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**SUSTAINING GROWTH IN A RESOURCE-
BASED ECONOMY: THE MAIN ISSUES AND
THE SPECIFIC CASE OF RUSSIA**

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Abbreviations, acronyms and explanatory notes

CBR	Central Bank of Russia
CIS	Commonwealth of Independent States
FDI	foreign direct investment
GDP	gross domestic product
IMF	International Monetary Fund
NBER	National Bureau of Economic Research
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
RCA	revealed comparative advantage
SITC	Standard International Trade Classification
SME	small- and medium-sized enterprises
UNCTAD	United Nations Conference on Trade and Development
UNECE	United Nations Economic Commission for Europe

The following symbols have been used throughout this publication:

..	=	not available or not pertinent
–	=	nil or negligible

In referring to a combination of years, the use of an oblique stroke (e.g. 1998/99) signifies a 12-month period (say, from 1 July 1999 to 30 June 2000). The use of a hyphen (e.g. 1999-2002) normally signifies either an average of, or a total for, the full period of calendar years covered (including the end-years indicated).

Unless the contrary is stated, the standard unit of weight used throughout is the metric ton. The definition of “billion” used throughout is a thousand million. The definition of “trillion” used throughout is a thousand billion. Minor discrepancies in totals and percentages are due to rounding.

References to dollars (\$) are to United States dollars unless otherwise specified.

Abstract

In recent years economists have come to see rich natural resource endowments as a “curse” or “precious bane” that undermines development and slows economic growth. Resource-based development undeniably involves major risks. Nonetheless, the resource curse is not inevitable, as the examples of Australia, Canada and the Scandinavian countries demonstrate. This paper argues that the challenges posed by resource dependence, which include an increased vulnerability to external shocks, the risk of “Dutch disease” and the risk of developing specific institutional pathologies, can be overcome, or at least very substantially mitigated, if accompanied by the right economic policies. It then analyses what these policies are, and how to set up economic and political framework conditions to facilitate their implementation. The paper looks specifically at Russia as a prominent example of a resource-based economy. It investigates briefly the main sources of Russian growth in recent years, and makes specific recommendations that would help the Russian economy to sustain high rates of economic growth.

Introduction¹

In the 1950s and 1960s economists generally saw abundant natural resource endowments as facilitating a country’s rapid development,² but in the last two decades many have come to see natural resources as an obstacle to successful development. A large empirical literature has investigated the existence of a so-called “resource curse”³ and speculated on its underlying causes.⁴ This paper argues that the resource curse is not inevitable. If a suitable economic and political framework can be established, natural resource abundance need not prevent successful economic development, as the examples of Australia, Canada and the Scandinavian countries demonstrate. Nonetheless, resource-based development obviously presents important challenges. These include an increased vulnerability to external shocks, the risk of “Dutch disease”, and the institutional pathologies often associated with heavy reliance on natural resource sectors. These challenges are serious, but they can be met, or at least substantially so, with the aid of appropriate institutions and policies. The main aim of this paper is thus to analyse what the “right policies” might be. General concepts are first discussed, before turning to the specific case of Russia.

The first part of the paper discusses the policies required for successfully developing a resource-based economy. It is argued that resource-based development places a priority on good macroeconomic management, particularly sound fiscal policy. Turning to institutions, it is stressed that an honest and efficient state apparatus is particularly important in a resource-based economy, and that the creation of such an apparatus is facilitated by the presence of a strong civil society. Finally, to the extent that a more diversified economy is less prone to the risks mentioned above, diversifying a resource-based economy can also solve potential problems of resource dependence. The paper therefore also explores the possibilities for resource-based economies to accelerate the diversification of their economic structures.

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The second part of the paper looks specifically at the Russian economy which in recent years has been a prominent example of resource-based development. The main sources of its recent growth are briefly examined, and the underlying policies assessed against the framework suggested in the first part of the paper. The role of the oil sector, and particularly of privately-owned oil companies, is shown to have been crucial in driving economic growth during 2001-2004. Almost one quarter of the growth during this period can be directly attributed to increased production by private oil companies. It is argued that, given its current economic structure, Russia is bound to remain a heavily resource-dependent economy for some time to come. Taking this into account, and based on the normative framework developed in the first part of the paper, detailed suggestions are made on how to manage successfully the Russian economy and to facilitate its economic diversification.

I. The challenge of sustaining growth in a resource-based economy – main concepts

A. Resource-based economies

In a large number of low- or middle-income economies, industrial production and exports are often heavily biased towards natural resources. This is the case for most African, Latin American and CIS countries. Whether such resources are a curse or whether (and how) they can be exploited to the benefit of the country and all its citizens is thus very relevant for a large proportion of the world's population.

Resource-based economies are often – although somewhat arbitrarily – defined as economies in which natural resources account for more than 10 per cent of GDP and 40 per cent of exports. As commodity prices are often very volatile, such economies are particularly vulnerable to external shocks.

Having a rich natural resource base, however, has some obvious advantages. Natural resources can provide a source of export revenue. For the poorest countries, such revenue allows the import of crucial goods (e.g. medicines) that cannot be produced domestically. From a practical point of view, natural resources also provide some shelter against international competition. It is a banal point – but worth stating – that in order to compete in natural resources, a necessary condition is that a country must possess the relevant deposits, and neither advanced technology nor ultra-cheap labour can change that.

On the negative side, it has been argued that the growth potential of natural resource sectors can be comparatively low. There are two reasons why this might be the case. First, natural resources are finite. Second, it is often claimed that natural resource extraction involves low levels of technology, and hence the potential for productivity increases is limited.⁵ The latter is also one of the most common economic explanations of why there might be a resource curse. Both of these arguments, however, are questionable. Undeniably, natural resources are ultimately finite, but the total stock of a natural resource is not particularly relevant until its total depletion is in sight. What is important is the quantity of known natural resource deposits that can be exploited profitably at current technology levels and expected long-term average prices. Since there has been considerable technological progress in resource extraction, for most commodities the volume of exploitable deposits has not been falling in recent decades.

Nor is it the case that specialization in natural resources inevitably implies low levels of technological know-how. Resource extraction – especially when it moves to deposits that are more difficult to exploit – has become quite intensive in the use of specific high technologies (e.g. oil platforms).⁶ To the degree that one of the main economic explanations for a resource curse rests on the low-tech character of resource extraction, it is doubtful whether such an outcome is really inevitable. Poor economic performance may be due not to resource abundance as such but to the structures of ownership and control over the resources. In many countries, resource sectors have been dominated by state-owned or state-controlled enterprises. Given the evidence that private enterprises tend to be

more efficient than state-owned ones in most sectors,⁷ the weak growth performance of resource-based economies may have been due to state ownership of large parts of those economies, rather than to natural resources per se.⁸ This said, not all forms of private ownership of resource sectors may be equally desirable. Different forms of private ownership (e.g. domestic, foreign or mixed ownership), as well as the structure of the natural resource sectors (e.g. competitive versus monopolies) may have different implications for economic development. These arguments have not been tested properly as most of the empirical work on the resource curse has focused on the hydrocarbon and hard mineral sectors since the late 1950s, a period during which the majority of states with large natural resource sectors exercised a high degree of state ownership and control.

Regardless of the desirability of being a resource-based economy, changes in the structure of an economy are usually unavoidably slow, which means that today's resource-based economies are bound to remain as such for some time to come. Resource-based development, however, can nevertheless be a source of growth and modernization, especially via exports, as the Chilean example shows. Increasing incomes, in turn, can lead to the expansion of a country's non-tradable sector, principally of services and construction. Growing resource exports also increase a country's capacity to import, especially of investment goods. Developing a country's natural resources, via increased imports and expansion of the service sector, can therefore help the process of modernizing a country.

Nonetheless, there are major risks in a resource-based economy that need to be addressed. These include its vulnerability to external shocks, the "Dutch disease", and the "political economy" problems that are often associated with resource-based development. Each of these is addressed in turn.

B. Vulnerability to external shocks

Crises in emerging market economies are commonly caused by large terms of trade shocks arising from sharp falls in the prices of their main export commodities,⁹ and resource-based economies are particularly exposed to this kind of risk. The margin of error for resource-based economies is much smaller than for economies with more diversified economic structures. Good macroeconomic management can help to reduce the vulnerability of resource-based economies to external shocks, and encourage successful resource-based development. In this respect fiscal discipline is important: good fiscal policy cannot eliminate the vulnerability to external shocks, but it can go a long way to mitigate them. Fiscal imbalances can magnify, rather than dampen, the effects of commodity price fluctuations on the domestic economy. What is needed therefore is a counter-cyclical fiscal policy with respect to commodity prices, the budget being kept in balance across the commodity price cycle. Moreover, fiscal policy should always be based on conservative price assumptions for the major export commodities: a budget that balances only because of exceptionally high commodity prices is not really in balance at all.

In order to achieve balance across the commodity price cycle, the creation of a stabilization fund can generally be very helpful. Such a fund accumulates windfall government revenues when prices are above trend and releases them when they fall below. The legal authority of such a fund and the rules determining how revenues should be accumulated, invested and spent should be strict and transparent. The stabilization fund can serve a number of functions.

