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The Economic Transformation of the Russian Oil and Gas Industry, 1991-1995: An Institutional View

by

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A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree Master of Arts

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Abstract

This thesis is an analysis of the Russian oil and gas industry, which during the period 1991-1995 underwent restructuring and privatisation. The machinations of the Russian economic transformation from a centrally planned economy to one with market institutions are discussed in order to add to the body of work on transitional economies. The thesis examines these issues not from a main-stream neo-classical economic point of view but from the instititutionalist economic perspective with the intent to uncover some of the shortcomings and inconsistencies of the present political and economic course to transform the Russian economy in general, and the Russian oil and gas sector in particular.

Such an analysis is needed to clarify the issue of privatisation and the resulting ownership structure of Russia's oil and natural gas resources. It is argued that privatisation has not solved the industry's economic problems, though there are signs of improvement. The case of the vertically-integrated Russian oil company *LUKoil* is studied to exemplify a successful strategy and to provide information about some trends in the industry's future development.

Acknowledgement

I would like to thank Dr. T. Yedlin for her guidance in my studies and for supervising the work on this thesis. I would also like to thank David Rees for his generous assistance and many helpful suggestions in preparing the manuscript. Finally I wish to recognise the support of the Department of Slavic and East European Studies, and secondly the departmental secretaries - Janet Ould and Jean Wilman - who were always kind and extended their assistance whenever they could.

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Chapter One

Introduction

> Institutions are the humanly devised constraints that structure political, economic and social interaction. They consist of both informal constraints (sanctions, taboos, customs, traditions, and codes of conduct), and formal rules (constitutions, laws, property rights) ... to create order and reduce uncertainty. [1]

> Since transformation is about grand-scale institutional change, any analysis of the transformation process in Eastern Europe [and Russia] has to face the origin of institutional arrangements and the incentives for change in established institutions. [2]

In Russia's economic transformation process from a centrally planned economy to a market economy, institutions play a complex role of being both agents and objects of change. To develop a market economy, Russia has to transform the institutional structures of its centrally planned economy into market orientated ones. In 1992, the economic reform programme of shock therapy marked the beginning of this process to rapidly restructure the national economy and its economic institutions. The main objective of the 1992 programme of shock therapy was to create market institutions and to force established institutions to adapt. Imposing new ideas on old institutions has caused both resistance and uncertainty.

The purpose of this study is to examine the course of economic transformation in the Russian Federation in general and the transformation of Russia's oil and gas industry in particular. To begin, a market economy requires well-defined property rights, a coherent banking system, a consistent and enforceable legal code, and an efficient manufacturing sector. However, a number of anomalies have appeared to weaken the effectiveness of the 1992 Yeltsin-Gaidar shock therapy programme. Critically, how have these reforms altered Soviet institutional arrangements? Second, what incentives for change exist to encourage the development of market institutions in Russia?

These issues concerning economic transformation carry considerable importance for Russia's oil and gas industry. Traditionally, the industry has financed the country's military-industrial complex. Today, as the Russian economy undergoes significant restructuring, the oil and gas industry unlike the shrinking military-industrial complex can afford to adopt or not adopt institutional changes. This paper seeks to analyse the evolution of the modern Russian oil and gas industry and the shortcomings of its present institutional transformation.

The period from 1991 to 1995 was a time of tremendous social, economic, cultural and political changes in Russia. In brief, the Soviet Union was dissolved and a restructuring of its centrally planned economy was undertaken. The restructuring of the centrally planned economy consisted of price liberalisation, macroeconomic stabilisation, and mass privatisation. [3] Through these policies, Russian political leaders materially changed the economic system. In their wake these policies brought high price inflation, a collapse in industrial output, mounting crime, a growth in corruption, and plunging living standards. The creation of a market economy to many Russians has created considerable economic and social hardship.

Precedence for the transition to a market economy was set by Poland, Hungary and Czechoslovakia in 1990. Following the advice of national and foreign economists, these three countries inaugurated plans for price and trade liberalisation, currency convertibility and budgetary controls. The Klaus Plan in Czechoslovakia and the Balcerowicz Plan in Poland rested on a theoretical approach which became known as the shock therapy school of transition, led by Jeffrey Sachs. [4]

Underlying the Klaus and Balcerowicz Plans was the neo-classical assumption that once the framework for market behaviour was installed, old institutions would easily adapt to the market signals. However, in Russia, traditional institutional practices such as the peasant commune (that had resisted Tsarist reforms and Stalinist collectivism), Orthodox Christianity and societal values that supported egalitarianism endured. Consequently, entrepreneurship and individualism, values of a market economy, have been slow to take root in Russia. Moreover, democratic values and the necessary didacticism required to forcefully install fundamental societal change have been at odds with the development of an entrepreneurial culture. The popular political will remains ambivalent and at times unwilling to countenance further painful economic reforms and marketisation. The neo-classical paradigm based on institutions present in western societies remains unsuitable for transforming Russian society and incompatible with the country's distinctive historical experience and culture. [5] Institutional inertia and a lack of political will thus limit the sustainability of such reform programmes.

Numerous academic studies have appeared in recent years on the intractability of economic transformation in Russia and certain Eastern European countries. [6] Apart from the neo-classical approach to economic transformation which characterises much of the academic literature on economic transformation, another approach, that of institutionalism, has come to explain many of the weaknesses of the neo-classical approach. The Institutionalist approach as outlined by Juliet Ellen Johnson in an article on the Russian banking system, [7] posits the view that as the economic system is transformed from one based on a centralised hierarchical structure to one based on decentralised markets, management behaviour (the decision-maker in the firm) is slow to adapt.

Management Sovieticus, [8] the prevailing management style in the Soviet Union, is characterised by homogenising economic behaviour and centralisation. During the transition process the manager exhibits familiar tendencies: stressing the importance of loyalty, personal relationships and quantitative production. The centrally planned economy created a specific system of formal and informal rules of conduct. Systemic economic transition requires that these behavioural traditions must be changed at all levels of society over time. The oil and gas industry is an important illustration of the phenomenon of *management sovieticus.*

Economic development in the Russian Federation depends largely on the success of its resource-based industries, [9] particularly on the earnings derived from the export of its crude oil and natural gas to Europe and to other republics of the former Soviet Union. The prospects of Russian oil and gas development have been widely discussed since 1991. Not surprisingly, the tone of these writings has changed in recent years. Before 1991, most Western (largely American) analyses of Russia's oil and gas industry concentrated on the politics of oil and its importance to Soviet economic growth and military capability. Since 1992, Western studies of the Russian oil and gas industry have centred on Russia's ability to integrate into the global economy, and on the transformation of this industry in the national economy. The global oil industry is affecting Russia's industry and its power as a producer of energy derived from its ability to, "channel oil wealth and influence into projects which expand their capabilities in other areas of state power." [10] The break-up of the USSR has forced the Russian Ministry of Fuel and Energy to adopt a new doctrine of energy security, as the once-integrated energy complex has been divided among the independent energy-producing successor states. [11] Though privatisation has satisfied economic and political strategies of the Ministry and rapidly changed the structure of the oil and gas industry, it has failed to create economic institutions that are based on market relations, namely supply and demand.

An extensive body of literature about Soviet oil and gas exists and provides the backdrop for this thesis. Several works by Robert W. Campbell, Marshall Goldman, Leslie Dienes, Theodore Shabad, and Ed A. Hewett provide a useful historical overview of the Soviet oil and gas industry. Robert W. Campbell in two studies examined the potential of Soviet oil and natural gas production at a time when concerns were raised about the international competition of Soviet exports: *The Economics of Soviet Oil and Gas* (1968); and *Trends in the Soviet Oil and Gas Industry* (1976). Marshall Goldman's *The Enigma of Soviet Petroleum* (1980) discussed the question of whether the Soviet Union would be able to satisfy its energy needs in future years. The 1977 CIA energy report (*Trends in the Soviet Oil and Gas Industry*) forecasted a sharp fall in petroleum production and a host of economic problems which would result from such a production decline. Leslie Dienes and Theodore Shabad provided a detailed case study of the entire Soviet energy system in *The Soviet Energy System: Resource Use and Policies* (1979). Ed A. Hewett examined the energy balance and related foreign policy issues in *Energy, Economics, and Foreign Policy in the Soviet Union* (1984).

Studies on regionalism and Siberian economic development provide additional information on the importance of the Soviet oil and gas industry. The best edition of Soviet economic geography in English is a selection of readings translated from the Russian by George J. Demko and Ronald J. Fuchs, *Geographical Perspectives in the Soviet Union* (1974). Important Russian statistical sources are *Narodnoe khoziaistvo RSFSR* (National Economy of the RSFSR), *Planovoe khoziaistvo* (Planned Economy), and various volumes published by the Siberian department of the USSR Academy of Sciences. [12] Western sources include work done by Leslie Dienes, *Soviet Asia: Economic Development and Policy*

Choices (1987), and Peter de Souza, *Territorial Production Complexes in the Soviet Union* (1989). Other useful Western sources are Thane Gustafson's *Crisis Amid Plenty. The Politics of Soviet Energy Policy Under Brezhnev and Gorbachev* (1989); and *Energy and Economic Reform in the Former Soviet Union* (1994) by Leslie Dienes and Theodore Shabad and Marian Radetzki.

Contemporary primary sources consulted include *Petroleum Economist*, *Ekonomika i zhizn'* (Economy and Life), and *Delovie Lyudi* [13] (Business in the ex-USSR/Business in Russia). These economic journals contain statistical data on the Russian oil and gas industry provided by the Institute of National Economic Forecasting under the Russian Academy of Sciences and foreign agency sources such as the IEA and the CIA. Russian government statistical yearbooks have been problematic and otherwise inaccessible to this author.

Pekka Sutela's monograph *Economic Thought and Economic Reform in the Soviet Union* (1991) is noteworthy for its analysis of the development of Soviet economic planning. As an advisor to the Bank of Finland, Sutela's numerous articles on economic transition have been particularly useful, especially his "Insider Privatisation in Russia: Speculation on Systemic Change" (1994), and "The Economic Transition in Russia" (1994). Secondly, are the works of a group of economists which have been classified roughly as the Insitutionalists such as O.E. Williamson's article, "The Institutions and Governance of Economic Development and Reform" (1995), and Douglass C. North's book, *Institutions, Institutional Change and Economic Performance* (1990).

This thesis is divided into five parts. The role of economic reform in Russia is discussed from the analytical perspective of the Institutionalist paradigm in chapter Two. Chapter Three outlines the stages, aspects and anomalies in the historical development of Russia's oil and gas industry. Chapter Four discusses privatisation, institutional influences and incentives for transforming the oil and gas industry. Finally, Chapter Five analyses in some depth the strategy of the recently privatised Russian oil company *LUKoil* and how it is adapting to the vagaries of the emergent Russian marketplace. This examination hopes to familiarise individuals and businesses about the nature of economic transformation in the Russian Federation generally, and in the Russian oil and gas sector specifically. This paper attempts to assess the viability of the Russian oil and gas industry at time when the country's overall economic performance continues to suffer the dislocation of establishing a market economy out of a centrally planned one.

End notes

[1] Douglass C. North, "Institutions," (*Journal of Economic Perspectives* 5 1, Winter 1991), p. 97.

[2] Hans van Ees and Harry Garretsen, "The Theoretical Foundation of the Reforms in Eastern Europe: Big Bang versus Gradualism and the Limitations of Neo-Classical Theory," (*Economic Systems* 18 1, June 1994), p. 8.

[3] This began on 2 January, 1992. See Iliana Zloch-Christy, *Eastern Europe in a time of Change: Economic and Political Dimensions* (Westport and London: Praeger, 1994), for more information.

[4] Juliet Ellen Johnson, "The Russian Banking System: Institutional Responses to the Market Transition," *Europe Asia Studies* 46 6 (1994): 973.

[5] For a comprehensive Russian perspective of Soviet life, society, values and etc., please see Vladimir Shlapentokh, *Public and Private Life of the Soviet People* (New York and Oxford: Oxford University Press, 1989); and Alexander Zinoviev, *The Reality of Communism* (London: Victor Gollancz Ltd., 1984).

[6] Two schools of economics are engaged in recommending *a priori* solutions: the neo-classical and the institutional. Åslund Anders' (ed.) *Economic Transformation in Russia* (New York: St. Martins Press, 1994); and Jeffery Sachs' "The Economic Transformation of Eastern Europe: The Case of Poland" (Acceptance paper. Memphis: Rhodes College, 1991), are examples of the former. Very good papers from the theoretical challenge of the institutionalists include: Paul J. Kubrik's "A Theoretical Alternative: Institutionalism" *Prague Economic Papers* 1 (1995): 85-92; and "The Theoretical Foundation of the Reforms in Eastern Europe: Big Bang versus Gradualism and the Limitations of Neo-Classical Theory" *Economic Systems* 18 1 (1994): 1-13. For a comparative summary of the various schools of economic thought, see: Douglas Mair and Anne G. Miller (eds.), *A Modern Guide to Economic Thought* (Aldershot: Edward Algar, 1991).

[7] Juliet Ellen Johnson, "The Russian Banking System: Institutional Responses to the Market Transition," *Europe Asia Studies* 46 6 (1994): 971-995.

[8] See Kari Liuhto, *Creating New Managerial Concept to Replace Management Sovieticus*, Institute for East-West Trade, Turku School of Economics and Business Administration, Series B4/93 (1993), for more information.

[9] Gavril Popov, *Delovie Lyudi*, (January 1995): 22.

[10] James Appleyard, "The Transformation of the Global Oil Industry and its Impact on Industrial Relations" *International Journal* 49 3 (Summer, 1994): 638. For an illuminating discussion about controlling the most important and political of the global commodities, see Daniel Yergin, *The Prize* (1991).

[11] Andrei Edemsky, *Delovie Lyudi*, (December 1995): 16.

[12] This paper uses the Library of Congress method of transliteration.

[13] *Delovie Lyudi* according to the Library of Congress method of transliteration would be *Delovye liudi*.

Chapter Two

Institutionalism and the Russian Economic Reforms

This chapter proposes to examine institutionalism and its application to the economic transformation of the Russian Federation during the period 1991-1995. Institutionalism, or more precisely the institutional school of economics (also called the evolutionary school) posits a world view that is holistic, organic, and evolutionary. Its main goal is to describe the "organisation and control of the economic system and its historical evolution". [1] Because institutions vary in their social function and complexity, the task for the analyst is to understand how institutions appear and evolve over time. Economic transformation is about large-scale institutional change, the origins of institutions, and the incentives for changing established conventions. [2] In general, institutionalist theory posits the view that:

> the behaviour of individuals is largely governed by the cultural institutions of the society to which they belong. It is with these institutions that provide human activity with its characteristic stability and predictable order which, in turn, make the study of economic, social and political activity possible. [3]

For Russia, its development under central planning gave it a specific economic culture and a set of rules of formal and informal conduct. Understanding systemic economic change requires that one is cognisant of the fact that behavioural traditions change over time. Institutionalism can provide useful insights into the socio-political and economic reforms which are currently reshaping Russia and other former Soviet-styled countries.

At the outset, this chapter briefly describes the economic perspective of institutionalism, which is followed by a short discussion about the suitability of institutionalism vis-à-vis the orthodox neo-classical analysis of the economic transition from central planning to free markets. Following this discussion, the chapter familiarises the reader with a general outline of the economic reform programme initiated in Russia.

