

How to Sustain Growth in a Resource Based Economy? The Main Concepts and their Application to the Russian Case

by Rudiger Ahrend¹

ABSTRACT

In recent years economists have come to see rich natural resource endowments as a “curse” or “precious bane” that inevitably undermines development and slows economic growth. Resource-based development undeniably involves important risks. Nonetheless, the resource curse – if it exists - is at least no fatality, as the examples of Australia, Canada and the Scandinavian countries demonstrate. This paper argues that the serious 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 in detail what these “right” economic policies are, and how to set up economic and political framework conditions to facilitate their successful implementation. The paper thereafter looks specifically at Russia as a prominent example of a resource based economy. It investigates briefly the main drivers of Russian growth in recent years, and makes specific recommendations that would help the Russian economy to sustain high growth.

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Introduction

While in the 1950s and 60s economists generally saw abundant natural resource endowments as facilitating a country's rapid development², in the last two decades many economists have come to see natural resources as an obstacle to successful development. A large literature has developed that econometrically investigates the existence of a so-called 'resource curse'³ and speculates on its underlying causes⁴. This paper makes the case that the resource curse, at least, is no fatality. If suitable economic and political framework conditions can be established, natural resource abundance does not have to prevent successful economic development as e.g. 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 indeed serious, but they can be overcome or at least very substantially mitigated with the aid of appropriate institutions and policies. The main aim of this paper is thus to analyse in depth what the "right policies" are to achieve this. We first discuss the main concepts in general, before looking more specifically at the Russian case.

The first part of this paper discusses in detail the policies that are required for successfully developing a resource-based economy. We argue that resource-based development places a priority on good macro-economic management, in sound fiscal policy in particular. Turning to the institutional side, it is stressed that, for a number of reasons, the need for a non-corrupt and efficient state apparatus is particularly strong in a resource-based economy, and that achieving such an institutional setting is facilitated by the presence of a strong civil society. Finally, to the degree that a more diversified economy is less prone to the risks enumerated above, diversifying a resource-based economy can also solve potential problems of resource dependence. This paper therefore also explores the possibilities for resource-based economies to accelerate the diversification of their economic structures.

2 . See, for example, Viner (1952), Lewis (1955) and Spengler (1960). The most ardent 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 (Innis 1956), and work on economic growth in the western U.S. (North 1955). Proponents of the staple theory suggested that economic development in backward areas commonly begins with resource booms that draw in labor and capital. As the booms proceed, the profits of this core resource sector are reinvested in local infrastructure and "value-added" industries, producing a diversified pattern of growth (see also Watkins 1963). I am particularly thankful to William Tompson for drawing my attention to this literature.

3 . See e.g. Sachs/Warner (2001) and Manzano/Rigobon (2001) for conflicting views.

4 . See Ross (1999) for an overview of competing explanations.

The second part of this paper looks more specifically at the Russian case that – in recent years – has been a prominent example of resource-based development. We examine briefly the main drivers of recent growth, and assess the main underlying policies against the framework for successful resource-based development set out in the first part of the paper. We show that the role of the oil sector, and particularly privately owned oil companies, has been crucial in driving economic growth since 2001. In fact, almost one quarter of recent growth can be directly attributed to increased production by private oil companies. Looking forward, we argue 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, we provide detailed suggestions on how to manage successfully the Russian economy and to facilitate economic diversification over time.

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

I.1 Resource-based economies

In a large number of low or middle income economies, industrial production or exports, and often both, are heavily biased towards natural resources. For example a majority of African, Latin American, and CIS countries are highly dependent on natural resource exports. Whether natural resources are an inevitable curse or whether they can be exploited to the benefit of the country and its citizens (and how) is thus a highly relevant question for a significant share of the world's population.

Resource-based economies are often – although somewhat arbitrarily – defined as economies where natural resources account for more than 10 per cent of GDP and 40 per cent of exports. As commodity prices are often particularly volatile, a situation in which export revenues depend significantly on commodity price developments implies that resource-based economies are particularly vulnerable to external shocks.

Having a rich natural resource-base has, however, some obvious advantages. If exploited, natural resources provide a country with goods that can be traded, and hence guarantee a certain revenue stream from exports. Especially for poor and less developed countries, natural resource revenues hence allow the import of a certain volume of crucial goods (e.g. medicines) they cannot produce themselves, and therefore – at least in theory – could be used to increase significantly the welfare of the population. From a practical point of view, natural resources also provide some shelter against competition. It is a banal point - but worth stating - that in order to compete in natural resources, a country needs to possess the relevant

deposits – and neither highly advanced technology, nor an ultra-cheap labour force are going to change that.

On the negative side, it has been argued that the growth potential of natural resource sectors would be comparatively low. This would result from two features. First, natural resources are finite. Second, it is often claimed that natural resource extraction is a low-tech undertaking, and hence the potential for productivity increases in natural resource sectors is very limited. The latter is also one of the most common economic explanations of why there might be a resource curse. Both of these arguments are, however, questionable, at least to some degree. Undeniably, natural resources are ultimately finite (at least when one thinks only about the planet earth). However, the total quantity of a natural resource is not particularly relevant at least up to the decades before its total depletion. 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.

It is also untrue that a specialisation in natural resources inevitably implies low levels of technological know-how. Resource extraction – as it gradually moves to deposits that are more difficult to exploit – has become quite intensive in the use of specific high technology (e.g. oil platforms).⁵ 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 therefore doubtful whether there really is an inevitable economic resource curse. In many countries resource sectors have been dominated by state controlled enterprises in recent decades. It is not unlikely, therefore, that substandard growth performance could have been brought about rather by state ownership of large parts of the respective economies, rather than by natural resources per se⁶.

In any case, independently of the desirability of being a resource-based economy, managing a resource-based economy well is a subject that is highly important on its own. Changes in the structure of an economy are necessarily relatively slow, which means that today's resource-based economies are bound to remain resource-based for some time to come – whatever their stance on further developing their resource sectors or their policies may be.

Moreover, resource-based development can also become a driver of modernisation. Further developing resource sectors - especially for exports - can be a strong driver for economic growth, as the Chilean example shows, and hence can significantly contribute to increasing incomes. Increasing incomes,

5 . See Wright/Czelusta (2002).

6 . On this see also Ross (1999), Aslund (2004) and Auty (2004).

in turn, usually leads to a strong expansion in a country's non-tradable sector, i.e. principally in services and construction. Growing resource exports will also allow a country to import more. Higher import potential not only contributes to higher living standards, as consumer choice improves, but in principle also allows the purchase of more investment goods. Developing a country's resource sectors, via increased import potential and an expansion in the service sector, can therefore also be helpful in modernising a country.

In a resource-exporting economy there are, however, three important types of potential risk that policy-makers need to address: external vulnerability, "Dutch disease", and the institutional pathologies that appear to be associated with resource-driven development. We address each of these in turn.

I.2 External vulnerability

Crises in emerging market economies are most commonly caused by large terms-of-trade shocks arising from sharp falls in the prices of countries' main export commodities⁷, and resource-based economies are particularly exposed to this kind of risk. The margin of error for resource-based economies is therefore much smaller than for economies with more diversified economic structures. Good macro-economic management becomes hence the *conditio sine qua non* for any attempt to reduce the vulnerability of resource-based economies to external shocks, and hence for successful resource based development. In this respect it is difficult to exaggerate the importance of fiscal discipline. Admittedly, good fiscal policy cannot eliminate the external vulnerability of a resource-based economy altogether, but it can go a very long way to mitigate it. Fiscal irresponsibility, in any case, will tend to magnify, rather than mute, the effects of commodity price movements, contributing to boom-and-bust cycles. In this respect, it is vital to keep the budget in balance across the commodity-price cycle – obviously with respect to those commodities that are most relevant for a given resource-based economy. Moreover, fiscal policy should always be based on conservative price assumptions for the major export commodities. If budgetary commodity price assumptions are above long-term averages, or if revenue assumptions implicitly take above-average prices for granted, then budgets should be drafted to achieve corresponding surpluses. In this respect it must be clear that a budget that balances thanks only to exceptionally high commodity prices is not in balance at all.

Given the importance of ensuring fiscal balance across the commodity-price cycle, the creation of a stabilisation fund is generally a very important issue. Such a stabilisation fund accumulates windfall government revenues. These revenues would ideally be managed by an entity that has no authority to

7. See Narain et al. (2003).

spend the money (that is an independent special institution or the central bank, but not the government, the ministry of finance, or any other ministry). The rules for when and which revenues should be accumulated, and when they could be spent should be very strict and transparent. Moreover, the accumulated revenues should be invested in fairly safe and liquid foreign currency denominated assets. Such a stabilisation fund generally serves a number of functions.