First, it can help to smooth government revenues – and thus government spending – over the commodity price cycle. For this to work effectively, it is necessary that the stabilization fund be large enough to insure the budget against several years of below-average commodity prices. In theory, such smoothing could also be achieved by borrowing abroad when commodity prices are low, and repaying the debt when they are high. In practice, however, resource-based economies often find that their access to international credit is severely constrained when prices are low. When commodity prices fall, current account problems are likely to arise and attempts to borrow are unlikely to be viewed favourably by the financial markets. Moreover, if they are able to borrow they are likely to have to pay a very high price. Hence, a stabilization fund that can be used to finance government expenditure when prices are low is by far the preferred option.

Second, a stabilization fund not only serves to smooth government expenditures, but can also help to reduce fluctuations in the rate of growth. As economic growth is partially driven by changes in the terms of trade, the fund reduces the risk of overheating when the economy is growing strongly, and provides a stimulus when growth is below potential.

Third, a stabilization fund can also serve to reduce exchange rate fluctuations. This arises if the investment and spending pattern of the stabilization fund described above contributes to capital outflows when commodity prices are high and to capital inflows when they are low. Such flows can thus help to counteract current account pressure on the exchange rate, thus shielding the economy to some degree from potentially damaging fluctuations in the exchange rate.

Whatever the desired size of a stabilization fund, it may at some time reach the point where further accumulation would be unnecessary and even undesirable. After all, the insurance provided by the fund comes at a price. A country will then need to decide what to do with any further windfall revenues arising from high commodity prices. The temptation to use them to finance tax cuts or higher levels of non-interest spending might have to be resisted if they were to increase the risk of overheating. It could also jeopardize the fiscal position as and when commodity prices eventually fell.

The urge to spend at least some windfall revenues – or to use them to reduce taxes – is, of course, understandable, given the many urgent calls on the public purse in low- and middle-income countries. However, if the authorities wish to use windfall revenues to finance sustainable tax cuts or expenditure increases, then the best strategy might be to use surplus revenues in the first instance for early debt repayment. This would reduce the government's future liabilities and thus allow for higher spending or lower taxation in subsequent years – without betting on continued high commodity prices. Using surplus revenues for debt repayment would also help to reduce the risk of currency crises and to limit their impact if they occur.

Once the stabilization fund has reached a size considered sufficient for stabilization purposes, the authorities might also wish to consider accumulating additional revenue windfalls in a fully-funded pillar of the state pension system – assuming of course that such a system exists. Apart from being a macroeconomically responsible way of distributing the windfall to the population, this would help to strengthen the pension rights of those who, owing to age or income, would otherwise have little or no claim to a pension from the fully-funded pillar.

Low levels of external debt also help to reduce vulnerability to external shocks, both by decreasing the risk of currency crises and by limiting the damage from such crises if they do occur. In this respect, the need for low levels of external debt applies equally to the public and private sectors. It is therefore important to make sure that the private sector's external borrowing does not reach dangerous levels. Empirical work suggests that external debt above a certain level has a negative impact on growth.¹⁰ To reduce an external debt level, it is not necessary to reduce the public debt burden. By issuing long-term debt in domestic rather than foreign currency, external debt is likely to fall since there is usually no significant international market for long-term domestic paper. In any case, sovereign debt should ideally be predominantly in domestic currency, or at least indexed to a relevant commodity price or commodity price basket, so that debt service rises and falls in line with commodity prices. So far, bonds indexed to commodity prices have been issued mainly in the context of sovereign debt restructurings or by private companies, but there is no obvious reason that would prevent them from being used more widely for sovereign issues.¹¹ Such bonds should attract those seeking a hedge against commodity price rises, especially as the possibilities for long-term hedging in commodity markets are relatively limited.

Resource-based economies also need a significant degree of exchange rate flexibility in order to be able to accommodate shifts in their terms of trade. When commodity prices are rising, currencies may become fundamentally overvalued, increasing the risk of large and painful depreciations when prices fall. Hence there may be a place for efforts to avoid excessive exchange rate appreciation, especially when the prices of major export commodities are high and there are large short-term capital inflows. Nonetheless, pursuing such exchange rate goals may be costly in terms of inflation unless there is the political will for sufficient fiscal sterilization, and the technical capacity for monetary

sterilization. This reinforces the need for resource-based economies to have a stabilization fund, but it also implies that their central banks need to have the capacity for monetary sterilization. Such economies should have a large market in domestic currency government debt, and it may also be useful to allow the central bank to issue securities.

More generally, dollarization (or euro-ization) of a resource-based economy should be avoided, with prices and contracts being denominated in local currency as far as possible. Borrowing, saving, setting prices or concluding contracts in an external currency may be rational and beneficial for individual households, enterprises or banks. However, general resort to a non-domestic currency implies a major risk to economic stability in the event of large exchange rate fluctuations, and is therefore better avoided in resource-based economies.

C. Dutch disease

The development of a country's natural resources often increases the risk of Dutch disease, a term that is used by economists to describe a situation where the discovery and subsequent export of large quantities of natural resources raises the equilibrium exchange rate and/or general wage level, thereby putting pressure on the competitiveness of the other tradable sectors in the economy.¹²

An appreciation of the equilibrium exchange rate is not entirely bad news as it increases the purchasing power of the population (as imported goods become cheaper) and therefore raises living standards. The increased spending also usually boosts production in the non-tradable sector. The drawback, however, is that the competitiveness of the non-resource-based tradable sectors, such as manufacturing, is undermined. To be able to continue exporting, or at least to withstand import competition, these sectors must therefore increase productivity sufficiently in order to maintain their competitiveness.

While productivity increases as such are obviously welcome, a potential problem is that the pressure from the appreciating exchange rate on the non-resource tradable sectors may ultimately affect equilibrium employment levels. The resource sector usually provides relatively little employment itself. Therefore, if resource-based currency strength leads to a more capital- and less labour-intensive production pattern in other industrial sectors, it risks reducing the level of industrial employment. This may not be a problem if growth in some of the non-resource-based activities is sufficiently strong to create the necessary jobs. An expansion of the service sector, in particular, could compensate for lost industrial jobs, but a significant part of the potential employment opportunities in the service sector may be of rather low productivity, which would imply relatively low wages. This could lead to social tensions.

The potentially negative impact of the natural resource sector on the economy, however, can be mitigated by appropriate policies. The tax system, for example, can be instrumental in avoiding the Dutch disease and assisting the development of the non-resource sector. More precisely, direct taxation of the natural resource sectors could be increased, as long as they remain sufficiently profitable to allow for their further development. The proceeds of the increased resource taxes could then be used to lower overall tax levels in the economy and in particular to cut non-wage labour costs. While lower non-wage costs might in some sectors be wholly or partly offset by wage increases, they should at least reduce total labour costs in sectors with low productivity. Obviously, cuts in non-wage labour costs may lead to shortfalls in social security or pension funds, but these could be compensated with part of the resource tax revenues. Moreover, taxing resource rents should also lower wages in the resource sector and hence diminish the pressure on wages elsewhere. As this leads to lower wages for activities with relatively lower productivity, it would also help to preserve employment that would otherwise be lost or to create new employment opportunities that would otherwise not arise.

While orienting the tax system towards the resource sector can help to alleviate the Dutch disease, it also increases the dependence of the budget on commodity prices. This, however, should not be seen as a deterrent to such a change; rather, it underlines the importance of having a sufficiently large stabilization fund.

D. Political economy challenges

As already pointed out, many – if not most – of the potential macroeconomic problems arising from resource dependence can be resolved or at least significantly reduced by following appropriate macroeconomic policies and undertaking structural reforms. The potential political economy implications may therefore be the toughest problems that resource-based economies face. The economic literature suggests a number of reasons why endowment of natural resources may complicate economic development. Among these, the incentives for rent-seeking are prominent. First, the allocation of talent in natural resource economies may be biased in favour of the resource sector, as capable individuals focus on securing resource rents rather than building successful businesses in other sectors.¹³ Secondly, countries with resource-based economies are also more likely to experience rebellions and civil wars, which to some degree are simply a consequence of rent-seeking being pushed to the extreme.¹⁴ Thirdly, it has been shown that a large share of natural resources in exports tends to be associated with more corruption,¹⁵ which, in turn, is associated with lower rates of long-term growth.¹⁶ And finally, a larger natural resource share in the economy is often accompanied by greater inequality of incomes, which also tends to undermine long-term economic growth.

As rent-seeking or its consequences underlie most of these problems, part of the solution is simply to tax away a fair share of the resource rent. For example, to the degree that inequality is driven by the fact that those active in natural resource sectors (owners, managers and workers alike) get their share of the resource rent, and hence are usually doing far better than those in similar positions in other sectors, taking away these rents goes a long way in solving the problem. The money thus collected can then be transferred to the population at large through generally lower tax levels. Using part of the tax to increase targeted social transfers may also help to reduce inequality, especially in countries where the social safety nets are weak. By providing the state with additional resources to reduce income inequality, the risk of social tensions, rebellion and civil war may also be lowered. A large reduction in resource rents going to individuals instead of the state would also help to weaken the potential misallocation of talent to resource sectors. The main obstacle to achieving this is that it requires an efficient and honest administration; otherwise, resource rents are simply divided between resource companies and their bureaucratic counterparts, with only a minor share going to the state. Hence an effective state relatively free of corruption is one of the key conditions for meeting the political economy challenges associated with resource dependence.

