

**THE REORGANIZATION OF THE RUSSIAN
HYDROCARBONS INDUSTRY :
AN OVERVIEW**

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Today, Russia is facing a major restructuring of its hydrocarbons industries. This restructuring cannot but raise a great many questions on the organizational model likely to emerge. The economic environment in which this sector is developing has changed profoundly. It was deconstructed as the logical outcome of the collapse of the main co-ordinating mechanisms of the planned and centralized command economy, which are the mechanisms that allocate and the principles of command and subordination between the economic agents arising from them. The hydrocarbons sector thus seems to be in search of a new mode of cohesion and new mechanisms of co-ordination likely to ensure growth of a no longer extensive type.

Expressed in these terms, the regulation of the hydrocarbons industry in Russia cannot be grasped independently of the development of the whole economic system, that is to say its mutation. It can no longer be conceived independently of the inheritance left by the, imperative centralized planning system, so greatly did this system determine behaviour patterns in the energy field and the forms taken by the organizations involved. In particular, the nature of the energy monopolies appears to be very specific. Henceforth, what can replace the hierarchy embracing central organs - ministries and technical units that prevailed under the planned economy ? There we have it, the question, albeit very debated one, of privatization which of itself does not exhaust the debate. At the present time, this is perhaps of another order, and may be summed up in two main questions. Are the reorganizations seen today a simple adaptation of behaviour patterns to the upsets occurring in the economic environment ? Or are they the premisses for the emergence of a new organizational model compatible with the specific features of the Russian economic environment ? In fact, the main question consists of specifying the boundaries of the energy industry, that is to say an economically viable player, and moreover a basic player in any market economy.

I - THE CRISIS FACING THE OIL INDUSTRY IN THE FORMER SOVIET UNION OR THE SEARCH FOR A NEW ACCUMULATION MODE

Today, one observation suggests itself : the Russian oil industry seems to be prey to a deep crisis, the most vivid sign of which is the continuous decline in production since 1990. Beyond any other consideration, one of the essential explanations of this "crisis" lies in the inability of the industry to finance investments which are moreover considerable. There could be said, therefore, to be a crisis affecting the accumulation mode in this sector.

1.1 The investment "crisis" in the Russian oil industry

Today, nobody contests the scale of the need for investments in this industry, as much to fulfil a policy of modernization which is endlessly referred to but never achieved, as to bring new reserves into production. Despite the breadth of investments already made (energy accounted for nearly 40% of industrial investments just before the collapse of the Soviet Union), the situation in which this industry finds itself is not a whole lot better than that of the rest of the economy. In general terms, it absolutely must modernize itself. According to certain studies, only 14% of the equipment used is up to international standards, whereas 70% of drilling installation components need to be replaced. The necessity of having assisted recovery techniques is also keenly felt. Bearing in mind the maturity of the deposits, the large scale use of simple technologies (massive water injection) in order to exploit the deposits fully, is no longer desirable.

In addition, the Russian oil industry suffers from a chronic lack of exploration, a problem largely exacerbated by the current economic difficulties. To remedy this would call for a minimum level of investment which is beyond the reach of the Russian economy. The volume of activity of the Soviet oil industry, measured in metres drilled (the traditional indicator in plans allocated to the ministry of Geology) stagnated at around five million metres during the seventies, only to rise, at the beginning of the eighties, to levels experienced during the sixties (about seven million)¹. The collapse of the Soviet Union was accompanied by an unprecedented drop in exploration, with a fall of 30% between 1992 and 1993 for Russia alone, which followed a drop of 36% in 1992 in

¹ Locatelli (C).- La question énergétique en Europe de l'Est.- L'Harmattan, Paris, 1992, pp 94-101.

relation to 1991, and 22% in relation to 1990 (cf table 1). In addition, at production level, the lack of replacement equipment lay at the root of the closure of a considerable number of wells. Their number is estimated at 31,900, i.e. 22% of the total.²

The worsening of certain productivity indicators (the increase of capital requirements to produce one tonne of oil) is even more revealing of the Russian "oil crisis" than the drop in production, or even the number of drillings³. Moreover, with the collapse of economic activity (of the order of 25%) and the consequence of a decline in internal energy consumption, certain production associations paradoxically remain in an overproduction situation faced with a saturated transport network which no longer provides access to international markets.

The success of the Soviet oil industry development model was based on extensive management of resources assuming a continuous increase of the inputs aimed at the sector in which capital is an essential component. This management ensured an increase, albeit an uneven increase, of oil production. But, it did not prevent a continuous deterioration of performance levels in the industry of which it is possible to learn from physical indicators such as the pattern of the growth rate of reserves, or the marginal or average productivity of new deposits. The paradox is that the Russian oil industry is in great need of modernization in spite of the scale of investments lavished on it (cf table 2). As the Russian economy is no longer in a position to finance the increasing growth of investments in this sector, oil production can only decline sharply ; a new development logic for the sector must therefore take place to enable the level of export resources to be maintained. This can only be conceived as being resited in the dynamic of the destructuring-restructuring process of the Russian economic system.

² Konoplyanik (A) - "Russia struggling to review production, Rebuild oil industry" OGJ, Vol.91 n° 31 Aug 1993, pp 43-51

³ The fall in production and in the volume of drilling could be an indicator of the rationalization of resource management, providing that account is taken of cost and profitability constraints in stead and in place of earlier management by quantity.

Table 1 : Some performance indicators of the oil industry of the former Soviet Union, 1980 - 1990

	1980	1985	1990
Average productivity of new deposits (tonnes/day)	38.9	26.9	17.2
Average depth of wells (metres)	2003	2031	2340
Water content (%)	57.4	69.6	77.5
Investments per unit capacity (Roubles, 1984/t)	73.2	97.2	177.8

Source : Bobylev (Y) - The (hydrocarbons) and energy complex of Russia. Development problems affecting the conditions for transforming the economy - Institut Economique de Transition. Moscow, January 1994.