A. The Institutional Paradigm: Theoretical Comments

Institutionalism has since its inception concerned itself with the task of understanding the process of institutional change in the study of firms, markets and other economic settings. [4] As an economic approach, institutionalism has evolved since its fundamental principles were first established by Thorstein B. Veblen (1899), and later modified and extended by John R. Commons (1934) and Ronald J. Coase (1937). [5] These origins demonstrate the interdisciplinary nature of institutionalism and the differences that have arisen between the institutional approach and mainstream neo-classical economics. The perspective of institutionalism is eclectic in the sense that "any economic endeavour pursuing explanations which involve institutions in the role of either *explanantia* [explanatory variables] or *explananda* [outcome] or both, constitutes a case of institutional economics." [6]

Origins of the Institutional Perspective

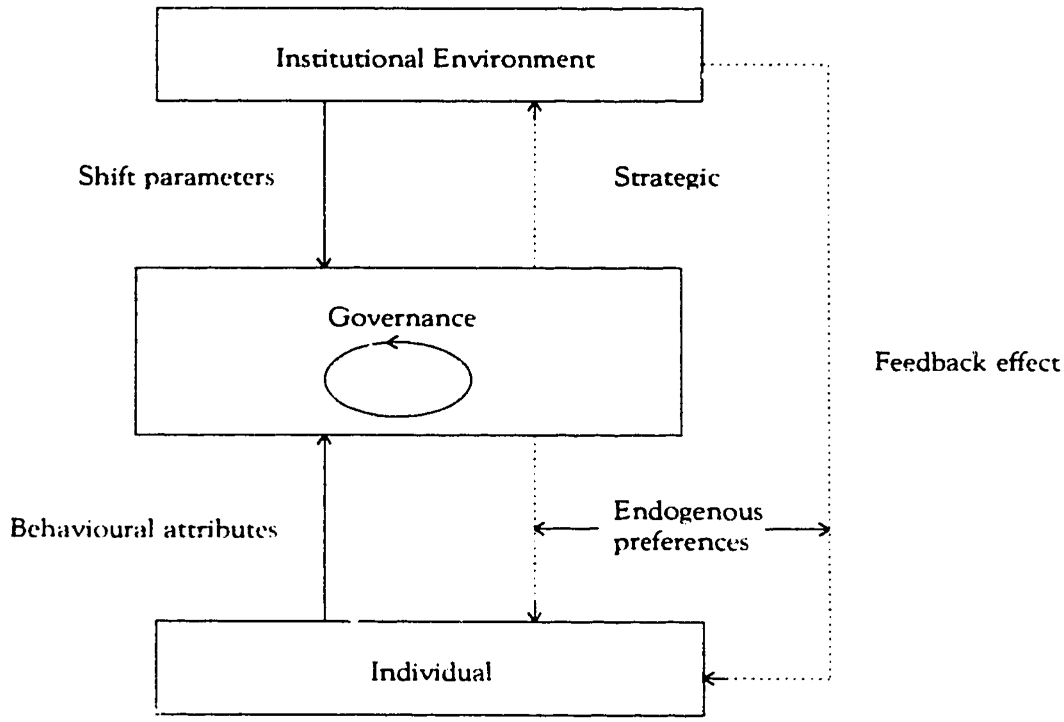
The origin of institutionalism arose from a critique of the emergent neo-classical approach in the 1890s. Veblen (1899) criticised the neo-classical concept of the rational economic man as a utility-maximising agent, the utility maximising behaviour of economic agents, and the *a priori* (hypothesised) deductive methodology that abstracted from of the economic process. To Veblen, as technology evolves, societal values and individualistic behaviour conflict with institutional dynamics which inhibit human interaction. This view is non-materialistic and collective, because the "structure of social and economic reality is seen as complex, functional, and interdependent while the dynamics of this structure are described in evolutionary terms." [7] Though the element of individual creativity separates institutionalism's evolutionary construct from that of Marx's dialectical materialism, the spirit of Veblen is definitively Hegelian, and a continuation of the Max Weber school of political economy. [8]

Commons (1934) diverges from Veblen's Darwinianism by associating democratic and voluntaristic processes with institutional selection and development: "institutionalisation ... is an (artificial) process of selection of (increasing) efficient and reasonable rules." [9] Consequently, the modern institutionalist school developed from the general approach of Commons and not that of Veblen, [10] to which Coase introduces the postulate that firms exist because of their efficiency in reducing costs involved in market transactions. The market may have costs that are higher than those of a hierarchy. The relationship between the price mechanism, the firm, and the co-ordination of production is carried out by what Coase calls the entrepreneur co-ordinator:

> Outside the firm, price movements direct production, which is co-ordinated through a series of exchange transactions on the market. Within a firm, these market transactions are eliminated and in place of the complicated market structure with exchange transactions is substituted the entrepreneur co-ordinator, who directs production. [11]

Coase argues that the negotiation of an economic transaction motivates the formation of a group "of specialists who will sell this information," and that the costs of negotiating and concluding a separate contract for each market transaction must also be taken into account. [12] Coase's criticism is of the idealised world of neo-classical economic theory, because in the real world these transaction costs or costs of concluding contracts do matter. The legal system and its appearance is an institutional response to these transaction costs. [13] The market is treated similarly by other institutions, such as formal laws, which as

Figure 1. The Organisational Matrix



Source: O. E. Williamson (1995), "The Institutions and Governance of Economic Development and Reform," *Proceedings of the World Bank Annual Conference on Development Economics 1994*. The International Bank of Reconstruction and Development/The World Bank, p. 175.

interactive mechanisms organise and allocate resources in the economic system.

Figure 1 represents the process of institutional change. The explanatory variables (*explanantia*) are the influences of the individual and the institutional environment on shaping decisions (governance) and institutional outcome (*explananda*). For example, technology shapes institutions by dictating formal influences (solid arrows), though it is the informal influences (dotted arrows) of social and economic preferences endogenous to the institution that determine the evolutionary dynamics which change the institutional environment.

The introduction of new institutional economics, by O. E. Williamson (1975), is a revival of Coase's argument that institutions are a response to transaction costs. In simple terms, transaction costs are the costs of running an economic system. [14] Williamson's focus in Figure 1 is on the *governance structure*: "the institutional matrix within which transactions are negotiated and executed." [15] Williamson's proposition is that the governance structure has a life of its own, in that "organisations undergo intertemporal transformations that need to be identified and factored into the analysis." [16] According to Williamson's schema, the institutional environment influences the preferences and the behaviour of economic agents (individuals). Individuals are rationally bounded economic agents in the sense that they modify their behaviour in the presence of limited or imperfect information. In neo-classical economic theory agents are assumed to have access to unlimited or perfect information and therefore can behave according to the maximising principle.

This cognitive assumption postulates that human agents are "*intendedly* rational, but only *limitedly* so," and that "human agents are given to opportunism, which is a deep condition of self-interest seeking that contemplates guile." [17] Williamson's governance scheme implies (by the solid arrows in Figure 1), that these behavioural attributes are vital to the study of economic organisations, a 'bottom-up' approach, instead of emphasising only the *de jure* (ideal) institutional environment, the rules of the game. [18] The dotted lines symbolise feedback and the informal influences that shape the individual and the institutional environment. In new institutional economics, it is changes in the governance structure that influence market relationships and hierarchies (firms), and optimistically creates renewed economising behaviour within the limitations of imperfect information and opportunism.

Though the primary difference between neo-classical theory and institutionalism is the rationality concept, both schools of economic thought seek to explain the working of an economic system. It is useful then to compare the underlying assumptions of institutionalism and neo-classical theory as illustrated in Table 1. Briefly summarising from Table 1 (page 16), the fundamental interest of the institutionalist is organisation and control in an economic system:

- the formation of institutions
- the changing relationship between economic and legal systems
- the relationship between power and belief systems
- the effect of technical change on institutional structure. [19]

The main emphasis of institutional economics is in other words to understand the dynamics of institutional change: why they come into existence; why they develop in a particular way; and how they change over time. Institutions are both constraints and instruments in the process of institutional change. To understand the process of economic transformation, or the change in the institutional matrix, it is useful to examine the recent works of Douglass North (1991, 1994, 1995).

The Process of Institutional Change

Douglass North's interest is the process of institutional change over time. In methodology and the emphasis on the individual (the influence and the constraints posed by the institutional structure) he is akin to Commons:

> For understanding that process, the individual using cost/benefit analysis is the basic building block. This individualism can be best characterised as structural individualism (or "institutional individualism"): on the one hand, the individual is constrained by the existing institutional structure, whereas on the other hand, he or she is capable of changing that structure according

Table 1.
Summary of the Neo-Classical School and the Institutionalist School

	Neo-Classical	Insitutionalist
World View	Individualistic, atomised society. Equilibrium and markets are 'natural'. The working of unfettered markets co-ordinates the attempts of diverse individuals to maximise their economic well-being, given the preferences and resources.	Holistic, organic, evolutionary
Values	The satisfaction of wants is a good thing. A rational individual is best judge of own welfare; consumer sovereignty. Individuals' optima are necessary for social optimum. Utilitarian maximisation of 'sum total' of happiness (utility). Pareto efficiency, given the status quo, takes priority. Libertarian. Anti-government intervention in markets.	Non-materialistic
Goals	To show that a complete unfettered market system coordinating exchange activities of rational utility-maximising individual economic agents, *given* their resource constraints, *could* lead to market clearing in all commodities. Prediction, rather than explanation, and of alternative policies - in terms of comparative utilities.	Normative priorities; the direct implementation of the collective values of a particular culture. Description of the organisation and control of the economic system and its historical evolution.
Methodological Practice	Deductive reasoning, rigorous logic, abstract, mathematical. Historic events (data) are used to check models. Application of theoretical models to a variety of situations.	Interdisciplinary. Inductive. Qualitative analysis. Situation-specific, game playing. Description.
Concepts	Rationality. Indifference curves. Consumer equilibrium; general equilibrium. Pareto efficiency. Perfect competition. Externalities.	Custom. Power relations. Value system and economic behaviour.
Positive Agenda	Explore the market consequences of utility-maximising behaviour by self-interested individual economic agents subject to constraints. Define the marginal constraints.	Explore the formation of institutions; the changing inter-relationship between economic and legal systems; the relationship between power and belief systems; the effect of technical change on institutional structure.
Themes	Consumer choice. Exchange. Production. Market structures. General equilibrium and welfare. Characteristics analysis. Capital theory.	Social change, process of institutional change. Social control, collective choice Economic role of government. Technology and innovation. The organisational - institutional, power structure of society. Changes in values.
Evidence	Intuititive. Testing hypotheses.	Case studies.

Source: Adapted from Douglas Mair and Anne G. Miller (eds.) *A Modern Guide to Economic Thought* (Aldershot: Edward Elgar, 1991), pp. 105-107, 231-232.

> to his or her own preferences. The aggregate outcome of the individual actions can be an efficient but also an inefficient structure. For a deeper understanding of that process of institutional change and its influence on economic performance, understanding ideology (culture), historical specificity (path dependency), power, strategy, and most of all processes of learning, are necessary. [20]

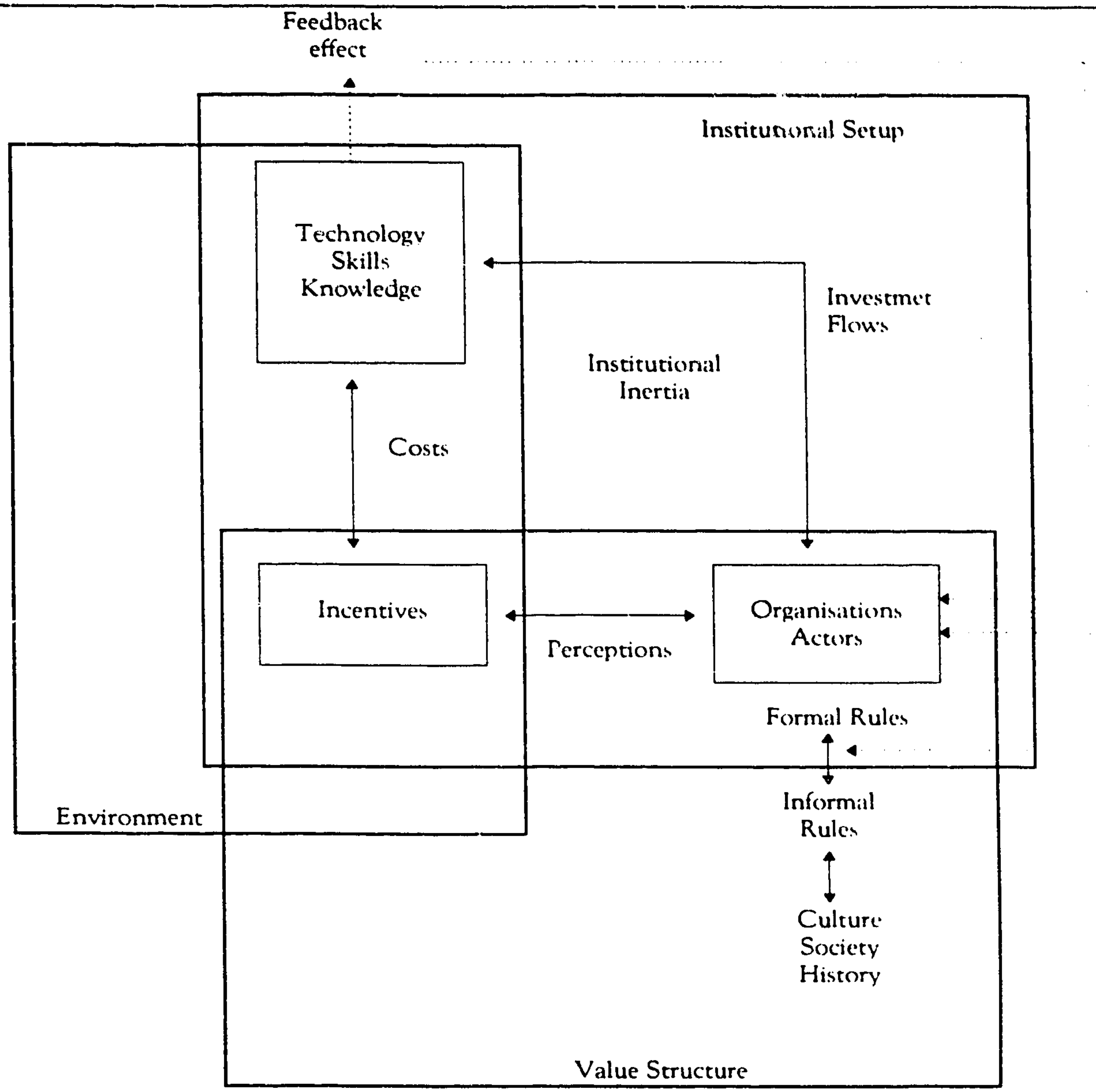
In the context of economic history the importance of institutions is how economies perform through time and how to construct an analytical framework which can describe their dynamic nature. [21] North criticises the neo-classical theory for containing two erroneous assumptions: "(i) that institutions do not matter and (ii) that time does not matter." [22] To North, the discrepancies in the economic development of European (English and Dutch versus Spanish) and American (North American versus Latin American) economies beg the question why Anglo-Saxon economies grew faster than Latin American economies. He remarks that,

> economic history is overwhelmingly a story of economies that failed to produce the set of economic rules of the game (with enforcement) that induce sustained economic growth. The central issue of economic history and of economic development is to account for the evolution of political and economic institutions that create an economic environment that induces increased productivity. [23]

Political and economic institutions, in providing the incentive structure of the economy, also influence the development of institutions. The institutional matrix in Figure 2 reflects the parameters for change and the opportunities that are available. As North points out, "if the institutional framework rewards piracy then piratical organisations will come into existence; and if the institutional framework rewards productive activities then organisations will come into existence to engage in productive activities." [24] The institutional set-up is the most significant element in analysing institutional

Figure 2.

The Process of Institutional Change



Source: David Rees, "Transformation of Russia and Eastern Europe," (University of Alberta, 1996). unpublished paper.

change, since it stipulates the net benefits for changing the *status quo*. In other words, change for individuals (and organisations) reflects the cost of undertaking a change in the institutional set-up. In Figure 2, the institutional set-up, the environment and the value structure constrain and influence the process of institutional change, symbolised by the solid arrows. The dotted arrows represent the feedback effect, the informal constraints and influences that result from institutional change.

External events, economies of scale, risk, uncertainty, and gains in transactions are reasons that might induce individuals or other economic agents to alter the institutional set-up. External events which are exogenous to the institutional set-up include changes in relative prices and spillovers from technological change. Institutional change does not occur unless the perceived benefits outweigh the costs of change. This is to say, the benefits in terms of higher profits, more opportunities, and rewards must be greater than the incurred costs of collecting, processing and comparing information (menu-selection), namely costs of *motivation* and *co-ordination*.

Institutional change is incremental and path dependent. It is path dependent in the sense that the existing institution defines the choices available to agents and thus the extent and direction of institutional change over time. [25] The other aspects of this are external events in the form of legal or political change, changes in technology, change in social expectations (value structure), or gains from outside the institutional set-up. Williamson's schema of organisational behaviour in Figure 1 (page 13) illustrates that change is determined by institutions, and that these institutions are products of previous institutions. This cognitive/institutional approach contributes not only to an understanding of the economic past, but also adds an intertemporal dimension in which it is possible for inefficient institutions and the differences in economic performance to persist over time.

Accounting for the rise and decline of the Soviet Union and the future of Russia is a challenge for all contemporary economic approaches. Assumptions about economic behaviour often have had to be altered. However, the institutional perspective provides some useful implications about the contemporary obstacles of development:

- It is the admixture of formal rules, informal norms, and enforcement characteristics that shapes economic performance. While the rules may be changed overnight, the informal norms usually change only gradually. Since it is the norms that provide "legitimacy" to a set of rules, revolutionary change is never as revolutionary as its supporters desire, and performance will be different than anticipated. And economies that adopt the formal rules of another economy will have very different performance characteristics that the first economy because of different informal norms and enforcement. The implication is that transferring the formal political and economic rules of successful Western market economies to third-world and Eastern European economies is not a sufficient condition for good economic performance. Privatisation is not a panacea for solving poor economic performance.
- Polities significantly shape economic performance because they define and enforce the economic rules. Therefore an essential part of development policy is the creation of polities that will create and enforce property rights. ...
- It is adaptive efficiency rather than allocative efficiency which is the key to long-run growth. Successful political/economic systems have evolved flexible institutional structures that can survive the shocks and changes that are a part of successful evolution. [26]

Subjective perceptions of the world determine the types of political and economic choices that are made when establishing entirely new institutions and transforming the old. The basic dilemma in Russia is to create, "in a hurry, the sort of conditions, political and economic, that will provide for a stable economic and political framework that will allow us to create the possibilities and the promise of economic growth and democracy...". [27] However, Russia's institutional heritage and experience under socialism created a set of stable and self-perpetuating political, economic, and social conditions. [28]

B. Towards a Philosophy of Economic Transformation

The economic transformation process of Eastern Europe and of the former Soviet Union is about institutional change. One school of thought on institutional change, the 'punctuated equilibrium' paradigm, [29] suggests that institutions are autonomous and pervasive until such time as a crisis fundamentally changes their character. The 'punctuated equilibrium' paradigm argues that external factors alone alter an institution's stability and autonomy, and determine the nature of institutional change. [30] A system can only be changed once its edifice has collapsed. Sovietologists of the totalitarian school support this viewpoint because they see coercion and centralised control as the pillars of the Soviet system. The only solution is to scrap the old and replace it with a new political and economic system.