There are various measures that can be taken to limit corruption. One is to create more corruption-resistant structures. Rules, when necessary, should be simple, transparent and standardized, with few exceptions and as little reliance as possible on bureaucratic discretion. However, while effective legislation is important, it will not be sufficient as long as corruption goes largely unpunished because of a lack of monitoring. Cross-country research shows that both an effective rule of law and a developed civil society are strongly and negatively correlated with corruption.¹⁷ The evidence also demonstrates that a lack of press freedom increases corruption.¹⁸ An independent judiciary, a free press and a strong civil society are not luxuries, but are important in reducing and keeping down corruption, and thus for promoting long-term economic development.

All resource-based economies that have developed successfully have had strong civil societies, relatively well-functioning and independent judicial systems, high levels of press freedom and relatively low levels of corruption, whereas resource economies that have failed to achieve adequate rates of economic progress have usually lacked most of these features. There is also tentative evidence that resource-based development has generally been more successful when state ownership in the resource sectors has been absent or very limited.¹⁹ In this respect, the contrast between the mainly state-owned Russian gas sector and the (until 2005) almost entirely privately-owned oil sector is suggestive. While from 2000 to 2004, the latter was one of the main engines of Russian growth, the former continued to stagnate.

E. Diversification

Given the right institutions and policies, developing a successful modern economy based on natural resource exports is feasible, as the examples of Australia, Canada and the Scandinavian countries demonstrate. As stated above, however, there are risks associated with being highly dependent on a limited number of resource-based sectors. Therefore a more diversified economic structure is something that in principle is desirable. It will, however, be important not to lose sight of what diversification policies can and cannot achieve. First, it must be clear that there is no miracle recipe to achieve diversification quickly. Fostering it will be a long, drawn-out process, and should hence be seen as a long-term goal. Second, there is no shortage of examples of failed diversification policies, and economists know fairly well on the basis of international experience what does *not* work. Fiscal irresponsibility as well as large-scale *state* investment in pet industrial projects rank at the top of the list of what should be avoided. Unfortunately, there is less agreement among economists as to what *does* work, as policies that work well in one place often fail dramatically elsewhere. Indeed, failures have been so common (and sometimes so spectacular) that, in recent years, economists have often preferred not to give any advice at all with respect to diversification policies.

Nevertheless, there are some policies that are both helpful in fostering diversification and are fairly uncontroversial. Broadly speaking, they consist of getting the framework conditions for entrepreneurship right, making sure that the business environment is generally competitive and that there are sufficient incentives to invest in non-resource sectors. As such, they involve a large number of structural reforms typically advocated by mainstream economics. However, reasonable doubts have been voiced as to whether these policies are sufficient to achieve the stated goal of diversification in a reasonable time span. While acknowledging the need for good framework conditions for business as a *sine qua non*, some economists have advocated “new style” industrial policies as a supplement to the structural reform agenda.

The most conventional approach is to use the tax system to promote the development of the non-resource sector. As the type of tax policies required are similar to those needed to combat the Dutch disease, and which have already been discussed in section I.C above, only the guiding principle is repeated here, namely, that there should be extensive use of taxes that specifically target the resource sectors, and that the revenue from these be used to lower the overall tax rate.

In addition to tax policy, there is also a long list of structural reforms, including financial and administrative, that are particularly important for facilitating the diversification of economic activity. Mechanisms for efficiently allocating investment between – and not merely within – economic sectors are important. Setting up the framework to allow the banking sector to develop – while making sure that it remains sound – is thus a key priority.²⁰ Facilitating the emergence of a venture capital industry would also be helpful, especially in those resource-dependent countries that have a relatively advanced technological potential. At the same time, there is often a crucial need to improve the basic framework conditions for business, particularly for small- and medium-sized enterprises (SME). In many resource-based economies, there is considerable scope to reduce the burdens of heavy regulation and a corrupt bureaucracy which, in addition to strengthening the financial system, would help to create a more level playing field for enterprises and lower barriers to entry.

Less conventional “new-style” interventions include the creation of programmes that would directly improve the productivity and competitiveness of selected enterprises, which to some degree could serve as an example to others. The guiding principles of such programmes usually include that they be transparent, that participation in them be determined by private sector representatives, and that the period during which any single enterprise can participate be strictly limited. Programmes should not involve significant transfers of resources to participating enterprises, but rather focus on the transfer of knowledge or skills, such as new production, management or marketing techniques, or the dissemination of specific information (e.g. about potential export markets). An extensive discussion of “new style” industrial policy is beyond the scope of this paper, but one can be found in UNECE.²¹

II. The Russian case

A. Sources of Russian growth, 1999-2004

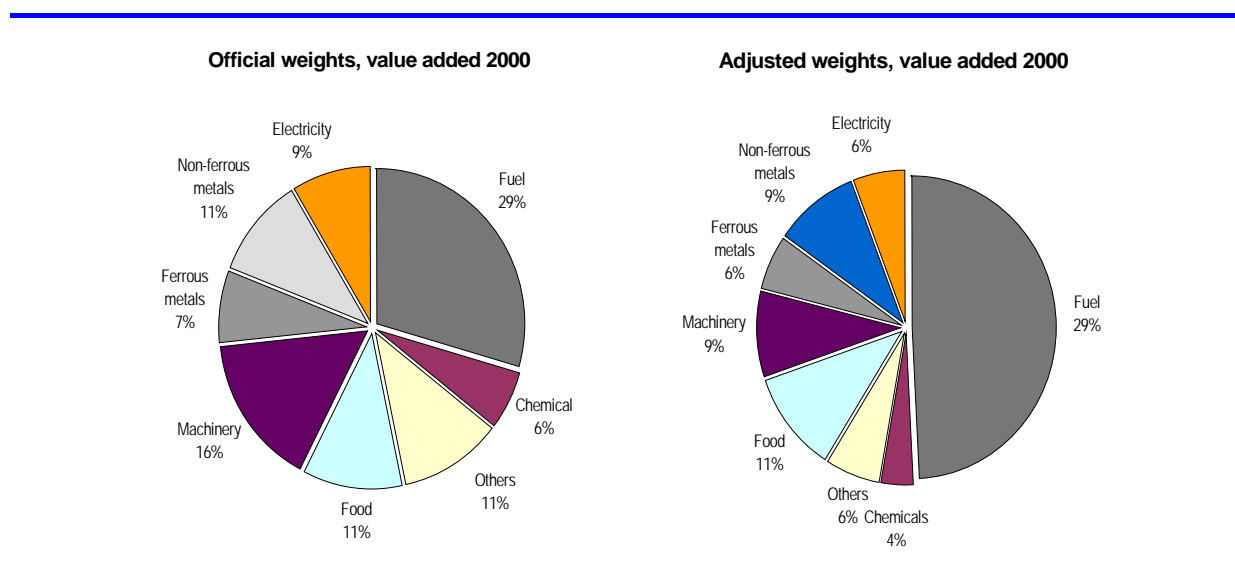
Russian real GDP grew at just under 6.8 per cent per annum between 1999 and 2004, much faster and more sustained than most observers thought possible in the wake of the 1998 financial crisis.²² Given that there has been – and still is – considerable doubt about Russia’s potential for sustained and rapid growth, a clear understanding of the factors and policies that have underpinned Russia’s performance is important for any attempt to assess the conditions under which Russia could maintain high growth rates in the future.

The starting point for analysis must be an understanding of Russia’s existing economic structure. Russian official data, although technically correct, present a somewhat distorted picture of the economy because a large share of the value added generated by the natural resource sectors is reflected not in the accounts of the extraction companies but in those of their affiliated trading companies. This practice is most common when output is exported, especially if the domestic and export prices of the goods involved differ substantially. As a result, export-oriented industries are underrepresented in industrial production, and industry as a whole is underrepresented in the Russian national accounts. Trade, and hence the service sector, is overrepresented.

There have recently been several attempts to correct for these distortions, and this analysis relies on one of them – the recent World Bank²³ estimates of the relative weights of different sectors in GDP.²⁴ According to these estimates the share of industry increases from 27 to 41 per cent, and the oil and gas sector’s share of GDP rises from around 8 per cent in the Goskomstat data for 2000 to just above 19 per cent. This is broadly in line with the estimates of the Economic Expert Group attached to the Russian Ministry of Finance, which suggest that the oil and gas sector’s share of GDP was around 21 per cent in 2000 and has hovered at around 17 per cent thereafter.²⁵ At the same time, the share of services falls from 60 to 46 per cent when employing the World Bank weights, which seems far more plausible. Chart 1 shows the structure of value added in industry according to the official and the adjusted weights.

CHART 1

The structure of industrial value added in Russia, 2000
(Percentage shares of GDP)



Source: Russian Federal Service for State Statistics; World Bank, “Russia: transition meets development”, country economic memorandum for the Russian Federation (Moscow), April 2004; author’s estimates and calculations.

Note: Weights estimated by the World Bank.

When the adjusted weights are used, overall economic growth is seen to have been relatively broad based. Immediately after the 1998 crisis it was overwhelmingly driven by industry and construction, but the relative importance of the service sector has been increasing, especially in 2002-2004, and even with the adjusted weights services still account for roughly one third of growth during this period.²⁶ Industrial growth, however, has been highly concentrated, and the role of energy in Russia's expansion is striking. Natural resource sectors²⁷ directly accounted for roughly 70 per cent of the growth of industrial production in 2001-2004, with the oil sector alone accounting for just under 45 per cent (chart 2). This implies that the natural resource sectors directly contributed more than one third of Russian GDP growth over the period, the oil industry alone accounting for close to one quarter.²⁸ It should be noted that this includes only the direct contribution of the oil sector to growth: taking into account the indirect effects of oil sector procurement and wages on domestic demand, the actual contribution of the oil industry to economic growth was greater still.