1.2 The consequences of the collapse of an economic system

The Russian oil industry crisis illustrates the constraints encountered in the change from the inherited, centrally planned economy. This industry was in fact fashioned by co-ordination mechanisms centred on command - subordination mechanisms. However, it must adapt to a largely destructured economic environment which is undergoing much change, and is therefore unstable, until new economic regulations wholly replace those of the planned economy⁴. This change is an unstable process, reflecting dependency paths such as those discerned by D. North and the neo-institutionalist approach. Possible futures depend on the inheritance of the planned economy system⁵ or, more broadly, they will be "a function of the constraints of the initial system and of the obstacles encountered during the change"⁶. We allow one to give an interpretation of the current evolution of the former Soviet Union's oil situation by changes to the mechanisms of co-ordination and organizational changes.

⁴ Andreff (W).- La crise des économies socialistes. La rupture d'un système.- PUG, Grenoble, 1993, p.327.

⁵ North (D.C) "Institutions" - Journal of Economic Perspectives, Vol 5, no 1, Winter 1991, pp 97-112.

⁶ Andreff (W), op cit., p.327.

1.2.1 The oil industry and the centrally planned economy : the earlier regulations

Russia inherited an oil industry whose development lay within the framework of command planning centralized by quantities. Planning thus constitutes the heart of the information system in relation to which economic agents are determined. Essentially, money and prices play a passive role in the sense that they are in no way a main vector of information ⁷. At the microeconomic level, it is the production targets defined in the one year and five-year plans that guide the growth of the oil industry insofar as they constitute the imperative to be achieved.

In addition, they respond to the logic of taut plans as the target for one year is calculated as an increase in relation to the level reached the previous year. The development of this industry therefore follows a development logic based on quantities. The famous mythical bar, often mentioned, but never reached, of 630 Mtep of oil production is the perfect illustration of this.

The main co-ordination mode of a system of this kind is the *allotment regime*⁸. An *allotment economy* is defined as "an economy in which industries and groups are recognized as "having acquired" the goods by virtue of a decision reached by their superior known as a "sharer" and in which they acquire the goods as the result of commands sent to the suppliers (producers or distributors) of the goods by the latter's superiors". Thus, within the Soviet economic system, each ministry has the function of sharer of those inputs between the units under its control. This mode of co-ordination defines the relations of the command-subordination type through a hierarchy-based organizational mode. The relations imposed between economic units are of the essentially vertical type. The implementing of this mode of co-ordination operates through two essential mechanisms ; the centralized financing of investments on budgetary allocations and the centralization of input supplies. They ensure the coherence of the whole system.

***The inputs allotment scheme**

⁷ Hewett (E.A) -Reforming the Soviet Economy : equality versus efficiency.- The Brookings Institution, Washington D.C., 1988, pp 96-152.

⁸ Cf particularly : Bensimon (G) - Le processus d'attribution et la monnaie dans une économie zinoviévienne.-ROSES-CNRS, Grenoble 1990, and Bensimon (G), Locatelli,(C).- Libération des prix, priorité et allocation des ressources dans une économie commandée avec relâchement de la coordination.- CNRS-ROSES-IEPE, Grenoble, June 1993.

Under this scheme, the oil sector had been dominated by a hierarchical structure containing several levels up till 1991. An initial consequence of this is the institutional separation of exploration and production, with exploration coming under the authority of the Ministry of Geology (MINGEO), which is disconnected from production, which comes under the Ministry of Oil. Discoveries financed under budgetary allocations are then "transmitted" (in fact given) to the Ministry of Oil, which will then be responsible for confirming them, and then for bringing them into production. Financing via budgetary provisions also has substantial consequences on how the price and the cost of Soviet oil is assessed. Exploration costs feature only as an arbitrary and fixed cost in the price of oil ⁹, today leaving the question of the real price of Soviet oil wide open.

For the rest, the same organizational structure prevails in each of the ministries referred to. The ministries cover the production associations which are groups of technical production units. On the scale of the Soviet Union, the Ministry of Oil covers forty-four production associations (33 for Russia alone) established on a regional basis. They manage technical production units (111 in Russia) covering different oil basins. The production associations are responsible for distributing the inputs (investments, labour) previously allocated by the ministries between the production units.

The latter therefore concentrates real economic decision-making powers in its hands, and carries out the resource distribution function. In this sense alone, its powers are immense. They have largely fashioned the current situation of the Russian oil industry, perhaps more than the strategies defined by the central organs (the State, planning bodies). The regional distribution of investments carried out under the auspices of the Ministry of Oil is an example of this. By favouring the old European regions to the detriment of the younger and very rich province of Western Siberia, in spite of decisions taken by the Central Committee, the choices made by the ministries heavily burdened the future of the industry ¹⁰.

*** Management by priority as defined by the Ministry**

⁹ Tretyakova (A) and Heinemeyer (M).- Cost Estimates for the Soviet Oil Industry : 1970 to 1990. - Center for Information Research, US Bureau of the Census, Washington D.C., 20233, 1986, no 20, p 12. In fact, during the course of the various price reforms (1967 and 1982), the way in which exploration costs were taken into account in the price of oil varied greatly.

¹⁰ Hewett (E.A) - Energy Economics and foreign policy in the Soviet Union.-Brookings Institutions, Washington D.C., 1984, p 59.

The ministry performs an essential function, that of balancing. It shows through in the form of inputs reallocation between the "firms" as a function of the *degree of tautness* of their plans. To enable the associations to carry out their plans, the Ministry of Oil systematically proceeded to reallocate investment funds between exploration and production, and later, proceeded to recentre resources to Siberia alone when it was shown that the difference between the resources allocated to this region and the *tautness* of its plan were too great. Here we see management by priority being exercised.