First, it helps to smooth government revenues – and thus government spending – over the commodity-price cycle. For this smoothing to work effectively, it is necessary that the stabilisation fund be large enough to insure the budget against several years of below-average commodity prices. In theory, such a smoothing could also be achieved by countries borrowing abroad when commodity prices are low, and repaying the money when they are high. In practice, however, resource-based economies risk finding that their access to international credit is severely constrained when prices are low. When commodity prices fall, they are likely to experience current account problems and any attempt to borrow at this stage risks being viewed suspiciously by financial markets. Moreover, if they are able to borrow on a sufficient scale, they risk paying a very high price to be able to do so. Hence accumulating some money in a stabilisation fund that can be used to finance government expenditure when prices are low is by far the preferable option.

Secondly, a stabilisation fund not only serves to smooth government expenditures, but generally also helps in smoothing growth. This results from the fact that the fund accumulates money when commodity prices are high, that is generally when the terms of trade of the country have been improving. The money is spent when commodity prices have been falling, i.e. following terms of trade deteriorations. As economic growth is likely to be partially driven by terms of trade changes, this means that a stabilisation fund takes out momentum of the economy - thus reducing the risk of overheating- when it is likely to be growing very robustly, and provides an additional stimulus in phases where growth is likely to be below potential.

Third, a stabilisation fund can also serve to reduce exchange-rate fluctuations. This arises from the fact that the investment and spending pattern of the stabilisation fund set up as described above contribute to capital outflows when commodity prices are high and to capital inflows when they are low. These flows can thus be an important mechanism to counteract current account pressure on the exchange rate, thus helping to shield the economy to some degree from potentially damaging sharp exchange-rate fluctuations.

Whatever the ultimate size of a stabilisation fund, it may at some point be sufficiently large that further accumulation would be unnecessary and may become inefficient. The insurance provided by the fund comes, after all, 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

non-interest spending should be resisted, as this would be strongly pro-cyclical and would thus increase the risk of overheating. It would also risk jeopardising 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 would 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 the impact of such crises if they occurred.

Once the stabilisation fund has reached a size considered sufficient for stabilisation purposes, the authorities might also wish to consider accumulating additional commodity windfalls in a fully funded pillar of a state pension system – assuming of course that such a system exists. This would be a macro-economically responsible way of distributing the windfall to the population and would help in particular to enhance the pensions of those citizens who, owing to age or income, will otherwise have little or no direct involvement in the fully funded scheme.

Keeping external debt low can also help to reduce external vulnerability, both by decreasing the risk of currency crises and by limiting the economic fallout from such crises if they did occur. This applies to both sovereign and private external debt, so it will be important to prevent the private sector's external borrowing from reaching dangerous proportions. Recent empirical work undertaken at the IMF suggests that external debt above a certain level has a negative impact on growth.⁸ To reduce a high external debt level, by the way, one need not necessarily reduce the public debt burden. A reduction in external debt may also be achieved by shifting more of it into domestic currency denominated debt. 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 would fall when commodity prices were low. Hitherto, commodity-price-indexed bonds have principally been employed by companies or in the context of sovereign debt restructurings, but there is no obvious reason why they could not be used more widely

8. Empirical work by Patillo *et al.* (2002) argues that, for developing and emerging countries, the average impact of 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.

for sovereign issues.⁹ Such instruments could be attractive to individuals, companies or countries needing a hedge against price rises in the respective commodities.

On the monetary side, given the large share of exports in resource-based economies that are subject to potentially hefty price fluctuations, exchange-rate flexibility is needed to accommodate terms-of-trade shocks, especially negative ones. Exchange-rate corrections following terms-of-trade shocks are especially painful if the exchange rate has become fundamentally overvalued beforehand. In this respect, in resource-based economies there may be some scope for efforts to avoid excessive exchange-rate appreciation, especially when the prices of the main export commodities are high and there are major short-term capital inflows. However, the pursuit of such exchange-rate goals may incur significant costs in terms of inflation unless monetary sterilisation tools are sufficiently developed and efficient. In general, therefore, the fact that resource-based economies can expect to experience exceptionally large swings in capital flows implies not only that they should have a stabilisation fund, but also that their central banks should have an especially large capacity for monetary sterilisation. First and foremost this means that those economies should have a large market in domestic currency denominated government debt. Secondly, in many cases there may also be a rationale for allowing the central bank to issue securities.

More generally, dollarisation (or euro-isation) of a resource-based economy as such should be avoided or low, with prices and contracts being 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, the widespread and generalised use of a non-domestic currency in economic transactions implies a large systemic risk to economic stability in the case of large exchange rate fluctuations, and should therefore better be limited or avoided in resource based economies.

I.3 Dutch Disease

Further increasing the importance of the mineral sector in the economy also increases the risk of ‘Dutch disease’. This term usually refers to a situation in which a country suddenly discovers large natural resources, the extraction of which increases the equilibrium exchange rate and/or general wage levels, thereby putting pressure on the competitiveness of the other tradable sectors in the economy.¹⁰ More generally, “Dutch Disease”, however, can also become a more pressing problem for a country if the weight of the resource sector in production or exports increases relatively fast.

9 . See UNCTAD (1998:41-5).

10 . The name ‘Dutch disease’ is in fact rather unfortunate, as the Netherlands actually handled such a situation comparatively well.

The strength of the resource sector often allows -- indeed, in many cases compels -- resource-based economies to have a relatively strong exchange rate, while high wages in the resource sector put upward pressure on wages in the rest of the economy. This is not all bad news. It increases living standards and boosts production in the non-tradable sector. However, it makes life much harder for other tradable sectors. To the degree that this results from the economic structure of resource-based economies, this is unavoidable. The non-resource tradable sector must therefore increase productivity and restrain unit labour costs sufficiently to stay competitive in order either to export or at least to withstand import competition.

Dutch disease may also, however, affect equilibrium employment levels. To the extent that the strength of the resource sector (which provides relatively little employment) necessitates relatively high levels of labour productivity in other industrial sectors, it risks contributing to reductions in industrial employment. Decreasing industrial employment would not necessarily be a problem in itself if employment in the service sector could compensate for lost industrial jobs. The problem, however, is that a lot of the potential employment opportunities in the service sector may be of rather low productivity, which would imply comparatively low wages. To the degree that large wage inequality may be socially and politically unacceptable, these potential employment opportunities in services may not arise.

There are, however, policy measures that can help limit the potential negative impact of the natural resource sector on the economy and ease the adjustment process for the tradable non-resource sector, while trying to avoid a low employment trap. While real exchange-rate appreciation in itself is not only desirable, but also unavoidable over the long term¹¹, attempts should be made to avoid sharp movements in relatively short time-spans. This is yet another reason for a fiscal policy that is to some degree countercyclical to the price of export commodities, a substantial stabilisation fund and a wider range of monetary sterilisation mechanisms.

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. Increases in direct taxation of the natural resource sector through excise, extraction or export taxes should be used to lower overall tax levels in the economy and in particular to cut non-wage labour costs.¹² Such a cut might in some sectors be partially or even wholly offset by wage increases, but it should certainly lead to lower total labour costs in sectors with low productivity. To the extent that cuts in non-wage labour costs may cause shortfalls in important areas, it might be desirable to earmark a certain portion of price-independent resource taxes to make up these

11. Medium-to-long term real appreciation in developing / emerging countries is driven by the Balassa-Samuelson effect.

12. OECD (2003).

losses. However, any increase in the taxation of resource-extraction industries must ensure that these sectors, which are often critical to growth, remain sufficiently profitable to allow for their further development. Taxing a larger part of the resource rent away should also lead to relatively lower wages in the resource sector and hence diminish the pressure on wages in other sectors. To the degree that this would allow the paying of lower wages for activities with lower productivity, it would help to preserve employment that would otherwise be lost (or facilitate the creation of jobs that might not otherwise exist).

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

I.4 Institutional Pathologies

Many of the potential macroeconomic problems arising from resource dependence can be resolved or at least substantially mitigated by the right macroeconomic policies and related structural reforms. The potential political economy implications may therefore be the toughest challenge. The literature suggests a number of reasons why resource orientation may complicate economic development. First, it has been shown that a larger share of natural resources in exports is associated with more corruption,¹³ which, in turn, is associated with slower long-term growth.¹⁴ Secondly, a higher natural resource share in the economy is often accompanied by greater inequality of incomes, which has also been shown to undermine long-term growth performance. Thirdly, it has been argued that the allocation of talent in natural resource economies is biased in favour of the resource sector. Highly capable individuals may focus on securing resource rents rather than building successful businesses in sectors with more potential for innovation.¹⁵ Fourthly, resource wealth may favour the development of political and economic institutions which likewise favour rent-seeking over entrepreneurship, thereby reinforcing the structure of incentives faced by individuals. Fifthly, countries that are highly dependent on natural resource exports are also more likely to experience large-scale rebellions and civil wars¹⁶.