However, this point of view about institutions and the mechanics of institutional change may be misleading and incomplete. Institutions in fact continue to function during a crisis. If a complete atomisation of society were to occur, institutions would not at all function. Lenin and the Bolsheviks realised this fact and launched in 1921 their New Economic Policy (NEP) to save the country. Moreover, institutional values, environment and framework influence the adaptation to the new circumstances. As North explains, the significance of path dependence lies in the fact that institutions have great powers of self-preservation and therefore, it is difficult to change the basic framework of any society and economy in order to make it change its ways. [31] Existing institutions define available preferences and choices (instead of the neo-classical assumption that institutions do not matter). From this perspective, many economists and political scientists may have erred in their attitude towards institutions by assuming that institutions are extraneous to change. Consequently, their prescriptions of how to achieve political and economic stability in ex-communist and developing countries may have been inappropriate.

Mainstream economists suggest that the proper course and sequence of economic transformation in post-communist Eastern Europe and the ex-USSR is first by implementing macroeconomic stabilisation, followed by microeconomic liberalisation and then by undertaking fundamental institutional restructuring. [32] To some degree, these steps are necessary, however, the fundamental flaw with this neo-classical approach is "the belief that old institutions will not need to be reckoned with once the proper incentives for market behaviour have been installed through these policy measures." [33]

Neo-classical theory with its emphasis on general equilibrium theory neglects economic transformation, in favour of stating that it is possible to arrive at an efficient market economy system. Accordingly, institutions (the state in particular) hinder the economic behaviour of a utility or profit-maximising individual. The outcome is a disequilibrium between production and consumption, in which individuals do not maximise social welfare. In neo-classical welfare economics, this condition is considered Pareto-inefficient, in the sense that one individual's welfare can be improved without affecting the welfare of another individual. [34] The shock therapy school (the Big Bang approach as pioneered by Jeffery Sachs) argues for sequencing and a version of neo-classical theory in which:

> [f]irst of all, however abstract it may be, it is the only piece of economic theory available to *neo-classical* [original italics] economists which 'proves' that a market economy

> is capable of achieving a Pareto-efficient outcome. Secondly, and more importantly for the present transformation process, since general equilibrium theory has nothing to say on the best way to arrive at a full-fledged market economy there are no sound theoretical objections against policy advises that proclaim the introduction of a market economy (and the institutions that go along with it) overnight. [35]

These arguments pertain less to the theoretic constructs of price and capital mobility, and more to political economy and the classical debate of allocative efficiency between markets and hierarchies for which the institutionalist perspective is better suited. The institutional paradigm suggests that change and adjustment occur gradually on the one hand, and that bounded rationality guides the analysis and formation of *a priori* (hypothesised) policies on the other. An agent's economic behaviour in a centrally planned economy is more the result of routine behaviour and the ability (or inability) to change the economic system. [36] The paradigm explains the gap that exists between *de jure* (ideal) and *de facto* (actual) changes. From this, it follows that any policy changes must consider an agent's ability to adapt to change, institutional inertia, incentives, and other factors illustrated in Figure 2 (p. 18).

Institutional factors in Russia are compounded by socio-political events that have occurred since the end of Communist Party rule over the political and economic hierarchy. The break-up of the Soviet Union and the discrediting of socialism has led to the dismantling of Union structures, the decline of the Communist Party, and the reduction in power of central political organs. [37] In the ensuing social, political, and economic chaos, previously latent institutions became salient, as economic agents tried to adapt to uncertainty. Institutions which formerly were conduits for central policy, such as banks, now became the vanguard of a fledgling market economy.

Another point to note is that "changes in the socio-economic context or political balance of power can produce a situation in which old institutions are put in the service of different ends, as new actors come into play who pursue their (new) goals through existing institutions." [38] The Russian Government inherited the old Soviet institutional framework and attempted to use it to implement its own programme of institutional reform. Individuals such as industrial managers who were part of the old institutional set-up, on seeing the possibility of enhancing their economic power in the vacuum of the break-down of the centralised system, attempted to secure their own position vis-à-vis the uncertainty of radical reforms. Instead of starting with a 'clean slate' as neo-classical theory would suggest, the former institutions will continue to exist and attempt to perpetuate their past activities. The 'seamless web' of neo-classical economic transition policy cannot account for this path-dependent activity on the part of old institutions.

Russia's institutions, having arisen under socialism, must be examined from an evolutionary approach and not from a neo-classical view based on a well-developed market economy. The current economic strategy underway in Russia is legitimate and for the most part irreversible. The crucial factor is time, which undoubtedly will be longer than that desired by shock therapists and Russian citizens.

C. The Russian Economic Reform Programme

Russia's economic reform programme has been inextricably linked to the struggle for political power. Following the August 1991 putsch, the reins of political control of Russia (and the Soviet Union) switched from the Communist Party of the Soviet Union to the directly-elected President Boris Yeltsin. The point of departure for economic reforms is Boris Yeltsin's speech on 28 October 1991, and the appointment of reform-minded economists to his government shortly thereafter in November. [39] Yegor Gaidar, the individual who would have the most influence in shaping policy, was appointed at this time. Joining him were other leading economists from Moscow's TsEMI (the Central Economic and Mathematical Institute), and a small group from Leningrad's Academy of Sciences, among whom was Anatoly Chubais, trusted aid of Yeltsin, who had become convinced of Gaidar's "Russia first" concept. [40] In June 1991, Gaidar formulated his "Russia first" as an economic growth programme for Russia separate from the Soviet Union. It was this economic programme that Yeltsin incorporated into his October 28, 1991 speech, propelling Gaidar into public prominence. Gaidar's "Russia first" concept was translated into a sweeping price liberalisation programme in January 1992.

From a historic perspective, economic reforms in Russia are not new phenomena. During the Soviet period, economic reforms occurred within the framework of the traditional socialist system. The Gaidar reforms represent however a break with previous economic reforms in that they sought to dismantle the central planning and hierarchical relations among enterprises. A simplified schema of the traditional Soviet-type system is given in Table 2, with one-party rule and state ownership as core features. Altering centralised planning or any of the other core elements within the institutional base constitutes *intrasystemic* change. Economic reforms that occurred under Gorbachev and earlier under Brezhnev are of this type. [41] Removing one or both of the features of the institutional base represents *intersystemic* change. This type of institutional change characterises the dismantling of the planning complex and political structures that occurred in the dissolution of the Soviet Union in late 1991.

Table 2.

Main Institutional Features of the Soviet System

Systemic complex	**Institutional base**	
		State ownership
		One-party system
	Centralised planning	
		General control hierarchy
		Targets disaggregation
		Administrative allocation of inputs
		Administrative control of wages funds
		Redistribution of profits
		Mono-bank
Other elements		Collectivised agriculture
		Monopoly of foreign trade
		Restrictions on the private sector
		One-man management in the enterprise

Source: Bernard Chavance, "Hierarchical Forms and Coordination Problems in Socialist Systems," *Industrial and Corporate Change* 4 1, (1995), p. 272.

The economic reform strategy advocated for Russia by Western economic advisors (Jeffery Sachs and Anders Åslund), American political leaders, the World Bank, and the International Monetary Fund became known as a 'Washington consensus'. The 'Washington consensus' described a set of economic policy reforms 'that Washington urges on the rest of the world.' [42] Central to the 'Washington consensus' are policies which force fiscal discipline on the central government, eliminate subsidies to state enterprises, promote a competitive exchange rate, liberalise import controls, permit free entry of foreign direct investment, and privatise state enterprises. In this respect, Gaidar's strategies for macroeconomic stabilisation and rapid privatisation rely heavily on the 'Washington consensus' for intellectual support and justification.

The economic transition of former centrally planned economies has given rise to two myths. The first is that Western economic advisors and institutions, can formulate the process of radical economic change. The second is that economic reform programmes in Poland, Czechoslovakia, and Hungary represent an ideal synergy of gradualism and shock therapy because of their success in creating market structures. [43] The successful transition was believed to include stabilisation, liberalisation, privatisation and structural change, leaving only the parameter of sequencing and timing up for debate. Leszek Balcerowicz, one of the main architects of the Polish programme, defines economic transition as:

- Macroeconomic stabilisation; mainly by means of macroeconomic policy;
- Microeconomic liberalisation, i.e. enlarging the scope of economic freedom by removing restrictions on setting up and developing private firms, eliminating price controls and bureaucratic and quantitative restrictions on foreign trade, introducing currency convertibility, etc. Liberalisation includes changing the general legal framework (e.g. liberalising the regime of property rights) and more specific regulations (e.g. removing controls on interest rates); in the West the latter is usually called 'deregulation'.
- Fundamental institutional restructuring, which consists of making changes to existing institutions, e.g. privatising state enterprises, reorganising the state administration or reforming the tax system, and also creating new ones, e.g. a stock exchange. [44]

For Russia, the transition plan began with price liberalisation on January 2, 1992. The liberalisation of prices would be followed by a programme of 'mass' privatisation in the autumn of that year. Privatisation would involve two processes first, the restructuring of state-owned enterprises into joint-stock companies and the subsequent distribution of assets to individuals and non-state entities. Through the use of closed subscription or open auction, privatisation would be the main component of Russia's reform strategy to radically restructure institutions. [45]

Radical economic reform in Russia has its failures and unintended consequences. Since January 1992, price liberalisation has destroyed the value of the ruble and led to the dollarisation of the economy in which Russians preferred to keep their savings in American dollars as a hedge against inflation. Stabilisation orthodoxy suggests that monetary overhang or excess money supply (from Russia's long-running shortage economy and controlled prices) could be resolved by either a confiscatory monetary reform or by a deliberate inflationary policy to restore monetary balance. Instead, the Central Bank increased the money supply exponentially and the government maintained its subsidisation of state-owned industries. Politically and socially, to do otherwise was unacceptable, and so the Central Bank continued in its traditional role as the issuer of 'soft-credits' to finance the operation of the state-owned industries and to prevent mass unemployment.

The policies based on the neo-classical approach fail to recognise the distinctiveness of Russia's circumstances, and the influence of old institutions on the development of market oriented organisations. The Russian government is a greatly weakened institution, and the building of market institutions to substitute Soviet ones in an environment of diminishing resources is problematic. Moreover:

> [t]he current Russian state is also peculiarly weak as the relations to other former Soviet republics remains unresolved. What is even more important, is the continuing *de facto* decentralisation of powers, not only in geographically to republics and regions within Russia, but also to enterprise insiders. Often regions and enterprise insiders amount to the same people. [46]

These main themes emerge in the study of the Russian oil and gas industries' institutional transformation. In particular is the break-down of the oil and gas production complex and its intimate connection between the planning ministries and the political leadership. Clearly, the strategies that have evolved within the oil and gas industry to adjust to the changing economic system in Russia pose challenges to its successful institutional transformation.

End Notes

[1] John Foster, "The Institutionalist (Evolutionary) School," in Douglas Mair and Anne G. Miller (eds.), *A Modern Guide to Economic Thought* (Aldershot: Edward Elgar, 1991), p. 231.

[2] Hans van Ees and Harry Garretsen, "The Theoretic Foundation of the Reforms in Eastern Europe: Big Bang versus Gradualism and the Limitations of Neo-Classical Theory," (*Economic Systems* 18 1, June 1994), p. 8.

[3] Paul J. Kubrik, "A Theoretical Alternative: Institutionalism," *Prague Economic Papers* 1 (1995), p. 86.

[4] John Groenewegen and Frans Kerstholt and Ad Nagelkerke, "On Integrating New and Old Institutionalism: Douglass North Building Bridges," *Journal of Economic Issues* 29 2 (June 1995), p. 467.

[5] We refer to their work as old institutionalist economics.

[6] Uskali Mäki, "Economics With Institutions," in Uskali Mäki and Bo Gustafsson and Christian Knudsen (eds.), *Rationality, Institutions and Economic Methodology* (London: Routledge, 1993), p. 11.

[7] Groenewegen, et al., "On Integrating New and Old Institutionalism," p. 468.

[8] Foster, "The Institutionalist School," pp. 209-210.

[9] Groenewegen, et al., p. 469.

[10] The second generation of institutionalists, like John K. Galbraith are among those. We call them neo-institutionalists. 'New' institutionalism developed out of the writings of O. E. Williamson, crediting his, *Markets and Hierarchies: Analysis and Anti-Trust Implications: A Study in the Economics of Internal Organisation* (New York: Free Press, 1975).

[11] R. H. Coase, "The Nature of the Firm (1937)," reprinted in Oliver E. Williamson and Sidney G. Winter, *The Nature of the Firm: Origins, Evolution and Development* (Oxford and New York: The Oxford University Press, 1991), p. 19.

[12] Ibid., p. 21.

[13] See Lisa Román, "Institutions in Transition, A Study in Vietnamese Banking," (Ekon. dr. thesis, Stockholm School of Economics, 1995), pp. 24-25, for more information.

[14] Christos Pitelis (ed.), *Transaction Costs, Markets and Hierarchies*, (Cambridge: Cambridge University Press, 1993), p. 9.

[15] Groenewegen, et al., p. 470.

[16] O. E. Williamson, "The Institutions and Governance of Economic Development and Reform," *Proceedings of the World Bank Annual Conference on Developmental Economics 1994* (The Intenational Bank of Reconstruction and Development/ The World Bank, 1995), p. 175.

[17] O. E. Williamson, "The Logic of Economic Organisation," in O. E. Williamson and Sidney G. Winter, *The Nature of the Firm* (Oxford: Oxford University Press, 1991), p. 92.

[18] O. E. Williamson (1995), p. 174.

[19] Foster, p. 211.

[20] Groenewegen, et al., p. 473.

[21] Douglass C. North, "Economic Performance Through Time," (*American Economic Review* 84 3, June 1994), p. 359.

[22] Ibid., p. 359.

[23] Douglass C. North, "Institutions," (*Journal of Economic Perspectives* 5 1, Winter 1991), p. 98.

[24] North (1994), p. 361.

[25] Lisa Román, p. 56.

[26] North (1994), p. 366-367.

[27] North, "Structural Changes of Institutions and the Process of Transformation," (*Prague Economic Papers* 3, September 1995), p. 234.

[28] See Pekka Sutela, "Gorbachev's Economic Advisors: A Comparative Analysis of their Economic Thinking," (*Berichte des Bundesinstituts fur ostwissenschaftliche und internationale Studien* 47, 1990), for more information. This classification best describes the institutional matrix that existed in the Soviet Union prior to and including the reforms of *glasnost'* (openess) and *perestroika* (restructuring) of the Mikhail Gorbachev era.

[29] Juliet Ellen Johnson, "The Russian Banking System," (*Europe Asia Studies* 46 6, 1995), p. 972. She cites this term as being adopted from the study of micro biology.

[30] Ibid., p. 972.

[31] North (1995), p. 234.

[32] Leszek Balcerowicz, "Common Fallacies in the Debate on the Transition to a Market Economy," (*Economic Policy* 19, Supplement-December 1994), p. 24.

[33] Johnson, p. 973.

[34] See J.M. Alec Gee, "The Neoclassical School," in Douglas Mair and Anne G. Miller (eds.), (1991), pp. 71-108, for more information about welfare economics and the 'Pareto-efficient criterion'.

[35] Hans van Ees and Harry Garretsen, pp. 3-4.

[36] Ibid., p. 9.

[37] Johnson, p. 975.

[38] Kathleen Thelen and Sven Steinmo, "Historical Institutionalism in Comparative Politics," in Sven Steinmo et al., *Structuring Polities* (Cambridge: Cambridge University Press, 1992), p. 16.

[39] Anders Åslund (ed.), *Economic Transformation in Russia* (New York : St. Martin's Press, 1994), p. 1.

[40] Marshall I. Goldman, *Lost Opportunity* (New York and London: W. W. Norton & Company, 1994), p. 89.

[41] Bernard Chavance, "Hierarchical Forms and Coordination Problems in Socialist Systems," *Industrial and Corporate Change* 4 1, (1995), p. 273.

[42] Lynn D. Nelson and Irina Y. Kuzes, *Radical Reform in Yeltsin's Russia* (New York: M. E. Sharpe, Inc., 1995), p. 35. See also John Williamson (ed.), *Latin American Adjustment: How Much Has Happened?* (Washington, DC: Institute for International Economics, 1990), pp. 7-20.

[43] Pekka Sutela, "The Economic Transition in Russia," in Timo Piirainen (ed.) *Change and Continuity in Eastern Europe* (Darmouth: Aldershot, 1994), p. 62.

[44] Leszek Balcerowicz, "Common Fallacies in the Debate on the Transition to a Market Economy," *Economic Policy* 19 (Supplement - December, 1994), p. 24.

[45] Michael McFaul and Tova Petmutter, *Privatization, Conversion, and Enterprise Reform in Russia* (Boulder: Westview Press, 1995), p. 5.

[46] Pekka Sutela (1994), p. 74.

Chapter Three

The Structural and Historical Overview of the Soviet Oil Complex

The Yeltsin-Gaidar reform programme of shock therapy was deeply felt in all sectors of Russian industry. The principal vehicle to restructure the Russian economy was privatisation which entailed changes in ownership, management, and productivity. In short, privatisation was meant to break up state control of industry. However, state control began to erode in the 1980s, when the production stagnation appeared in several industrial sectors of the economy. By 1992, institutional flux characterised the situation in the Russian oil and gas industry as Moscow could no longer exert central authority over the energy sector. [1] This was partly by design (government policy), and partly by the institutional effects of socio-economic and political reforms in the oil and gas complex. This chapter examines briefly the evolution of the institutional structure of the Soviet system and the endogenous influences that were shaping the industry before the collapse of the Soviet Union in late 1991.