The logic governing the development of this industry had little to do with notions of cost or profitability criteria. Being financed from budgetary provisions, capital is practically cost-free for the ministry and its production units. The priority allocation logic calls for production plans to be achieved whatever the cost, even if this takes place to the detriment of other sectors through inter-sectorial reallocations of investment funds. This is the very illustration of the principle of priority inherent in the centralised planning system ¹¹. It operates through the "driving links" in the materials balance method. Moreover, profitability concepts are of little importance because the price determination method itself systematically undervalues the price of basic goods. Energy is regarded as one of them, and must ensure continuous industrial development, and be virtually free of charge to consumers.

The worsening of the oil industry's performance led, for its part, to a response from the central organs of an essentially quantitative type by increasing resources in the form of labour and capital. Here again, this response was only made possible by the existence of "cost-free" capital for the production associations, financed and divided centrally by the central organs (The State, Gosplan, Ministries). As a striking example of this, the first signs of difficulties in Western Siberia led to a massive, rapid reorientation of investments to that province, with the balance being tilted towards exploration. A response of this kind was conceivable only within the framework of an allotment economy.

1.2.2. The disintegration of co-ordination mechanisms

¹¹ "The existence of priorities (...) is inherent in a system of planning. From the moment that the State (...) directs and fixes the production objectives, it is led to direct the distribution of productive resources between firms such that the objectives that are considered to be absolutely essential (whatever be the reasons) are realized". in G. Bensimon, C. Locatelli, op. cit., p. 7.

The gradual dislocation of the centrally planned economic system destroyed the essential co-ordination and coherence mechanisms at work in the oil sector. This breakage was in itself sufficient to explain the vertiginous fall in production which marked the early nineties. In their turn, the centralized financing of investments, the centralized allocation of inputs, and the sharing and balancing functions carried out by the branch ministries disappeared.

This disintegration has been gradual. Gorbachev's laws on the Autonomy of State Enterprises, 1987 and 1991, were an important early step. They affected oil directly by formally granting financial autonomy and management to the production associations, whilst maintaining the ministries. Identified as "oil enterprises", they were - in theory at least - invested with the majority of decision-making powers in the area of resource allocation. More prosaically, it was a question for the State of withdrawing from the financing of this sector faced with the mounting budget deficit of the Soviet Union. The strategic nature of this industry was not lost as is demonstrated by the introduction of "State orders" defining the level of production to be achieved by the oil industry at prices to be fixed administratively. In return, the State provided the Ministry with a guarantee that a certain number of inputs would be delivered. So, it very quickly emerged that these State orders to a considerable degree replaced the old production plans devolved to the production associations. In fact, the latter had acquired only a small degree of autonomy where control over their production (and sales) were concerned, and - consequently - over their financial and economic management.

The State orders were deemed to ensure the overall coherence of the sector. However, the State's inability to deliver the inputs made this regulating structure very problematic. With the fall in centralized financing of investments, a powerful means of co-ordination and application of its priorities disappeared. There then arose the problem of co-ordination, particularly between the ministries to maintain the coherence of industrial links. Faced directly with these questions, the ministries started to perform the main economic functions hitherto devolved to the Centre. The Ministry of Oil therefore performs a twofold function : co-ordination through its alliances with other ministries for supplying capital goods, but also the distribution of inputs in order to respond to State orders. "Bargaining" relationships were slowly established along the oil sector chain between ministries having differentiated negotiating powers. So, the Ministry of Oil has increasingly less financial power to purchase capital goods in the face of an upstream branch which is experiencing gradual price deregulation, with oil prices remaining strictly controlled. This gradual development in fact consecrates

the emergence of new power relationships, which remain today, implicitly overturning the order of priorities where resource allocation is concerned. So, the price liberalizations clearly explain the strength relationships which are being formed between the enterprises by bargaining¹². The coup d'etat in 1991 virtually completed this process of dislocation of links within the oil chain between producers and equipment suppliers. Following the spatial logic of Stalinist planning, the latter were geographically situated in regions very remote from centres of production, the main ones being situated in Azerbaijan, a now independent Republic.

1.3. The restructuring of the Russian hydrocarbons industry

The collapse of the planned economy demanded a reorganization of the entire energy sector. The disappearance of branch ministries raises a question that could not be by-passed. On what basis could the energy sector be restructured from the inheritance of the past ? The willingness of leaders to "move towards a market economy", whatever the mythical nature of this aim, assumes a form of restructuring based on energy enterprises. It is vital to state what the notion of an enterprise may embrace, to qualify its frontiers in the Russian hydrocarbons field, in the light of the legacy left by the planned economy. However, it is also helpful to carry out an analysis of the behaviour patterns of the new players, players which cannot yet be regarded as enterprises in the traditional sense of the term.

*** The reorganization scheme of the Russian hydrocarbons industry**

In theory at least, the reorganizing scheme of the Russian hydrocarbons industry is simple. In its broad lines, it corresponds to the general framework adopted for all industries¹³. State financial holding companies, joint stock companies, were set up in order to manage State enterprises in the sector. In practice, these were Gazprom in the case of natural gas, and Rosneft in the case of oil. Subsequently, they will be the subject of privatization. There is thus a movement towards "top down" concentration of ownership. These holding

¹² Aglietta (M), Moutet (Ph). "Redéployer les réformes" .-Economie Internationale, CEPII, n° 54, 2nd term 1993, p.83.

¹³ W. Andreff, (1993), op cit., p 384-385.

companies should carry out the necessary restructuring prior to privatization in the strict sense ¹⁴. This is particularly the case with Rosneft. (Cf box 1).