To the extent that inequality in resource-based societies 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, the solution is to tax away

13 . See, *e.g.* da Cunha Leite and Weidmann (1999).

14 . Mauro (1995).

15 . See Acemoglu and Verdier (1998) for a related point.

16 . See Ross (2003) for an overview on the issue.

a larger part of the resource rents, in a relatively corruption-proof way, and to reduce general tax levels for the economy as a whole. Some increase in targeted social transfers may also have to play a role in some cases, mainly in countries where the social safety net already in place is small and insufficient. A large reduction in resource rents going to individuals instead of the state would also help solve the problem of potential misallocation of talent to resource sectors. The main obstacle to achieving this is that it requires a fairly efficient and non-corrupt administration. Hence the second and third concerns, regarding income inequality and the allocation of talent, basically reinforce the importance of the first, namely low levels of corruption.

There are various measures that can be taken to limit corruption. The first step is to create more corruption-resistant structures. Rules, if necessary at all, should be simple, transparent and standardised, with few exceptions and as little reliance as possible on bureaucratic discretion. While drafting corruption resilient legislation is important, it will not be sufficient on its own to reduce corruption levels as long as corruption goes largely unpunished because of a lack of monitoring. Cross-country research shows that both the efficiency of the rule of law and the development of civil society are strongly and negatively correlated with corruption levels.¹⁷ The evidence also demonstrates that a lack of press freedom causes corruption.¹⁸ It is thus in the economic interest of resource-based economies not only to strengthen the judicial system, but also to foster the development of civil society and press freedom. Strengthening the rule of law and increasing the accountability of officialdom are particularly important in creating an institutional environment more conducive to entrepreneurship and wealth creation rather than rent-seeking.

Interestingly, all resource-based economies that have developed successfully 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 failed to achieve adequate economic progress usually lacked most of these features. There is also evidence that resource-based development has generally been more successful when state-ownership in the resource sectors has been absent or very limited. 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.

17. Brunetti and Weder (1999).

18. Ahrend (2002).

I.5 Diversification

Developing a successful modern economy based on natural resource exports is -in principle- feasible, given the right institutions and policies, as the examples of OECD countries such as Canada, Australia or the Scandinavian countries demonstrate. As stated above, there are, however, 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 overnight. Fostering diversification 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 about 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 helpful in fostering diversification that should be fairly uncontroversial. Broadly speaking, they consist of getting 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, some economists have expressed doubts as to whether these policies would turn out to be sufficient to achieve the stated goal of diversification in a reasonable time span.¹⁹ While acknowledging the need for good framework conditions for business as a *sine qua non*, they advocate the pursuit of “new style” industrial policies as a supplement to the structural reform agenda²⁰. The discussion that follows considers first our own recommendations for achieving diversification, which we regard as fairly conservative and conventional, before reporting some of the more innovative, but less proven, ideas that have been floated recently.

The most obvious conventional measure is to use the tax system to assist the development of the non-resource sector. As the type of required tax policies are similar to the ones required to combat Dutch disease, and hence have already been discussed in detail in section I.3, we here only restate that the guiding

19 . See e.g. Drebensov (2004).

20 . See also Rodrik (2004).

principle should be to make extensive use of taxes that specifically target the resource sectors, which in turn allows low general tax rates.

In addition to tax policy, there is also a large list of structural reforms, including financial sector and administrative reform, that would be particularly important for facilitating the diversification of economic activity. Mechanisms for efficiently allocating investment resources across -- and not merely within -- economic sectors are important. Setting up framework conditions so as to allow the banking sector to develop – while making sure that it remains in good health - is thus a key priority²¹. Facilitating the emergence of a venture capital industry would also be helpful, although mainly for those resource dependent countries that have relatively advanced technological potential, especially for assisting start-ups in sectors at the technological frontier. At the same time, there often is a crucial need to improve basic framework conditions for business, particularly small and medium enterprises (SMEs). In many resource-based economies, there is large scope to reduce the burdens imposed by heavy regulation and an often corrupt bureaucracy, which in addition to strengthening the financial system, would help to create a more level playing field and decrease barriers to entry.

On the less conventional side, advocates of ‘new-style interventions’ recommend the creation of programmes that would directly improve the productivity and competitiveness of selected enterprises, which would to some degree serve as an example for other entrepreneurs. The guiding features of such policies usually include that they be highly transparent, that participation in these programs be determined by private sector representatives, and that the period during which any single enterprise can participate in such a programme 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, and a survey of various international experiences in this field is beyond the scope of this paper, but can for example be found in Rodrik (2004) and Drebenstov (2004).

II. The challenge of sustaining growth in a resource-based economy – Application to the Russian case

II.1 Sources of Russian growth in recent years

Russian economic growth since the August 1998 financial crisis, averaging slightly above 6.5 per cent per annum in 1999-2003, has consistently exceeded expectations. In the immediate aftermath of the crisis,

21 . 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. See Narain *et al.* (2003).

most observers did not expect any growth at all. When the economy then began to recover sooner and more robustly than anticipated, it was widely argued that, in view of Russia's remaining structural problems, growth would come to a halt as soon as the effects of the devaluation wore off.²² Both predictions were regarded as reasonable at the time, but they were far off the mark. This is more than an academic puzzle: an understanding of the factors and policies that have underlain this unexpected performance is crucial to any attempt to assess the conditions under which Russia could maintain current high growth rates in the future.

Before looking at Russian growth more closely, it is necessary to consider a problem with the official data on Russian output. Official statistics, though technically correct, present a somewhat distorted picture of the economy. This is because a large share of the value added generated by natural resource sectors is reflected not in the accounts of the extraction companies, but in the accounts of their affiliated trading companies. This practice is especially common where output is exported. While transfer pricing is often used to shift profits to companies located in low-tax jurisdictions, it is also to some extent a logical form of industrial organisation for products whose domestic and export prices differ substantially. As a result, export-oriented industries are under-represented in industrial production, and industry as a whole is under-represented in Russian national accounts. Trade, and hence the service sector, are over-represented.

There have recently been several attempts to estimate the size of these distortions and to correct for them.²³ This article will use the recent World Bank (2004) estimates of the relative weights of different sectors in GDP in order to present a more meaningful picture of the Russian economy, as is illustrated e.g. by the Russian service sector. On the official statistics it is highly developed, contributing roughly 60 per cent of GDP, which is only marginally below the 65-70 per cent typical of the most advanced OECD economies. This, however, seems counter-intuitive, given that most services in Russia are still relatively under-developed. Even the communications and banking sectors, arguably among the most developed Russian service sectors, are relatively small when compared with countries that have developed service sectors. The apparent contradiction disappears when correcting for transfer pricing: 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 produced by the Economic Expert Group attached to the Ministry of Finance, which suggest that the oil and gas sector's share of GDP was around 21 per cent in 2000 and hovered at around 17 per cent thereafter.²⁴ At

22 . For an exception to this view, see Ahrend (1999) and Breach (1999).

23 . Kuboniwa (2003); World Bank (2004); Gurvich (2004).

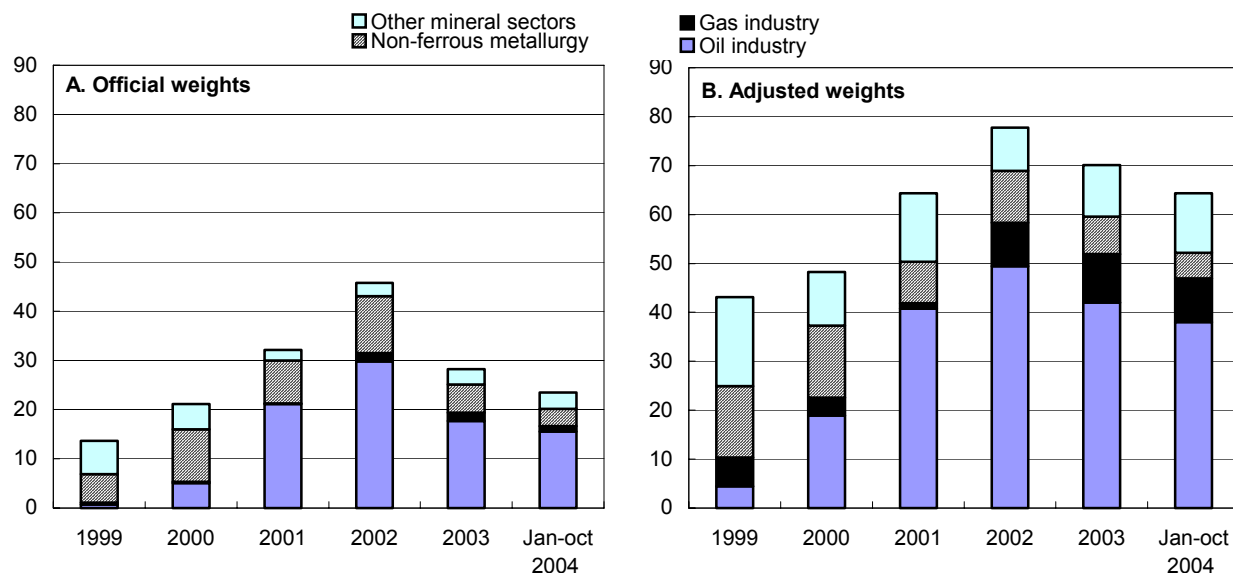
24 . Gurvich (2004).

the same time, the services share drops from 60 to 46 per cent when employing the World Bank weights, which seems far more plausible.

