is to investigate Russian forest enterprise managers' attitudes towards the market. Since the "population" to be studied consists of all forest enterprise managers in Siberia a suitable sample from that population must be selected for interviews. Then a number of statements should be derived that express specific opinions or attitudes towards various features of the emerging Russian market system. Statements should not be unnecessarily lengthy and they should clearly reflect a specific view (attitude, opinion) about the emerging Russian market system. Respondents are asked to rank each statement according to his/her opinion. Ranking is usually done with the help of card sorting or scales which measure the respondent's degree of support for the respective statements. The data obtained through these interviews is then run through a factor analysis, which provides results identifying groups of similar views about the various statements belonging to the set.

The set of statements is derived in order to collect the most marginal and opposite opinions on the subject. However, it is very important that diversified opinions are obtained. Thus, only issues that are controversial or problematic in some respect should be included in the set of statements. In the literature reporting on research in which Q-methodology has been used, the number of statements usually does not exceed 70.

In order to derive a set of statements, pilot interviews were conducted in the form of a free conversation with several employees engaged in the Forest Management (*Upravlenie Lesnym Khoziaistvom*) in Novosibirsk. Twenty-three statements¹ were derived

¹ A complete listing is found in Appendix 1.

based on the conversations with these people (managers and policy makers) who are responsible for different aspects of the regional forest management.

The goal of this exercise was to identify the most pertinent problems relating to the forest products markets and to rank them in order of priority. Obviously, different managers and policy makers tend to put different priority on the main problems relating to the current market situation. Those problems where opinions differed the most were selected to be included in the set of Q-sort statements.

Examples of statements that were included in the set of Q-sort statements include:

- If forest enterprises used more qualified labor they would perform much better on the market.
- The fact that prices for forest products are too high causes a decrease in consumption.
- Use of forest products substitutes cause additional decrease in consumption.
- Competition with foreign producers causes a weak demand for Russian forest products.
- The statistical data on forest product trade contain less than 30% of all information on the trade volumes which are actually traded.²
- Non-wood products constitute less than 5% of total forest industry consumption.
- The change in the ownership has significantly changed the volumes of forest sector production and trade.
- Production activities are well regulated through existing legislation.

The interviews were held in the Novosibirsk, Tomsk, Kemerovo, and Gorno-Altai regions in Siberia. Initially, data collection was supposed to be made in several Siberian regions in order to have input from different climatic, forest and socio-economic conditions. However, when the pilot interviews were conducted, it became clear that it would not be feasible to make such a broad study. Presumably, due to the specific “Russian psychology” as well as to the existing power structures, it is practically impossible to set up appointments with the “right” people and conduct the interviews strictly in accordance with the requirements of the Q-methodology. To be able to arrange an interview, especially when it deals with attitudinal measurements, it is absolutely necessary to have the “right” approach to the respondents. It is practically impossible to come in from the outside and arrange such interviews without knowing someone inside the organizational or management structure.

After several unsuccessful attempts to find managers who would agree to be interviewed, 3-5 persons were finally found in the Novosibirsk Forest Management (*Upravlenie Lesnym Khoziaistvom*). However, as it appeared later, two of them refused to participate after they found out what the interview was about. Fortunately, the law of “connections” helped and I managed to meet with a person in Novosibirsk as well as to in-

² In its original wording this statement provoked very diversified and aggressive reactions during the pilot interviews so it was rephrased to its present form.

interview several people from Tomsk and Kemerovo. One interview was conducted with a manager from the Gorno-Altai region during his participation in a research meeting in Novosibirsk.

The size of the sample, therefore, is one person from each region. This is of course a rather small sample. However, Q-methodology is known to provide precise results although the number of respondents is not very large. The important thing is to have diversity in people and opinions. For the purpose of the present study the sample is sufficient to analyze the applicability of the methodology and to obtain tentative results.

The original Q-methodology procedure requires the sorting of cards containing the statements which the respondent should sort in accordance with his/her attitudes. The pilot study revealed that Russian respondents were likely to refuse to participate in such a procedure and, in addition, it is time consuming. Thus, the procedure was modified to the conventional type of "questionnaire" (which the majority of Russian managers are accustomed to) and the data collection took the form of an interview based on this questionnaire.

In the Russian literature, different approaches have been defined in order to succeed in sociological research like this. After having consulted sociologists from the Institute of Economics (Dr. Cheremisina), questionnaires were finally designed to include questions on statistics for enterprises as well as the attitude measurement statements. The statistics for enterprises were collected to provide a basis for analyzing the result of Q-methodology as well as for updating the database.

The respondents were asked to state to what extent they agreed or disagreed with the respective statements about the functioning of markets. The answers were recorded on a scale ranging from -3 – 3, where the negative number indicated complete disagreement and the positive complete agreement, while zero indicates a neutral attitude to the statement. This gives a scale with seven positions to represent the opinion of the respondent.

Implementation of Q-methodology – Factor Analysis

The factor analysis required by the Q-Methodology is conveniently performed with software specifically designed for the purpose by Atkinson (1992).³ Once the statements and the attitude ranges have been entered, the user selects the correlation option for the factor analysis, centroid factoring or principal component analysis. In the next step a manual or a varimax rotation is performed. The last routine is the actual analysis, which provides a text file containing a report of the analysis of the data entered.

One of the requirements for Q-analysis is that data on each respondent is normally distributed to obtain a cardinal ranking between the statements (Brown, 1968). To collect the data for Q-methodology, all 23 statements were distributed normally for each respondent, as shown in Fig.1.

³ A description of the program can be found in Appendix IX.

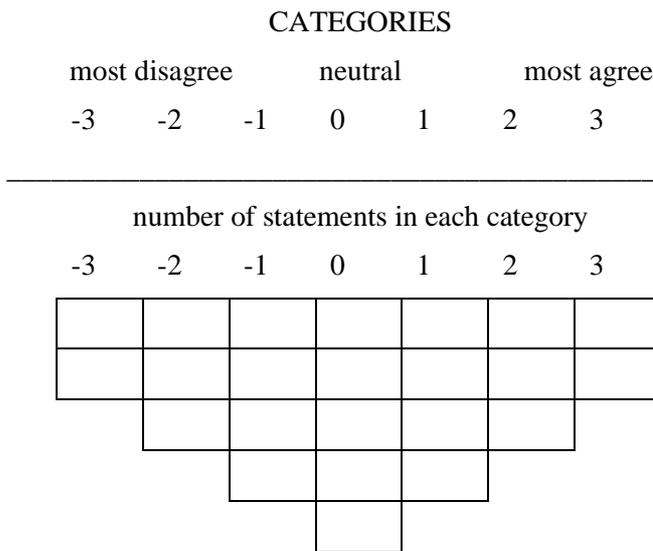


Figure 1: Normal distribution of the Q-sort

When each respondent's normally distributed recorded "degree of agreement" with the various statements in the set has been fed into the computer program the actual factor analysis procedure can begin.