The movement initiated under Mr Gorbachev has not been called into question. The production associations were confirmed in their "role" of energy enterprises in that they recovered certain economic powers. In particular, they were obliged to finance their investments from their own budgets, doing so in accordance with the law on enterprises and entrepreneurial activity, 1990, which is still in force. In legal terms, this movement has drawn some comfort from the 1992 law on privatization, which required the production associations to become stock companies, with the shares initially being held by the financial holding companies. Gradually, part of the capital was to be opened up to "private investors", mainly by the distribution of coupons to the population, and then to the staff of the enterprise in question.

However, in the medium term at least, the State will remain the majority shareholder, through the financial holding companies. Rosneft is to retain the majority of the shares in the production associations for at least three years. In the same way, Gazprom's capital is to be divided up as follows : 40% of the shares will remain, for at least three years, the property of the Russian State ; 10% will go to the management of Gazprom ; the remainder will be divided between the staff, the Directors of the different units of Gazprom, and the population. As an important element for defusing potential conflicts between the centre and the regions, 29% of the shares will be sold only in those regions where Gazprom units are situated ¹⁵

¹⁴ W. Andreff, (1993), op cit., p 384-385.

¹⁵ JOSSE (C.).-"Privatization of Gazprom : more than 200 million shares issued late".- Revue de Presse Russe. IFP , n° 7, mai-juin 1994.

Boris Yeltsin's decree dated 27 November 1992 on the privatization of the oil industry in practice covers two distinct movements. We have just addressed the first one, the preparation for the change of legal ownership of the production associations, but in parallel, the decree also covers a restructuring of the oil industry. Rosneft is thus regarded as reorganizing the industry on the basis of eight to ten vertically integrated oil companies. One of the aims pursued by creating these companies is to stimulate a degree of competition in the oil industry in stead and in place of a monopolistic market. If the scale of their reserves could lead to the constitution of regional monopolies, it is a case of allowing the emergence of companies likely to compete with each other and to be competitive with the international oil companies on the world energy markets. In this perspective three companies vertically integrated from exploration to distribution, via refining - these being Lukoil, Yukos and Surguneftegaz, have been created. Four other groups have been added recently, namely Slavneft, Sidanko, Vostochnaya Komp and Onako (July 1994) (cf box 2). Like Rosneft, these companies have the structure of a financial holding company. Rosneft must however, for at least the next three years, retain its position as majority shareholder in these companies by retaining 45% of their capital constituted in this way : 38% of the associations' assets, 38% of the refineries' assets with the remainder being the distribution companies' assets (cf box 3).

**Box 2 : Composition of the integrated oil companies
identity sheet**

*** Lukoil**

This holding company is structured around

- 1) production associations : Langepasneftegaz (production 21.9 Mt in 92)
: Uraineftegaz (production 6 Mt in 92)
: Kogalymneftegaz (production 29.1 Mt in 92)

- 2) refineries belonging to : Mazheikai
: Ufa
: Volgograd

La "privatization" should be launched in 1994.

*** Yukos**

This holding company is structured around :

- 1) production associations : Yuganskneftegaz (production 39.4 Mt in 92)

- 2) refineries belonging to : Kuybyshev
: Syrzans
: Novo Kuybyshev

*** Surguneftegaz**

This holding company is structured around :

- 1) production association : Surguneftegaz (production 42.5 Mt in 92)

- 2) refinery belonging to : Kirishnefteorgsyntez

To these three holding companies, will be added **Slavneft**, structured around :

- 1) production association Megionneftegaz : (production 4.6 Mt in 92)

- 2) refineries : Mozir (Bielorussie)
: Gorknefteorgsyntez

*** Sidanko**

- 1) Production associations : Varyeganneftegaz (6.5 Mt)
: Kondpetroleum (7.0 Mt)
: Purneftegaz (9.3 Mt)
: Udmurtneft (6.8Mt)

- 2) Refineries : Angarsk
: Saratov

*** Vostochnaya Komp**

- 1) Production association : Tomskneftegaz (10.9 Mt)

- 2) Refinery : Achinsk

*** ONAKO ou Orenburg oil**

- 1) Production association : Orenburgneftegaz (7.2 Mt)

- 2) Refinery : Orsk

**Box 3 : The capital structure of the integrated oil holding companies except Rosneft
(Financial holding company)**

* A reorganization scheme is required for the companies created (except Rosneft).
They are made up as follow :

- the producers (associations) : 38% of the company's shares
- the refineries : 38 %
- distributors : 24%

* Constituted in this way, the capital will be divided between :

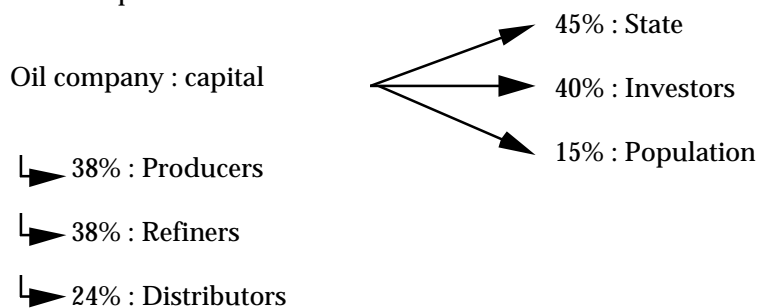
- The State (in this case, Rosneft) : 45%
- Private investors : 40% including 15% to international capital
- the population : 15%

With regard to the partial privatization of Surguneftegaz in late 1993, a dispute has opposed on one hand the Ministry of Fuels and Energy supported by local authorities and on the other hand the State Committee for the management of State Property. The latter wanted 15% of the shares to be offered to the entire Russian population, with the Ministry of Energy preferring to limit the sale to the population of the region concerned by the company (the geographical area covered by the production association).