Taking into account the distortion described above, the contribution of different Russian sectors to economic growth can be fruitfully discussed. While growth immediately after the crisis was overwhelmingly driven by industry and construction, the relative importance of service-sector growth has been increasing, especially in 2002-03. This holds even when adjusting for the fact that the service sector's share of total GDP is significantly overstated in official Russian statistics. Even on the adjusted weights, services still account for roughly one-third of economic growth in recent years²⁵.

While overall economic growth has been relatively broad-based, industrial growth has been overwhelmingly driven by resource sectors and related industries. Adjusting for the under-representation of these sectors in the official data reveals the staggering extent to which resource sectors have driven the growth of industrial output. The fuel, non-ferrous metals and forestry sectors account for almost 70 per cent of industrial growth over 2001-04, with the oil sector alone accounting for around 40-45 per cent (see Figure 1). There has also been relatively strong growth in some other areas (e.g. the food sector) but the comparatively small size of these sectors (especially using the adjusted sectoral weights) means that their contribution to industrial growth has been relatively small.

Figure 1. **Percentage of contribution of resource related sectors to industrial production growth**
Per cent



Source: Russian Federal Service for State Statistics, World Bank and OECD calculations.

25. See Ahrend (2004a) for details.

Immediately after the financial crisis, Russian industry profited from a sharply devalued exchange rate and sharply reduced real energy prices. These factors were major drivers of the industrial recovery in 1999-2000, but both the real exchange rate and energy prices were at unsustainably low levels during this period. Subsequent real energy price rises, together with strong wage increases, have generated cost pressure on Russian enterprises. These developments, together with a steadily appreciating real exchange rate, have put considerable pressure on Russian enterprises to restructure in order to remain competitive. So far, much of Russian industry seems to have withstood competitive pressures relatively well. While industrial production growth slowed in 2001-02, it recovered to around 6-7 per cent in 2003 and 2004. The main reason for this resilience appears to be significant labour productivity increases in a large majority of sectors²⁶. However, much of the increase in productivity, especially in sectors with very low initial productivity levels, has been achieved via what is often described as ‘passive’ restructuring -- a drastic reduction in the labour force with relatively little investment and stagnant or declining output. Output growth has been concentrated in those sectors that restructured actively, not only increasing productivity but also investing. Investment alone, though, was insufficient. Some industries, like gas and electricity, largely failed to restructure, recording no significant increases in labour productivity. Such sectors contributed little to output growth despite significant investment.

In the early years of the recovery, enterprises were also able to draw on the existing but under-employed stock of both capital and labour -- in the former case, via higher capacity utilisation rates and in the latter via increases in effective hours worked. This probably explains to a large degree why Russia has been able to achieve high growth rates in recent years despite comparatively low investment rates. Investment as share of GDP has been around 18 per cent, which is significantly below the shares found in other fast-growing countries in Eastern Europe or Asia and also well below the OECD average of around 22 per cent.

From a supply side point of view, growth has almost certainly been driven by strong increases in total factor productivity²⁷, while the main factor driving growth from a demand perspective has been rapidly increasing private sector demand. Private consumption, for example, has grown by an average of more than 8 per cent per annum from 2000-2003. This consumption boom, in turn, has been driven by increases in the real purchasing power of households, as a result of rising real disposable incomes and exchange-rate appreciation.²⁸ Rapid growth in real incomes has also led to even faster import growth²⁹. This growth has

26 . See Ahrend (2004b).

27 . See OECD (2004), Box 3.

28 . Real wages increased by 82 per cent during 1999-2003, and were 28 per cent above pre-crisis levels at the start of 2004.

so far been balanced by sharply increasing oil exports and favourable terms of trade, which have prevented the current consumption boom from putting the external balance of the economy in danger. It should also be noted that fiscal restraint has played an important role in preventing an unsustainable overheating in recent years.

II.2 The policies and developments underlying recent Russian growth

The most important economic policy choice underlying the expansion since 1998 was the adoption of a prudent fiscal stance -- in sharp contrast to the pre-crisis period. During 2000-2004, federal budgets were drafted to aim for surpluses based on conservative oil price assumptions. This approach not only delivered sizeable surpluses but also a budget that was balanced over the oil price cycle. Simulations show that the federal budget would have remained in rough balance even with oil prices unchanged at USD 19/bbl (Urals) throughout the period.³⁰ To be sure, fiscal responsibility was facilitated by growing revenues due to favourable terms of trade and strong growth. However, the government largely resisted the temptation to spend this windfall, instead using a significant part of it to repay debt and accumulate some reserves. Parts of these reserves have been used to set up a stabilisation fund.

Tight fiscal policy was also instrumental in sterilising part of the foreign exchange inflows resulting from large external surpluses. These would otherwise have resulted in a sharper appreciation of the rouble or even faster monetary expansion. Fiscal sterilisation was mainly achieved via budget surpluses. An increasing -- though still small -- share of fiscal sterilisation was also realised by shifting hard-currency denominated sovereign debt into rouble-denominated debt, reflecting the financial markets' renewed interest in such instruments.³¹

Tax reform also played an important role in sustaining the recovery.³² Greater simplicity has increased the efficiency of taxation while decreasing distortions to economic activity. Moreover, the tax system was also oriented towards capturing a larger share of natural resource rents, especially windfall profits from high oil prices. This, together with a reduction in the profit tax rate and the introduction of a simplified

29 . See Figure 3.

30 . See Kwon (2003) and Ahrend (2004a).

31 . Internal government debt was roughly constant between 1999 and 2001 and increased by Rb144bn (ca. €4.8bn/USD 4.6bn) in 2002. In 2003, new issuance of domestic debt (OFZ-AD) increased significantly, to around Rb333bn (ca. €9.6bn/USD 10.8bn), but there was almost no net effect on outstanding internal debt, as the bulk of the OFZs issued in the rescheduling of the pre-crisis GKO (OFZ-PD) fell due.

32 . For an overview of tax changes in 2000-01 see OECD (2002), for 2002-2004 see OECD (2004), Box 1.4.

unified social tax (regrouping several social payments), was also a first step towards decreasing general tax pressure on the whole of the productive sector, while increasing taxation of the resource sector.

There were also very deep structural cuts on the expenditure side. General government expenditures (including all levels of government and social funds) were about 10 percentage points of GDP lower after the crisis than before it, while revenues relative to GDP remained at roughly their pre-crisis levels.³³ There also was 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 for private investment and consumption, and hence economic growth.

Prudent fiscal policy and the resulting budget surpluses played a key role in reviving private investment. Before the crisis government borrowing had been massively crowding out private investment.³⁴ Afterwards, however, fiscal discipline led to very limited new issuance of government bonds.³⁵ This helped reduce spreads on Russian external debt and lower internal real interest rates, which was reflected in increasing private investment³⁶.

Declining sovereign foreign debt levels, together with improved perceptions of the Russian economy (at least until mid-2003), helped large Russian companies to borrow increasingly from foreign banks and international markets. While increased corporate borrowing in foreign currencies carries some systemic risks and complicates monetary policy, it has had the positive effect of compelling Russian banks to begin lending to a wider range of corporate clients than before, as well as to consumers.

Although a number of developments in late 2003 and 2004 raised new concerns with respect to property rights, the perception that property rights had become sufficiently secure was one of the factors

33 . This reduction in the spending-to-GDP ratio has 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 overall spending restraint have contributed to more efficient expenditure management.

34 . From 1990 to 1998 real investment fell continuously. After 1995, this was to a great extent because large government deficits and correspondingly large borrowing requirements pushed real yields on government paper into double and even triple digits (see, *e.g.*, Ahrend 1999).