A. An Overview of the Historical Development

The Russian oil and gas industry developed in the later half of the 19th century, largely through the activities of foreign entrepreneurs and financiers (the Nobel family and the House of Rothschild). [2] Activity centred on the development of oil fields and refineries around Baku. The main obstacle hindering further exploitation of the Baku oilfields was Russia's vast geography. It was cheaper to import American kerosene produced by Standard Oil into the capital of St. Petersburg than to utilise domestic production, which had to be hauled overland in wooden barrels. The transport of kerosene occurred on the

Caspian Sea and then up the historic river-routes of the Volga from Astrakhan to major centres in the Empire. The freezing of the Volga River in the winter greatly stemmed the flow. Another barrier to satisfying growing domestic demand was the logistics of transporting crude oil to and from the refineries and shipping refined products to the various sea-ports for domestic use and export. Ludwig Nobel solved these storage and transport problems by inventing the world's first oil tanker *Zoraster* and by integrating the production process. Further improvements were achieved by building pipelines and a railroad linking the Caspian Sea region with the Black Sea port of Batumi.

Though kerosene was the main refined product in demand, its derivative *mazut* (fuel oil) became an increasingly important commodity after 1890. [3] By 1900, the entrepreneurial activities of Russian oil companies and foreign investors had made Russia the world's largest producer of oil. In 1900, Russian oilfields produced 10.35 million tons of petroleum against 8.3 million tons in the United States. [4] Though oil production began to decline somewhat before 1914, technological improvements by Russian and foreign entrepreneurs ensured that Russian oil remained a strong competitor to American oil products in European markets.

The main features of the Soviet-style system emerged in the aftermath of the 1917 Russian Revolution with the nationalisation of the entire industry. Though the turmoil of the First World War (1914-1918) and Civil War (1918-1921) had disrupted output, by 1927, oil production recovered and surpassed pre-war levels under the New Economic Policy (NEP). The reason, as Marshall Goldman suggests, was that similar to other industries in Soviet Russia, production had increased with the administrative controls emanating from Moscow. [5]

Operating from 1917 to 1932, the central administrative power and authority for the oil and gas industry rested with the Supreme Council of the

National Economy (VSNKh). It controlled and supervised industrial production through a network of departments, administrations, and committees, of which the most important were the *Neftianoi komitet* (Oil Committee), and *Glavnyi neftianoi komitet* (Chief Oil Committee). On January 5, 1932, the VSNKh was replaced by GOSPLAN and a system of industrial commissariats. Oil production fell under the responsibility of the People's Commissariat of Heavy Industry (NKTP). In 1939, the People's Commissariat of the Fuel Industry underwent a reorganisation, creating a People's Commissariat of the Oil Industry. Following World War II, a final reconsolidation and reorganisation took place in 1946, when the commissariats were replaced by ministries. The Ministry of the Oil Industry became the locus of centralised authority until 1957. [6]

In 1957, Nikita Khrushchev initiated a programme of political and economic de-Stalinisation. [7] These intrasystemic changes were felt in the oil industry with the creation of *sovnarkhozy*:

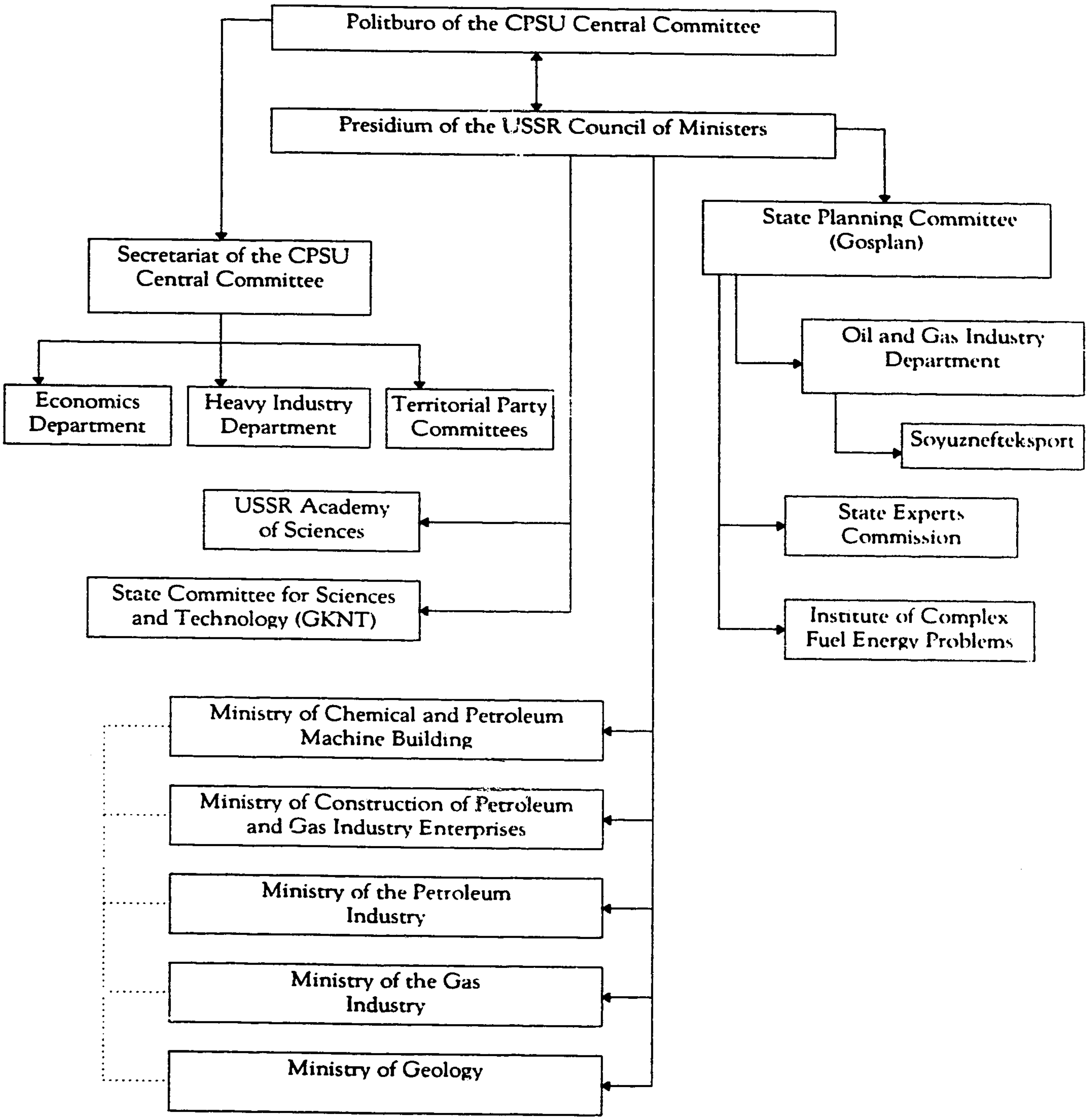
> In the reorganisation of industry and construction of 1957, the administrative structure of the Soviet industry was shifted from the branch principle to the territorial principle [*sovnarkhozy*]. In the process, the central machinery for the administration of the oil industry ... was broken up and its various functions dispersed among other organisations. The system of supervisory organs for the industry has been in a state of flux ever since, in a never-ending process of creating new organs and abolishing old ones, redefining responsibilities, and changing high-level personnel. [8]

For the Soviet oil industry, its basic production units remained relatively unaffected by the establishment of *sovnarkhozy*. In fact, the technological requirements of the industry production units remained unchanged throughout the institutional evolution of the Soviet oil system. [9] The basic production unit, the *predpriiatie* (enterprise), maintained a measure of independence and accountability for its performance under a regime of *khozraschet* (economic cost accounting). [10] The main *khozraschet* enterprises were: (1) *razvedochnyi trest* (the exploration office); (2) *kontora bureniia* (the drilling company); (3) *neftpromyslovoe upravlenie* (the oil field administration); (4) *neftepererabatyvaiushchii zavod* (the refinery); (5) *neftebazy* (distribution bases); (6) pipeline companies; (7) construction companies; and (8) machinery plants. [11] The Soviet management approach differed from the Western one in that coordinative and administrative hierarchies implemented long-term investment and development strategies of the Five Year Plan and other government-directed policies. These organisations functioned throughout the Soviet period, with administrative adjustments, and later served as the basic units for implementing the restructuring and reform of production units.

A significant restructuring of the Soviet energy complex appeared with a massive investment programme to develop the oil and natural gas industries in West Siberia, beginning in the 1960s. [12] The undertaking proceeded under a vertically integrated decision making structure comprising the Ministry of Oil (MNP), the Ministry for Construction of Oil and Gas Enterprises (MNGS), and the Ministry of Gas (MGP) (see Figure 3). The MNGS acted as a contractor [*podriadchik*] for MNP and MGP, who were customers [*zakazchiki*] for the various completed building projects. The State Planning Committee [GOSPLAN] oversaw the financing and co-ordination of the development projects. The fuels and energy sector in consequence received an increasing share of Soviet industrial investment from 1960 to 1990:

> "30% of industrial investment in the 1960's, but this increased to about 35% in the early 1970's, then climbed to nearly 40% as Brezhnev's oil campaign gathered momentum in the late 1970's, and reached about 45% in the early 1980's. In 1988, the peak year for the entire sector, investment was about 40 billion rubles, or about 48% of industrial investment." [13]

Figure 3. Soviet Structures for Decisionmaking



Source: Thane Gustafson, *The Soviet Gas Campaign* (Santa Monica: Rand, 1983), p. 18.

Oil and gas policy in West Siberia became consequently integral to the health of the Soviet economy, as new oilfields there had to compensate for the depletion of older production fields in the Volga region (see Table 3). Gas began to replace oil as an energy source in domestic industry and to be exported to the CMEA (Council for Mutual Economic Assistance). [14] A shrinking demand for oil in the domestic market was balanced by increasing exports of refined oil to Western Europe. [15] West Siberia became the Soviet Union's principle oil-producing region, with 66% of national total output in 1990, and of this share 98% came with Tyumen' Oblast (see Table 3). The advances in national economic output since 1945 became dependent on increases in oil field production, especially after the development of West Siberian oilfields in the early 1970s which came to symbolise national energy self-sufficiency and served as a show-case of Soviet planning. [16]

It is impossible to say for certain whether the Soviet reaction to the 1977 CIA report served to galvanise Soviet decision makers to develop West Siberian oilfields. The report clearly initiated significant western scholarship and interest in Soviet energy production, because of its highly pessimistic outlook for future oil production in the Soviet Union. CIA experts failed to realise however the latent potential in Soviet society to unite human capital with materials in a crisis situation. One such attempt was the development of territorial production complexes (TPK) for West Siberian oil and gas production. Traditionally in Soviet planning, a relatively strong emphasis has been placed on developing industrial sectors, whereas the TPK represented a shift to a regional planning mechanism. [17] Based on the writings of N.N. Kolosovskiy (1947), [18] the TPK posited an optimal planning model to harmoniously distribute productive resources within a geographic area and to link together that region's industrial and economic instruments. [19] In practice, the West-Siberian TPK was developed

Table 3.

Geographical Distribution of Oil Production in the USSR
(million metric tons a year; 1 million tons/year = 20,000 b/d)

	1975	1980	1985	1986	1987	1988	1989	1990
USSR	490.8	603.2	595.3	614.8	624.2	624.3	607.3	569.7
RSFSR (Russian Republic)	411.3	546.7	542.3	561.2	569.5	568.8	552.2	516.4
European Russia	181.9	153.9	105.5	99.8	95.1	90.0	84.8	82.0
Kaliningrad Oblast	0.3	1.3	1.5	1.5	1.4	1.3	1.3	1.0
Komi ASSR	11.1	20.4	19.4	19.4	18.3	17.1	16.0	16.0
North Caucasus	23.3	18.8	10.8	10.4	10.1	9.6	7.0	6.0
Volga	147.2	113.4	73.8	68.5	65.3	62.0	60.5	59.0
Urals	79.2	77.6	66.0	63.9	62.3	61.4	60.0	58.0
Siberia	150.2	315.2	370.7	397.4	412.0	417.3	407.4	376.4
West Siberia	148.0	312.7	368.1	394.9	409.5	415.1	404.9	373.9
Tyumen' Oblast	143.2	307.9	361.1	387.0	400.9	405.7	395.9	364.9
Glavtyumenneftgaz	141.4	302.8	323.8	332.2	340.5	392.1	382.9	352.9
Gazprom	---	---	---	6.0	6.0	8.0	8.0	8.0
Tomsk Oblast	3.8	4.8	7.0	7.9	8.6	9.4	9.0	9.0
Tomskneft'	6.6	9.8	13.1	13.7	15.0	15.0	14.0	13.0
Sakhalin	2.2	2.5	2.6	2.5	2.5	2.2	2.5	2.5
Outside RSFSR	79.7	56.6	52.8	53.6	54.7	55.5	55.2	53.3
Ukraine	12.8	7.5	5.8	5.7	5.6	5.4	5.4	5.0
Belorussia	8.0	2.6	2.0	2.0	2.0	2.1	2.1	2.0
Georgia	0.3	3.2	0.5	0.2	0.2	0.2	0.2	0.2
Kazakhstan	23.9	18.7	22.8	23.7	24.5	25.5	25.4	25.1
Turkmen	15.6	8.0	6.0	5.9	5.8	5.7	5.8	5.6
Other Central Asia	1.9	1.9	2.6	2.8	2.8	2.9	3.1	3.2
Uzbekistan	1.4	1.3	2.0	2.2	2.3	2.4	2.7	2.8
Kirghizia	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Tadzhikistan	0.3	0.4	0.4	0.4	0.3	0.3	0.2	0.2
Azerbaijan	17.2	14.7	13.1	13.3	13.8	13.7	13.2	12.2

--- no production.

Source: Matthew J. Sagers, "News Notes," *Soviet Geography* 32 4 (April 1991), p. 251-290.

to satisfy the energy needs of industry in European Russia and for the development of a substantial petrochemical base in Tomsk and Tobolsk. [20] The TPK was highly successful as a planning mechanism for prospecting and exploiting oil and gas resources and for constructing a network of transport facilities.

Thane Gustafson (1989) has commented that crisis and the perception of a crisis in the top echelons of Soviet hierarchy gave the planning system its essential characteristics with a set of policies geared to supply rather than conservation, inertia of vast vertical hierarchies, and short-sighted development of infrastructure. [21] The rapid growth of Soviet annual oil output was the outcome of a drive to exploit vast fields in West Siberia. [22] This 'supply-push' mentality was the result of the Soviet manager's need to fulfill plan targets, by emphasising quantity over efficiency and quality of production. This attitude for production manifested itself in the oil industry with the technique of using 'water injection' to extract the oil. Effective in the short-term, the practice damaged the long-term sustainability of field output. Exploration and drilling also increased dramatically as a result of the demands placed on the production associations, stretching materials and infrastructure farther north, which in the process made additional production more costly to develop.

By 1985, Soviet leaders began to question their strategies for Siberian oil development, as it became obvious that further development to sustain past economic growth would bankrupt the country. Though Gorbachev professed a desire to increase efficiency and conservation to redirect investments into infrastructure development (i.e., homes, roads, and services), the rhetoric altered little. Soviet industry continued to rely on cheap energy sources. In the Soviet oil complex, any adoption of Gorbachev's 'new thinking' toward production and management practices was actively resisted. The industry's hierarchy, goaded by their previous rapid growth, thwarted any new changes since their adoption as many managers believed would lead to lower growth in the future. Though the Soviet Union was the world's largest producer of oil, with a peak output of 624.3 million metric tons in 1988, the system could no longer sustain its development strategy and high annual output levels.

B. Summary of the Intrasystemic Changes

By 1990, production in the Tyumen' Oblast was falling due to a combination of little investment, poor management, low worker morale, chronic shortages of production equipment, and low fixed prices for crude which limited production incentives. [23] The crisis was analogous to the general state of the Soviet economy as it underwent restructuring, though the continuous deterioration of operating conditions in the oil-producing industry led to increased production costs, and consequently declining profitability. [24] Hard currency earnings were siphoned off by the central government to fund *perestroika* (restructuring) and to supply consumer goods to the Soviet people. Oil industry enterprises were forced to operate essentially on 100% state orders (at targeted output levels and prices), while contract prices for machinery and oil-field equipment were liberalised. [25] During 1982-1990, the price of crude oil rose by less than 4% (from 24.8 rubles per ton to Rbl 25.7/ton), while the average cost of oil production increased more than twofold (from Rbl 9.4/ton in 1982 to more than Rbl 21.1/ton in 1990) reducing the profit margin from Rbl 15.4/ton in 1982 to Rbl 4.6/ton in 1990. [26] These factors led to an open conflict between Tyumen' oil-production units and the central authorities over the redistribution of oil export revenues to restructure their production complex in 1989. [27] When oil production in 1990 dropped by 6.2% from the previous year (see Table 3, page 40), the government reacted with an investment scheme to restore idle wells and re-equip others. The West Siberian production administration viewed this injection of cash as insufficient to solve the more serious socio-economic and environmental problems in their region, which had accumulated over time. The Tyumen' Oblast's administration could no longer rely on the state to address the region's concerns, and responded by seeking greater independence from central ministerial authorities in Moscow.