* For the associations of which 38% of the shares are assigned to the oil company created, the remainder is being distributed as follow :

- The staff : 35%
- The association directors : 5%
- The local authorities : 5%
- The public : 17%

To sum up :



However, in parallel, a more or less spontaneous emergence of "independent companies" may be observed. There are, grosso modo, three types of "independents" on the Russian scene which nevertheless reflect different realities. The first type consists of companies which operate on a leasing basis to manage part of an oil basin. They are generally formed from one or more production units belonging to an association. The best known is the Chernogorneft company within the Nizhnevartovskneftegaz Association. It is difficult for the time being to assess the economic viability and significance of

enterprises of this kind. The second type consists of financial organizations of an apparently purely commercial kind (oil trading and exports), such as Hermes, Ritek and Nipek ¹⁶. Finally, players have emerged in an unexpected way on the Russian oil scene, as the product of a spontaneous reorganization movement resulting from disagreements and tension between the centre and the local and regional powers. The latter tend to become autonomous in relation to the centre, seeking to create a structure of their own in order to gain privileged access to oil revenue. Companies such as Sameko (for Sakhaline onshore), Sinko (Western Siberia Corporation) or Russia Petroleum (in the Irkutsk Oblast) have thus obtained exploration licences ¹⁷ from the Regional Geology Committees, albeit without having had any backing of any kind from the central authorities. The claims of the autonomous republic of Bashkirye, concerning the resources of its own subsoil, betoken a movement towards autonomy on the part of the oil provinces in relation to the Centre where the management and reorganization of their oil industries are concerned (cf box 1).

¹⁶ "New kids on the block" - Petroleum Economist, August 1993, pp 5-6.

¹⁷ Petroleum Economist, August 1993, op cit. p 5.

Box 4 : Organization of the GAZPROM Joint Stock Company

GAZPROM

Unified supply branches system	Nine R&D Institutes	6 construction units	6 service units	21
↓ ③ Drilling units, ③ Gaz export, ③ Transgaz (13 unités), ③ Distribution units ③ Production associations: (12 unités) - Astrakhan gazprom - Kavkaz transgaz - Kuban gazprom - Nadyngazprom : 11,5% de la production de Gazprom - Orenburggazprom - Severgazprom - Surgutgazprom - Tyumentransgaz - Urengoygazprom : 47% de la production de Gazprom - Yamalgazprom - Yamburggazdolycha : 29,6% de la production de Gazprom - Yugtransgaz				

* Two production associations are independent of Gazpromi. They are :
 - Yakutgazprom and
 - Norilskgazprom

The robust integration of the gas industry (cf box 4) is opposed to the shake-up of the oil sector, in spite of the apparent identity that would seem to be conferred on the oil sector by the presence of the financial holding companies. It enjoys a monopoly of production-transportation and distribution. The notion of monopoly nonetheless remains to be specified in an economy of this type. Today, it is the subject of widespread debate in Russia, insofar as the behaviour patterns of organizations of this kind are specific, even if, in the energy sector it can embrace natural monopoly phenomena ¹⁸. However, the different technological

¹⁸ A substantial part of the first 1994 issue of the publication Communist Economies and Economic Transformation was devoted to this question. The following, in particular, may be cited :

Starodubrovskaya (I).- "The nature of monopoly and Barriers to entry in Russia", pp 3-18
 Yakovlev (A).- "Anti-Monopoly Policy in Russia - Basic Strategies and Prospects", pp 33-44
 Capelik (V.E).- "Should Monopoly be regulated in Russia ?", pp. 19-32.

realities of the two industries considered here are a powerful variable serving to explain their contrasted development. The gas branch is a network industry. The gas production associations, whatever the interests of the autonomous republics, are dependent upon Gazprom's transportation and distribution network. In addition, they are bound by long term contracts signed at European level. This is not the case with oil. In the Russian context, it is undeniably the product that is most readily valued in foreign currency, particularly because of its more substantial export facilities.

II - ANOTHER READING OF THE RUSSIAN HYDROCARBONS REFORMS

Going beyond reorganizations of the purely juridical kind that we have just addressed, the restructuring of the sector and particularly its development are bound up with the general changes in the economy. Today, we are witnessing the deformation of the organizational system of the planned economy and its adaptation to a new context distinguished by the absence of clearly defined co-ordination mechanisms. Are they an adaptation of old forms of co-ordination to the disappearance of key mechanisms from the mode of co-ordination and to an increasingly uncertain economic environment ? Or are these adaptations the long term heralds of a new organization model suited to the Russian context ? A number of hypotheses may be tested in order to answer these questions.

If we adopt this way, the interplay of the reorganizations seems twofold. Firstly, as X Richet stresses, it is a question of changing the internal and external structures controlling the enterprise ¹⁹. It is also necessary to mark out the boundaries between the enterprise and its economic environment, and by doing so, to impart some content to the notion of the market (following Williamson's approach) ²⁰. In the energy field, the debate focuses around the monopoly (of oil and gas). Taking account of the allocation system described above, the monopoly in Russia differs in nature from what is usually observed in a market economy. It leads to specific behaviour patterns that cannot be reduced to those of a company seeking to increase its profit from a monopoly. Neither can these behaviour

¹⁹ Richet (X) "Restructurations industrielles et transformations économiques" Revue Francaise d'Economie, Vol VII, n° 4, Autumn 1992, pp 3-31

²⁰ Chavance (B) .-Hierarchical forms and Coordination Problems in Socialist Economy.-, CEMI, Paris, mars 1994, Working Paper.

patterns be reduced to a search for economies of scale ²¹. The "monopoly" is in fact the way in which the centrally planned economy imposed by earlier co-ordination mechanisms of command and subordination is organized. It is the working of the economy as a whole that is at issue, not only that of a particular sector or market ²². This characteristic is essential for any reform, as much in terms of restructuring and privatizing, as of the regulations to be put in place, particularly where energy tariff structures are concerned. The hierarchical organization of industrial monopolies and the behaviour patterns arising from them are also constraints which are going to affect the privatization and restructuring processes directly.