Factor analysis has been used as a procedure for studying the relations between the attributes characterizing the object of investigation (the so-called "R method"). The correlation and factoring of persons (the so-called "Q-method") is based on factor theory, but has become a separate methodology.⁴

A factor analysis entails several steps. Initially, all variables in the analysis are normalized and then a covariance matrix is calculated between the variables. The resulting matrix is called the unrotated matrix.⁵

In order to understand the identification of factors, it is necessary to examine the relationship between the number of common factors and the independent dimensions of the resulting correlation matrix. The examination of the relationship is made by using the different ranks of the matrix (which depend on the number of factors). In general, this means that by examining the correlation matrix it is possible to identify a number of common factors.

However, at this junction a problem may occur since the same covariance structure may be created by different causal structures. For example, the same number of factors may be caused by different loadings, or by a different number of common qualities. In order

⁴ Some studies erroneously consider the Q-method as the transpose of the R-matrix. It is true only under a condition of universality (units are common for both rows and columns).

⁵ Any variable can be represented as a linear combination of an unknown common source and an independent source. According to theorems in variance analysis the combination can be broken down into the variance of dependent and independent sources respectively. There are a number of basic factor models defined through the number of factors and the relationships between those factors.

to solve this problem rotation of the factors should be used. This does not change the position of the data in space; it merely affects the coefficients present in the original matrix.⁶

The obtained matrix is called the *rotated factor matrix*, the columns of which indicate the actual number of factors. The coefficients in the matrix are termed *factor loadings* and reflect the extent to which a person relates to or represents a factor (in our case a Q-statement). Higher individual loadings on a particular factor provide more characteristics for identifying typologies. It is important to distinguish which loadings are significant. In the literature the standard error is used to set the significance level, although there is no one acceptable rule for its calculation.

Results and Discussion

In the present study factor loadings were at the level of 0.8. Table 1 summarizes the results of the calculations.

Table 1: The results of the Q-analysis, factors and factor loadings.

Factor Matrix With an X Indicating a Defining Factor		
	Loadings	
QSORT	1	2
1 Novosibirsk	-.1759	.8701X
2 Tomsk	.4584	.7610X
3 Gorno-al	.8393X	-.1999
4 Kemerovo	.8199X	.3284
% expl. Var	40	37

As can be seen in Table 1, two factors seem to capture some underlying common attitude. Further analysis of the factor loadings reveals that individuals with high loadings on one factor are usually highly covariated. Low loadings on the factor indicate that the factor is insignificant or weak and should be neglected.

In Q-methodology, description of types is done with the help of a so-called factor array representation, which describes the importance of each statement to each individual. The factor array gives the “ideal Q-sort” for a type and shows which of the statements

⁶ Normally orthogonal or oblique rotation is used (Kim & Mueller, 1978).

contributed the least or the most to the formation of the type. These can be seen in Appendix V.

Description of the Main Types

Two dominant factors were obtained through the Q-analysis that was performed on the data. By studying the factor arrays (see Appendix IV) we found that the attitudes favored by those respondents mainly contributing to the first factor might warrant them the label “demand accusers,” the group of respondents building the second pertinent factor might be labeled “realistic entrepreneurs.” In this section we briefly summarize the characteristics of the two entrepreneurial “types” that are indicated by the respective factors.

TYPE I: “DEMAND ACCUSERS”

Representatives of this type strongly believe that the weak domestic (intra-region) demand has caused the main problems for the Siberian forest enterprises. Consequently, the absence of public (government) demand (*goszakaz*) is seen as an obstacle for successful business activities.

The representatives of this type also believe that forest products are highly overpriced, a fact that creates a misbalance and depresses demand.

Respondents from the Gorno-Altai and Kemerovo regions grouped to form the first type – “*demand accusers*.” For this type, domestic (intra-region) demand and governmental demand is important. If sufficiently large, this demand would provide for a normal functioning of the markets in the region, implicitly implying that tariffs and financial systems would be relatively unimportant for the functioning of the market. This type was labeled “*demand accusers*” also because they put strong emphasis on demand rather than on prices or the quality of the wood products, marketing services, wood substitutes and transportation. Consumer insolvency is not assumed to be a very important reason for the current market problems.

The “*demand accusers*” blame their problems on difficulties obtaining financial credits, rather than blaming the high interest rates. This can be explained by the fact that in the Gorno-Altai and Kemerovo regions there are significantly fewer financial institutions and foreign funding operations, and business services.

Managers in the first group do not rely much on existing marketing services and believe that their disappearance would not slow down the development of the forest product markets. Respondents of the “*demand accuser*” type do not consider transport tariffs to be an essential problem for the development of their enterprises.

The “*demand accusers*” type does not believe that wood substitutes exert any strong influence on the markets for forest products. Barter trade and consumer insolvency are not the main problems of the markets according to this type.

TYPE II – “REALISTIC ENTREPRENEURS”

In our pilot study representatives of the “*realistic entrepreneurs*” type of manager were mainly to be found in the Novosibirsk and Tomsk regions.

This type strongly believes that high interest rates are the main cause of the problems of the forest products markets. The “*realistic entrepreneurs*” also acknowledge consumer insolvency and high transport tariffs to be primary problems.

They believe that public (government) demand does not make any difference. Managers belonging to this type do not consider the weak domestic (intra-regional) demand to be an important problem. Realistic entrepreneurs do not worry about the financial resources and credit availability. To them this is not the main reason for production decrease.

For the “*realistic entrepreneurs*” prices of forest products are not higher than they should be. This is a difference compared with the opinion of the “*demand accusers*.” But like the latter group they do not believe that substitutes for wood products can significantly influence the demand.

It is likely that this manager type exists in regions where enterprises do not heavily rely on the old system of *goszakaz* and instead look at the market crisis in the forestry industry mainly as a problem of insufficient liquidity and high interest rates.

Regional Descriptions

The result of the analysis (Table 1) reveals that Novosibirsk and Tomsk load high on factor two, while Gorno-Altai and Kemerovo seem to be unified under factor 1. How can this be explained? Many explanations are of course possible. Since the Q-analysis is based on a few persons we can only indicate likely explanations that should be further examined.

During the interviews some quantitative data describing the situation in the regions were collected as well. The picture that emerges from these data of the overall situation in the selected regions to some extent may assist us in an analysis of the result of the Q-analysis. Obviously, the regions that were included in our study have a quite different resource base and some differences in institutional structure. One of the underlying assumptions of the study is that the geographical location of the region and its transportation situation may influence the attitudes towards the problems of forest products markets.