This contrasts with developments in the period immediately after the crisis. Then, Russian industry profited from a sharply devalued exchange rate and a large reduction in real energy prices, and these two factors were the major sources of the industrial recovery in 1999-2000. However, as both the real exchange rate and energy prices recovered from their exceptionally and unsustainably low levels, the boost to growth from the devaluation gradually disappeared.

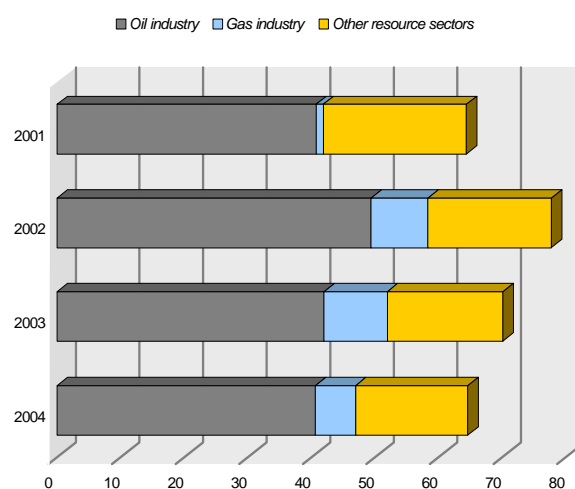
From the supply side, growth was almost certainly driven by large increases in total factor productivity,²⁹ while on the demand side the main factor was the rapid increase in private sector demand.³⁰ In this respect it is important to note that, especially in 2003-2004, fiscal restraint played a major role in preventing the Russian economy from overheating. Moreover, during 2001-2004, the consumption boom did not put the external balance at risk, as large increases in imports were balanced by rapidly growing exports, mainly of oil.³¹ In other words, while Russian growth was increasingly *driven* by consumption, it was largely *sustained* by rising oil exports.

B. The policies and developments underlying recent Russian growth

While the commodity structure of Russian exports was already highly concentrated during the 1990s, it has become even more so since 2000. Chart 3 shows that the strong growth of export volumes in 2000-2004 was driven overwhelmingly by the oil sector. In this respect it is striking to see the huge differences in the export performance of Russia's main sectors. While the volume of oil exports grew by more than 60 per cent, the growth of the other major export sectors (ferrous and non-ferrous metals, as well as machinery) was somewhere between 10 and 20 per cent,³² while gas exports even fell.³³

Monetary policy in 2000-2004 was affected by conflicting policy goals, and de facto was very loose. The Central Bank of Russia (CBR) aimed at gradually reducing inflation while at the same time limiting the real appreciation of the rouble in order not to endanger the competitiveness of Russian industry.³⁴ Given the large current account surpluses and decreasing net capital outflows during most of the period,³⁵ this determination to prevent an overly rapid appreciation of the rouble compelled the CBR to intervene increasingly on the foreign exchange market.³⁶ In the absence of efficient

CHART 2
Contribution of resource-related sectors to industrial production growth in Russia, 2001-2004
(Per cent)

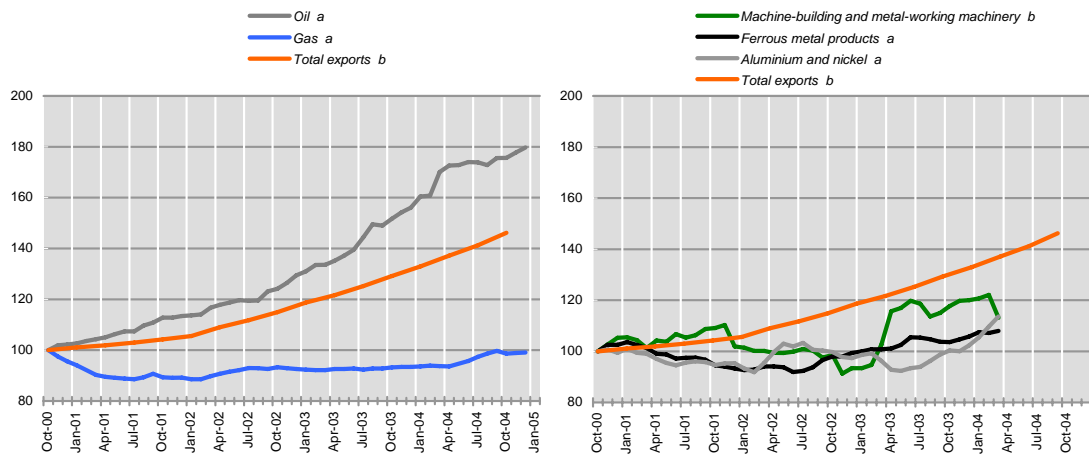


Source: Russian Federal Service for State Statistics; World Bank, "Russia: transition meets development", country economic memorandum for the Russian Federation (Moscow), April 2004; author's estimates and calculations.

Note: Calculation based on adjusted sector weights, as estimated by the World Bank.

CHART 3

Exports by main sectors in Russia, October 2000-January 2005
(12-month moving average, index October 2000=100)



Source: Russian Federal Service for State Statistics; author's estimates and calculations.

a Physical volumes.

b Real roubles.

large-scale sterilization tools the accumulation of reserves led to a very strong monetary expansion. This loose monetary stance also meant that from mid-2000 interest rates on rouble lending to enterprises and individuals were very low, and real interest rates on deposits or government bonds were actually negative.

Prudent fiscal policy was probably the Russian government's single most important contribution to sustaining economic growth during 2000-2004. Due to deep cuts in spending, general government expenditures (including all levels of government and social funds) were about 10 percentage points of GDP lower after the 1998 crisis than before it, while revenues relative to GDP remained at roughly pre-crisis levels.³⁷ As a result, following a decade of large deficits, the federal budget was in surplus from 2000. To be sure, fiscal responsibility was facilitated by growing revenues due to the favourable terms of trade and rapid growth. However, the government largely resisted the temptation to spend this windfall, instead using a significant part of it to repay debt.³⁸ The government also accumulated reserves, part of which were used to set up a stabilization fund. Indeed, during 2000-2004, the federal budget was based on such conservative oil price assumptions that it probably would have remained roughly in balance even if oil prices had been at their long-term average throughout the period.³⁹

In part this was achieved by the 2000-2004 tax reform which simplified the tax system, while increasing its efficiency.⁴⁰ At the same time, the tax system was restructured so as to capture a larger share of natural resource rents, especially windfall profits from high oil prices. Together with a reduction in the rate of profits tax and the introduction of a simplified and unified social tax (involving the regrouping of several social payments), this was a first step towards increasing taxation of the resource sector, while using the freedom this generated to cut the overall rate of taxation on the economy as a whole.

A sound fiscal position also played a key role in reviving private investment. The fact that the government turned from being a net domestic borrower to a net lender helped to bring domestic interest rates down, while declining levels of sovereign foreign debt, together with improved perceptions of the Russian economy (at least until mid-2003), helped large Russian companies to borrow more, and at better terms, from foreign banks and international markets.

The perception that property rights had become sufficiently secure (even though – with hindsight – this turned out to be misguided in some cases) was one of the factors contributing to the recovery of investment in 2000 and especially 2001. This was particularly strong in the oil sector, where

investment rose from roughly 25 per cent of total industrial investment before the crisis to around 35 per cent from 2000.⁴¹ Strikingly, the growth of investment in the oil sector was initially led by companies controlled by the state or by oil industry insiders: by 2000, their investment was already 70 per cent above 1998 levels. This was in sharp contrast to oil companies whose owners' property rights were perceived as less secure, for example, those owned by major financial groups. In these companies investment in 2000 was only marginally above 1998 levels (table 1). However, as perceptions of the security of property rights improved, the latter group of companies began to rapidly increase investment in 2001, soon reaching levels comparable to those of the former group. This increase in private investment led to a sharp increase in oil production and exports in the following years.

TABLE 1

Investment in the oil sector in Russia, 1999-2002
(1998=100)

	Upstream capital spending			
	1999	2000	2001	2002
Total	65	148	215	167
Financial group owned ^a	35	122	225	202
Oil industry insider owned ^b	80	169	229	174
State controlled ^c	73	173	244	169

Source: Renaissance Capital Investment Bank estimates.

^a Sibneft, TNK, YUKOS.

^b LUKOIL, Surgutneftegaz.

^c Bashneft, Rosneft, Tatneft.

The output and export growth of Russian oil companies, however, was very uneven during 2001-2003 (chart 4). Two points stand out. First, state-controlled companies barely increased their output or exports. Russia's private oil companies accounted for almost all of the growth during this period. Private oil producers thus directly accounted for somewhere between one fifth and one quarter of GDP growth, as well as most of the indirect contribution referred to above. Secondly, the private companies that did the most to drive this growth were those controlled by major financial groups (the so-called *finansisty*) rather than those under the control of oil industry insiders (the *neftyaniki*).