The real form that the hydrocarbons sector takes and will take will depend on the changing economic environment and the institutional and organizational inheritance of the past, according to the hypothesis on "dependence on the economic path" developed by North ²³. In planned economies, typical behaviour patterns sought, via bargaining relationships, when faced with the phenomena of shortage, to ensure for themselves a stable, even increasing supply of inputs, and to protect the workforce within the enterprise. They do not in any way consist of maximizing the profitability ²⁴. Providing that the economic environment in which the new organizational forms evolve is likely to allow the continuation of these phenomena of shortage, of bargaining and social management of the labour force within the enterprise, there is no reason for these patterns of behaviour to change appreciably, or in any case for them to be orientated towards the taking the slightest account of profitability criteria.

It is therefore a question of wondering whether the hydrocarbon industry has the capacity to reform, to push forward to new micro-economic behaviour patterns. Is the "fractioning" of monopolies in itself sufficient to induce financial behaviour patterns or to lead to a certain level of competition ? Rather, is the risk not one of the emergence of regional monopolies, notably in the case of oil ?

2.1 Defining the boundaries of the Russian energy enterprise.

²¹ I. Starodubrovskaya, op. cit., pp. 3-6.

²² A. Yakovlev, op. cit., pp. 34-36

²³ North (C.G).- "Institutions".- Journal of Economic Perspectives, vol. 5, n° 1, pp. 97-112

²⁴ Leitzel (J).- "A note on Monopoly and Russian Economic Reform".- in Communist Economies and Economic transformations, vol. 6, n° 1, pp 45-53.

The hydrocarbons field was doubtless an extreme case, the prime example of an administrative organizational model dominated by command-subordination relationships, without any real of energy enterprises existing. Given the presence of financial holding companies belonging to the State and the conflicting effect of sharing oil revenues can the organizational forms based on the former production associations ns be seen as enterprises enjoying strategic and economic autonomy ?

*** What economic viability can there be for a Russian oil enterprise ?**

The affirmation of entrepreneurial autonomy at the decentralized level of the former hierarchical organization comes up against a number of constraints. Firstly, exploration and production activities are not always integrated. The maintenance of this separation manifests the absence of change of Russian behaviour patterns vis-a-vis the appropriation of natural resources : hydrocarbons are above all a valuable resource and the property of the Nation as a whole, implicitly assuming that the reserves are virtually free. The traditional cut-off in a planned economy has thus been maintained, even if Geology, along with the regional committees placed directly under the control of the government (sic) (cf box 1). The associations are deemed to sign contracts with the regional exploration committees ²⁵. This being the case, the exploration is still financed from a budgetary provision. Thus, the "economic" viability of the various associations, on the basis of their assuming all the real costs of exploration and production, remains a substantial unknown. What will happen when there is an alignment of the organizational rules along Western lines ?

Secondly, the economic viability of the associations is questioned in a more immediate fashion by the absence of cash and by the maintenance of price controls. In fact, the associations are becoming increasingly less capable in financial terms of carrying out their everyday production activity in a normal way. The rise in the number of closed wells bears witness to this. The growth in the number of unpaid bills (in the domestic, industrial and refining sectors), the inability of the associations to set their prices, which remain regulated by the State, the weakness of the financial markets and the embryonic banks in providing finance in the form of loans are further factors which limit the decision-making elbow room. The

²⁵ p.107 in Dienes (L.), Dobozi (I.), Radetzki (M)..- Energy and Economic Reform in the Former Soviet Union - St Martin Press, New York, 1994, 246p.

entire oil chain, from production to refining, is heavily indebted, and this reaches extreme levels in the case of some associations ²⁶.

It is worth spending some time on the question of prices, as they determine the profitability of the oil industry. The general tendency has been one of a downward movement of the relative price of oil, particularly in relation to the price of capital goods, with the consequential growing inability of the industry to finance the renewal of its capital. Thus, up till 1992, oil prices only benefitted from price increases administered without any comparison with the inflation rate recorded. Since May 1992, a system imposing upper limits or ceilings on oil prices (around 9,000 R per tonne in January 1993) ²⁷ has been progressively implemented. Beyond this limit, increasing taxation (with consequent disuasive effect) is imposed. From July 1993, this ceiling was eliminated, but a "cost plus" regulation was introduced, with the price being aligned with all the production costs and charges, increased by a standard profit which could not exceed 50% ²⁸. (cf box 5).

This system proved difficult to implement. Faced with an increasingly unsatisfiable demand, the producers could barely take advantage of it to increase their profits on pain of seeing bad debts increase or demand falling away sharply ²⁹. What is more, the regulated limiting of profits turns out to be a very strong constraint for producers enjoying low production costs. It forbade them from selling their production at the highest price that solvent consumers would be prepared to pay ³⁰. Producers facing higher production costs found themselves in a slightly better financial position, being able to derive a higher unit profit. In a general way, however, the producers found themselves in a price-related pincer movement, with an increase in the cost of their capital equipment which was distinctly higher than that enjoyed by their production.

²⁶ At the end of 1993, the oil producer debt was R 485 Billion. "Financial situation of the fuel and energy complex".-BWW, n° 44, 1989, p. 8.

²⁷ For a detailed analysis, refer to : Russian Energy Prices, Taxes and Costs, 1993 - AIE-OECD, Paris, 1994 101 p..