For example, Tomsk is a region rich in forest resources and it is an important producer of roundwood, veneer, lumber, and particle board. Tomsk region is the home of several large-scale forest-industrial complexes (Tomsk, Asino, Kargasok). The economic crisis has influenced production and resulted in a decrease of industrial wood supply from 6.2 (1991) to 1.65 (1995) million cubic meters. However, fiber board production increased from 107.2 to 128 thousand cubic meters (20% growth) between 1991 and 1995. Novosibirsk has fewer forests and only a few wood processing plants. The dominating type of forest industry is sawmills and furniture production. Lately, lumber production has been expanding on the basis of timber imports. However, for industrial wood production is still decreasing, from 876 to 203 thousand cubic meters (1991 to 1995) and for lumber from 598 to 210 thousand cubic meters. In 1991, less than 1% of the population in appropriate age was employed in the forest industry. So, the forest industry does not play any important role for the regional economic development.

Because of the high demand from regional forest industries the Kemerovo region can simultaneously be characterized as a region rich in forests and as a region with a lack of forests. Forest resources are unevenly located throughout the region: 70% are in the east

part, 25% in the north, and 5% in the west. The forest sector in the Kemerovo region produces a substantial output of lumber. During 1991-1995 the industrial wood decreased from 2,25 million to 570 thousand cubic meters; lumber from 1.34 million to 392 thousand cubic meters, and plywood production decreased from 4.7 thousand to 2 thousand cubic meters. The Altai region is considered to be relatively rich in forest resources. The main industries are sawnwood, some lumber, plywood and furniture. The forest sector in Altai region is characterized by several small enterprises. This has to do with the scattered location of the resource, its mountainous geography and its weak transportation system. The economic crisis has resulted in a decrease in industrial wood production from 1,085 to 158 thousand cubic meters, from 467 to 272 thousand cubic meters in lumber.

Table 1. Forest-production volumes for four regions 1995.

<i>Products</i>	<i>Units</i>	<i>Novosibirsk</i>	<i>Tomsk</i>	<i>Altai</i>	<i>Kemerovo</i>
Harvest	mln. cub. m	0,28	2,36	0,321	0,73
Industrial Wood	mln. cub. m	0,20	1,65	0,158	0,57
Lumber	mln. cub. m	0,21	0,80	0,272	0,39
Plywood	thsd. cub. m	0,20	5,70	0,006	1,80
Particle Board	thsd. cub. m	0,00	128,10	0,002	0,00
Fiber Board	mln sq. m	0,00	0,00	0,000	0,00
Cellulose	thsd. ton	0,00	0,00	0,000	0,00
Paper	thsd. ton	0,00	0,00	0,000	0,00
Cardboard	thsd. ton	0,00	10,40	0,000	2,70

Source: The Blam database, 1995, IIASA.

In terms of infrastructure the Novosibirsk, Khabarovsk, Krasnoyarsk, Kemerovo, Sakhalin and Altai regions have a greater concentration of marketing and consulting firms. This concentration should, however, be weighted by the area of the respective regions and their urbanization level to provide precise results.

Table 1. Distribution of consulting and marketing firms in some Siberian regions

Novosibirsk region	20
Kemerovo region	10
Altai region	7
Tomsk region	6

Source: Based on data from *Biznes Karta 97*.

When we compare the production characteristics of the regions in which the respective types of answers dominate, we find that the main difference is that particle board is not produced in regions where the first type – the “*demand accusers*” – dominates.

Regions that are relatively rich in forests, like the Kemerovo and the Altai regions, have some similarity in the location of their forest resources in mountainous areas. This may help to explain the fact that these two regions were grouped in the same type. Although the Novosibirsk and Tomsk regions have a different resource base it is interesting to note that managers from the two regions grouped together to form the second manager type. It can be noted that both regions are in the “realistic entrepreneur” group not because of their geography or the volume of their forest resources, as was the case with Kemerovo and Altai. The similarity of opinions about financial issues between the managers from Novosibirsk and Tomsk may be explained by the fact that there are quite a few funds and support programs in operation in these regions. They also have a similar infrastructure, more developed and powerful financial centers, international connections and transport. Transportation and the availability of funding are, however, the main concern of managers in both regions.

The geographical location of the two regions may have exerted an influence on this factor as well as similarities in the political and economic environment. In both the Novosibirsk and the Tomsk regions problems with domestic (intra-regional) demand were not considered significant. Potentially, domestic demand is high.

However, on the basis of data on merely one representative from each region, it is not possible to draw any reliable conclusions. Thus, this type of reasoning might be fruitful in a more extended investigation.

Conclusions

With the limited time and number of respondents available this pilot study can only provide conclusions of a very tentative nature. However, the result of the Q-analysis indicate that there might exist two main types of attitudes (“*demand accusers*” and “*realistic entrepreneurs*”) towards the problems besetting the Russian forest products markets. The study shows that Q-methodology may be used as a tool of subjective qualitative research through which it is possible to obtain a better understanding of attitudes and trends prevailing among actors on the forest products markets. The two identified manager types seem to accurately reflect the current situation, notwithstanding the fact that only a limited sample was available. Quite possibly the regions represented here happen to be the “key” regions. Since Q-methodology does not require many respondents (it is rather the diversity of opinions that is most important for identifying existing typologies) it may be that the two types of opinions that we have identified would hold true as a description of forest enterprise managers’ attitudes in most Siberian regions.

In this study two main groups of attitudes towards the prevailing market situation have been identified. The first group has a belief in a state demand system and domestic markets are considered important. The second group mostly blames the credit system and the transport tariffs for all the problems in the forest sector. Of course, all of the mentioned problems exist and need to be taken care of. However, it is interesting to note the different importance assigned to the various problems by the two manager types that were identified in our analysis.

However, several lessons can be learned from this Q-methodological study of market attitudes.

1. The study provides important insight that might be useful for the understanding of how various policies may be received. For example, the fact that one group blames the problems that the forest market faces on the lack of government demand (*goszakaz*) may explain why certain government policies for the forest sector might be unfavorably received by some actors in the market and favorably by others.
2. Taking different types of market attitudes into account is important for the identification of efficient institutional policies. In order to design new and efficient institutions it is important to understand what different groups in society (e.g. forest enterprise managers) really think about proposed changes and the functioning of the market mechanism.
3. The two types discussed in this paper may provide meaningful categories for understanding the nature of economic behavior on the part of enterprise managers in the Siberian forest sector.
4. Finally, typologies, like the ones identified here, provide a kind of “control” of the description of a real situation. Thus it can be argued that it is important to note that prevailing attitudes towards a marketization of the forest sector might differ between regions.