In 1990, *Glavtyumenneftgaz* (Main Administration for Oil and Gas Production in Tyumen' Oblast) was abolished and replaced by several independent associations (*Nizhnevartovskneftgaz*, *Surgutneftgaz*, *Yuganskneftgaz*, *Noyabr'skneftgaz*, *Varyeganneftgaz*, *Krasnoleninskneftgaz*, and *Purnftgaz*). These associations represented most of production in West Siberia (see Table 4). Inasmuch as these associations marked the beginning of a trend in the oil production industry to sever ties with their administrative organisations, they were motivated by financial incentives, namely to retain their earnings which had come to subsidise less profitable performers. The West Siberian production fields of Langepas and Kogalym became the first to dissolve their association with the state enterprise *Tatarneft'* (the oil-production association in Tatar ASSR) and *Bashneft'* (the oil-production association in Bashkir ASSR) in 1988, and to become quasi-independent enterprises.

The trend toward administrative independence by West Siberian enterprises signified that the Ministry of Oil and Gas had lost direct control over the most productive and influential associations of the Soviet oil complex, though it still controlled price and exports. These West Siberian production units began to enter into barter agreements with domestic industry and joint-ventures with foreign companies in an attempt to circumvent the investment squeeze. [28] Their counterpart in natural gas production was *Gazprom*, the state-owned natural gas producer which in 1989 became the USSR's first 'socialist concern'.

Table 4.
Distribution of Oil Production in West Siberia
(million metric tons)

	1970	1975	1980	1983	1985	1986	1987	1988	1989
West Siberia	31.4	148.0	312.7	377.8	368.1	394.9	409.5	415.1	404.9
Tyumen Oblast	28.5	143.2	307.9	366.2	361.1	387.0	400.0	405.7	395.9
Glavtyumenneftgaz	28.0	141.4	302.8	366.2	323.4	332.2	340.5	392.1	352.9
Nizhnevartovsk	8.2	97.8	193.5	210.2	160.0	140.0	130.0	120.0	112.9
Surgut	3.5	13.2	48.6	70.0	59.4	65.0	65.0	n.a.	52.9
Yugansk	11.7	24.8	45.5	(60)	68.0	70.0	70.0	75.0	65.0
Noyabr'sk	n.a.	n.a.	3.0	10.0	15.0	20.0	30.0	40.0	41.2
Var'yegan	n.a.	n.a.	6.0	(10)	15.0	31.2	34.0	30.0	18.0
Krasnoleninskiy	4.6	5.6	6.2	(6)	6.0	6.0	11.5	n.a.	21.0
Purneftgaz	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9.6
Gazprom	---	---	---	---	---	6.0	6.0	8.0	8.0
Tatar/Langepas	n.a.	n.a.	n.a.	n.a.	25.5	25.5	28.0	n.a.	30.2
Bashkir/Kogalym	n.a.	n.a.	n.a.	n.a.	13.0	18.0	20.0	n.a.	31.7

n.a. not applicable

--- no production

Sources: Arild Moe, "The Future of Soviet Oil Supplies to the West," *Soviet Geography* 32 3 (March 1991), pp. 137-167; and Matthew J. Sagers, "News Notes," *Soviet Geography* 32 4 (April 1991), pp. 251-290.

Like the oil industry associations *Glavtyumenneftgaz*, *Gazprom* was located also in Tyumen' Oblast and had gained a degree of operational independence from the Ministry of Oil and Gas. Unlike *Glavtyumenneftgaz*, horizontal links were maintained between *Gazprom*'s producing enterprises. Of these, *Tyumengazprom* was by far the largest (see Table 5) and operated the Yamburg and Urengoy natural gas fields in northern Tyumen' Oblast. In 1989 administrative reforms merged the Gas Ministry into the Oil Ministry creating the Ministry of the Oil and Gas Industries. [29] The objective of this reform was

Table 5.
Geographical Distribution of Gas Production in the USSR
(billion cubic meters)

	1975	1980	1985	1986	1987	1988	1989	1990
USSR total	289.3	435.2	642.9	686.1	727.4	770.0	796.1	814.7
RSFSR (Russian Republic)	115.2	254.0	462.0	503.0	544.3	589.8	615.8	640.4
European Russia	52.9	37.6	30.3	28.5	30.1	29.3	28.7	26.4
Komi ASSR	18.5	19.4	17.9	16.9	16.1	13.6	13.0	13.0
North Caucasus	23.2	14.1	7.5	7.0	6.5	6.2	6.0	5.4
Volga	11.2	7.8	4.9	4.6	7.3	9.5	9.7	8.0
Urals	22.7	51.0	48.9	48.1	47.2	46.6	45.0	44.0
Siberia	39.6	165.4	382.8	426.4	467.0	513.7	542.1	570.0
West Siberia	38.0	160.1	375.8	419.1	464.8	510.8	539.0	567.0
Tyumen' Oblast	38.0	160.0	375.4	418.9	464.0	510.6	538.8	567.0
Tyumengazprom	35.8	148.8	350.4	390.0	430.8	475.8	530.8	540.0
Urengoy	---	50	255	292	312	325	335	340
Yamburg	---	---	---	4	28	70	90	130
Medvezh'ye	29.9	71	72	70	65	53	50	n.a.
Vyngapur	---	16	17	17	17	17	17	n.a.
(unidentified)	3.6	7.8	6.4	7	8.8	10.8	12	n.a.
Other Siberian	1.3	1.6	1.8	2.0	2.2	2.9	3.1	3.0
Outside RSFSR	174.1	181.2	180.9	183.1	183.1	182.0	180.3	174.3

--- no production

Sources: Matthew J. Sagers, "News Notes," *Soviet Geography* 32 4 (April 1990), p. 290; and Matthew J. Sagers, "News Notes," *Soviet Geography* 32 4 (April 1991), p. 266.

basically to democratise the system of economic management and transfer concrete economic decision-making to the enterprise level. [30] The reorganisation left most enterprises of the former Gas Ministry out of the new structure and formed one enormous enterprise called *Gazprom* (*Gazovaya promyshlennost'*). Those integrated enterprises and associations which became part of *Gazprom* retained their 'independence', according to the Law on Enterprises (1988), [31] to negotiate inter-industry contracts outside state orders. The emergence of this type of entity which preserved enterprise independence prompted oil-production enterprises to propose similar changes in their sector in 1989.

In comparison to the fluctuations in oil production (see Table 3, page 40), natural gas and gas condensate (propane and butane) production in the Soviet Union grew annually from 435.2 billion cubic meters in 1980 to 814.7 billion cubic meters in 1990 (see Table 5, page 45). The main reason for the production increase was that the enterprises of the Ministry of Gas did not dissolve their traditional associations to the same extent as those in the oil industry. The institutional structure of *Gazprom* resembled closely that of its predecessor, the Ministry of Gas, whereas the production enterprises of the Ministry of Oil in the Tyumen' Oblast severed their institutional links. To characterise the changes, *Gazprom* resembled more a western-styled vertically integrated company. Oil-production enterprises on the other hand were horizontally integrated and maintained tenuous traditional links with exploration, equipment, and refining enterprises. As a result, this institutional atomisation could not prevent dramatic declines in oil output in 1990. The newly independent oil-production enterprises became part of a less efficient institutional set-up. Why did the two industries embark on separate paths of change?

In general, the Soviet natural gas industry is a young one, having gained most of its growth in the 1980's. Its ability to adapt more quickly to new conditions under Gorbachev *perestroika* reforms was unique in that in spite of less investment from central authorities, it managed a steady growth in annual output. Yet the oil-production enterprises suffered from path dependent economic behaviour, in that they relied on state investment and development directives. Once 'cut-off' from state control and support, they could not readily co-ordinate 'up-stream' (exploration) and 'down-stream' (refining and pipeline transport) activities with the Ministry of Oil and Gas' enterprises. The institutionalist perspective suggests that oil-production enterprises did not consider the costs of radical systemic transformation. Instead, the economic behaviour of oil industry insiders seemed to be motivated more by political intransigence and a struggle for power with the centre, than by a goal to increase the efficiency of their operations. In the short-term, they preferred to consolidate their position within the enterprise and the ministerial hierarchy of the dissolving Soviet state.

To briefly summarise, the institutional structure of the oil and gas industry fluctuated considerably during the Gorbachev reform period. The weakening of central political control greatly reduced the state's ability to plan the economy. The momentum of political and socio-economic change altered the former institutional structure and consequently the relationship between the state and enterprises. The adaptation to administrative and economic independence created two distinct trends in the oil and gas industry. The first occurred primarily in the oil and gas-production enterprises of West Siberia and was characterised by a struggle with the centre for power and the control over resources. *Gazprom* obtained independence from the state, and its managers avoided the disruptive power struggle, electing instead to maintain their monopoly. The second occurred with those remaining enterprises under the direct control of the Ministry of Oil and Gas. As institutional changes were enacted, the disruption of traditional lines of authority led to a bitter struggle for power and influence in the oil industry. The political events of 1991 would however alter the type and form of changes that occurred in the Russian oil and gas industry.

End Notes

[1] Leslie Dienes and Istvan Dobozi and Marian Radetzki, *Energy and Economic Reform in the Former Soviet Union*, (New York: St. Martin's Press, 1994), p. 105.

[2] See Robert W. Tolf, *The Russian Rockefellers*, (Stanford: Hoover Institution Press, 1976), for further information on the roles played by the Nobel family and the House of Rothschild in developing the Russian oil industry.

[3] John P. McKay, "Restructuring the Russian Petroleum Industry in the 1890s: Government Policy and Market Forces," in Linda Edmondson and Peter Waldron (eds.), *Economy and Society in Russia and the Soviet Union 1860-1930* (New York: St. Martin's Press, 1992), pp. 85-106.

[4] Margaret S. Miller, *The Economic Development of Russia, 1905-1914* (London: P. S. King & Son, 1926), Table B, p. 292.

[5] Marshall Goldman, *The Enigma of Soviet Petroleum* (London: George Allen & Unwin, 1980), p. 25.

[6] See Robert W. Campbell, *The Economics of Soviet Oil and Gas* (Baltimore: The John Hopkins Press, 1968), pp. 26-28. Also see, Marshall Goldman (1980), p. 28. Goldman refers to it as the Ministry of the Petroleum Industry.

[7] Most analysts agree on the significance of the XX Party Congress of the CPSU, Khrushchev's 'secret speech' marked the beginning of these reforms.

[8] Robert W. Campbell (1968), p. 28.

[9] Ibid., p. 25. His assertion is based on comparisons made with the American oil and gas industry.

[10] *Khozraschet* is the abbreviation of '*khoziaistvennii raschet*'. The basis of this system is cost-accounting and internal responsibility for self-financing without the aid of central state funds. This efficiency-orientated neo-classical approach permeated early Soviet economic thought. 'Optimal planning' became central to the reforms of the 1960's, and a technocratic tool to develop rational productive and managerial behaviour. See Pekka Sutela, "Gorbachev's Economic Advisors: A Comparative Analysis of their Economic Thinking,"

(*Berichte des Bundesinstituts fur ostwissenschaftliche und internationale Studien* 47, 1990).

[11] Robert W. Campbell (1968), p. 26.

[12] Due to the long-term production cycle of the oil and gas industry, investments made in the 1960s did not realise the effects of this development until the early 1970s, when annual output from this region increased (see Table 3). Infrastructure (i.e., roads, housing for workers), drilling, construction of pipelines, and wells required time to develop in this sparsely inhabited, remote and technically challenging Siberian landscape.

[13] Matthew J. Sagers, "News Notes," (*Soviet Geography* 32 4, 1991), p. 252.

[14] Matthew J. Sagers and Albina Tretyakova, "Constraints in Gas for Oil Substitution in the USSR," (*Soviet Economy* 2 1, 1986). p. 73. CMEA (Council for Mutual Economic Assistance) was the trade structure established between the U.S.S.R. and the socialist countries of Eastern Europe in 1949.

[15] Ibid., p. 74. For a more detailed analysis of the integral use of oil exports by Soviet planners as an instrument for balancing external trade patterns in the 1980's, see Marget Chadwick and David Long and Machinki Nissanke, *Soviet Oil Exports* (Oxford: Oxford University Press, 1987). *Soyuzneftieksport* was the principle Soviet agency involved in these transactions.

[16] Mathew J. Sagers (1991), p. 254. The dramatic price increases of oil in 1973-74 by the members of the Organisation of the Petroleum-Exporting Countries (OPEC), meant windfall earnings for the Soviet Government from these petroleum exports. For further reading on the oil crisis, see Daniel Yergin, *The Prize: The Epic Quest for Oil, Money and Power* (London: Simon & Shuster, 1991).

[17] Stephen Rutt, "The Soviet Concept of the Territorial-Production Complex and Regional Development," *Town Planning Review* 57 (October, 1986), p. 431.

[18] N.N. Kolosovskiy (1947), "The Territorial-Production Combination in Soviet Economic Geography," in G. J. Demko and R. J. Fuchs (eds. and trans.) *Geographical Perspectives in the Soviet Union* (Columbus: Ohio State University Press, 1974), pp. 105-138.

[19] See Peter de Souza, *Territorial Production Complexes in the Soviet Union*, (Gothenburg: University of Gothenburg, 1989).

[20] Ibid., pp. 131-134.

[21] See Thane Gustafson, *Crisis Amid Plenty* (Princeton: Princeton University Press, 1989): pp. 289-337.

[22] Matthew J. Sagers (1991), p.254, and Thane Gustafson, "The Origins of the Soviet Oil Crisis, 1970-1985," (*Soviet Economy* 1 2, 1985), pp. 130-132.

[23] Mathew J. Sagers (1991), p. 255.

[24] Eugene M. Khartukov (1995), "Russia's Oil Prices: Moving Toward the Market," *Energy Exploration and Exploitation* 13 6, p. 554.

[25] The Enterprise Law, in effect since 1988, permitted the equipment suppliers to the oil and gas industry to negotiate prices. See Leslie Dienes, "Siberia: Perestroika and Economic Development," *Soviet Geography* 32 7 (September, 1991), pp. 445-457.

[26] Eugene M. Khartukov (1995), p. 554.

[27] Mathew J. Sagers (1991), p. 256.

[28] Ibid., p. 256.

[29] Mathew J. Sagers, "News Notes," *Soviet Geography* 31 4 (April 1990), p. 291.

[30] Vladimir Mau, "Perestroika: Theoretical and Political Problems of Economic Reforms in the USSR," *Europe-Asia Studies* 47 3 (1995), p. 398.

[31] Mathew J. Sagers (1990), p. 291.

Chapter Four

The Transformation of the Russian Oil and Gas Industry

With the collapse of the Soviet Union in autumn 1991, the Russian Federation inherited over 90% of the oil and 75% of the natural gas reserves of the former Soviet Union. [1] Resource ownership in the Russian Federation and the other members of the Commonwealth of Independent States (CIS) was divided according to a simple formula and the Union Treaty (1991), in which resources residing within existing republican borders belonged to that republic.

Of the three policy objectives of the Yeltsin-Gaidar economic programme (stabilisation, liberalisation and privatisation) implemented in 1992, the institutional structure of the Russian economic system was transformed irrevocably by privatisation. Though the basic objective of the Yeltsin-Gaidar economic programme was to create efficient market conditions, Yeltsin and his advisors used privatisation as a mechanism to *depoliticise* the emergent market relationship between enterprises and the state. The reform architects viewed the entrenched Soviet *apparatchiki* (bureaucrats) as the main obstacle to reform and a continued source of enterprise inefficiency. The strategy of mass privatisation has failed to bring about the desired favourable market conditions in general and increased efficiency for large enterprises in particular. The shortcoming was due to the strategy of 'mass' privatisation itself on the one hand, and to the institutional influence of the former Soviet system on the other.

This chapter seeks to analyse the institutional dimensions of the Russian privatisation programme. Privatisation created an institutional environment that influenced the path and direction of systemic transformation of the Russian oil and gas industry. The course of and the reasons for the changes are discussed. Finally, the strategies adopted by the oil and gas-production enterprises are compared, and assessed in accordance to their meeting the goals of privatisation, the restructuring and the formation of efficient open joint-stock companies.

A. An Assessment of Russia's Programme of Mass Privatisation

Prior to the launch of the Yeltsin-Gaidar economic reform programme in November 1991, the Russian parliament adopted in July 1991 two privatisation laws, 'On the privatisation of state and municipal enterprises in the RSFSR' and 'On personal privatisation accounts and deposits in the RSFSR'. [2] These laws defined the general attitude towards privatisation and the forms it could take: auctions, free distribution to all citizens, tenders, sale to enterprise workers on preferential terms and corporatisation. Due to the political turmoil of the August 1991 putsch, this moderate approach to intersystemic change was stalled. In November 1991, Gaidar outlined a reform programme in which privatisation was featured as a key component of the reforms along with price liberalisation and financial stabilisation. The Main Provision of the 1992 Programme of Privatisation adopted by Presidential decree in December 1991, became the first document to *regulate* the process of privatisation in Russia. [3] The privatisation scheme, loosely defined as the de-nationalisation of state property, was in fact a continuation of and response to the institutional processes already at work in Russia. Before the 1992 programme was adopted, substantial privatisation had already occurred, in the form of 'spontaneous privatisation': [4]

> The haphazard, ad hoc means by which Russian managers have established legal ownership of industrial assets they control has been called "spontaneous privatisation." The first, least formal examples of this phenomenon date back to the early 1970s, but the

term is still used to describe the transfer of property rights to managers when it occurs in a particularly lucrative way and not through the official privatisation programme. [5]

The privatisation programme, therefore, was a response (*ex post facto*) to the momentum occurring in the institutional environment. The goal of the privatisation reform was to restructure ownership and transformation of the Russian economy along lines justified by the neo-classical theoretic approach favouring mass privatisation.