²⁸ AIE-OECD., op. cit., p.32

²⁹ AIE-OECD., op. cit., p. 31

³⁰ AIE - OECD., op. cit., pp 33-34

As a final element conditioning the economic viability of the associations, powerful means of control have been given to the State financial holding companies capping the associations, by conferring on the former control not only over the transport and marketing networks, but also over the export companies in the case of Gazprom. In relation to economic powers of this kind, the associations are confirmed in a simple role of production, in the absence of direct access to exports, and above all to convertible currency. At present, the financial - and therefore strategic - autonomy of the bodies has more reality for the holding companies (i.e. at regional market level) than for the associations, reproducing this time on a regional basis, the autonomy that was apparent at branch ministry level. This reality also slows down the learning of managerial and financial functions within the associations, which threatens to become a long, drawn out process. The holding companies though, are emerging as powerful players on the Russian oil scene, but they are players in which the State retains a controlling interest. The appropriation of oil income in foreign currency is such stake that there cannot be any compromise other than the State maintaining this favoured access to foreign currency in Russia.

*** The emerging structures of ownership**

The creation of financial holding companies added to the confusion of the economic powers. Who really takes the decisions, particularly where investment is concerned ? If we examine the vertically integrated "companies" the decision-making power is divided between Rosneft, representing the State, these "holding companies", the associations and the refineries. Moreover, it is difficult to get a clear idea of the margin of autonomy enjoyed by the associations, 38% of whose shares belong to one of these vertically integrated "holding companies".

Box 5 :
Evolution of the oil price determining system in Russia

*** Under the centrally planned economic system**

The prices are determined on the basis of an average cost plus a standard.

*** January 1991**

Administered increase of energy prices.

*** January-May 1992**

Introduction of a two channel marketing system. Under the system of State orders (accounting for 60% of production), the selling price of crude is 350 R/tonne. The remainder is sold at an unrestricted price.

*** May 1992**

Price negotiated freely within an upper limit of 2,200 R/tonne. For prices between 1,800 and 2,200 R/tonne, a progressive tax is applied, intended to equalize prices.

*** Decree dated 17 September 1992**

The price determining system becomes that of the "cost plus" type, but on an individual basis. The price is defined as being the total by way of costs and taxes plus a standard profit rate.

Zone-based prices are abolished. However, a basic wellhead price of 4,000 R/tonne is defined. If the transaction price exceeds the basic price, it is subject to increasing taxation as follows :

30 R each 100 roubles increase in the range	4,000-4,999 R/tonne
40 R in the range	4,500-4,999 R/tonne
50 R	above 5000 R/tonne

The profit margin is limited to 50% if the price exceeds 4,000R/tonne.

*** January 1993**

The basic wellhead price is raised to 9,000 R/tonne.

*** July 1993**

Introduction of a new regime. Only the "cost plus" rule remains, i.e. a price defined as the total by way of production costs and taxes, plus a maximum profit of 50%.

Source : Russian Energy Prices, Taxes and Costs 1993.-AIE - OECD, Paris, 1994, 101 p.

Where the opening up of capital is concerned, the privatization movement remains limited. Only 40% of the capital will be opened up to private investors, 15% of which will be allocated to international capital. However, in the context of juridical, legislative, economic and fiscal uncertainties, these "privatizations" hold little attraction for foreign investors. All the potential partners of the Russian oil industry (particularly the international oil companies) come up in particular against the essential question of where control of these enterprises will lie in future. In fact, the privatization schemes put in place encourage an ownership structure that would broadly favour internal control structures as opposed to external control by the shareholders. In fact, the crumbling of ownership and the absence of well-developed financial markets raise doubts about the possibility of effective external control on their part. The consequential emergence of internal

control by workers' collective organizations, seems inevitable ³¹. On these conditions, however, their position will weigh down on any internal reorganization and restructuring.

At the present time, the current ownership structures reflect the search for a compromise between the interests of the State and those of the regions, between public ownership and private ownership. The question of the ownership of natural resources lies at the heart of the conflicts between the Centre and the Regions. Discussions hingeing around the adoption of oil and gas law prove as much. It remains to be seen whether the current compromise will be durable. Explicit or implicit opposition, the blockages encountered during successive reorganizations of the oil industry enable some doubt to be cast on this. Differences dividing the Committee for the Management of State Property and the Ministry of Fuels and Energy over the privatization of Surguneftegaz, one of the first holding companies set up, illustrate the splits running through the Russian State itself.

2.2 Specific aspects of the behaviour of the enterprises : the survival challenge

In this highly specific economic environment in which regulations of the monetary and trading type remain somewhat underdeveloped, the enterprises have been able to develop particular behaviour patterns. Forms of adptation and adjustment do exist, but need to be specified.

In the light of the changes to the economic environment, the responses of the entrepreneurs have been far from those expected by the majority of Western observers. The main goal of managers is the survival by keeping the enterprises unchanged³² that is to maintain the workforce in place ³³. In order to do this, it is helpful to pursue as far as possible a logic of maximizing production irrespective of criteria of economic efficiency and profitability. The clearest clue to this logic in

³¹ Joskow (P.), Schmalensee (R.), Sukova (N.).-” Competition Policy in Russia during privatization” - Economic Activity Micro Economics, 1994 n° 1, pp 301-381 and Creating Private Enterprises and Efficient Markets.- World Bank, Washington D.C.,1994, 255 p.

³² Recent surveys of the conduct of Russian heads of enterprises carried out at the E. Gaidar Institute of the Economics of Transition broadly confirm this pattern of behaviour across the entire Russian economy.

³³ According to W Andreff, the changing of the attenuated salaries relationship, a characteristic of centrally planned economies, is one of the fundamental influences on the current reforms. W. Andreff, 1993, op. cit., p 324.

the oil industry is the maintenance of a fairly high production level, in spite of the fall in domestic demand leading to situations of overproduction in the case of the larger associations.