As mentioned already, it is unlikely that Russia would have been able to grow at anywhere near the rates it achieved in 2001-2004 had it not been for the oil sector. What is more, the performance of the state-controlled oil companies and of other important state-controlled companies⁴² strongly suggests that Russia's leading private oil companies would not have achieved the growth of the last few years if they had remained under state control, implying that the Russian growth rate would also have been significantly reduced.

The above analysis, however, should not be taken to imply that there have been no positive developments outside the oil sector in recent years. Other industrial sectors have also grown, and in many there have been large increases in labour productivity. There has also been a large amount of consolidation in the industrial sector in the aftermath of the 1998 crisis. Large industrial groups that have emerged were usually founded around some commodity exporting business, and in recent years have mainly pursued strategies of vertical integration. The privately-owned industrial groups – usually tightly controlled by a small number of core shareholders – have generally restructured the businesses they owned or acquired in recent years and most of them are fairly well managed. The productivity of many private enterprises has been increasing briskly, and often by more than in the economy as a whole.⁴³

C. Sustaining Russian economic growth

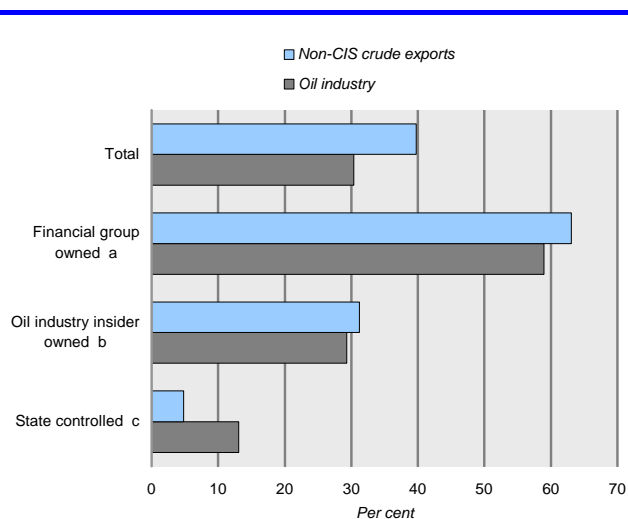
Having discussed the policies required for successful resource-based development, as well as briefly examining the main sources of Russian growth in recent years, the question now is whether, and under what conditions, Russia will be able to sustain its recent rates of economic growth.

First, if Russia is to sustain growth at current rates, it must also be able to increase exports rapidly in the short to medium term. This is because imports, which consist largely of consumer goods in which Russian output is either non-existent or uncompetitive, will in all likelihood tend to increase in line with disposable incomes as recent experience shows (chart 5).⁴⁴ Since one of the main aims of economic growth is to raise living standards, high growth rates will almost certainly imply a continuation of increasing import demand.⁴⁵ The large current account surplus in 2004 and the large

projected surplus for 2005 might be interpreted as showing that Russia has ample room to increase imports without a corresponding rise in exports. This, however, is probably not the case. In 2004 and in the early months of 2005, the terms of trade were very favourable, but they are likely to deteriorate at some point in the future. If oil prices had been at their long-term average of \$19 per barrel (Urals) in 2004, and everything else remaining equal, the current account surplus would have been somewhere around \$15 billion. This is roughly the amount Russia needed to finance estimated capital flight and pay for underreported imports. Alternatively, assuming that import volumes in dollar terms continue to increase at their average rate in 2000-2004 and that the growth in the volume of exports slows to 5 per cent from 2005 onwards,⁴⁶ the current account surplus would disappear by the end of 2006 even with Urals crude at around \$30 per barrel and non-hydrocarbon commodity prices staying at their high average levels of 2004. In theory, Russia might continue to enjoy a consumption boom and increase imports, even if the trade and current account balances were to swing into deficit. This would imply, however, becoming structurally dependent on foreign capital – a highly risky strategy for a country that is as exposed to external shocks as Russia and that has so far had little success in attracting large and stable inflows of FDI. Such a policy would in all likelihood lead to a balance of payment crisis at some point in the future.

CHART 4

The growth of output of oil companies in Russia, by form of ownership
(Per cent change, 2001 to 2003)



Source: Russian Ministry of Energy; InfoTEK-Consult (Moscow); author's estimates and calculations.

- ^a Sibneft, TNK, YUKOS.
- ^b LUKOIL, Surgutneftegaz.
- ^c Bashneft, Rosneft, Tatneft.

In short, if Russia wants to sustain a high rate of growth, it will have to be able to sustain rapid rates of export growth. Russia's revealed comparative advantage (RCA) in recent years has been in natural resources, especially hydrocarbons and energy-intensive basic manufactures (steel, aluminium, nickel, fertilizer), plus some other commodities. What is more, the RCA in oil has been growing strongly in recent years, and oil, oil products and gas currently account for over 55 per cent of Russia's exports (chart 6). It is therefore clear that in the short and medium term these commodities will continue to dominate Russia's exports, regardless of whether or not policies aimed at the diversification of the economy are successful. Even if Russia manages to increase sharply its exports of more sophisticated manufactures, their contribution to total export growth will remain modest for some years to come, simply because they start from such a low base. This implies that robust export growth in the short to medium term will probably not be possible without further increases in mineral, and especially hydrocarbon, exports.⁴⁷

Continued growth of hydrocarbon exports will require investment in the transport infrastructure, especially pipelines. Moreover, as Russia's own energy consumption is likely to increase in the coming years, assuming continued high rates of economic growth,⁴⁸ increasing export potential will require substantial increases in production which at some point will necessitate the development of new fields. It will therefore be important that fiscal and regulatory policies encourage the development of new oil fields to replace those currently in decline. A healthy business climate and, especially, clearly assigned and secure property rights are therefore a *sine qua non* for private enterprises' willingness and capacity to finance such large projects. However, the handling of the Yukos case by the Russian authorities has caused a deterioration in the business climate, with negative economic repercussions.

While GDP growth was some 7.1 per cent in 2004, it slowed through the year as the growth of both oil extraction and total investment slowed, and capital flight rose sharply. Moreover, the growth slowdown occurred in spite of a large fiscal stimulus and sharply improving terms of trade. Other factors contributed to the slowdown, but it clearly owed much to the change in the business climate.

Although much of the 2004/2005 slowdown in the growth of oil production was a consequence of the influence of government policy on the business climate, oil exports would probably have slowed somewhat anyway. Oil cannot remain the chief source of Russian export growth indefinitely, as Russian oil reserves are comparatively limited.⁴⁹ Given that world demand for gas will probably continue to increase and that Russia has the world's largest proven gas reserves, the obvious candidate for expansion as oil exports slow is gas. Much of the gas is in areas that are difficult to develop, but Russia's gas monopolist, OAO Gazprom, as well as smaller gas producers, have demonstrated great technical ability in extracting it.

Unfortunately, the gas industry is arguably Russia's least reformed major sector and one of its least efficient. Put simply, the sector in its current highly monopolized and heavily regulated configuration is unlikely to deliver sustained output and export growth, as indicated by its decidedly lacklustre

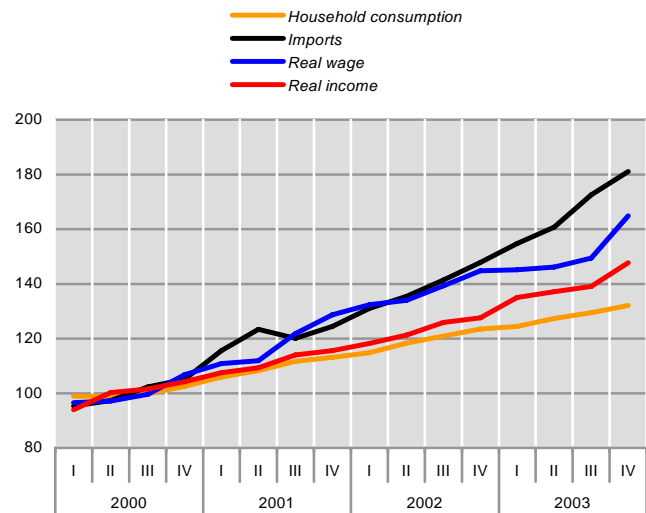
performance in recent years. Gas production has grown by around 1.5 per cent a year over the last five years, against an all industry average of over 6.7 per cent, and the sector's record with respect to productivity and unit labour costs since 1998 has been by far the worst of any major sector in Russia.

The oil sector has shown that with the correct incentives – as well as with multiple, privately-owned production companies and fair access to the export infrastructure – production increases on an unexpected scale have been possible. Milov⁵⁰ observes that two of Russia's hydrocarbon sectors were predominantly in private hands during the last decade (oil and coal), and two others were dominated by state-controlled monopolists (gas and electricity). Whereas the two former sectors flourished, the latter two performed extremely poorly. Therefore, if private gas producers were given equitable access to the trunk pipeline network and to export markets, they could probably increase investment and output very rapidly, and that would probably help to stimulate a better performance on the part of Gazprom itself.⁵¹ Unfortunately, in 2004-2005 the Russian state tightened its grip on key "strategic" sectors, especially natural resources. It therefore seems that the structure of the oil sector is more likely to evolve in the direction of that prevailing in the gas sector, rather than the other way round.⁵² Greater state control over resource-exporting industries is therefore likely to lead to less efficiency, more rent-seeking and slower growth in the very sectors that have been driving the Russian expansion in recent years.