The analysis of the results also allows some conclusions regarding changes in the design and performance of further, more extended studies of the present topic. If the hypothesis of geographical location and economic situation should be maintained the following issues must be given further consideration:

- First, the regions have to be selected with a view to their geographical location as well as the economic conditions of their regional forest complex. It might be desirable to investigate all 28 regions of Siberia. Furthermore, not only would it be interesting to include respondents from different geographical areas but also from differing positions in society, e.g. both workers and managers of an enterprise. However, the most representative regions for further investigation seem to be Krasnoyarsk, Buryatia, Khakassia, Tomsk, Novosibirsk, Tyumen, Kemerovo, Yakutiya and Altai (since these regions differ in forest resources availability, geographical location, infrastructure and existing policies).
- Second, the number of questions should be increased (to at least 40). It would be interesting to include questions about, for instance, financial industrial groups (FIGs) and their organizational structure as well as questions on the legal and institutional structure. Another recommendation would be to exclude statements that are relatively uncontroversial.
- Third, the best way to avoid problems in connection with the registering of data during the interviews would be to conduct a so-called Lickert scaled interview that will provide the most efficient and precise measure of attitudes, which, in turn, will become an input for the Q-methodology software. If a Lickert scale were used, questions would need to be modified to become strong controversial statements.

This pilot study has demonstrated that it is possible to use attitude measurements and Q-analysis to identify the situation in the market. Such a study, carried out with a larger sample, could provide information on the attitudes of main actors in the market. If a further study would like to emphasize the “political side” of attitudes in the forest sec-

tor, the sample of respondents should include different political officials in addition to the others already mentioned.

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Appendices

Appendix I.

Q-methodology statements

1. I consider the problem of no demand inside the region to be very crucial for my enterprise.
2. In my opinion, absence of demand from the government does not destroy successful business operation for my forest enterprise.
3. The biggest problem for forest business is the difficulty of obtaining credits and investments.
4. I agree that if forest enterprises used more qualified labor they would perform much better in the market.
5. In my opinion, the fact that prices for forest products are too high causes the decrease of the consumption.
6. Use of the forest products substitutes results in the decrease of consumption.
7. Low level of available consumers' funds caused the decrease of the consumption of forest products.
8. Increased prices for the raw materials and energy influence the situation at the market.
9. A smaller volume of trade with the former CIS countries is the reason for the low export and market volumes.
10. Competition with the foreign producers causes a low level of demand for Russian forest products.
11. I believe that the low quality of our forest products is the reason for a low level of demand.
12. In my opinion, the trade with Western countries is growing and positively influences the demand at the market of forest products.
13. Competition with local producers results in the increased level of demand for forest products.
14. Current transport tariffs system does not allow for successful development of the market demand.
15. Statistical data of forest product trade, which is not represented by the statistical reports, contains more than 30%.
16. The non-wood products provide less than 5% of forest industry consumption.
17. The structure of the export market has been changed in favor of Asian countries.
18. Energy costs are extremely high at an average forest enterprise and are the cause of the high prices.

19. High interest rates on credits and finances provide for problems in forest industry production.
20. In my opinion more than 50% of all the trade of forest products at the enterprise is done by barter or through the 'third person.'
21. I consider that in more than 50% of forest enterprises there are marketing specialist and branches.
22. Change in the ownership really has changed the volumes of forest production and trade.
23. Production activities are well regulated by the existing laws.

Appendix II.

Correlation Matrix between Sorts

SORTS	1	2	3	4
1 nski	100	41	-13	9
2 tomsk	41	100	16	54
3 Gorno-al	-13	16	100	44
4 kemerovo	9	54	44	100

Unrotated Factor Matrix

SORTS	Factors			
	1	2	3	4
1 nsk	-.4061	-.7893	-.4300	-.1648
2 tomsk	-.8334	-.3080	.2464	.3873
3 Gorno-al	-.5306	.6804	-.4890	.1281
4 kemerovo	-.8454	.2557	.2706	-.3830
Eigenvalues	1.8557	1.2462	.5580	.3402
% expl.Var.	46	31	14	9

Factor Matrix With an X Indicating a Defining Factor

QSORT	Loadings	
	1	2
1 nsk	-.1759	.8701X
2 tomsk	.4584	.7610X
3 Gorno-al	.8393X	-.1999
4 kemerovo	.8199X	.3284
% expl.Var.	40	37

Free Distribution Data Results

Q-SORTS	MEAN	ST.DEV.
1	.000	1.758
2	.000	1.758
3	.000	1.758
4	.000	1.758

Appendix III.

Rank Statement Totals with Each Factor

No.	Statement	Factors				
		No.	1	2		
1	I consider the problem of no demand inside the region	1	2.01	1	-1.32	20
2	In my opinion, absence of demand from the government	2	.40	6	-1.55	23
3	The biggest problem for forest business , is in diff	3	.40	6	-1.32	21
4	Absence of qualified labour create the biggest problem	4	-1.65	21	-1.54	22
5	In my opinion, the fact that prices for forest prod	5	1.34	3	-.21	14
6	Use of the forest products substitutes result in the d	6	-1.70	22	.00	13
7	Low level of available consumers' funds caused the d	7	.23	12	1.55	2
8	Increased prices for the raw materials and energy make	8	1.70	2	1.32	4
9	Smaller volums of trade with the former CIS countries	9	.36	8	.00	11
10	Competition with the foreign producers causes low leve	10	.04	13	-.22	15
11	I believe that the low quality of our forest products	11	.67	4	1.10	5
12	I think that export to Western countries is growing	12	.00	15	.00	11
13	Competition with local producers results in the increa	13	-.31	16	.00	13
14	Current transport tariffs system does not allow for su	14	-.98	20	1.54	3
15	Statistical data of forest products trade, which is no	15	-.36	17	-.44	17
16	The non-wood products provide less than 5% of forest i	16	-.40	18	.22	8
17	The structure of the export market has been changed in	17	.31	10	.66	6
18	Energy costs are extremely high at an average forest	18	.31	10	.22	9
19	High interest rates on credits and finances provide fo	19	.36	8	1.76	1
20	In my opinion 100% of all the trade of forest produ	20	.27	11	-.66	18
21	I consider that in more than 50% of forest enterprises	21	-.98	20	.44	7
22	Change in the ownership really have changed the volums	22	.00	15	-.44	17
23	Production activities are regulated well by the existi	23	-2.01	23	-1.11	19

Correlations Between Factors

	1	2
1	1.0000	.1303
2	.1303	1.0000

Appendix IV.