The Institutional Dimension of Ownership in Russia

Spontaneous privatisation had been occurring gradually in the Soviet Union during the 1970s and 1980s because of the *de facto* (actual) intrasystemic power struggle between a declining state hierarchy and the enterprise director. As an agent of the state, the director had the task of managing the enterprise in fulfilling state production orders, but also the director was a political functionary in the institutional matrix of the Soviet bureaucracy. Another institutional influence that enabled this gradual process was the paternalistic role of the enterprise director as a guarantor of workers' social benefit who possessed the power of governance over the enterprise and its workers.

The relationship between the *de jure* (ideal) owner of state property (the Soviet Union) and the *de facto* (actual) concession of them to the enterprise director can be best described by agency theory. In the former Soviet Union, the hierarchy of authority was divided between the principal (the state) and the agent (the manager), who acted on behalf of the principal. The principal delegated to the agent some rights over resource use, and the agent was bound by a formal or informal contract of responsibility. [6]

In the institutional structure of the Soviet economic system, directors were influenced to rationally maximise the powers granted to them, and benefits the enterprise gave to them came all at the expense of the state. Due to imperfect information and the massive quantities of informational feed-back through the state hierarchy, the state's ability to monitor the actual performance of its enterprises was constrained. Directors became the link between the enterprise and the state hierarchy. Whoever controlled the information flow was in a position to withhold information about the enterprise's performance. From the institutionalist perspective, the inability for information to freely flow caused the grave inefficiencies in the Soviet economic system. Control of information, in other words, gave the enterprise manager power over the state.

The incentive for this institutionalised behaviour existed because the Soviet economic system reinforced it. The state determined financial rewards to each enterprise on quantitative and not qualitative standards, rather than on lowest cost and highest profitability. Any operating shortfalls were covered from the state budget, since "Soviet bankruptcy" did not happen. By controlling the flow of information to the state about the enterprise's true economic state, the manager undermined the implicit contract, and the ability of the state to control production targets. The system-wide result of this economic behaviour, by shirking and mispresenting planned and actual performance, resulted in economic decisions being made at increasingly lower levels of the Soviet bureaucracy, 'from the bottom up'. [7] Consequently, the director's power over the decision mechanism in the planned economy gave them *de facto* (actual) rights over state property.

Throughout the Gorbachev period, directors accumulated *de facto* (actual) property rights of the emergent 'small businesses' and co-operative enterprises. The Law on State Enterprises that Gorbachev introduced on

January 1, 1988, codified this spontaneous transfer of ownership rights from the state to the director. The response by directors to the reform was a misuse of excess material inputs without the state's knowledge and a diversion of them into new enterprises. [8] These were generally small and service-oriented enterprises such as co-operative restaurants that fed the demand of the *grey* or underground economy. Overhead for these enterprises was paid directly or indirectly through the state budget. [9] Satisfying the Soviet consumer was part of the *perestroika* strategy and the political support for this arrangement was tacitly accepted by the Gorbachev regime.

One possible check on director's control over enterprise property was the workers' councils, though the institutional arrangement of the enterprise annulled this. Since Stalin's rule, enterprises assumed the responsibility of providing social services, schools, housing, and vacations. [10] Consequently, the worker's immediate concerns were best expressed by the enterprise director, and not by the state and its official Communist-controlled trade unions. This relationship between the director and workers of the enterprise reinforced and institutionalised the powers of the director. Thus, when *de jure* (ideal) privatisation began in earnest in 1992, workers did not oppose management control that took the guise of employee ownership. [11]

The Official Privatisation Programme

The State Committee on Managing State Property (*Gosudarstvennyi komitet po upravleniiu gosudarstvennym imushchestvom* or GKI), was set up in July 1990 to co-ordinate the division of property between the USSR and Russia, and to oversee the privatisation of state enterprises. [12] Following the collapse of the Soviet system, the government of Boris Yeltsin maintained it for its privatisation programme and appointed Anatoly Chubais its director in October 1991. In preparation for the privatisation programme, GKI was organised on three levels:

> (1) the national or federal level; (2) the provincial level, including all "subjects of the federation:" republics, *krays* [regions], *oblasts* [provinces], ... and the cities of Moscow and St. Petersburg; and (3) the municipal level. Regional committees were charged with drawing up local privatisation programs and schedules. The result was a new structure that constituted one of the few "vertical" administrative structures in post-Soviet Russia. [13]

The final version of the State Programme of Privatisation of Public and Municipal Enterprises was passed by the Russian Federation Supreme Soviet on June 11, 1992. [14] GKI, like other state institutions in Russia such as military and government bodies, was staffed by individuals who held their position formerly and lobbied for their own group's interest. As a result, privatisation quickly turned into a highly politicised struggle for power over state assets.

The privatisation programme divided state enterprises into three broad categories: (1) those that were forbidden to be privatised; (2) enterprises which required official permission for privatisation ('strategic' industries such as oil and gas); (3) and those enterprises for whom privatisation was mandatory. [15] Permission for privatising state enterprises in 'strategic' industries was granted by one of GKI's three organisational levels and depended on the importance of the enterprise. The political debate over privatisation concerned those who wanted 'free' privatisation with vouchers distributed to all citizens and those who desired 'paid' privatisation. An interrelated issue was the controversy over the allocation of vouchers (to enterprises or all citizens). The Communists and trade unions wanted enterprise employees to benefit, whereas GKI's reformist directors wanted to consider the interests of all citizens, so to bring more outside influence into enterprises. [16] These differing political aims and the strategies of various interest groups in Russia made the privatisation document into a hodgepodge of conflicting premises.

Another dimension of the privatisation program was the method of privatisation. Large enterprises (with over 1,000 employees and book value of 50 million rubles) were to be converted into *akstionernye obshchestva* (joint-stock companies). Small enterprises (with fewer than 200 employees and a value of less than 1 million rubles) were to be auctioned off to the highest bidders. Medium sized enterprises were to be converted into open joint-stock companies and privatised according to one of the three variants outlined in the state programme for the distribution of stock (Table 6, page 58). The enterprise itself would choose the privatisation option. Between 1992 and 1993, Russian enterprises were privatised in the following ways:

> 1) Sale of shares in a newly formed joint-stock company, by closed subscription to management and employees, and to the public through voucher and cash auctions.
> 2) Sale of enterprises at auctions.
> 3) Sale of enterprises through commercial tenders.
> 4) Sale of enterprises through non-commercial investment tenders.
> 5) Sale of assets of enterprises through liquidation.
> 6) Buy-out of leased assets. [17]

In 1993, privatisation vouchers were made available to all Russian citizens. Every citizen received a privatisation voucher with a nominal value of 10,000 rubles. The voucher could be used by the employees in closed tenders for stocks, or transferred into investment fund certificates (by mid-1993, there were 550 investment funds in Russia). [18] The most popular privatisation option was Variant 2 (Table 6). About 80% of large firms choose this privatisation variant in 1993. [19] The popularity of Variant 2 stemmed from the fact that employees and management obtained majority ownership and control of their

Table 6.

Privatisation Variants, 1993-94

	Variant 1	Variant 2	Variant 3
Employees	25% (non-voting, free) 10% (voting, vouchers or cash 30% discount)	51% (4/5 vouchers, 1/5 cash) for managers and other employees via a "closed tender" bidding process	40% (employee group, up to 4/5 vouchers
Managers*	5% (cash)		
For Auction (by GKI)	60%	49%	60%
	100%	100%	100%

Notes: With all the variants, firms lent cash to employees to buy shares.

Variant 2: A two-thirds majority of employees was needed to support Variant 2. Assets of the firm were valued at 1.7 times the book value of January 1992.

Variant 3 (announced November 1992): The employee group who acquired shares required majority support of all employees. The group was required to maintain the volume of output after privatisation. One-half of the employee group's shares could be brought at a 30% discount.

* Managers could bid for shares at auction or in subsequent share markets.

Sources: "State Privatisation Programme for State and Municipal Enterprises in the Russian Federation, 1992," *Ekonomika i zhizn'* 29 (1992), pp. 15-17; and Trevor Buck and Igor Filatotchev and Michael Wright, "Employee Buyouts and the Russian Transformation of Russian Industry," *Comparative Economic Studies* 36 2, (1994), p. 9.

enterprises. Outsiders were consequently denied the opportunity to participate in the privatisation process, which clearly undermined GKI's aims to provide property ownership to all citizens. Moreover, Variant 2 preserved the paternalistic institutional relationship that existed between the enterprise manager and the employees, and in the process further enhanced the power of the director. Managers guided the enterprise through the privatisation process, by sitting on the Board of Directors of the newly corporatised firm, and by influencing the choices available to the employees. Management ownership of enterprise assets became both *de facto* (actual) and *de jure* (ideal).

The 1994 privatisation programme signed by President Yeltsin in December 1993, took effect on January 1, 1994. It was a revision of the earlier 1992 privatisation programme, though it retained the essential characteristics of the 'three variants' programme. [20] The main features of the revision were: (1) foreigners could participate in voucher and money auctions; (2) investment funds could hold a 25% share of stock in an enterprise, up from 10%; and (3) local GKI offices could approve enterprise privatisation, whereas in the 1992 privatisation programme only GKI offices in Moscow had the final authority.

Some Institutional Implications of Russia's Privatisation

The intended goal of the privatisation plan was to transfer the ownership of cash flow and property rights of enterprises from the state to private hands. [21] The Russian approach to rapid privatisation was couched in the neo-classical belief that public enterprises were inefficient and that individuals were profit maximisers and better able to restructure a firm than the government. Once depoliticised and placed in the hands of individual profit-maximisers, the economy so went the neo-classical belief would become more efficient and market-driven. The Russian privatisation process would force many enterprises to restructure, but the response was not the desired form of restructuring:

> where privatisation had been forced upon enterprises and not selected as a strategy of transformation, privatisation was not usually seen as a move towards commercialisation but as a defensive step to preserve the *status quo*. The primary objective of most managements and workforces in the privatisation process, ... is to retain control of the enterprise. The main advantage seen in privatisation was to be relieved of government controls. [22]

The neo-classical theoretic assumptions about individual behaviour, the nature of institutions and path dependency created a privatisation programme that did not meet the goals of the reform politicians or satisfy Russian citizenry. Privatisation in Russia did not escape politics as the managers fought for the *de facto* (actual) property rights they acquired during the Soviet era. [23] The worker, threatened and confused by the maze of new ideas and complicated procedures governing the new economy, became more dependent on the manager. The lack of separation between ownership and management resulted in the overriding concern by managers to maintain the *status quo* in the enterprise. The absence of potential market mechanisms to control manager-owners, such as outside shareholders or an independent corporate structure led to a situation where directors operated with virtual autonomy from state regulation and as during the Soviet era, withheld information from their new relatively uneducated and uninformed stockholders. [24]

For large enterprises, numerous exceptions were made in the privatisation programme. In particular were the exceptions made by GKI to enterprises of the oil and gas industry. The privatisation policies that were adopted for the oil and gas industry conceded to regional interests. The government would be allowed to own a non-controlling share. These concessions had been granted in 1992, by powerful Moscow-based ministries, which lobbied for control over their formerly subordinate enterprises. [25] The struggle for control over natural resources alienated regional authorities, and stimulated separatist policies, fearful that the regions would not gain control over local resources. [26] For example, when *Gazprom* was privatised in 1994, only the residents of the 61 regions in which *Gazprom* enterprises participated were allowed to buy shares. About one-fourth of the public float of *Gazprom* was given to residents of Tyumen' Oblast. [27]

Yeltsin's privatisation compromises to the regional authorities was indicative of his political weakness. The institutionalised behaviour of regional elites was a product of the administrative-command economy, in that these elites sought to maintain their former horizontal links so to survive in an uncertain environment of unstable supply and economic disruption. The 'personal economy' of Russia, the networks of relationships formerly built-up during Soviet rule, were maintained and expanded to accommodate new elites and Mafiosi. [28] Since 1994 regional elites have re-established their former control over enterprises and resources through the formation of *finansovo-promyshlennye gruppy* (financial-industrial groups), in which banks began to own industrial enterprises.

B. Privatisation in the Oil and Gas Industry

The Law on Underground Resources, decreed by Boris Yeltsin in December 1991, provided the general framework for the privatisation of the oil and gas industry by introducing the principle of ownership and license payments for the use of underground resources. The principle of competitive licensing was a departure from past Soviet practices which assumed that resources underground had no value prior to their extraction. The licensing task fell to the former Ministry of Geology, renamed *Goskomnedra* (State Committee for Underground Resources), though oil production continued in absence of any clear government policy. A more detailed Law on Oil and Gas was delayed and redrafted several times throughout 1993, a victim of differing perceptions and of power struggles between the centre and the regions. Meanwhile, the influence of the economic reform programme of 'shock-therapy' brought further changes to the oil and gas complex. As a cornerstone in the

Russian economy, the oil and gas sector exemplified both the process of economic transformation in general and the struggle for control and power of administration between the regions and Moscow.

Regional Strategies for Transformation

The perception of the present problems in the oil industry, namely that of declining annual output (see Table 7), has created a conceptual conflict over its correct solution. The institutionalised behaviour of the oil-production enterprise managers demonstrated the path dependent nature of their agenda, because:

> [w]ithin the oil industry, the problems are largely perceived as technical. Consequently, if the production associations are given the equipment they need and sufficient investments, the performance will be turned around. The keyword for the organisation of the industry is *integration*, retaining the "unified production technological complexes" that were established during the Soviet period. Outside reform-minded observers tend to regard the problems as primarily organisational and institutional. According to their view, it is impossible to revitalise the industry without restructuring. The important concept for them is *competition*.[29] (original italics)

Since 1991 the structural policies of the Russian government have been a balancing act between differing perceptions of the production problem and a conflict of power with the production regions. Shortly after the August 1991 coup, the USSR Oil and Gas Ministry was dissolved, and replaced with the "corporatised" administration *Rosneftgaz* (Russian State Oil and Gas Corporation). As Kryukov and Moe (1993) explain, *Rosneftgaz* was a feeble creature and that the real power rested with "oil generals," who had

Table 7.

Russia's Oil Output, 1990-1994

Year	Output (million tons)	Decrease (million tons)	%
1990	516.0	36.0	6.5
1991	461.0	55.0	10.7
1992	398.8	62.2	13.5
1993	345.7	44.1	11.1
1994	317.0	37.7	10.6

Source: *Delovie Lyudi*, various issues, 1994-1995.

consolidated their position and power in the latter stages of the Soviet Union and refused to join the new administrative structure. The new Ministry of Fuel and Energy no longer controlled the oil-production associations, but maintained its monopoly only over "downstream" activities (refining and product distribution). [30] In 1992, the Russian government attempted to regain some influence over the production associations by appointing the former chairman of *Gazprom*, Viktor Chernomyrdin as the minister of fuels and energy. In December 1992, Chernomyrdin replaced Yegor Gaidar as Prime Minister.

Independent-minded oil-production associations sought a different strategy for their industry. In 1991, the first integrated oil-production concern, *LUKoil* was formed. Vagit Alekperov, a former deputy minister for the oil and gas industry, approached three refineries in Perm, Volgograd, and Mazeikiai (Lithuania) to merge with the oil-production associations of *Langepasneftgaz*, *Uraineftgaz*, and *Kogalymneftgaz*. As head of the company, Alekperov convinced the minister of fuels and energy to allow *LUKoil* to develop as a large vertically-integrated oil company:

> The State Property Committee [*GKI*] had earlier orientated itself towards the creation of a number of small joint-stock companies so as to guarantee

> competition on the internal market, Alekperov was able to demonstrate that, in the case of such a mode of development being adopted, the domestic oil industry would be doomed to failure in its battle with the West's oil giants, which were already penetrating the Russian market. The contract for the exploitation of the Tengiz oilfield in Kazakhstan, won by Chevron, was, according to Alekperov, only the beginning of a massive offensive by the West's oil industries on the CIS's market. [31]

The presidential decree on privatisation in the oil industry issued in November 1992, seemed to satisfy both political camps, the protectionist ministries and the oil-production associations. The legislation proposed to set up 10 to 12 giant structures of vertically-integrated oil companies, linking production associations with refineries and distributors. [32] State ownership was transferred *de jure* (ideal) to several vertically-integrated holding companies, in which the government received a minority interest. *LUKoil*, *Yukos*, and *Surgutneftgaz* emerged as vertically-integrated entities, but the question remained whether vertical integration could stimulate efficiency. Annual production figures in Table 8 for the period 1992-93 indicated otherwise. Vertical integration preserved the former institutional administrative structure and failed to instill competition in the oil industry. [33]

Besides creating *LUKoil*, *Yukos*, and *Surgutneftgaz*, the November 1992 government privatisation decree created *Rosneft* as a holding company of state assets in the oil industry. *Rosneft's* role as a holding company of state oil assets was not clarified until April 1993 when Prime Minister Viktor Chernomyrdin signed a government resolution. *Rosneft* was put in charge of the re-organisation and restructuring of Russian oil companies as public stock companies. [35] *Rosneft*'s responsibility was the commercial management of all federal share-holdings in oil joint-stock companies. Additionally, its assignment included federal financing to revitalise the industry and to co-ordinate

Table 8.