Another source of long-term growth could be the service sector. With Russia becoming a richer country, the demand for services (banking, insurance, restaurants, travel, hotels, etc., will increase). As the Russian service sector, excluding the trading of oil and gas, is still largely underdeveloped, it has ample scope for growth.⁵³ It will not develop very strongly, however, without a general increase in living standards, and for that Russia will need to increase its industrial production and exports.

CHART 5

Income, consumption and imports in Russia, 2000-2003QIII
(Seasonally adjusted, index 2000=100)



Source: Russian Federal Service for State Statistics; author's estimates and calculations.

As noted in the first part of this paper, a strategy of further developing natural resources exports is not without risks. More precisely, three important potential dangers were identified that policy-makers will need to address: external vulnerability, Dutch disease and specific institutional weaknesses. Fortunately, the risks related to resource-based development should remain manageable if the right policy choices are made. General recommendations concerning these choices were outlined in sections I.B-D above); the next task is to see how they translate into concrete measures in the specific context of the Russian economy.

It is important to stress that there is no question here of recommending that Russia *should* follow a resource-based development path. It is merely noted that resource-based development is the course that Russia has been following for several years and – given the present structure of the Russian economy – it is difficult to see how this could change in the short to medium term without causing major disruptions. Even if policies favouring economic diversification were highly successful, Russia’s economic performance would continue to depend on natural resources for quite some time to come. Therefore, if Russia wants to sustain a strong rate of growth in the short and medium term – which is one of the major policy objectives of the Russian authorities – it is hard to see how this can be achieved without further developing its natural resources. In any case, even if Russia decided to hold back such development – despite the negative implications for economic growth – it would still remain a resource-based economy for some time to come. The issue of managing a resource-based economy is therefore a highly topical one for Russia.

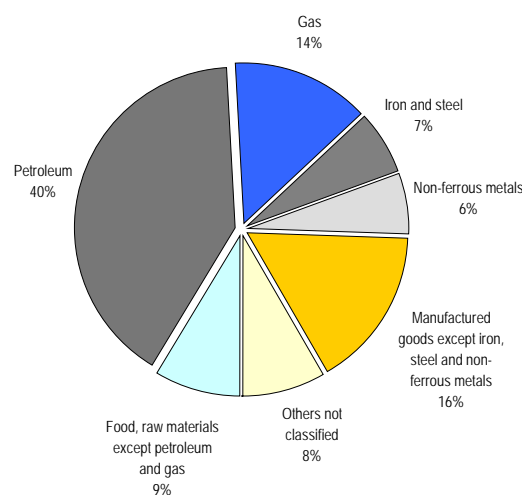
Good macroeconomic, and especially fiscal, policies are particularly vital for Russia. Improving the quality of institutions that enhance the sustainability and political feasibility of responsible macroeconomic policies is therefore a priority. The recently established stabilization fund can play a crucial role in enhancing fiscal policy as a stabilization tool over the oil-price cycle, but there are some problems with its organization. To understand this, it is necessary to consider briefly how the stabilization fund works. Its primary purpose is to shield the budget from the potential consequences of a drop in oil prices.⁵⁴ By law, the fund acquires automatically the surplus revenues from the natural resource extraction tax and the crude oil export duty that are generated when the price of Urals crude averages more than \$20 a barrel (this threshold price was raised to \$27 in 2005). If the federal budget ends the year in surplus, most of the surplus may also be transferred to the fund in the early months of the following year. The law stipulates that the first R500 billion accumulated in the fund can only be spent to cover a budget deficit when the Urals price falls below the threshold price. Everything above that amount can be spent for other purposes, at the discretion of the authorities.

There is nothing to stop the government from holding more than R500 billion in the reserve, but international experience shows that it is very difficult for governments to maintain a reserve if political will is the only factor preventing them from spending it. Unless there are institutional rules to safeguard the stabilization fund, it is likely that the sums accumulated above the target level enshrined in the law will almost certainly be spent, if not by the current government then by one of its successors.

If the stabilization fund is to fulfil its main purpose – fiscal stabilization – it must be large enough to insure the budget against the risk of several years of low oil prices. On that criterion, R500 billion – around 2.5 per cent of projected GDP in 2005 – is not enough, especially given that the higher the cut-

CHART 6

The structure of Russian exports, 2003



Source: United Nations, Commodity Trade Statistics Database (COMTRADE), SITC, Rev.3.

off price the greater is the potential for large revenue shortfalls. (It is interesting to note in this respect that the finance ministry's initial proposal was to accumulate the equivalent of around 8.7 per cent of GDP in the fund.) R500 billion would probably not be sufficient to offset the revenue losses to the federal budget for much more than a year.⁵⁵ Moreover, the R500 billion target figure is not indexed to inflation, nor to the growth of either federal spending or real GDP; given current rates of inflation and economic growth, the target figure relative to GDP is falling by 15-20 per cent a year.

A straightforward solution would be to raise the R500 billion threshold substantially. A new target level should also be set in relative terms – for example, as a percentage of GDP – rather than as an absolute sum. It would also make sense to adopt a threshold price that is linked to a 10- or 15-year moving average of the Urals crude price. The government's ability to raise spending as the oil price rose would thus increase only gradually, but the impact of falling prices would also feed through only gradually, thus making fiscal adjustments less abrupt and painful.

As mentioned earlier, keeping external debt low, as well as denominating it as far as possible in domestic currency and strictly limiting levels of short-term debt, can also help to reduce vulnerability to external shocks. Recent empirical work suggests that the optimal external debt level for Russia would probably be under 40 per cent of GDP.⁵⁶ The fact that Russia has been reducing its external sovereign debt in recent years is thus a positive development, as is the (albeit slow) shift from foreign currency to domestic currency sovereign debt issues.

As pointed out earlier, there may also be some scope for efforts to avoid excessive exchange rate appreciation in periods of high oil prices which are often also accompanied by large short-term capital inflows. In Russia, however, the pursuit of exchange rate goals with the monetary policy tools that were available in the past (mainly unsterilized exchange rate intervention) incurred significant costs in terms of inflation. In this respect, it would have been helpful if the CBR had been given earlier a wider range of instruments in order to reduce the trade-off between inflation and rouble appreciation.⁵⁷ Gradual disinflation may have been necessary and desirable in order to prevent an overly rapid real appreciation of the exchange rate which could have negatively affected economic growth. The crucial priority, however, is to keep inflation on a downward trajectory in order to manage inflation expectations and, especially, to avoid creating expectations that inflation will increase.

If Russia continues on a path of resource-based development, with the mineral sector maintaining or increasing its share of exports, this will also increase the risk of Dutch disease. In this respect it must be understood that for Russia – as well as for most other resource-based transition economies – the discovery and exploitation of natural resources as such is not the main source of the enhanced risk of Dutch disease. Natural resource extraction already loomed large in these countries even in communist times. However, their full weight in the economy only made itself felt at the start of the transition. Relative prices of primary raw materials, which had been held at artificially low levels under central planning, soared, as did exports of natural resources. As a result the large differences in productivity between sectors finally became visible. The export-oriented energy sectors were found to be highly competitive and profitable. In contrast, many enterprises, especially in the manufacturing sector, were already barely competitive even at relatively weak exchange rates, and their situation further deteriorated when exchange rates started to appreciate as a result of surging exports of natural resources.

Applied to Russia, this means that the relatively strong exchange rate puts a premium on the need for productivity increases in the non-mineral, tradable sectors. So far, this seems to have led to increased efforts to restructure, and thus a large part of Russian industry seems to have withstood the increase in competitive pressures relatively well. While the growth of industrial production slowed in 2001-2002, it recovered to around 6-7 per cent in 2003 and 2004. The main reason for this resilience appears to be significant increases in labour productivity in a large majority of sectors.⁵⁸ However, much of the increase in productivity, especially in sectors where it was initially very low, has been due to what is often described as “passive” restructuring, namely, a drastic reduction in the labour force with relatively little investment and stagnant or declining output.⁵⁹ Ironically, the very low levels of efficiency in many Soviet enterprises has actually facilitated productivity gains with little or no investment. However, the easy gains have probably now been largely realized and there are natural

limits to how far passive restructuring can go. *Active* industrial restructuring, including private investment to modernize production capacities, is thus the *sine qua non* for continuing strong growth, implying that sustaining competitiveness in the face of mounting cost pressures may turn out to be increasingly difficult.

As pointed out earlier, the tax system is also an important lever that can be used to avoid Dutch disease and assist the development of the non-resource sector. In this respect the abolition of turnover taxes in Russia during 2001-2003 was a welcome development as they were relatively heavier on manufacturing industries.⁶⁰ Also welcome were measures adopted in 2003-2004 to increase in an equitable fashion the tax burden on the oil sector. However, instead of focusing on the oil industry alone there needs to be a broader attempt to increase the taxation of other resource or resource-related sectors without harming their future development.