35 . Fiscal discipline in the direct aftermath of the crisis was also supported by the fact that there was little possibility for the government to borrow.

36 . While interest rates for private borrowing mattered little immediately after the crisis (non-related-party lending was almost non-existent), this has markedly changed in recent years.

contributing to the recovery of investment in 2000 and especially 2001, particularly in the oil sector.³⁷ Oil-sector investment jumped from roughly 25 per cent of industrial investment before the crisis to around 35 per cent from 2000 onwards. Strikingly, the growth of oil-sector investment was led by companies controlled by the state or by oil industry insiders: by 2000, their investment was already 70 per cent above 1998 levels. By contrast, oil companies owned by major financial groups (whose owners' property rights were perceived as less secure) were investing only marginally more than in 1998 (Table 1).³⁸ In 2001, however, as perceptions of the security of property rights further improved, the latter group of companies began rapidly increasing investment, soon reaching levels comparable with the former group. This investment led to a sharp increase in oil production and exports in the following years. Output growth, however, was uneven. From 1998 to 2003 oil industry insider- and financial group-controlled companies increased output by roughly 45 per cent and 60 per cent respectively, with the output of the three largest oil companies owned by financial groups up by 90 per cent. State-controlled companies increased output only marginally. The picture with respect to exports is even more extreme. While there was only a slight increase in the exports of state-controlled companies, exports were up 30 per cent in the insider-controlled companies and 80 per cent in the financial group-controlled companies (almost 140 per cent in the three largest).

Table 1. Oil sector investment output and exports

As a percentage of 1998 figures

	Upstream capital spending				
	1999	2000	2001	2002	2003
Total	65	148	215	167	
Financial group owned	48	117	188	160	
<i>of which 3 largest</i>	35	122	225	202	
Oil industry insider owned	80	169	229	174	
State controlled	73	173	244	169	
	Output: crude and condensate production				
	1999	2000	2001	2002	2003
Total	101	107	115	125	139
Financial group owned	99	105	116	136	158
<i>of which 3 largest</i>	99	119	138	162	190
Oil industry insider owned	102	111	128	135	144
State controlled	98	100	103	106	113
	Non-CIS crude export				
	1999	2000	2001	2002	2003
Total	98	118	125	139	164
Financial group owned	90	111	129	142	180
<i>of which 3 largest</i>	104	147	178	190	239
Oil industry insider owned	86	100	111	124	131
State controlled	86	104	97	99	109

Source: Ministry of Energy, InfoTEK, Renaissance Capital estimates, RIANTEC, OECD calculations.

37 . Clearly, high oil prices were another major factor.

38 . See also OECD (2004), Annex, Tables 1.A1.3-5.

Since 2000, the importance of the private oil companies' performance for the economy as a whole has been enormous. Industry accounted for slightly below half of GDP growth in 2000-03 and the oil sector for somewhat below half of industrial growth.³⁹ Since the state-owned companies barely grew, this means that Russia's private oil companies directly accounted for somewhere between one fifth and one quarter of GDP growth.⁴⁰ Taking into account the knock-on effects from oil-sector procurement and wages on domestic demand, the actual contribution of the private oil companies to economic growth was probably greater still. Moreover, the private oil companies played a crucial role in keeping Russia's external balance in surplus, and thus in allowing the current consumption boom to unfold. It is unlikely that Russia would have been able to grow at anything like the rates it experienced in 2002-04 had the private oil companies not raised investment, output and exports very rapidly. Moreover, the examples of the state-controlled oil companies and of other important state-controlled companies⁴¹ would appear to suggest that Russia's leading private oil companies would not have achieved the growth performance of the last few years if they had remained under state control.

Russia's export structure is still dominated by commodities and basic manufactures, which account for over three-quarters of exports. More than half of exports are hydrocarbons, with the oil sector alone accounting for 40 per cent. Russia, as a large commodity exporter, benefited from healthy terms of trade during 2000-04. The current account surplus, however, was not driven by high oil and commodity prices alone. Export volumes increased by roughly 30 per cent during 2000-03 (Figure 2). This increase was overwhelmingly driven by the oil sector, which increased export volumes by more than 60 per cent. The other major export sectors (ferrous and non-ferrous metals, as well as machine building) contributed little to overall export growth, as their export volumes increased by only around 10-15 per cent during the period,⁴² and the export volumes of the gas sector even fell significantly.⁴³

39 . Using the adjusted sectoral weights discussed above. Contributions to industrial growth are calculated on the assumption that the share of value added in production has been roughly constant in the short term.

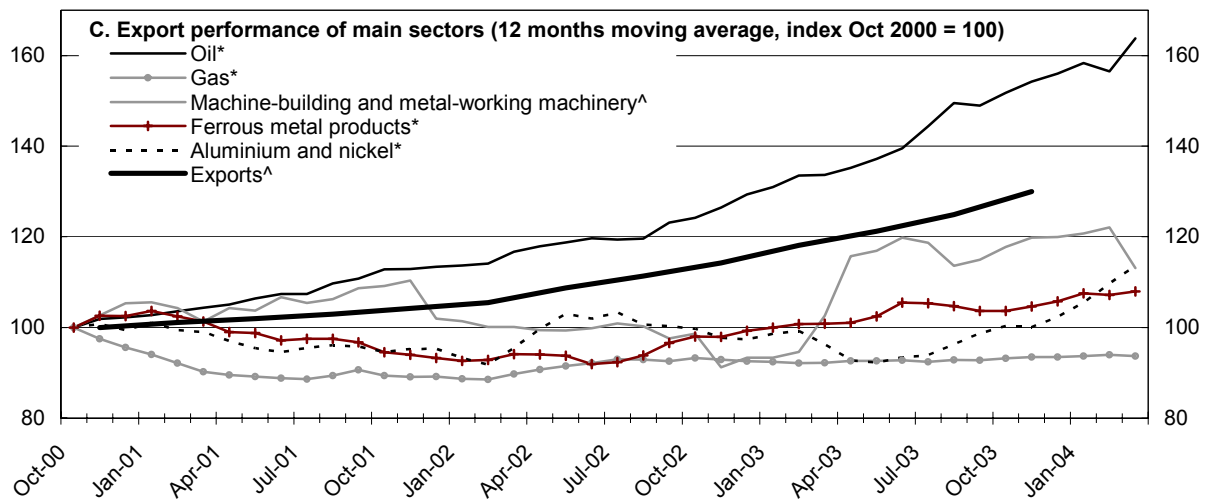
40 . This corresponds closely to Gurvich (2004) who – using a different methodology – estimates that for 2000-2003 period the whole oil sector directly accounted for 24.8 per cent of GDP growth.

41 . See Ahrend (2004b), Ahrend/Tompson (2004) and Tompson (2004).

42 . According to official statements, the armaments sector increased export volumes, but there are no official published statistics. In any case it is unlikely that these increases would have influenced total export performance substantially as the share of arms in exports is relatively small, probably somewhere around 5 per cent.

43 . Gas export volumes to non-CIS countries, which are widely reported, actually increased over the period. Total gas export volumes (including to CIS countries) fell quite significantly, however.

Figure 2. Export performance of main sectors



* Physical volumes

^ Real roubles

Source: Goskomstat, Datastream, OECD calculations and estimates.

Given that import volumes increased by an average of 21 per cent per year between 2000 and 2003, both strong oil prices and sharply increasing oil export volumes were vital in keeping the current account in surplus. Exports in 2000 were almost double the value of imports, which allowed import growth to outstrip export growth for several years without pushing the current account into deficit. While import levels are still significantly below those of exports, differences in growth rates between exports, which grew at an average annual rate just below 9 per cent during 2000-03, and imports will have to converge if Russia wants to keep a sustainable external balance.

While the current account surplus has been consistently large, the net outflow of private sector capital decreased steadily between 2001 and mid- 2003 as the situation in Russia was perceived to normalise⁴⁴. From 2002, this trend was increasingly driven by corporate borrowing abroad. At the same time, unrecorded capital outflows continued unabated, doubtless reflecting what is often referred to as ‘capital flight’ or ‘asset diversification’, but also to some degree financing un- or under-reported imports.