Oil Production in Russia, 1992-93

	Percentage of Production	1993 Production (million tons)	Percentage Change 1992-93
Russian Federation =	100%	34[illegible]	- 11%
Rosneft	59.2%	210	- 13%
LUKoil	13.8%	49	- 15%
Surgutneftgaz	10.8%	38	- 10%
Yukos	9.0%	32	- 18%
Gazprom	2.6%	9	- 10%
Russian oil companies	92.8%	330	- 14%

Source: "Energy Outlook," *PlanEcon*, May 1993, p. 3.

exploration, extraction, transport, refining and distribution (domestically and abroad). [36] Its mandate was reminiscent of the old Soviet Oil Ministry, whose central control was a feature of the Russian oil industry.

Gazprom was able to survive the restructuring mainly due to the influence of its former director, Viktor Chernomyrdin, who argued that a high level of technical integration between the industry and central control was required to optimise the production and distribution capabilities. [34] The argument was reminiscent of the optimal planning approach used in the development of the oil production complex in West Siberia. In maintaining technical integration, production in the gas industry did not slip as dramatically as in the oil industry. Ironically, the continuation of *Gazprom* in its previous form owed more to the fact that it was exempt from the regulatory demands of the Law on Underground Resources.

The basic restructuring of the oil and gas complex in 1992 is illustrated in Figure 4. The concept of vertical integration is Western to most Russian oil companies, but the institutional structure of the oil industry retains much of its former Soviet complexion with an additional tier of 'independent integrated associations'. Clearly, the federal policy sought to preserve integrated units that were created during the Soviet period.

C. Governance in the oil and gas industry

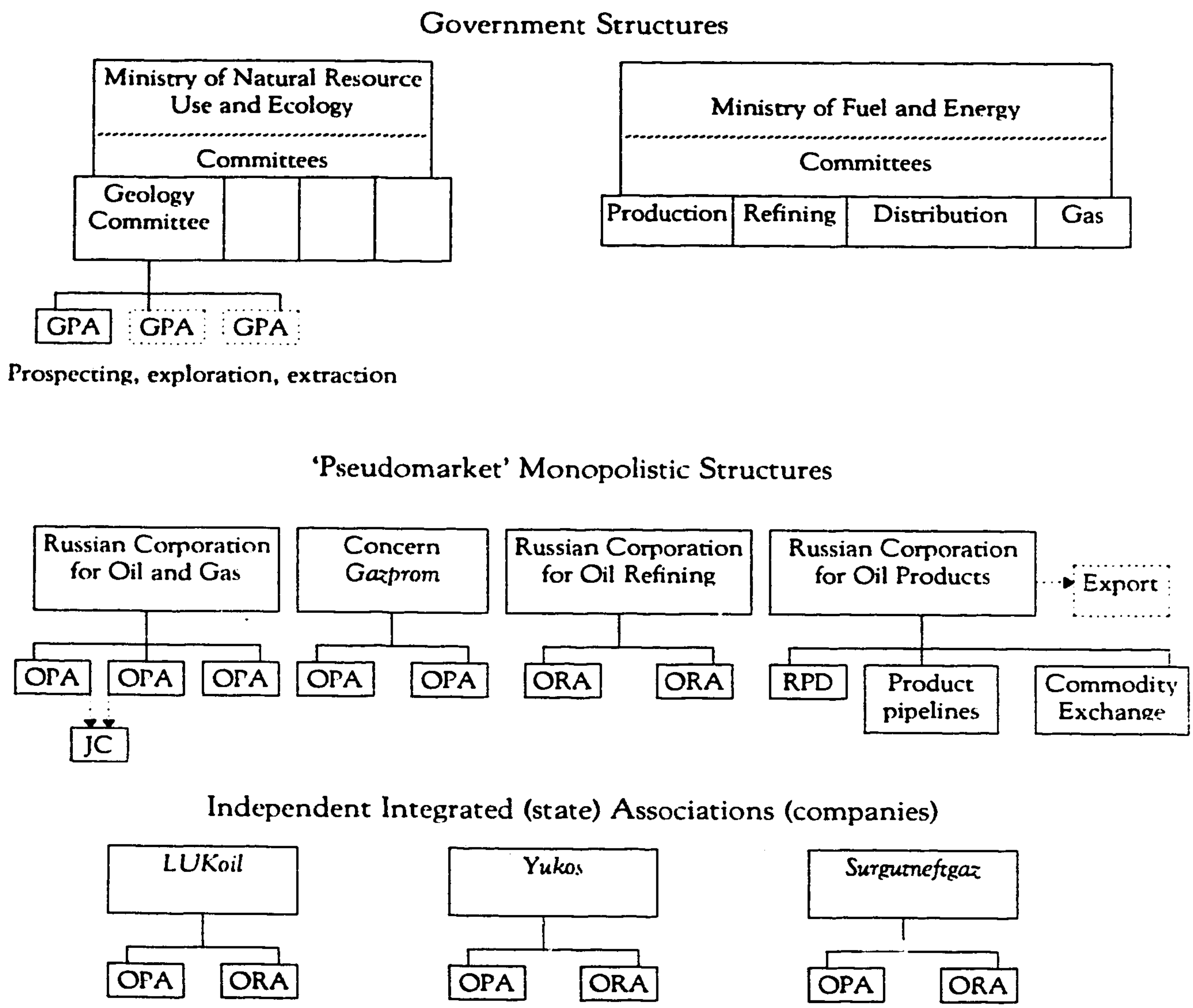
Institutionalism posits that governance can influence in the process of economic transformation, and that of the Russian oil and gas industry. Formerly in the Soviet Union, the Communist Party and the ministries held the reigns of control, shaping the industry according to its political and economic agenda. The number of players in the oil and gas industry tended to be small.

In 1994, a similar scenario emerged in the industry as ownership, control, and economic benefits shifted from the state to individuals. GKI held a 45% share in eight privatised Russian oil companies. The state oil holding company *Rosneft* held a 38% stake in approximately 100 oil-production enterprises waiting to be privatised. [37] By spring 1994, eight vertically-integrated joint-stock oil companies existed - *LUKoil*, *Yukos*, *Surgutneftgaz*, *Sidanko*, *Slavneft*, *Eastern Oil Company*, *East Siberian Oil & Gas Company*, and *Onako*. Their privatisation did not correspond to any of the variants in Table 6 (page 58).

When *LUKoil*, *Yukos*, and *Surgutneftgaz* conducted their voucher auctions in 1993, management were able to obtain huge amounts of stock based on pre-1992 valuations. *Yukos*, for example, was valued at $80 million US in 1994. [38] Through the control over employee share ownership plans, Vagit Alekperov (*LUKoil*), Sergei Muravlenko (*Yukos*), and Vladimir Bogdanov

Figure 4.

Institutional Structure of the Russian Oil Industry, 1992



<u>Legend</u>

GPA Geological Production Association
OPA Oil Production Association
JC Joint Company
ORA Oil refining association
RPD Refinery product distribution

Source: Leslie Dienes et al., *The Soviet Energy System* (Washington: Winston & Sons, 1994), p. 108.

(*Surgutneftgaz*) reaped vast profits and maintained control over their companies. In agency theory, they became both the principal and the agent of the corporation, with the state (and the citizenry of Russia) losing out in the new institutional arrangement.

The privatisation of *Gazprom* in the spring of 1994 created an equally dubious ownership and control structure. Of the 237 million shares authorised to be issued, 33% were given to Russian citizens in exchange for privatisation vouchers. These auctions were clearly rigged as they took place in remote Siberian towns and *Gazprom* management maintained the first right of refusal over the registration of any shareholder they did not approve. [39] In the end, 40% of the company's shares remained in government hands, 15% went to *Gazprom* managers and employees, 10% to the company treasury (for future share auctions), and the remaining 35% to affiliated companies. *Gazprom* chairman, Rem Viakhirev, became the true leader of this massive and wealthy organisation, which controls 94% of Russia's natural gas production and is the largest gas producer in the world. It is unknown how many shares have been issued to *Gazprom* management and at what price.

Industrialists and holding companies have become key players in the privatisation and transformation of the oil and gas industry. In 1994 these groups bought up large blocks of shares of oil companies at voucher auctions. One example is Hermes Corporation, which made a fortune in oil trading. Directors of state-owned oil-production companies sold oil to Hermes at low state prices, who in turn sold the oil to buyers who were unwilling or unable to obtain oil supplies from the state procurement bureaucracy. [40] Other players in the privatisation process were the banks. The oil and gas companies themselves diversified by buying into newly-privatised organisations such as the former Ministry of Oil and Gas Construction which became *Rosneftgazstroy* (Russian Oil and Gas Construction).

The process of institutional change is witnessing a re-establishment of former intra-industry horizontal links that existed on the eve of the collapse of the hierarchical Soviet institutional set-up in late 1991. The political and social agenda of formal government privatisation and restructuring policies have consequently been undermined by this institutionalised behaviour and the *de facto* (actual) governance of the industry's managers. The greatest failure of the government's privatisation policy perhaps is its inability to increase industrial efficiency and to prevent a precipitous decline in production levels. Privatised oil and gas companies today complain of cash flow problems, high taxes and the need to rebuild their production facilities. Yet, several companies such as *Gazprom* are buying shares in European industrial and natural gas distribution companies. *Gazprom* has bought blocks of shares in Daimler Benz, BASF, Ruhrgas, and Swissgaz. This activity constitutes a capital flight from Russia. In fact, the capital flight is the result of a host of political and economic factors. The problem for the country is that the badly-needed capital is not being utilised in rebuilding productive capacity and a loss of revenue for the government.

End Notes

[1] *Petroleum Economist*, (May 1993), p. iii.

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[3] Ibid., p. 4.

[4] Darrell Slider, "Privatisation in Russia's Regions," *Post-Soviet Affairs* 10 4 (1994), p. 372, and Michael McFaul, "Agency Problems in the Privatisation of Large Enterprises in Russia," in Michael McFaul and Tova Perlmutter, *Privatisation, Conversion and Enterprise Reform in Russia* (Boulder: Westview Press, 1995), p. 42.

[5] Michael McFaul and Tova Perlmutter, *Privatisation, Conversion and Enterprise Reform in Russia* (Boulder: Westview Press, 1995), pp. 221-222.

[6] Michael McFaul, p. 41.

[7] Ibid., p.42.

[8] Janos Kornai, *The Socialist System: The Political Economy of Communism* (Princeton: Princeton University Press, 1992), p. 73.

[9] Michael McFaul, p. 42.

[10] Ibid.

[11] Ibid., p. 44.

[12] Darrell Slider, p. 368.

[13] Ibid., p. 369.

[14] Alexander Radygin, p. 4.

[15] Michael McFaul and Tova Perlmutter, p. 223.

[16] Alexander Radygin, pp. 4-5.

[17] Michael McFaul, et al., p. 223.

[18] Darrell Slider, p. 375.

[19] Trevor Buck and Igor Filatotchev and Michael Wright, "Employee Buyouts and the Russian Transformation of Russian Industry," *Comparative Economic Studies* 36 2, (1994), p. 8.

[20] See Aleksandr Bekker, "State Privatisation Program Basically Approved," *Current Digest of the Post-Soviet Press* 45 51 (1993), p. 19, and Igor Karpenko, "New Privatisation Program is Adopted. But There are Already Plans to Revise it," *Current Digest of the Post-Soviet Press* 46 2 (1994), pp. 21-22.

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[22] Pekka Sutela, "Insider Privatisation in Russia: Speculations on Systemic Change," *Europe-Asia Studies* 46 3 (1994), p. 428.

[23] Michael McFaul, p. 44.

[24] Ibid., p.48.

[25] Darrell Slider, p. 375.

[26] Ibid.

[27] Ibid., p. 376.

[28] Ibid., p. 396.

[29] Valery Kryukov and Arild Moe, "Controlling the Russian Oil and Gas Complex: The Regions vs. the Centre," *Colloquium 1993* (Brussels: NATO, 1993), p. 146.

[30] Leslie Dienes and Istvan Dobozi and Marian Radetzki, *Energy and Economic Reform in the Former Soviet Union* (New York: St. Martin's Press), p. 105.

[31] *Delovie Lyudi*, (September, 1993), p. 81.

[32] Valery Kryukov and Arild Moe, p. 150.

[33] Ibid.

[34] Ibid., p. 152.

[35] Ibid., p. 150.

[36] Ibid.

[37] Irina Chumakova, "Who's Who in the Russian Oil Industry?" *Delovie Lyudi* (Supplement - October, 1994), p. 32.

[38] Paul Klebnikov, "Russia's Robber Barons," *Forbes* (November 21, 1994), p. 77.

[39] Ibid.

[40] Ibid., p. 78.

Chapter 5
Case Study: *LUKoil*

LUKoil has emerged from the break-up and the privatisation of the Russian oil industry as the largest and most powerful domestic producer, and potentially one of the world's leading oil companies. In the years 1990-1991, the idea of creating several vertically integrated oil companies in the Soviet Union was debated, but the political leadership was reluctant to eliminate one of the central pillars and a major source of revenue of the centrally planned economy. Some junior officials in the ranks of the Soviet Ministry of Oil and Gas however realised from their experience as enterprise managers in West Siberia that a restructuring of the Soviet production complex was badly needed. Since 1988 oil production had fallen from 624 million tons to 571 million tons in 1990. [1] The decline in output and loss of federal revenue, which was accelerated by political instabilities following the August 1991 putsch compelled the Russian government to demonopolise Soviet industry. The break-up of Soviet monopolies, it was thought, would unleash competition and create free-market conditions. *LUKoil* has been in the vanguard of the process of economic transformation, demonstrating a willingness to balance Western ideas about economics, corporate strategy, vertical integration, and future development with a more traditional institutionalised Russian perspective about ownership, personal networking, and operations in the uncertain environment of the former Soviet Union.

This chapter explores the development of *LUKoil* and its ability to adapt to nascent market conditions in Russia, and its emergence as an important player in the Russian oil industry. Some obvious weaknesses make this analysis somewhat sketchy. The disclosure of inside information remains a serious obstacle as it was for Sovietologists before 1991. Today, published economic information is inconsistent and susceptible to under-reporting or outright falsification because of Russia's punitive tax system and widespread corruption. [2] Though institutionalist assumptions help clarify many political machinations and can reveal much about the development of *LUKoil*, corporate information on *LUKoil* remains closely guarded.

The Russian oil industry is only partially demonopolised. A break-up of the holdings of the Ministry of Fuel and Energy was proposed by lobbyists from within the ministries in 1991. They pointed out that major oil companies such as Shell, British Petroleum and Exxon were vertically integrated organisations, and could serve as relevant industrial models for Russian oil companies. One of the prime proponents of the Western model was Vagit Alekperov, a then deputy minister in the oil and gas ministry. After the August 1991 coup attempt against Mikhail Gorbachev, Alekperov was vaulted into the position of acting minister, when his former boss was implicated with the hard-liners. [3] Through persuasion and influence Alekperov convinced President Yeltsin to issue a decree and set of special rules for privatising the oil industry. In early 1993, *LUKoil*, *Yukos*, and *Surgutneftgaz* were created officially along with the state holding company *Rosneft*.

However, Vagit Alekperov advanced earlier the view of creating several vertically integrated Russian oil companies. In 1990 he visited several Western oil companies, such as Agip (Italian), BP (British) and Chevron (American) and observed how these companies did business. [4] At the time, neither the Soviet government nor the Western firms he visited took his ideas or the vision he had about forming several vertically-integrated Russian oil companies seriously.

Vagit Alekperov was born in Baku in the Soviet republic of Azerbaijan. Since the discovery of oil in Baku in the 19th century, the city has given birth to many oil magnates, Russian and Soviet. Alekperov studied at Baku's Azizbekov Oil and Chemical Institute, and after graduating as a mining engineer, worked for a time in the oilfields of the Caspian Sea. In 1979 he left for the oil boom in the Tyumen' region of West Siberia. In 1983, his exceptional talent and drive was recognised and he was appointed the managing director of the newly founded *Kogalymneftgaz*. Under his stewardship *Kogalymneftgaz* developed into a major oil production enterprise, producing 31.7 million metric tons per year in 1989 (see Table 4, page 44). Moreover, he organised the building of Tyumen's only integrated oil-town. Tyumen's oil-settlements generally consisted of makeshift temporary barracks huts and an absence of social infrastructure for oil-workers. His demonstrated success in Tyumen' paved his move to the central oil ministry in Moscow in 1990. In Moscow he was confronted with the politics and inefficiencies of a horizontally organised planning apparatus in which separate ministies were responsible for drilling, refining and distribution. The ministerial system was clearly unbalanced and in need of both financing and better management. To Alekperov and other experts, the only way out of the malaise was to reorganise the planning system of the entire oil industry according to the Western model, which concentrated the tasks of drilling, refining and distribution under one entity. [5]

In 1991, Alekperov established his 'concern' *LUKoil*, and began almost immediately to restructure the oil industry while holding his ministerial position in Moscow. As the minister in charge of restructuring the oil industry, he moved quickly to install loyal associates into the key positions of the newly-emerging institutions. The country's oil assets were transferred to the new institution *Rosneft*, and he appointed Alexander Putilov its chairman. Previous to his appointment, Putilov was the manager of the production enterprise *Uraineftgaz*. Alekperov in 1991 established the new Ministry of Fuel and Energy, which absorbed the old Soviet ministries charged with oil extraction, oil pipelines, oil refining, petroleum product pipelines and distribution, natural gas pipelines and distribution, and power generation and distribution. [6] Yuri Shafranik, the former head of *Langepasneftgaz*, became the minister of this new organisation. In forming *LUKoil*, the oil-producing associations *Langepasneftgaz*, *Uraineftgaz*, and Alekperov's former enterprise *Kogalymneftgaz* were combined (the company name is derived from the first letter of each enterprise). Political and personal patronage of this magnitude was not uncommon in the Soviet Union. It signified that Alekperov and his associates occupied powerful positions in the oil industry and its ministerial apparatus. It was they who largely influenced the content of the Presidential decree on the privatisation of the oil and gas industry, and thwarted the demonopolisation of the oil industry which Gaidar and other economic reformers hoped for. *LUKoil*, *Yukos*, and *Surgutneftgaz* were permitted in the decree to establish Western-style vertically-integrated joint-stock companies in April 1993 in the hope:

> that these three firms would run along similar lines. Their strength and stability would be ensured by gathering a group of smaller firms around a major extraction concern and by creating a unified, integrated production process, ranging from prospecting to gas-station management. The companies were to function as agents of the state, using their processing facilities to provide petroleum products to Russia's regions. Finally, they were expected to form the core of even larger financial-industrial structures. In reality, however, things turned out differently. [7]

Institutionalism posits that the process of economic transformation is incremental and path dependent, in that existing institutions define the choices available to agents and consequently the extent and direction of institutional change. [8] To vertically integrate production associations in the oil industry requires more than just the influence of a new law. The production associations suffered from infrastructure problems that required large inputs of financing which after 1992 had to be obtained from non-state sources. One particular source of non-state financing was the formation pf financial-industrial groups, in which privately-owned Russian Banks became major shareholders of oil companies.