Normalized Factor Scores -- For Factor 1

No.	Statement	No.	Z-SCORES
1	I consider the problem of no demand inside the region to be	1	2.009
8	Increased prices for the raw materials and energy make an i	8	1.695
5	In my opinion, the fact that prices for forest products	5	1.339
11	I believe that the low quality of our forest products is th	11	.670
3	The biggest problem for forest business , is in difficulc	3	.398
2	In my opinion, absence of demand from the government does	2	.398
9	Smaller volums of trade with the former CIS countries is th	9	.356
19	High interest rates on credits and finances provide for pro	19	.356
17	The structure of the export market has been changed in favo	17	.314
18	Energy costs are extremely high at an average forest enter	18	.314
20	In my opinion 100% of all the trade of forest produ	20	.271
7	Low level of available consumers' funds caused the decrea	7	.229
10	Competition with the foreign producers causes low level of	10	.042
12	I think that export to Western countries is growing	12	.000
22	Change in the ownership really have changed the volums of	22	.000
13	Competition with local producers results in the increased l	13	-.314
15	Statistical data of forest products trade, which is not rep	15	-.356
16	The non-wood products provide less than 5% of forest indust	16	-.398
21	I consider that in more than 50% of forest enterprises ther	21	-.983
14	Current transport tariffs system does not allow for success	14	-.983
4	Absence of qualified labour create the biggest problem for	4	-1.653
6	Use of the forest products substitutes result in the decrea	6	-1.695
23	Production activities are regulated well by the existing la	23	-2.009

Normalized Factor Scores -- For Factor 2

No.	Statement	No.	Z-SCORES
19	High interest rates on credits and finances provide for pro	19	1.765
7	Low level of available consumers' funds caused the decrea	7	1.547
14	Current transport tariffs system does not allow for success	14	1.542
8	Increased prices for the raw materials and energy make an i	8	1.324
11	I believe that the low quality of our forest products is th	11	1.102
17	The structure of the export market has been changed in favo	17	.662
21	I consider that in more than 50% of forest enterprises ther	21	.444
16	The non-wood products provide less than 5% of forest indust	16	.222
18	Energy costs are extremely high at an average forest enter	18	.218
12	I think that export to Western countries is growing	12	.000
9	Smaller volums of trade with the former CIS countries is th	9	.000
13	Competition with local producers results in the increased l	13	-.004
6	Use of the forest products substitutes result in the decrea	6	-.004
5	In my opinion, the fact that prices for forest products	5	-.213
10	Competition with the foreign producers causes low level of	10	-.222
15	Statistical data of forest products trade, which is not rep	15	-.440
22	Change in the ownership really have changed the volums of	22	-.440
20	In my opinion 100% of all the trade of forest produ	20	-.662
23	Production activities are regulated well by the existing la	23	-1.107
1	I consider the problem of no demand inside the region to be	1	-1.320
3	The biggest problem for forest business , is in difficulc	3	-1.324
4	Absence of qualified labour create the biggest problem for	4	-1.542
2	In my opinion, absence of demand from the government does	2	-1.547

Appendix V.

Descending Array of Differences Between Factors 1 and 2

No.	Statement	No.	Type 1	Type 2	Difference
1	I consider the problem of no demand inside the region to be	1	2.009	-1.320	3.329
2	In my opinion, absence of demand from the government does	2	.398	-1.547	1.945
3	The biggest problem for forest business, is in difficult	3	.398	-1.324	1.723
5	In my opinion, the fact that prices for forest products	5	1.339	-.213	1.552
20	In my opinion 100% of all the trade of forest produ	20	.271	-.662	.933
22	Change in the ownership really have changed the volums of	22	.000	-.440	.440
8	Increased prices for the raw materials and energy make an i	8	1.695	1.324	.371
9	Smaller volums of trade with the former CIS countries is th	9	.356	.000	.356
10	Competition with the foreign producers causes low level of	10	.042	-.222	.265
18	Energy costs are extremely high at an average forest enter	18	.314	.218	.096
15	Statistical data of forest products trade, which is not rep	15	-.356	-.440	.084
12	I think that export to Western countries is growing	12	.000	.000	.000
4	Absence of qualified labour create the biggest problem for	4	-1.653	-1.542	-.110
13	Competition with local producers results in the increased l	13	-.314	-.004	-.309
17	The structure of the export market has been changed in favo	17	.314	.662	-.349
11	I believe that the low quality of our forest products is th	11	.670	1.102	-.433
16	The non-wood products provide less than 5% of forest indust	16	-.398	.222	-.621
23	Production activities are regulated well by the existing la	23	-2.009	-1.107	-.902
7	Low level of available consumers' funds caused the decrea	7	.229	1.547	-1.318
19	High interest rates on credits and finances provide for pro	19	.356	1.765	-1.409
21	I consider that in more than 50% of forest enterprises ther	21	-.983	.444	-1.428
6	Use of the forest products substitutes result in the decrea	6	-1.695	-.004	-1.691
14	Current transport tariffs system does not allow for success	14	-.983	1.542	-2.525

Appendix VI.

Factor Q-Sort Values for Each Statement

No.	Statement	No.	Factor Arrays	
			1	2
1	I consider the problem of no demand inside the region to be	1	3	-2
2	In my opinion, absence of demand from the government does	2	1	-3
3	The biggest problem for forest business, is in difficulc	3	1	-2
4	Absence of qualified labour create the biggest problem for	4	-2	-3
5	In my opinion, the fact that prices for forest products	5	2	0
6	Use of the forest products substitutes result in the decrea	6	-3	0
7	Low level of available consumers' funds caused the decrea	7	0	3
8	Increased prices for the raw materials and energy make an i	8	3	2
9	Smaller volums of trade with the former CIS countries is th	9	1	0
10	Competition with the foreign producers causes low level of	10	0	-1
11	I believe that the low quality of our forest products is th	11	2	2
12	I think that export to Western countries is growing	12	-1	0
13	Competition with local producers results in the increased l	13	-1	0
14	Current transport tariffs system does not allow for success	14	-2	2
15	Statistical data of forest products trade, which is not rep	15	-1	-1
16	The non-wood products provide less than 5% of forest indust	16	-1	1
17	The structure of the export market has been changed in favo	17	0	1
18	Energy costs are extremely high at an average forest enter	18	0	1
19	High interest rates on credits and finances provide for pro	19	1	3
20	In my opinion 100% of all the trade of forest produ	20	0	-1
21	I consider that in more than 50% of forest enterprises ther	21	-2	1
22	Change in the ownership really have changed the volums of	22	-1	-1
23	Production activities are regulated well by the existing la	23	-3	-2

Variance = 2.957 St. Dev. = 1.719

Appendix VII.