Monetary policy in 2000-2004 was dominated by the pursuit of conflicting policy goals, and *de facto* was very loose. The Central Bank of Russia (CBR) followed a policy aimed at gradually reducing inflation while limiting the real appreciation of the rouble in order not to endanger the competitiveness of Russian

44 . Net private outflows, however, increased again as the so-called “Yukos affair” unfolded.

industry, with some degree of priority given to the latter goal⁴⁵. Given the large current account surpluses and decreasing net capital outflows, this determination to prevent the rouble from appreciating too rapidly increasingly compelled the CBR to intervene on the foreign exchange market. Until 2002, the CBR's task was made easier by significant net private capital outflows, and fiscal sterilisation was also able to absorb a large amount of the current account pressure, reducing the need for CBR intervention. Fiscal sterilisation, however, declined in 2003, and would probably have become overburdened anyway, as net private capital outflows decreased sharply in early 2003. The policy of restraining the nominal and real appreciation of the rouble was therefore increasingly pursued via large-scale foreign currency purchases by the CBR. However, in the absence of efficient large-scale sterilisation tools⁴⁶ the accumulation of reserves led to very strong monetary expansion. This loose monetary stance also meant that starting mid-2000 rates for rouble lending to enterprises and individuals were very low, and real interest rates on deposits or government bonds were actually negative. In spite of a loose monetary stance, the CBR, aided by rapid growth in money demand, was nonetheless able to keep inflation on a downward path. This success must, however, be qualified, as starting 2003 the overall reduction in the inflation rate was largely due to the authorities' decision to limit the rate of increase of regulated prices.

Consolidation in the industrial sector continued at a rapid pace in the aftermath of the crisis. The industrial structure that has emerged is dominated by a relatively small number of large industrial groups, most of which were founded around some commodity exporting business, and which have in recent years mainly pursued strategies of vertical integration. The privately held 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 industrial groups' enterprises has been increasing briskly⁴⁷.

II.3 How to sustain Russian growth – Looking Forward

Having thoroughly discussed the required policies for successful resource-based development, as well as briefly examined the main sources of Russian growth in recent years, we can now investigate the question of whether, and under what conditions, Russia – being a resource-based economy - will be able to sustain its recent growth performance. This subject, however, necessitates another *detour*. First it must be understood that in the short-to-medium term, if Russia wants to sustain growth at current high rates, it must also be able to increase exports rapidly. Why is this? Imports in recent years have tended to increase at

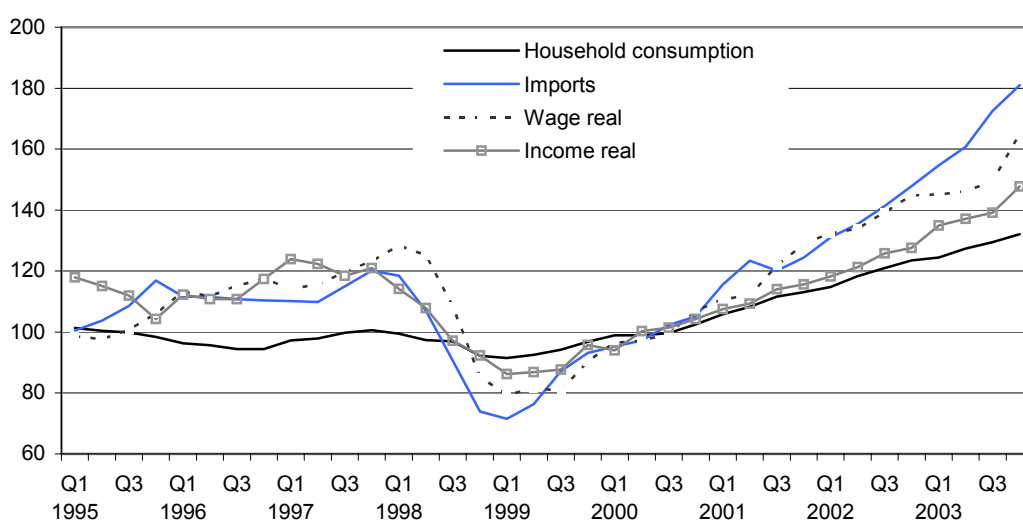
45 . See Vdovichenko (2004).

46 . Large-scale, longer-term monetary sterilisation was impossible, as the CBR could not issue its own debt.

47 . See also Boone and Rodionov (2002).

least in line with disposable incomes (see Figure 3). Since one of the main aims and consequences of economic growth is to raise living standards, high growth rates will almost certainly imply a continuation of strongly increasing import demand. Russian industry is still unable to compete with imports of many sought-after consumer goods. Moreover, the continued real appreciation of the rouble will further increase demand for imported goods, for both consumption and investment.⁴⁸ This rise in imports may be somewhat dampened by further import substitution.⁴⁹ Nonetheless, it would be very surprising if imports did not continue to grow strongly.

Figure 3. Income, consumption and imports
Index 2000=100, Seasonally adjusted



Source: Goskomstat, OECD.

To sustain such a situation, Russia must continue to increase exports. While the large current account surplus in 2004 could be taken to mean that Russia has ample space for increasing imports without a corresponding increase in exports, this is not the case. In 2004 the terms of trade were extremely favourable but they are likely to deteriorate at some point in the future. If oil prices had been at their long-term average of USD 19/bbl (Urals) in 2004, and everything else equal, the current account surplus would have been somewhere around USD 15bn. This would have been in the order of magnitude of the amount of capital Russia needed to finance estimated capital flight and pay for underreported imports. Alternatively, assuming that import volumes in dollar terms continue to increase at the average rate seen in 2000-2003, with growth in export volumes slowing to a still reasonable 5 per cent by end-2004 (which would be above

48. Short-term real appreciation will be driven by the current account surplus, medium-to-long term appreciation by the Balassa-Samuelson effect.

49. Production increases in import-competing sectors would also contribute to a welcome diversification of the economy.

the 1996-99 average, as well as the rate recorded in 2001), the current account surplus would disappear by end-2006 even with Urals crude at around USD 30/bbl and non-hydrocarbon commodity prices staying at the high average levels seen in 2004. As in recent years the amount of capital Russia needed to finance estimated capital flight and pay for underreported imports has been substantial, Russia would be structurally dependent on importing foreign capital even when oil prices were relatively high. Given Russia's vulnerability to terms-of-trade shocks, this would be a highly dangerous situation, especially in the absence of strong, stable FDI inflows. In short, if Russia wants to sustain high growth, it will have to be able to sustain rapid export growth.

While the Russian authorities would understandably -- and rightly -- prefer a more diversified export structure, Russia's revealed comparative advantage (RCA) in recent years has been in natural resources, especially hydrocarbons, and energy-intensive basic manufactures (steel, aluminium, nickel, fertiliser), plus some other commodities.⁵⁰ Moreover, the RCA in oil has been growing strongly in recent years⁵¹, as the oil sector increased exports much faster than any other important sector (Figure 2). In any case, more than 50 per cent of Russian exports consist of oil, oil products and gas. Even if Russia managed sharply to increase exports of more sophisticated manufactures,⁵² their contribution to total export growth would remain modest for some years to come, given their small share in current exports. Basic manufacturing in energy-intensive sectors may also be able to make some contribution to future export growth, although part of their competitive advantage will be eroded by necessary increases in domestic energy prices and by exchange-rate appreciation. In any case, recent experience suggests that potential export growth in these sectors may be constrained by the threat of protectionist measures on the part of Russia's trade partners.⁵³

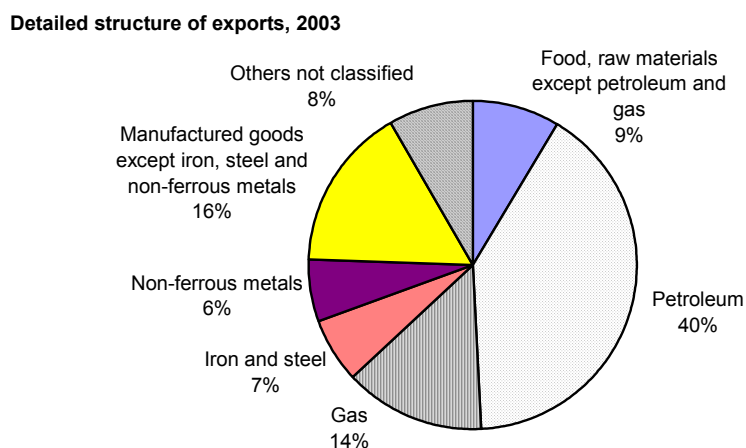
50 . Russia apparently also has a comparative advantage in arms production.

51 . See Ahrend (2004b).

52 . There is little scope to compete in labour-intensive basic manufactures with countries like China, which have much lower wage levels than Russia and almost unlimited surplus labour.

53 . 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, with a further 25 per cent affecting the chemicals sector.