In 1995, *Surgutneftgaz*'s management convinced the GKI that 40.16% of the 45% state owned share in its company could be auction off in the 'loans-for-shares' programme. [9] *Surgutneftgaz*'s management wanted a new owner to finance their company's restructuring and future investment programme. Unexim Bank became *Surgutneftgaz*'s largest shareholder by giving the government loans for its shares. Consequently, *Surgutneftgaz*'s managers were able to wrestle control of their company from the state and to secure *de facto* (actual) ownership of their enterprise by forming a financial-industrial group with Unexim Bank which would become the company's source of non-state capital.

More interestingly, the behaviour of the management of *Surgutneftgaz* betrayed a predilection to maintain their regional orientation in Tyumen' Oblast. There *Surgutneftgaz* continued to stress its development along purely technological lines. The company has yet to expand into 'downstream' activities such as marketing and distribution or to establish joint ventures with foreign firms. [10] Its approach to economic transformation in many ways closely resembled the strategy employed by earlier Soviet planners.

Though geographically and technically diversified, *Yukos* has yet to establish vertically integrated operations and to stabilise its production. Its main extraction enterprise in West Siberia, *Yuganskneftgaz* is linked by pipelines that lead directly to its three refineries in Samara as well as to its second extraction enterprise, *Samaraneftgaz*. The distribution centres are located in the Volga region. However, the management of these associated enterprises has yet to consolidate their control with the parent company *Yukos*. [11] The political power of management remains diffuse. Burdened with mounting debts, *Yukos* on its own initiative sold quickly a 33% equity share at a 'shares-for-loans' the condition that it went to a single buyer. [12] Together with the state's 45% share, 78% of *Yukos* share-stock was acquired by the Moscow-based Menatep Bank for $509 million US in cash and loans. [13] The establishment of the *Yukos*/Menatep financial group demonstrated firstly that market considerations were not uppermost in the purchase decision by Menatep Bank, and secondly that the costs of motivation and co-ordination did not matter as much as the issues of power and prestige.

LUKoil above all Russian oil companies has been the most adventuresome in creating its own corporate identity. Its identity is not a Russian copy of an Exxon or a Shell, but rather is developing into something uniquely Russian. The company's management has successfully overcome the impulse of Soviet management to rely on production. Since 1994 *LUKoil* has turned to the marketing and distribution of refined oil products. In 1994 it consolidated under one corporate roof three oil-production amalgamations (*LUKoil-Langepasneftgaz*, *LUKoil-Uraineftgaz* and *LUKoil-Kogalymneftgaz*), two oil-refineries (*LUKoil-Permnefteorgsintez* and *LUKoil-Vologogradneftepererabodka*), seven regional wholesale and retail trade associations, and over 50 diversified companies and joint ventures operating in 30 Russian regions and 16 countries.[14]

The benefits of this consolidation have begun to show themselves to be significant both for the company and the state. It has raised Alekperov's credibility with the federal government and inside the oil industry. *LUKoil* has become the organisation that now other Russian oil companies seek to emulate. Company production levels of crude oil have stabilised considerably, in the sense that production declines are below industry averages - declining 14.5% in

1993, 12% in 1994 and 3.7% in 1995. [15] Its strategy of diversifying into producing refined oil products such as petrol, jet fuel and diesel fuel, rather than heavy *mazut* (fuel oil) has paid off.

In 1994, the American company ABB Lummus Crest entered into a joint venture with *LUKoil* to build a new refinery in the Krasnodar region of southern Russia, and from this venture *LUKoil* gained access to American technical expertise in processing crude into more profitable products. The Krasnodar refinery will be linked by pipeline to the main oil-export terminal of Novorossiisk on the Black Sea and lessens *LUKoil*'s dependence on the distribution and export facilities of the state owned pipeline transport company (*Transneft*) and export company (*Transneftexport*).

Increasing export opportunities is uppermost in the minds of Russian oil producers today. The domestic market is anaemic and greatly hindered by a non-payments crisis, high cost of credit (160-200% per annum) and domestic prices which still remain below world prices. In June 1995, the domestic price of Russian crude oil was set at 49.3% of world prices. [14] Price controls on fuel remain one of the few exceptions (along with bread and vodka) to the price-liberalisation reform launched in January 1992. Besides having to operate in a climate of partially controlled oil prices, *LUKoil* is charged with the responsibility of supplying various Russian regions with fuel, and demonstrates that:

> given a sensible approach to the problem of mutual settlements, a business [in Russia] can come to an agreement with the authorities in any region or republic. [*LUKoil*] makes active use of barter arrangements, trading fuel in return for various goods and services from its partners. [17]

LUKoil's conduct in this instance seems to run counter to market principles, but the company has found a way to increase profit margins and retained earnings for expansion. *LUKoil*'s way out is vertical integration by combining the extraction, refining and marketing of oil into one technological process. [18] In this way, the company can achieve significant economies of scale and greatly lower operating costs to a point where each increase in price can be used to finance corporate expansion without having to resort to expensive bank credit. The first step in *LUKoil*'s transformation into a vertically integrated oil company occurred in 1994 with the establishment of a distribution network of filling stations in Estonia. Presently, the company has plans to build 1,500 filling stations throughout Russia. [19]

According to company statistics on annual production (see Table 9), *LUKoil* is one of the world's largest oil producers. Its production is exceeded only by Royal Dutch/Shell, Exxon and BP. Its proven oil reserves are rivalled only by those of Royal Dutch/Shell. [20] Who owns and controls *LUKoil* is not entirely known for certain. According to privatisation documents, the Russian government owns approximately 5% of the company's issued stock. Other

Table 9.

LUKoil in Comparison, 1994
(includes equivalents)

Company	Oil Production (million barrels/day)	Oil Reserves (billion barrels)
Royal Dutch/Shell	12.7	17,500
Exxon	9.3	12,700
British Petroleum	6.5	8,300
LUKoil	4.5	14,500

Sources: *Delovie Lyudi*, (Supplement - June, 1995), p. XII; and *Energy Economist* 170 (December, 1995), p. 16.

shareholders include Los Angeles-based ARCO, CS First Boston and various mutual funds with 20%; 15% is slated for sale to foreign investors; and 29% is owned by the *LUKoil* pension fund and company affiliates such as Imperial Bank and Nikoil. The remaining 31% is divided between Alekperov, senior managers and workers. [21] Alekperov is believed to hold voting control of the company.

The presence of foreign shareholders in the company's equity structure illustrates one important strategy of Alekperov. It is his intention to use foreign capital as a means to pay off company debts to the Russian government. More importantly, foreign capital can provide an access to valuable technical information, new methods of marketing and profitable expansion beyond Russia. In late 1995, ARCO purchased $250 million US of the company's convertible bonds, representing a 8.3 % stake in *LUKoil*'s share capital. This was clearly an opportunity for *LUKoil* to gain technical expertise from ARCO, and perhaps in the future, a platform from which the company could launch a take-over of a foreign multinational oil company. Foreign capital enhances *LUKoil*'s ambitious desire to be a global player in the future. [22]

The maintenance of management control over voting shares has allowed *LUKoil* to [illegible] its publicly-stated strategy of reversing the decline in domestic oil production, discovering new reserves in the CIS and abroad, upgrading refineries, establishing an extensive marketing network, and implementing Western-style management and financial controls. [23] The lack of financial statements developed according to generally accepted accounting and auditing standards in the West poses a problem for *LUKoil* in attracting foreign capital. To this end, the company hired the Western accounting firm KPMG to develop and publish its 1995 annual report. This paved the way for the company to receive a $1 billion US loan from the Mitsu Bank and the European Bank of Reconstruction and Development (EBRD). The loan enabled *LUKoil* to invest in upgrading its refineries in Perm and Volgograd, and with technical assistance from ABB Lummus and the Canadian firm Lavalin.

LUKoil's most significant development to date has been its ability to act as a national oil company, especially since privatisation broke up the previously integrated and centrally managed oil production complex. As a 'national' oil company, *LUKoil* has been actively involved in oil projects abroad, in the CIS, and Russia. In this regard, the Ministry of Fuel and Energy is particularly supportive of the activities of Russian companies to enter foreign markets. [24] *LUKoil*, for example, has formed joint-ventures with the Italian company Agip to exploit oil deposits in Egypt. The technical experience gained from exploration work in the Egyptian desert may prove useful to *LUKoil*'s plans to re-develop production sites in Iraq, on whose behalf the Russian government is lobbying to lift UN-imposed sanctions on Iraqi oil exports. Iraqi government representatives have negotiated a $2 billion US production-sharing contract with *LUKoil*. [25]

In the CIS, *LUKoil* is deeply involved in a consortium led by Chevron and the Kazakh state oil company, *Tengizmunaigaz*, to develop Kazakhstan's Tengiz oilfield. *LUKoil* is the lead partner in a pipeline consortium to transport oil from Tengiz through Russia to the Russian Black Sea port of Novorossiisk. Part of this oil will supply *LUKoil* refineries in the Volga region. However, the politics of oil exports are muddied by Russia's desire to strengthen economic ties with Kazakhstan. [26] Adding to the political machinations are *LUKoil's* contract negotiations with the Kazakh government which included of all things a $18 million 100-seat Yak-42 executive jet given to Kazakh President Nursultan Nazarbayev. In Russia, as Alekperov is quick to explain, "nothing is free, but the forms of payment can differ." [27]

By virtue of its size and political connections, *LUKoil* has become Russia's eminent oil company. Its production operations dwarf domestic rivals and are rapidly being extended into many areas to the extent that the company has begun to think and act as a multinational oil company. At the heart of this emerging multinational is Vagit Alekperov, the 45 year-old President and Chairman. He has successfully marshalled his political connections and made them serve his oil company as it became a private company. There is no question that without his personal political connections in government, extensive knowledge of oil, and confident brashness, his goal to make *LUKoil* into the world's largest oil company, both in terms of production and profits, would not have succeeded to the extent it has to date. As Alekperov is want to say: "The seven sisters now have a brother." [28]

End Notes

[1] *Narodnoe khoziaistvo SSSR v 1990g.* [National Economy of the USSR in 1990] (Moscow: Goskomstat, 1991), p. 397.

[2] Taxes on oil production are many, including excise duties (up to 30%), profit tax (38%), and other fiscal charges add to up an 80% levy. See Eugene M. Khartukov, "Russia's Oil Prices: Moving Toward the Market," *Energy Exploration and Exploitation* 13 6 (1995), pp. 553-582.

[3] Paul Klebnikov, "The Seven Sisters Have a Baby Brother," *Forbes* (January 22, 1996), p. 73.

[4] Ibid.

[5] *Delovie Lyudi*, (September, 1993), p. 81.

[6] Nikita Rogachev, "The Making of the Petro-Giants," *Delovie Lyudi* (January-February, 1996), p. 55.

[7] Ibid.

[8] Lisa Román, "Institutions in Transition," (Ekon. dr. thesis, Stockholm School of Economics, 1995), p. 56.

[9] Anton Prishvin, "Lucrative Deals Split the Banking Community," *Delovie Lyudi* (January-February, 1996), pp. 38-41.

[10] Ibid.

[11] Ibid.

[12] Ibid., p. 57.

[13] *Reuters* (January 10, 1996).

[14] Eugene M. Khartukov, "Russia's Oil Prices: Moving Toward the Market," *Energy Exploration and Exploitation* 13 6 (1995), p. 576.

[15] Ibid., and *Delovie Lyudi* (Supplement - October, 1994), p. 4

[16] Eugene M. Khartukov, p. 576.

[17] *Delovie Lyudi* (Supplement - October, 1994), pp. 34-35.

[18] *Foreign Trade* [Russia] 12 (December, 1994), p. 25.

[19] Ibid.

[20] Paul Klebnikov, p. 70.

[21] Ibid., p. 73.

[22] *Energy Economist* 170 (December 1995), p. 13.

[23] Ibid., pp. 15-16.

[24] Andrei Edemsky, "The Fuel and Energy Industry goes its own way," *Delovie Lyudi* 63 (December 1995), p. 16.

[25] Paul Klebnikov, p. 74.

[26] Andrei Edemsky, "The Twisted Logic of the Kazakh Oil Deals," *Delovie Lyudi* 62 (December 1995), pp. 64-67.

[27] Paul Klebnikov, p. 74.

[28] Ibid., pp. 71-72.

Looking Ahead: Some Concluding Thoughts

The oil and gas industry was not the only economic sector to experience dislocation and confusion arising out of the collapse of the Soviet centrally planned economic system. However, due to its historical strategic and economic importance, the restructuring of the oil and gas industry was bound to have an inordinate effect on Russia's course to a market economy. Moreover, because the oil industry occupied a prominent position in the planning apparatus, its managers and administrators could not but influence the success of reforms to privatise state assets.

As the process of economic transformation began in earnest in January 1992, political influences from the past emerged to create a new set of dynamics which economic reformers had not considered. Managers, long accustomed to operating in a system of centralised control, were cut loose and forced to operate in a new environment which stressed more economics than politics. A new environment in which the disappearance of one system was not replaced by another created an atmosphere of uncertainty.

Though central planning has been formally replaced with democratisation and marketisation, the end of central planning did not lead to new ways of doing things. Old institutions and institutionalised habits of the Soviet system persist. How is it possible for people to change immediately from one approach of thinking and doing things to another? Neo-classical economic theory that underlies the Gaidar reforms of 1992 presupposed that people can change quickly and adapt to working and functioning under different institutional settings. Institutional theory pioneered by Veblen, Commons, and Coase posits a very different view. Institutions appear to lessen uncertainty but they may not necessarily be the most efficient ones because of imperfect information. This leads to a reluctance on the part of people and the organisations formed by them to change, because change in a world of imperfect information creates uncertainty and potentially great risks. What has occurred before can matter greatly and guide future actions. The challenge of the analyst is to understand the past's influences on the present and into the future.

This study has shown that the momentum for change began under Gorbachev, when the centrally planned economic system was already in decline and unable to satisfy the expectations of the population. Initially, the transformation of the oil and gas industry began as a political struggle of control over production resources, and the economic and social benefits derived from their sale. Regions broke away from a dominant centre, characterised by a hierarchical command structure.

The region of West Siberia has the most to gain from a disintegrating centre because of its extensive oil and gas resources, in spite of declining output, inefficiencies and little investment. The paradox of Russia's economic decline since 1992 is that as domestic industry restructures, it is using less energy. Wasteful consumption of energy is curtailed as more industrial managers attempt to conserve scarce financial resources just to survive. Yet curiously, the oil and gas industry seems unaffected by these changes as it tries to increase production.

Many foreign oil and gas firms since 1992 have made forays into the previously closed and potentially lucrative Russian market. Few are prepared however for the vagaries of Russia's economic transformation, inconsistent and confusing laws, punitive taxation and bureaucratic resistance at all levels. Though Western oil companies can offer technical expertise and more efficient models of management, Russian companies continue to dominate oil and gas production.

More interesting is the fact that as Russian oil associations are privatised, they are establishing new productive links along old lines. *Gazprom*, the natural gas monopoly continues to control its production associations and structures, arguing that it is already vertically integrated. Among the oil producing associations, Western ideas about vertical integration have been accepted but few are in any financial position to implement them save for *LUKoil*.

LUKoil did have the advantage of starting its restructuring first, though the stewardship of its chairman Vagit Alekperov seems to have had the most influence on the company's success. Formally inaugurated only in 1993, *LUKoil* has rapidly emerged ahead of its Russian counterparts by boldly taking market risks.

Looking ahead, it must be asked if the emerging institutional structure is conducive to the interests of the Russian government and the citizens of Russia. Trends suggest that a few individuals are benefiting from the new arrangement. Ownership of oil company shares is not widespread. Managers and insiders have appropriated most of the shares offered to the public. In so doing, management has consolidated their power. To be sure, public concern over the manipulation of oil shares by managers has raised demands for the renationalisation of the oil industry.

The present government supports and promotes the current trend in the industry, but a resurgent Communist Party led by Gennady Zyuganov will force the government to reassess its privatisation policies. The belief that private ownership and control of oil is inamicable to national development is widespread among Russians. In the oil industry, these issues will certainly raise further questions especially for management in general and perhaps for *LUKoil* in particular as its chairman Alekperov builds a Russian multinational company.

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