There are also some specific measures that could be taken to correct institutional weaknesses that may be aggravated by resource-based development. For example, the importance was stressed of a strong civil society and a free press in the fight against corruption. It was also argued that rules and regulations should be simple, transparent and standardized, with few exceptions and as little reliance as possible on bureaucratic discretion. Many recent legislative changes in Russia seem to be at least partly motivated by this kind of reasoning: these include changes to fiscal federal relations and measures to curb bureaucratic interference in commercial activity, for example, by curtailing officials' inspection powers, simplifying business registration and reducing the range of activities subject to licensing requirements.⁶¹

With respect to diversification, Russia is a somewhat special case. While a more diversified economic structure is something that in principle is desirable for economic reasons, a significant part of the Russian political elite – given their global ambitions for the Russian state – consider a resource-based development path as politically unacceptable. Russia can therefore be expected to pursue policies to foster diversification in coming years. Given the political context, however, it is especially important to have a clear understanding of the limits of diversification policies, as discussed in section I.E above, and to recognize that diversification is bound to be a long-term process.

In addition to the standard recommendations with respect to diversification, as mentioned above, there are two points that are worth stressing in the specific case of Russia. First, in spite of the rapid growth of lending to the private sector in 2002-2004, Russia's financial sector remains underdeveloped. Further reform, especially of the banking sector, is thus a key priority. Given Russia's potential in a number of advanced technology sectors, Russia is a resource-dependent economy where the emergence of a venture capital industry could actually be very helpful. Reducing the burdens imposed by heavy regulation and an often corrupt bureaucracy could play an especially important role in creating a more favourable environment for business (especially SME) and reducing barriers to entry. In this respect, a more active competition policy is also needed. This is especially true for sectors such as natural gas and electricity, where large, state-controlled monopolies need to be restructured, while creating legal and regulatory frameworks that combine robust competition with effective regulation.⁶² Finally, streamlining burdensome customs procedures could help potential Russian exporters (especially among SME) by facilitating their access to international markets. However, none of the above can be achieved without substantial improvements in the probity, efficiency and accountability of the courts, the bureaucracy and other state institutions.

Among less conventional measures, "new-style interventions", beyond those mentioned above, could help to establish broader links and networks. In this spirit, for example, there have been proposals to create research parks and technology transfer centres attached to the leading educational and research institutions.⁶³ Many of these approaches, however, require the intervention of some part of the Russian administration in one way or another, so, again, increasing the quality of the state administration will be crucial to their prospects of success.

III. Concluding summary

This paper argues that while natural resources are sometimes seen as a “curse” for longer-term economic development, many of the potential problems can be avoided, or at least greatly mitigated by good macroeconomic policies and a sound institutional framework. It draws attention to the argument that most resource-based economies have relied heavily on state ownership and intervention and this, rather than their dependence on natural resources, has been largely responsible for their disappointing economic performance. The examples of economies with strong private entrepreneurship in resource sectors, such as Australia, Canada or the Scandinavian countries, demonstrate that, given the right institutions and policies, developing a successful modern economy based on exports of natural resources is feasible.

In the case of Russia it argues that while diversification is an important long-term goal for Russia, its economy is bound to remain resource-based for some time to come even if diversification policies are relatively successful. At least for the short and medium term, and until diversification has borne significant fruit, Russia should therefore ensure that, while avoiding the pitfalls often associated with resource-dependent growth, it follows policies that will allow it to make the best of its resource endowments.

Notes

- ¹ The views expressed are those of the author and do not necessarily reflect those of the OECD or its member states.
- ² See, for example, J. Viner, *International Trade and Economic Development* (Glencoe, IL, Free Press, 1952); W. Lewis, *The Theory of Economic Growth* (Homewood, IL, R. D. Irwin, 1955); and J. Spengler (ed.), *Natural Resources and Growth* (Washington, D.C., Resources for the Future, 1960). The strongest support for resource-based development strategies came from economists identified with the staple theory of growth, which grew out of studies of the Canadian fur and cod industries (H. Innis, *Essays in Canadian Economic History* (Toronto, University of Toronto Press, 1956)), and with work on economic growth in the western United States (D. North, "Location theory and regional economic growth", *Journal of Political Economy*, Vol. 63, April 1955). Proponents of the staple theory suggested that economic development in backward areas commonly begins with resource booms that draw in labour and capital. As the booms proceed, the profits of this core resource sector are reinvested in local infrastructure and the development of processing industries, producing a diversified pattern of growth (see also M. Watkins, "A staple theory of economic growth", *Canadian Journal of Economics and Political Science*, Vol. 29, May 1963). I am particularly thankful to William Tompson for drawing my attention to this literature.
- ³ See, for example, J. Sachs and A. Warner, "Natural resources and economic development: the curse of natural resources", *European Economic Review*, Vol. 45, 2001, pp. 827-838 and O. Manzano and R. Rigobon, *Resource Curse or Debt Overhang?*, NBER Working Paper, No. 8390 (Cambridge, MA), July 2001, for conflicting views.
- ⁴ See M. Ross, "The political economy of the resource curse", *World Politics*, Vol. 51, January 1999, pp. 297-322, for an overview of competing explanations.
- ⁵ For a theoretical model making this prediction see e.g. Y. Kim, "Resource curse, overcommitment and human capital", *Journal of Economic Development*, Vol. 23, No. 2, December 1998.
- ⁶ G. Wright and J. Czelusta, *Exorcising the Resource Curse: Minerals as a Knowledge Industry, Past and Present*, Stanford University Economics Department Working Paper, No. 02008 (Stanford, CA), July 2002.
- ⁷ W. Megginson and J. Netter, "From state to market: a survey of empirical studies on privatization", *Journal of Economic Literature*, Vol. 39, No. 2, June 2001, pp. 321-389.
- ⁸ On this see also M. Ross, "The political economy of the resource curse", op. cit.; A. Åslund, "Russia's 'curse'", *The Moscow Times*, 16 January 2004; R. Auty, "Patterns of rent-extraction and deployment in developing countries: implications for governance, economic policy and performance", Lancaster University (Lancaster, United Kingdom), 2004, mimeo.
- ⁹ A. Narain, P. Rabanal and S. Byskov, *Prudential Issues in Less Diversified Economies*, IMF Working Paper WP/03/198 (Washington, D.C.), October 2003.
- ¹⁰ Patillo et al. show that, for developing and emerging countries, the average impact of (gross) external debt on growth becomes negative at about 35-40 per cent of GDP or about 160-170 per cent of exports. The marginal impact of debt would start being negative at about half of these values. C. Patillo, H. Poirson and L. Ricci, *External Debt and Growth*, IMF Working Paper WP/02/69 (Washington, D.C.), April 2002.
- ¹¹ UNCTAD, "A survey of commodity risk management instruments: Report by the UNCTAD secretariat" (Geneva), 6 April 1998, mimeo, pp. 41-45.
- ¹² The name Dutch disease is rather unfortunate, as the Netherlands actually handled the exploitation of its natural gas resources comparatively well.
- ¹³ See D. Acemoglu and T. Verdier, "Property rights, corruption, and the allocation of talent: a general equilibrium approach", *The Economic Journal*, Vol. 108, 1998, pp. 1381-1401, for a related point.
- ¹⁴ For empirical evidence see P. Collier and E. Hoeffler, "Greed and grievance in civil wars", *Oxford Economic Papers*, Vol. 56, October 2004, pp. 563-595; for an overview on the issue see M. Ross, "Natural resources and civil war: an overview", University of California (Los Angeles), 2003, mimeo.
- ¹⁵ See, for example, C. Leite and J. Weidmann, *Does Mother Nature Corrupt? Natural Resources, Corruption, and Economic Growth*, IMF Working Paper No. 99/85 (Washington, D.C.), June 1999.
- ¹⁶ P. Mauro, "Corruption and growth", *Quarterly Journal of Economics*, Vol. 110, No. 3, August 1995.
- ¹⁷ A. Brunetti and B. Weder, "A free press is bad news for corruption", *Journal of Public Economics*, Vol. 87, Nos. 7-8, August 2003, pp. 1801-1824.
- ¹⁸ R. Ahrend, *Press Freedom, Human Capital and Corruption*, DELTA Working Paper, 2002-11, February 2002.
- ¹⁹ P. Jones Luong, "Rethinking the resource curse: ownership structure and institutional capacity", Yale University, 2004, mimeo.