Figure 4. Structure of Exports



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

Robust export growth in the short-to-medium term will probably not be possible without further increases in mineral, and especially hydrocarbon, exports. This, in turn, will necessitate investment in the pipeline infrastructure, as well as at some point in time the development of new fields. Therefore, if Russia is to maintain reasonable oil-sector growth beyond the medium term, it will be vital to ensure that fiscal and regulatory policies are set accordingly, that is encourage the development of new oil fields to replace production from those currently in decline.⁵⁴ In this connection, it will also be important to ensure that property rights are clearly assigned and secure, lest asset-control contests damage the sector's ability to finance new investment. The dramatic fall in oil sector investment in 2004, largely caused by the insecurity generated by the "Yukos affair" is a vivid illustration of this point. Moreover, it should be borne in mind that, as recent strong performance of the oil sector has been overwhelmingly driven by private companies, any important shift away from the current model of the oil sector towards more state ownership and control will in all likelihood significantly dampen the growth potential of the sector.

In the longer term, oil exports probably cannot remain the chief driver of export growth. Russian oil reserves are comparatively limited,⁵⁵ and, continued rapid export growth could at some point risk a price

54 . It is often claimed that slow progress in realising large-scale export infrastructure projects would sharply constrain the growth of oil exports in the coming years. There are, however, a number of smaller (and thus less visible) infrastructure improvement projects that should allow oil exports to increase at an estimated average annual rate of around 10 per cent, at least between 2004 and 2006 (Collison et al. 2004). It appears that production increases would be consistent with such export increases for the next few years.

55 . At least those for which development is commercially viable at current technology levels.

war with OPEC.⁵⁶ The obvious candidate to take the lead as oil export growth slows would be gas. Russia has the world's largest proven gas reserves. While many of them are in areas that are difficult to develop, Russia's gas monopolist OAO Gazprom, as well as its smaller gas producers, have exhibited real technical excellence in extracting them. Gas has the added advantages that world demand for it will probably continue to increase and Russia's gas reserves mean that it probably faces no threat of a price war if it increases exports. Unfortunately the gas sector in its current highly monopolised and heavily regulated configuration is unlikely to deliver sustained output and export growth. This underlines the importance of gas-sector reform from a macroeconomic point of view. The oil sector has shown that with the correct incentive structures -- including multiple privately owned production companies and fair access to export infrastructure -- production increases on a totally unexpected scale have been possible. In all likelihood the same would hold for a reformed gas sector. Unfortunately, recent developments would indicate that there is a larger chance to see the structure of the oil sector to move in the direction of the one prevalent in the gas sector, than the other way round⁵⁷.

The service sector could be another driver of long-term growth. With Russia becoming a richer country, demand for services will increase. As the service sector is still largely underdeveloped (once the statistical effect of transfer pricing in export sectors is stripped out), there is ample scope for catch-up growth in services.⁵⁸ The service sector, however, will not develop very strongly in the absence of a general increase in living standards: in other words, services growth may well outpace overall GDP growth but it must be accompanied by increases in goods production and exports.

As noted in the first part of this article, a strategy of further developing resource-sector exports is not without risks. More precisely, we identified three important types of potential dangers that policy-makers need to address: external vulnerability, Dutch disease, and specific institutional pathologies. Fortunately, the risks related to resource-based development should remain manageable if accompanied by the right policy choices. General recommendations on these choices have been outlined in sections I.2-I.4, and in the following we will look how they translate into concrete measures in the specific context of the Russian economy beyond those already discussed above.

56 . There is increasing agreement that the oil price collapse of 1986 was one of the key factors in triggering the terminal crisis of the Soviet system; see Tompson (1999) and Kotkin (2001).

57 . The de facto re-nationalisation of YugansNefteGaz, as well as the planned merger of Rosneft and Gazprom are prime examples.

58 . Part of the increasing weight of services in GDP will also come from a shift in relative prices. Domestic prices for non-tradables will be increasing faster than for tradable with the Russian currency appreciating.

Before doing this it may be useful to stress that we are not making a normative recommendation that Russia *should* follow a resource-based development path. We merely note that resource-based development is the course Russia has been following for several years now and - given the structure of the Russian economy - it is difficult to see how it could change in the short-to-medium term without causing major disruptions. Even if policies favouring economic diversification were highly successful, Russia's performance would continue to depend on its resource sectors for quite some time to come. Therefore, if Russia wants to achieve sustainable strong growth in the short and medium terms – which is an important official Russian aim - it is hard to see how this could be achieved without further developing its resource sectors. In any case, even if Russia decided to constrain significantly development of its natural resource sectors – with the implied negative implications for overall economic growth – Russia would still remain a resource-based economy for some time to come. This results simply from the fact that Russia's current industrial and export structure is heavily resource-based, and changes in the economic structure of a country take significant time to materialise. Therefore the issue of managing a resource-based economy well is a highly important topic for Russia, whatever one's stand on the desirability of being a resource-based economy or further developing Russia's resource sectors.

Hence, given its industrial and export structure, the crucial importance of good fiscal and monetary policy for the Russian economy can hardly be overstated. In this respect it will also be important for Russia to continue developing institutions that enhance the sustainability and political feasibility of responsible macroeconomic policies. As we pointed out before, on the fiscal side where revenues are extremely sensitive to oil prices, this translates into a need for prudent fiscal policy based on conservative oil price assumptions and a large stabilisation fund. The recently established stabilisation fund (see Annex for technical details) could play a crucial role in using fiscal policy as a stabilisation tool over the oil price cycle, but this necessitates that – as also stated earlier – it must be sufficiently large to insure for several years of below-average oil prices. This implies that the amount to be accumulated in the fund should be raised. It was planned to accumulate Rb500bn in the fund, roughly 3.8 per cent of 2003 GDP, and this aim was reached by the end of 2004. This nonetheless is a much smaller figure than was first proposed: the finance ministry's initial aim was to accumulate the equivalent of around 8.7 per cent of GDP in the fund. Moreover, as the underlying long-term oil price assumption has been significantly raised with the adoption of the 2005 budget, the potential risk from oil price drops has increased substantially. This makes a further increase in the size of the stabilisation fund even more important. Finally, it is worth noting that a larger fund would also strengthen Russia's bargaining position *vis-à-vis* OPEC.

As mentioned earlier, keeping external debt low can also help to reduce external vulnerability. Recent empirical work undertaken at the IMF suggests the optimal external debt level for Russia is probably

somewhere below 40 per cent of GDP.⁵⁹ The reduction in external sovereign debt in recent years is thus a welcome development, as is the shift from external to internal sovereign debt issues, although this has so far been on a small scale.

On the monetary side, as pointed out in the general section, there may be some scope for efforts to avoid excessive exchange-rate appreciation, especially when oil prices are high and there are major short-term capital inflows. However, in Russia, the pursuit of such exchange-rate goals with the monetary policy tools that were available in the past (mainly unsterilised exchange-rate intervention) incurs significant costs in terms of inflation. While it may be both necessary and desirable to accept relatively gradual disinflation in order to support growth and manage the exchange rate, it is important to ensure that inflation does remain on a downward path to avoid a shift of expectations from declining to increasing inflation. Such a shift would make fighting inflation much harder and costlier in the future. Continued disinflation should thus be a priority even if it meant a somewhat stronger nominal appreciation of the rouble.

It should be possible to make the inflation/rouble appreciation trade-off somewhat less acute by giving the CBR a wide range of sterilisation instruments. In recent years sterilisation may have been difficult because of 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. This said, the market for Russian domestic currency-denominated fixed income securities is still too small. It is therefore to be welcomed that late in 2004 the CBR finally obtained the possibility to issue securities for sterilisation purposes. As mentioned, further de-dollarisation (or de-euro-isation) of the economy would also be helpful in reducing Russia's external vulnerability. However such a shift will not happen overnight. It will require further bolstering the confidence of business and the public in the rouble, above all by maintaining sound fiscal policies and achieving stable low inflation.

A larger role of the mineral sector in the economy also increases the risk of 'Dutch disease'. In the Russian context – as for many other resource-based transition countries – the discovery of natural resources as such is not the main source of the problem. Rather, it is the fact that in Russia their full weight in the economy made itself felt only at the start of the transition, when the relative prices of primary raw materials, which had been held at artificially low levels under central planning, soared, as did resource exports. This exposed large differences in productivity between sectors in Russia. Whereas the export-oriented energy sector is highly competitive and profitable, and would be so even at a stronger exchange rate, many enterprises, especially in the manufacturing sector, were already barely competitive at 2000

59. Empirical work by Patillo *et al.* (2002) would suggest that, for Russia, optimal external debt levels would be somewhere in the range of 15-40 per cent of GDP.

wage and exchange-rate levels. The fact that some manufacturing enterprises are located in places with unfavourable climatic conditions (which increases operating costs) does not help.⁶⁰

As noted above, the strength of the resource sector implies a relatively strong exchange rate for Russia, which makes life much harder for other tradable sectors and puts the need for productivity increases in the non-mineral tradable sector to the forefront. In this context, positive developments with respect to productivity in most sectors, and to some degree also unit labour costs, are encouraging⁶¹. This improvement must be sustained if Russia wants to maintain high growth rates and achieve a more diversified industrial structure in the longer term. Ironically, Russia's otherwise problematic industrial inheritance has so far made it easier for processing industries to cope with the effects of rising wage levels and an appreciating real exchange rate: the inefficiency of former Soviet industrial enterprises meant that there was often a great deal of scope for relatively easy productivity gains -- not least by means of 'passive' restructuring (*i.e.* labour-shedding). However, there are limits to how far such passive restructuring can go. Further *active* industrial restructuring, including private investment to modernise production capacities, is thus the *sine qua non* for continuing strong growth. This implies that sustaining competitiveness in the face of mounting cost pressures will be increasingly difficult.