Factor Q-Sort Values for Statements sorted by Consensus vs. Disagreement (Variance across normalized Factor Scores)

No.	Statement	No.	Factor Arrays	
			1	2
12	I think that export to Western countries is growing	12	-1	0
15	Statistical data of forest products trade, which is not rep	15	-1	-1
18	Energy costs are extremely high at an average forest enter	18	0	1
4	Absence of qualified labour create the biggest problem for	4	-2	-3
10	Competition with the foreign producers causes low level of	10	0	-1
13	Competition with local producers results in the increased l	13	-1	0
17	The structure of the export market has been changed in favo	17	0	1
9	Smaller volums of trade with the former CIS countries is th	9	1	0
8	Increased prices for the raw materials and energy make an i	8	3	2
11	I believe that the low quality of our forest products is th	11	2	2
22	Change in the ownership really have changed the volums of	22	-1	-1
16	The non-wood products provide less than 5% of forest indust	16	-1	1
23	Production activities are regulated well by the existing la	23	-3	-2
20	In my opinion 100% of all the trade of forest produ	20	0	-1
7	Low level of available consumers' funds caused the decrea	7	0	3
19	High interest rates on credits and finances provide for pro	19	1	3
21	I consider that in more than 50% of forest enterprises ther	21	-2	1
5	In my opinion, the fact that prices for forest products	5	2	0
6	Use of the forest products substitutes result in the decrea	6	-3	0
3	The biggest problem for forest business , is in difficulc	3	1	-2
2	In my opinion, absence of demand from the government does	2	1	-3
14	Current transport tariffs system does not allow for success	14	-2	2
1	I consider the problem of no demand inside the region to be	1	3	-2

Factor Characteristics

	Factors	
	1	2
No. of Defining Variables	2	2
Average Rel. Coef.	.800	.800
Composite Reliability	.889	.889
S.E. of Factor Scores	.333	.333

Standard Errors for Differences in Normalized Factor Scores

(Diagonal Entries Are S.E. Within Factors)

Factors	1	2
1	.471	.471
2	.471	.471

Appendix VIII.

Distinguishing Statements for Factor 1

(P < .05 ; Asterisk (*) Indicates Significance at P < .01)

Both the Factor Q-Sort Value and the Normalized Score are Shown.

No. Statement	No.	Factors	
		1	2
		RNK SCORE	RNK SCORE
1 I consider the problem of no demand inside the region to be	1	3 2.01*	-2 -1.32
5 In my opinion, the fact that prices for forest products	5	2 1.34*	0 -.21
3 The biggest problem for forest business, is in difficulc	3	1 .40*	-2 -1.32
2 In my opinion, absence of demand from the government does	2	1 .40*	-3 -1.55
19 High interest rates on credits and finances provide for pro	19	1 .36*	3 1.76
20 In my opinion 100% of all the trade of forest produ	20	0 .27	-1 -.66
7 Low level of available consumers' funds caused the decrea	7	0 .23*	3 1.55
21 I consider that in more than 50% of forest enterprises ther	21	-2 -.98*	1 .44
14 Current transport tariffs system does not allow for success	14	-2 -.98*	2 1.54
6 Use of the forest products substitutes result in the decrea	6	-3 -1.70*	0 .00

Consensus Statements -- Those That Do Not Distinguish Between ANY Pair of Factors.

All Listed Statements are Non-Significant at P>.01, and Those Flagged With an * are also Non-Significant at P>.05.

No. Statement	No.	Factors	
		1	2
		RNK SCORE	RNK SCORE
4* Absence of qualified labour create the biggest problem for	4	-2 -1.65	-3 -1.54
8* Increased prices for the raw materials and energy make an i	8	3 1.70	2 1.32
9* Smaller volums of trade with the former CIS countries is th	9	1 .36	0 .00
10* Competition with the foreign producers causes low level of	10	0 .04	-1 -.22
11* I believe that the low quality of our forest products is th	11	2 .67	2 1.10
12* I think that export to Western countries is growing	12	-1 .00	0 .00
13* Competition with local producers results in the increased l	13	-1 -.31	0 .00
15* Statistical data of forest products trade, which is not rep	15	-1 -.36	-1 -.44
16* The non-wood products provide less than 5% of forest indust	16	-1 -.40	1 .22
17* The structure of the export market has been changed in favo	17	0 .31	1 .66
18* Energy costs are extremely high at an average forest enter	18	0 .31	1 .22
20 In my opinion 100% of all the trade of forest produ	20	0 .27	-1 -.66
22* Change in the ownership really have changed the volums of	22	-1 .00	-1 -.44
23* Production activities are regulated well by the existing la	23	-3 -2.01	-2 -1.11

Appendix IX.

Main Menu

Choose the number of the routine you want to run and enter it.

- 1 - STATES - Enter (or edit) the file of statements
- 2 - QENTER - Enter q sorts (new or continued)
- 3- QCENT - Perform a Centroid factor analysis
- 3 - QPCA - Perform a Principal Components factor analysis
- 5 - QROTATE - Perform a manual rotation of the factors
- 6 - QVARIMAX - Perform a varimax rotation of the factors
- 7 - QANALYZE - Perform the final Q analysis of the rotated factors
- X - Exit from QMETHODS

Last Routine Run Successfully - (Initial)

(1) STATES

Choosing option *States* provides the possibility to enter the statements. It is possible to use the already created file with the statements.

Every statement must be typed as a single line (without empty lines between them). Note that all records will get truncated to 60 characters, since that is the maximum for statement text in PQMethod.

(2) QENTER

QENTER is used to enter data directly from the q-sorts you have administered. The file that is created by QENTER can be created by another source, but it must be modified for entry to QCORR and etc. The details needed will be:

1. The total number of statements that were sorted.
2. The value of the leftmost column of the q-sort. It is assumed that the leftmost column has a lower value than the rightmost column, so that values will range from, say, -4 to +4, or from 1 to 9. The maximal number of columns is 13, with values ranging from either -6 to +6, or from 1 to 13. In general, there should be an unequal number of categories to provide for a neutral midpoint. *If that is not the case, PQMethod 2.0 now issues a warning only, but accepts the design.*
3. The rightmost column value (see above).
4. The number of rows in each column, from left to right. This should exactly match your q-sort design. The design itself should be symmetric -- that is, the number of rows on the left should be the same as those of the corresponding columns on the right. In addition, the de-

sign must be unimodal – that is, the number of rows must not decrease from either left or right to the center.

(3) QCENT

QCENT first takes the rawdata file created by QENTER and computes and outputs a correlation matrix in a file with file-name extension .cor. Then it create an unrotated factor loadings file (.unr), which is created by the application of the Centroid factor analysis process. As a default, QCENT suggests the 'magical number' of seven Centroids to extract. However, you can change that; the maximal number of factors PQMethod can handle is eight. In fact, under normal conditions, there is no good reason for selecting less than 7 factors, since upon rotation of factors you can choose how many of the unrotated factors to use.