With this prospect in mind, we may talk about continuity in the behaviour patterns of the enterprises. As the inheritance of the centrally planned economy, an enterprise cannot be reduced to its economic functions alone : it also embraces social functions, ³⁴ such as the social management of the workforce within the company. This leads to the State replacing the enterprise in paying salaries in the event of the latter becoming insolvent. This being the case, the State has recently been seen to cover the payment of salaries to Gazprom employees in certain regions ³⁵ The absence of unemployment, in spite of situations of near bankruptcy is a concrete result of these behaviour patterns. On the other hand, we have seen the development of the phenomenon of inter-enterprise credit, a specific form of adaptation to changes in the economic environment. However, this new "regulation" has allowed lax budgetary constraint to be maintained, as before, in spite of the 1992 bankruptcy law. In fact, bad debts represent a private issuing of money ³⁶. It follows that monetary constraint is of little effect, with price liberalizations losing their substance. In no case are monetary variables likely to modify behaviour patterns or guide them towards a rationalization of costs or a quest for profitability ; at most, the successive price increases of the inputs will be passed on to the end price. In no case can prices then be a factor likely to guide the enterprises, and at the end of the day to drive structural reforms, particularly by taking account of notions of efficiency and profitability in economic behaviour patterns.

*** The absence of incentive through monetary constraint**

The development of inter-enterprise credit tends to perpetuate past behaviour patterns. It does not provide an incentive to adopt economic profitability criteria for companies having to secure their supply of inputs in order to remain in production. This practice renders inoperative any incentive to achieve efficiency in enterprises that normally emerges from the financial

³⁴ Du combinat à l'entreprise. Reconversion des combinats d'Europe de l'Est.- CERNA, Paris, 1992.

³⁵ "Workers in Russian gas region End Strike".- The Moscow Tribune, 3.12.1993.

³⁶A. Aglietta , P. Moutet, op. cit., pp 67-103

requirements for access to bank credit. Amongst other fundamental effects, the reform of the banking sector has thus served to harden both budgetary constraint on companies and the incentive towards productive efficiency, by redefining the terms on which credit will be granted ³⁷.

The recently devised fiscal mechanisms also contribute towards maintaining past patterns of behaviour where the financing of investment is concerned. On the one hand, fiscal depreciation mechanisms which, in a market economy, constitute a real key to the financing of investments, pose a problem. In the form that they currently take, they do not really allow the enterprises to replace their equipment. Furthermore, most of the fiscal burden is on producers, with moreover, the basis of taxation resting on the production achieved rather than on profits. Because of this simple fact, a large part of the oil industry is unable to achieve sufficient cash flow after tax to finance its investments ³⁸. Hence, the bulk of the investment financing in this industry has to be met from the oil investment fund, i.e. a system of subsidies that maintains the past dependence-based behaviour patterns in relation to the State. In 1993, in spite of substantial losses by the oil industry, investments have been paid for from this fund to the tune of \$1.3 billion, with the rest of the finance (\$0.5 billion) coming from short term government loans made at very low rates compared with the rate of inflation. Investments may thus be made independently of their financial profitability or any assessment of the economic profitability of the enterprise concerned. Maintaining subsidies of this kind upholds past patterns of behaviour, through enterprise strategies based on their capacity to obtain subsidies. They question any form of financial discipline although this is the intended effect of the reforms themselves. The mechanism of the oil investment fund finally comes down to a creaming-off of oil producers via taxation on production, and then to redistribution without the sharing criteria really being known.

*** The superimposition of heterogeneous logics**

On these terms, the outcome of this situation is the restructuring of old organizations in the new form of conglomerates. The financial holding companies are a means of securing supplies through the relationships of strength

³⁷ W. Andreff stresses that it is "the requirement to achieve self-financing or to obtain credit whose repayment to the bank is compulsory, on pain of bankruptcy, that makes budgetary constraint on enterprises really hard" W. Andreff, 1994, op. cit., p 354.

³⁸ AIE-OCDE, 1994, op. cit., p 32-37

that they are able to develop with the State. They also reproduce internally, behaviour patterns of the command-subordination type in a logic of allocation between the holding on the one hand and its constituent units on the other hand. In part, they perform the function of sharing the investments, standing in for the old ministries in this respect³⁹. It would seem, then, that the institutionalization of monetary behaviour patterns within the enterprises is a long way off.

As the introduction of co-ordination by the market and monetary exchange, the effect of the financial reforms is very limited in the oil sector. This has not prevented commercial logics from being able to emerge : those of the newly created oil and gas companies are undeniable, particularly within the CEI. The latter, particularly Gazprom in Europe, may be seen working on the international markets, looking for new outlets. Some commercial strategies have been able to emerge on the Russian market between regions, strategies strictly governed by financial and speculative logics, motivated by price differences that exist in the oil sector. However, most of the distribution networks continue to be part of the State holding companies, and this is reflected in marketing practices based on regional monopolies. This vertical integration does not allow for the development of competition on a Russia-wide scale through diversified marketing practice.

Conclusion

The Russian oil scene has thus been one of great change, even if it is difficult for the present to predict what will emerge from such contradictory developments. Nevertheless, these developments open up an interesting field of research, particularly for interpreting and monitoring the development of the links between the holding companies and their components, when future changes occur in their economic and financial environment.

In addition, it is clear that if different organizational and marketing forms seem to coexist, betokening different economic logics, if there also appears to be a persistence of the earlier behaviour patterns and regulations, the present implicit structuring seems unstable. The gradual affirmation of an enterprise logic holds substantial new changes in store.

³⁹ Crosnier (M.A.) .-"Les ressources primaires d'énergie en ex-URSS : état des lieux fin 1993".- Le Courrier des Pays de l'Est., n° 387, mars,1994, p 10.