As pointed out beforehand, the tax system is also an important lever that can be used simultaneously to avoid "Dutch disease" and assist the development of the non-resource sector. The abolition of turnover taxes in Russia during 2001-03 represents an important step in this direction, since such taxes weighed particularly heavily on processing industries.⁶² In Russia, increasing direct taxation of the natural resource sector (not only the oil sector) should be used to lower overall tax levels and in particular to further cut the unified social tax (UST), thereby reducing non-wage labour costs⁶³ which should at least lead to lower total labour costs in sectors with low productivity. Since a cut in the UST would cause shortfalls for the Pension Fund, it might be desirable to earmark a certain portion of *commodity price independent* resource taxes to make up these losses. However, any increase in taxation of resource-extraction industries must ensure that these sectors, which are critical to growth, remain sufficiently profitable to allow for their further development. Those steps undertaken in 2003/04 that increased in an equitable fashion the tax burden on the oil sector, especially under favourable oil prices, while closing tax loopholes at the same time, were hence a step in the right direction. However, it would be unwise to focus solely on the taxation of the oil industry. There should also be attempts to increase taxation of other resource or related sectors.

60 . Mikhailova (2003).

61 . For details see Ahrend (2004b).

62 . See OECD (2004), Box 1.4.

63 . OECD (2003).

There are also some Russia-specific measures that can be taken to limit institutional weaknesses that may be aggravated by resource-based development. For example, we pointed out the importance of a strong civil society and a free press in the fight against corruption. We also stated previously that rules, if necessary at all, should be simple, transparent and standardised, 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, including changes to fiscal federal relations and measures to curb bureaucratic interference in commercial activity by, for example, curtailing officials' inspection powers, simplifying business registration and reducing the range of activities subject to licensing requirements. In this context, recent proposals to vary effective tax rates in the oil sector on the basis of the quality of deposits exploited should be viewed with caution. Such an approach would in theory be more efficient, as it would not only favour the exploration of less profitable fields but would also prolong the life of declining fields beyond what would be commercially viable under the current tax system.⁶⁴ However, it will be critical to ensure that any such system of taxation relies on a small number of variables that are easily collected and 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. Though the adoption of such a relatively simple system may be advisable in the medium term, given widespread corruption and transfer pricing 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.

With respect to diversification, Russia is probably 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 the global ambitions they see for the Russian state – would also consider a resource-based development path as politically unacceptable. Hence Russia should – and will – pursue policies to foster diversification in coming years. Given the political context it is, however, especially important to have a clear understanding of the limits of diversification policies as discussed in section I.5, and it must be recognised that diversification is bound to be long term process.

In addition to the standard recommendations with respect to diversification made in the aforementioned section, there are a couple of points that are specifically worth stressing for Russia. First,

64 . While Russian oil companies appear to consider current fiscal terms attractive enough to invest in short-term projects, enhancing production from existing fields, it is not clear that this regime will be equally attractive when it comes to making large, up-front investments in the development of new fields. Any changes in oil-sector taxation should be sensitive to this problem, and there is an urgent need to streamline government decision-making with respect to new field development and to reduce the existing, very considerable bureaucratic barriers that currently impede such activity.

in spite of rapid growth in lending to the private sector in 2002-2004, Russia's financial sector remains underdeveloped. Further reform of the banking sector, in particular, is thus a key priority. Given Russia's potential in a number of high-tech sectors, Russia is a resource dependent economy where the emergence of a venture capital industry could actually be very helpful. In Russia, reducing the burdens imposed by heavy regulation and an often corrupt bureaucracy could play an especially important role in creating a more level playing field for business (especially SMEs) and decreasing barriers to entry. In this respect, a more active competition policy would also be needed. This is especially true for sectors such as natural gas and electricity, where large, state-controlled monopolies should be restructured, while creating legal and regulatory frameworks that combine robust competition with effective regulation⁶⁵. Finally, streamlining burdensome custom procedures could be helpful for potential Russian exporters (especially for SMEs) 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.

On the less conventional side, advocated 'new-style interventions' beyond those mentioned beforehand include programs that could help to establish links and networks. In this spirit, it has, for example, been suggested to create research parks and technology transfer centers attached to the leading educational and research facilities.⁶⁶ Many of these "new-style interventions" will, however, require the intervention of some part of the Russian administration in one way or another, and increasing the quality of the state administration will therefore be crucial for their success.

Conclusion

The first part of this article 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 significantly mitigated by good macro-economic policies and a sound institutional framework. It draws attention to a new line of argumentation that sees not resources as such, but rather the fact that most resource-based economies have relied heavily on state ownership and intervention as responsible for their disappointing economic performance. The examples of economies with strong private entrepreneurship in resource sectors, such as Canada, Australia or the Scandinavian countries, demonstrate that, given the right institutions and policies, developing a successful modern economy based on natural resource exports is feasible. The article then discusses in detail the necessary policies for successful resource-based development, focussing specifically on how to deal with the potential problems of external vulnerability,

65 . See Ahrend/Tompson (2004) and Tompson (2004) for details.

66. See Kim (2004).

Dutch disease, and resource-connected institutional pathologies. In this context possibilities to actively further a more diversified economic structure are also considered.

The second part of this article looks at Russia, a prominent resource rich economy, in light of the normative framework set up in the first part, and adapts the general recommendations to the Russian case. It argues that while diversification is an important long-term goal for Russia, even if diversification policies are relatively successful, its economy is bound to remain resource-based for some time to come. At least for the short and medium term and until diversification has borne significant fruit, Russia should therefore make sure that while avoiding the pitfalls so often associated with resource-dependent growth, it follows policies that will allow it to make the best of its resource endowments.

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ANNEX. THE FISCAL STABILISATION FUND

The Stabilisation Fund of the Russian Federation was established in 2004 following the adoption of amendments of the Budget Code of the Russian Federation in December 2003.¹ The purpose of the fund is to insure the federal budget against oil-price volatility. Under the Budget Code amendments, ‘surplus’ revenues resulting from relatively high oil prices are accumulated in the fund automatically: all income from the natural resource extraction tax and the crude oil export duty above that which would accrue at an oil price of USD20/bbl (Urals) is automatically transferred to the fund. The government may also be required to transfer to the fund budget surpluses accumulated in the previous fiscal year, although this is less automatic: some surplus funds may be carried over to finance budgetary expenditures in the early months of the new year, when tax revenues are traditionally low.

The legislation stipulates that, until the fund accumulates a total of Rb500bn, the revenues accumulated in the stabilisation fund may be spent only to finance the federal deficit arising as a result of oil prices below the baseline USD20 level for Urals crude. The Russian authorities estimate that a fund of Rb500bn would insure the budget against the revenue losses arising from two consecutive years with oil prices averaging USD15/bbl for Urals crude. Once the fund exceeds Rb500bn, the government will be able to spend the additional revenues for unspecified ‘other purposes’, albeit only with the agreement of the Federal Assembly (such spending must be specified in the law on the federal budget for the year in question). The government intends that such surplus revenues would be used, in the first instance, to repay foreign debt early and to finance spending on structural reforms, but there is no requirement to this effect in the Budget Code.

The fund is managed by the Ministry of Finance, although the government may delegate some management functions to the CBR. The only instruments in which stabilisation fund revenues may be invested are foreign government securities; the government is to define the list of states whose securities may be used for this purpose.

It is important to recognise that the fund’s purpose is fiscal stabilisation across the oil price cycle. In this, the fund differs from some other oil funds, most notably that of Norway.² 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. The Norwegian fund actually accumulates all of the state’s net cash flow from petroleum activities, a portion of which is then transferred back to the budget to finance the non-oil budget deficit.

1. ‘O vnesenii dopolnenii’ (2003).

2. On the Norwegian fund, see Finansdepartementet (2003).