- ²⁰ Developing a sound banking sector is complicated by resource dependence, as it makes it more difficult for banks to achieve sufficient sectoral diversification of their loan portfolios. A. Narain, P. Rabanal and S. Byskov, *Prudential Issues in Less Diversified Economies*, IMF Working Paper WP/03/198 (Washington, D.C.), October 2003.
- ²¹ UNECE, *Economic Survey for Europe, 2005 No. 1*. For a theoretical foundation of “new style” industrial policy and a survey of international experience in this field see also D. Rodrik, *Industrial Policy for the Twenty-First Century*, KSG Faculty Research Working Paper 04-047, Harvard University, November 2004 and V. Drebenstov, “Diversifying Russia’s economy – key to sustainable growth”, The World Bank (Moscow), 2004, mimeo.
- ²² For an exception to this view, see R. Ahrend, “Russia’s post-stabilization decline, crash and revival”, *Russian Economic Trends*, Vol. 8, No. 3, September 1999 and A. Breach, *Russia: Now a Competitive Exchange Rate – The Revival of the Real Economy*, Goldman Sachs Global Economics Paper, No. 22, July 1999.
- ²³ World Bank, “Russia: transition meets development, country economic memorandum for the Russian Federation” (Moscow), April 2004.
- ²⁴ See also the estimated sectoral weights produced by Kuboniwa and Gurvich. M. Kuboniwa, “The hollowing out of industry and expansion of trade service sector in Russia”, Hitotsubashi University (Tokyo), 2003, mimeo; E. Gurvich, “Makroekonomicheskaja otsenka roli Rossiiskogo neftegazovogo sektora”, *Voprosy Ekonomiki*, No. 10, 2004.
- ²⁵ E. Gurvich, *ibid*.
- ²⁶ For details see R. Ahrend, “Russia’s post-crisis growth: where did it come from? Can it last?”, OECD Economics Department (Paris), 2004, mimeo.
- ²⁷ Fuel, non-ferrous metals and forestry.
- ²⁸ Industry accounted for slightly less than half of GDP growth in 2000-2004 and the oil sector for somewhat less than half of industrial growth. (Calculations based on the adjusted sectoral weights discussed above; contributions to industrial growth were calculated on the assumption that the share of value added in production has been roughly constant in the short term.)
- ²⁹ *OECD Economic Surveys: Russian Federation* (Paris), September 2004, box 3.
- ³⁰ Private consumption grew on average by almost 9 per cent a year in 2000-2004, driven by exchange-rate appreciation and large increases in real disposable incomes (real wages increased by 82 per cent during 1999-2003, and were 28 per cent above their pre-crisis levels at the start of 2004). Rapid growth in real incomes also led to even faster import growth, with import volumes increasing by an average 21 per cent a year between 2000 and 2003.
- ³¹ Price increases for Russia’s major export commodities also contributed to the increase in export revenues.
- ³² The volume of armaments exports apparently increased, but there are no officially published statistics. In any case it is unlikely that the increase would have influenced total export performance substantially as the share of arms is relatively small, probably somewhere around 5 per cent.
- ³³ While the volume of gas export to non-CIS countries are widely reported to have increased over the period, total gas export volumes (including to CIS countries) fell quite significantly.
- ³⁴ In practice, a degree of priority was given preventing rapid exchange rate appreciation. A. Vdovichenko, “Monetary policy rules and their application in Russia”, Economic Expert Group (Moscow), 2004.
- ³⁵ Net private outflows increased again from mid-2003 as the so-called “Yukos affair” unfolded.
- ³⁶ Fiscal sterilization was able to absorb a significant amount of the current account pressure, reducing the need for CBR intervention. Fiscal sterilization was mainly achieved via budget surpluses. An increasing – although still small – share of fiscal sterilization was also realized by shifting hard currency-denominated sovereign debt into rouble-denominated debt, reflecting the financial markets’ renewed interest in such instruments. It should be noted that during most of the period the CBR’s task was also made easier by significant net outflows of private capital.
- ³⁷ This reduction in the spending-to-GDP ratio coincided with massive reductions in wage and pension arrears, and has not resulted in any substantial deterioration in the provision of public services. This suggests that the creation of a federal treasury, the reform of fiscal federal relations and the government’s restraint in overall spending have contributed to a more efficient management of expenditure.
- ³⁸ There was also a “virtuous cycle” with respect to debt, as debt repayment from budget surpluses and rouble appreciation led to sharp falls in the ratio of debt service to GDP. Federal interest expenditures fell from 3.4 per cent of GDP in 1999 to 1.7 per cent in 2003. Lower levels of government expenditure also gave Russia room to reduce the tax burden, which was an additional stimulus to private investment and consumption, and hence economic growth.
- ³⁹ G. Kwon, “Post-crisis fiscal revenue developments in Russia: from an oil perspective”, *Public Finance and Management*, Vol. 3, No. 4, 2003, pp. 505-530; R. Ahrend, “Russia’s post-crisis growth...”, *op. cit*.

- ⁴⁰ For an overview of tax changes in 2000-2001 see *OECD Economic Surveys: Russian Federation* (Paris), February 2002 and for 2002-2004 see *OECD Economic Surveys: Russian Federation* (Paris), September 2004, box 1.4.
- ⁴¹ High oil prices were another major factor.
- ⁴² R. Ahrend, *Russian Industrial Restructuring: Trends in Productivity, Competitiveness and Comparative Advantage*, OECD Economics Department Working Paper, No. 408 (Paris), October 2004; R. Ahrend and W. Tompson, *Russia's Gas Sector: The Endless Wait for Reform?*, OECD Economics Department Working Paper, No. 402 (Paris), September 2004; W. Tompson, *Restructuring Russia's Electricity Sector: Towards Effective Competition or Faux Liberalization?*, OECD Economics Department Working Paper, No. 403 (Paris), September 2004.
- ⁴³ See also P. Boone and D. Rodionov, "Sustaining growth", Brunswick USB Warburg Russia Equity Research, September 2002.
- ⁴⁴ There may be more import substitution, but this is very unlikely to change the general trend.
- ⁴⁵ Moreover, the continued real appreciation of the rouble will further increase demand for imported goods, both for consumption and investment.
- ⁴⁶ Russia not only grew at this rate in early 2005, but it is also above the 1996-1999 average, as well as that in 2001.
- ⁴⁷ Basic manufacturing in energy-intensive sectors may also be able to make some contribution to future export growth. Recent experience suggests, however, that potential export growth in these sectors may be constrained by the threat of protectionist measures by Russia's trade partners. According to the Ministry of Economic Development and Trade, Russian exporters in early 2004 faced 93 different restrictions on access to foreign markets, including 57 anti-dumping measures of various kinds. Roughly 60 per cent of these applied to steel exports and a further 25 per cent to chemicals.
- ⁴⁸ V. Milov, *Russian Energy Sector and its International Implications*, Institute of Energy, Policy Discussion Paper, March 2005.
- ⁴⁹ At least, those for which development is commercially viable with current technology. Although in the current high price oil environment this may appear a remote possibility, continued rapid Russian export growth could at some point risk a price war with OPEC. There is increasing agreement that the oil price collapse of 1986 was one of the factors contributing to the terminal crisis of the Soviet system; see W. Tompson, "The price of everything and the value of nothing? Unravelling the workings of Russia's 'virtual economy'", *Economy and Society*, Vol. 28, No. 2, May 1999 and S. Kotkin, *Armageddon Averted: The Soviet Collapse, 1970-2000* (Oxford, Oxford University Press, 2001).
- ⁵⁰ V. Milov, op. cit.
- ⁵¹ R. Ahrend and W. Tompson, op. cit.
- ⁵² The de facto renationalization of YugansNefteGaz is a prime example, as are current plans to ensure that the Russian state obtains formal control over Gazprom (de facto it is already the controlling shareholder).
- ⁵³ Part of the increasing weight of services in GDP will come from a shift in relative prices. Domestic prices for non-tradables will increase faster than those for tradables as a result of the Russian currency appreciating.
- ⁵⁴ In this, the fund differs from some other oil funds, most notably that of Norway. Norway's much larger Petroleum Fund aims not only to smooth short-term fluctuations in oil revenues but also to act as a mechanism for transferring the wealth derived from the current exploitation of a non-renewable resource to future generations.
- ⁵⁵ The Economic Expert Group estimates that a fall in oil prices from the new cut-off price of \$27 a barrel to the old one of \$20 would reduce federal revenues by around 1.6 per cent of GDP. In addition, there would also be further losses as a result of slower economic growth.
- ⁵⁶ The estimates of Patillo et al., op. cit., suggest that, for Russia, the optimal (gross) external debt level would be somewhere in the range of 15-40 per cent of GDP.
- ⁵⁷ In the aftermath of the 1998 crisis, monetary sterilization was difficult because of the limited demand for rouble debt instruments. This is no longer the case, as witnessed by the fact that in 2004 interest rates on rouble instruments were very low and often negative in real terms. The market for Russian domestic currency-denominated fixed income securities remains nonetheless too small. It is therefore welcome that late in 2004 the CBR finally obtained the authority to issue central bank securities for sterilization purposes.
- ⁵⁸ R. Ahrend, *Russian Industrial Restructuring...*, op. cit.
- ⁵⁹ Output growth has been concentrated in those sectors that restructured actively, increasing not only productivity but also investment. Investment alone, however, was insufficient. Some industries, such as gas and electricity, largely failed to restructure, and there were no significant increases in labour productivity. Such sectors contributed little to output growth despite significant investment. R. Ahrend, *ibid.*
- ⁶⁰ *OECD Economic Surveys: Russian Federation* (Paris), September 2004, box 1.4.

- ⁶¹ In this context, recent proposals to vary effective tax rates in the oil sector on the basis of the quality of the deposits exploited should be viewed with caution. Such an approach should in theory be more efficient, as it would not only favour the exploitation of less profitable fields but would also prolong the life of declining fields beyond what would be commercially viable under the current tax system. However, it will be critical to ensure that any such system of taxation relies on a small number of variables that are easily monitored and that it be implemented in a manner which does not give much discretion to bureaucrats. In Alberta, for example, the royalty system takes into account three basic variables – the age of the field, the depth of the oil and the flow rate – all of which are easy to monitor. Although the adoption of such a relatively simple system may be advisable in the medium term, given that corruption and transfer pricing are widespread in the sector, it probably makes more sense at present to tax natural resources mainly through excise and similar taxes, as well as export taxes.
- ⁶² For details see R. Ahrend and W. Tompson, op. cit. and W. Tompson, *Restructuring Russia's Electricity Sector...*, op. cit.
- ⁶³ A. Kim, "Why Google is not a Russian company", *The Moscow Times*, 23 August 2004.