(4) QPCA

Principal Components analysis (PCA) is an alternative to Centroid factoring. Centroid analysis, the method of choice for Stephenson and his followers, is not much used outside the Q community nowadays, whereas PCA is the default method of factor extraction in statistical packages like SPSS.

Like QCENT, QPCA computes first the correlation matrix, and then the unrotated factor matrix file (.unr). QPCA always computes eight factors, which is the maximum number of factors PQMethod can process. This does not mean that you have to take into account all eight factors for either judgmental or Varimax rotation which follow later.

After extraction of the factors the full table of Eigenvalues and respective percentages of explained variance is displayed on the screen, and also written to the unrotated-factors file (.unr) for later inspection.

(5) QROTATE

Now it is time to rotate the factors. You have two options: you can rotate the factors by hand, or you can perform a varimax rotation. You would not normally do both, unless you wanted to compare the methods. If you choose QROTATE to rotate the factors yourself, you are first asked if this is a continuation. If you say 'no', then the file output by QCENT or QPCA, respectively, the unrotated factors file (.unr), will be the only input. If you say this is a continuation, then an intermediate file (.hro) created the last time you ran QROTATE is used instead. In either case, at the end of this session, a new intermediate file is written out, and you always have the option of running QROTATE again and using either this file or the original file of unrotated factors (if you want to start over).

(6) QVARIMAX

If you choose not to rotate the factors yourself, you can choose a varimax rotation. QVARIMAX takes in the unrotated matrix file (.unr) created by QCENT or QPCA, and asks for the number of factors you wish to rotate. If you just press the <ENTER> key, all unrotated factors will be rotated to the Varimax criterion. After the VARIMAX rotation is performed, you are then given the option to do further rotating by hand if you want, or you can simply flag the factors and write them out, just as you would if you had done the entire rotation by hand. See chapter (6) ROTATE for details.

(7) QANALYZE

Finally, you need to run QANALYZE to give you a complete analysis of the q-sorts you collected. There is no input that should be required of you if you have used PQMethod to get to this point.

When run, QANALYZE creates a written report in a listing file (file extension .lis) that is actually sent to disk, just like all the other files in this system. You can view this file with your favorite file viewer or editor / text program. You might wish to edit and, specifically, shorten the report before printing it out.

Chapter 5

Future Research

Lars Carlsson and Mats-Olov Olsson

The previous chapters of this report have demonstrated that a great number of the problems and opportunities that are discussed in relation to the Russian forest sector are, in fact, representative of the transition process in general. Like most other areas in the Soviet economy the forest sector was also ran as a typical top-down enterprise, the shortcomings of which must now be taken care of. However, these changes are associated with many problems which essentially have an institutional character. The basic problem is to change the “rules of the game,” but there exist many hurdles along the road. In order to get a better understanding of the transition of the Russian forest sector three main themes should be addressed.

The *first* of these is “the legacy of history,” namely the general problem of altering old patterns of governance, of collective and individual action. Even before the revolution property rights of the Russian forests were closely tied to the State. As a consequence, after the downfall of the Soviet Union, there exist no other natural inheritors than the State itself. In other East European countries the descendents of the pre-communist property holders have claimed their former property. Thus, in these countries some privatizations of forest lands have taken place. In Russia, however, formally no such possibilities exist and the new State has preserved major parts of the old governance structure related to the forest sector. At the same time this structure must be, and is actually being, reorganized. However, in order to gain legitimacy for any new order of things the “new” authorities have to demonstrate that this order is better, more effective, etc. than the old one. Since to succeed the forest sector is totally dependent on these change efforts this would be a most crucial part for the transition.

A *second*, but related, theme to be addressed is the structural reorganization of the forest sector. A major problem is how to assess (or predict) to what extent certain types of organizational features support or obstruct the transition towards a market economy. When history can provide an “answer book” judgements might be easy, but for those who are in the middle of the process no such guidelines exist (Carlsson & Olsson, 1998).

The task of creating new organizations for collective action in the forest sector is a rather problematic and, arguably, even a paradoxical enterprise. On the one hand, new organizational solutions must be developed. On the other hand, most of those who are supposed to achieve these changes and populate the new units are the same persons who constituted the system which is now being abandoned. Even if it would be desirable, it is unlikely that a conscious “replacement strategy” would succeed. Knowledge and

skills reside in people, not primarily in organizational features, and in many branches of the forest sector special competence is needed. Accordingly, most of the building material for the new institutional edifices consists of old “bricks.” Therefore, in order to promote the reorganization of the Russian forest sector, one has to put more emphasis on the individual.

Consequently, the *third* theme to be focused is the role of the individual. Institutional change in the Russian forest sector has the character of a chicken-and-egg problem. In order to change the “rules of the game,” i.e., the institutional framework, people must change their behavior, their norms, and attitudes. Simultaneously, the changing of norms, etc., is basically dependent on the institutional framework itself. From where, then, is the change supposed to come, from outside, from some external force not exposed to the logic of the rest of the players? Of course, this is not possible. The reorganization of the Russian forest sector must be carried out by managers, industrialists, policymakers, scientists, and others who are in many cases already involved in the forest sector. Hopefully, contemporary research about the issues outlined in this report may give these actors new insights and ideas which will be useful for the renewal of the Russian forest sector.

To sum up. In order to get a better understanding of the Russian forest sector as well as of the prospects of making it beneficial for the economic development one has to pay attention to the historical legacy. Such a heritage often decides the “degrees of freedom” for the actors. Second, one also has to understand that organizational renewal is a more complicated process than just reorganizing or instituting new units and agencies. Third, it must be appreciated that institutional change goes along with change of the individuals and vice versa. Finally, it should be noted that all three themes discussed above can be subsumed under the broader heading of *institutional change*. The puzzle is to know how this can and should be preformed in the Russian forest sector. How can institutional change be conceptualized and understood?

The Russian Forest Sector, a Laboratory of Institutional Change

The Russian forest sector provides an interesting case for analyses that might contribute significantly to our understanding of how institutional change takes place in society. It is a well-known fact that institutions may change through dramatic events, such as revolutions and national subjugation caused by military force. The sudden and profound disintegration of the Soviet State has many similarities with such events. However, institutional change is a continuous process and in most countries such changes take place quite peacefully. This is also the situation in Russia today.

The very definition of institutions as a relatively stable set of rules-in-use indicates a certain permanence, but systems of rules are, and must constantly be, changing due to technological development, population growth, etc. Thus, it is obvious that – even in a very stable society – it is necessary to allow some degree of instability. Otherwise no institutional renewal and no economic and social development would take place. The Russian forest sector provides an interesting “laboratory” of institutional change. However, it is not evident how these sweeping institutional changes should be preformed and understood. David Weimer (1995: 6) uses the phrase “the puzzle of institutional

change.” He suggests two alternative ways of conceptualizing the mechanisms of institutional change in society.

The *first* view, which is built on Douglass North’s (1991) theory, considers changes as caused by actors’ response to shifts in relative prices and preferences. In this way new institutional arrangements that *enhance* economic growth are constantly created in society. We can think about these changes as a driving force behind economic development. Nevertheless, “bad” or inefficient institutions – not promoting economic development – might develop and persist over significant periods of time. Two features can explain this. The first is that it might be too expensive to move to more efficient arrangements because substantial investments have already been made in the existing institutional setting. This is the so-called “path dependency” argument. A second reason might be that those in favor of the existing, but inefficient, system have a bargaining power and can block those who might benefit from a change. The winners, furthermore, find it too expensive to compensate the losers of the desirable change.

The *second* view, which is based on Knight (1992), sees institutional change as a by-product caused by conflicting interests. According to this theory, changes in institutional arrangements have a tendency to take place when the changes favor those with advantageous bargaining power. Thus, it cannot be expected that institutions automatically change for the better.

Weimer (1995: 6) concludes that according to North’s theory inefficiencies can only be assessed *ex post* while Knight’s theory allows for making those assessments *ex ante*. However, there are also a number of other ways of understanding the mechanisms of institutional change. The application of property rights theory is one alternative, policy making theory is another. In addition there are numerous theories that try to explain the emergence, as well as the relative permanence, of rules, norms and conventions in society; from game theory to psychological theories of attitudinal change.

A general problem with empirical research, however, is that scientific conclusions only can be drawn retrospectively. Empirical research is subjected to the fact that something must first take place before it can be analyzed. What we are observing in contemporary Russia, its forest sector included, is a society involved in a process of institutional change that might not be conceptualized by the use of contemporary theories and the effects of which might only be properly understood in a distant future. Thus, the changes in Russia might be so special that they cannot be analyzed by existing theories. Therefore, some would argue, the task of research should merely be to “collect data” in order to construct such theories in the future. However, such an attitude misses three important features of empirical research:

- In the first place, no data collection can actually be performed which is not (explicitly or implicitly) based on some kind of theory.
- Research should be able to explain and provide a better understanding of what is going on in front of our eyes.
- Empirical research should provide the possibility to influence ongoing activities and make things “better.”

In previous chapters of this report a number of important issues have been raised that call for more and deeper analysis. Some features of the Russian forest sector are under-

standable by the use of existing theory while other are more problematic. This was, for example, demonstrated in Barbara Lehmbruch's analysis.

With reference to the issues discussed in the first four chapters of this report, our three statements above and the previous discussion about institutional change we can conclude the following. In order to change the Russian forest sector one must gather a better understanding of its factual structure, its relations to other sectors as well as of the overall changes in the Russian society. In the next section we will suggest an agenda for such research.

Institutional Analysis for Institutional Change

Suggested Lines of Inquiry

- More research is needed in order to understand the structure of, and the ongoing changes in, the Russian forest sector.
- Given the assumption that internal as well as external factors will influence the ongoing reorganization of the Russian forest sector the research should have a comparative character. A number of studies focusing on different geographical areas of Russia should be conducted. These studies would make it possible to estimate the *relative* success of the transition.
- The research should have a multi-level character. In-depth studies focusing on local and regional aspects of the forest sector should be complemented with national and international level analyses.
- Research results should be “packed” and presented in a format that could easily be utilized by stakeholders, policy makers, and others directly involved in, or related to, the reorganization of the Russian forest sector.

Specific Questions and Issues to Be Addressed

Property rights: How should the current system of dual property rights to forest lands be understood? What problems and possibilities are associated with this type of ownership? What types of property rights systems related to forest lands have been developed during the course of the transition? What is the function of these property rights regimes?

Legal issues: How does the current legal system affect the forest sector? What are the means and possibilities to implement the rule of law? What relations exist between different kinds of formal rules – constitutional and other – regulating the forest sector? To what extent and in what ways do different rules support or contradict each other. What changes are needed?

Taxes: What is the exact configuration of the system of taxes that affects forest enterprises, investors, and other actors in the Russian forest sector? How can and should this system be refined?

Financing: What financial structures apply to the forest sector? What is the general supply or availability of economic resources for investments, etc? To what extent are sys-

tems of “quasi money” developed, e.g., how widespread is the barter system? In what ways do the existing barter system affect the policymaking process?

Trade: Are there significant differences in how well effective trade with forest products have been developed in different parts of the federation? What are the functions of central trading and export organizations? How do their activities benefit regional development of trade and the development of local competence?

Infrastructure: What does the transportation system that is supposed to serve the forest sector look like? What problems and obstacles for development exist? What is the magnitude of investments needed in order to modernize the sector? How does the current transportation policy affect the forest sector? What should be done to reorganize the transportation sector? What other types of infrastructure investments, such as information technology, are essential or desirable for the forest sector?

Supply of wood: How does the new system of stumpage fees, leasing, and auctions work? Are there significant differences in how they work in different parts of the federation? In what way do these systems affect the forests, their maintenance, regeneration, etc.? If significant differences are found, how can these be explained?

Management and other professional skills and capacities: What kinds of competence do actors involved in the forest sector have and what improvements are essential for the development of the sector?

Norms and attitudes among stakeholders: What types of attitudes towards entrepreneurship, management, and other central aspects of a market economy do managers, industrialists, and policy makers have? In what ways do these qualities affect the performance in the forest sector?

General attitudes among people: What is the level of understanding among citizens – particularly in typical forest communities – concerning changes to be made in order to establish a society based on the principles of a market economy?

Technological renewal and institutional features: The question of the general and specific relation between institutional features and technological renewal of the forest sector should be addressed. Under what circumstances does technological development take place and what are the obstacles for such development?

The social importance of the forest sector: What is the structure of monoculture and how widespread is this feature? To what extent and in what ways are single communities and regions depending on the forest sector? What strategies, if any, have been developed to tackle the situation? For example, how widespread is the use of subsidiary sources of income among people? How does this affect land use and the standard of living?

Social issues: What is the structure and volume of forest enterprise involvement in the provision of public goods and social services? What hurdles do these engagements raise for the renewal of the sector? In what ways can these systems be dismantled without creating unacceptable welfare losses and social unrest?

Political administrative organizations: What solutions have been developed in order to provide a political administrative framework beneficial for the forest sector? Are there differences and similarities in how this framework is organized in different parts of Russia? What conclusions can be drawn from these differences? To what extent is the forest sector politicized, and, is this for the better or for the worse?

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