

Caspian Oil in a Global Context

William Tompson¹

This paper provides a brief overview of the political economy of Caspian oil. It begins by situating the Caspian region's oil sectors in the larger global market, before proceeding to examine the ways in which the Azerbaijani, Turkmen and Kazakh oil sectors have been organised and governed since 1991. The paper then considers the likely consequences of recent policy shifts in Kazakhstan, the region's most important oil producer. A further section considers the questions of transport infrastructure and export routes, which remain particularly complex problems for Central Asia's landlocked producers. This is followed by a brief conclusion. The paper's central argument is that it is by no means certain that the Caspian region's hydrocarbon potential will be developed in a timely, economically efficient way. While the impact of geology, geography and international price movements can hardly be ignored, policy-makers can do much to raise or lower the long-term elasticity of CIS supply. Unfortunately, policy in the region seems, on present trends, likely to lower it.

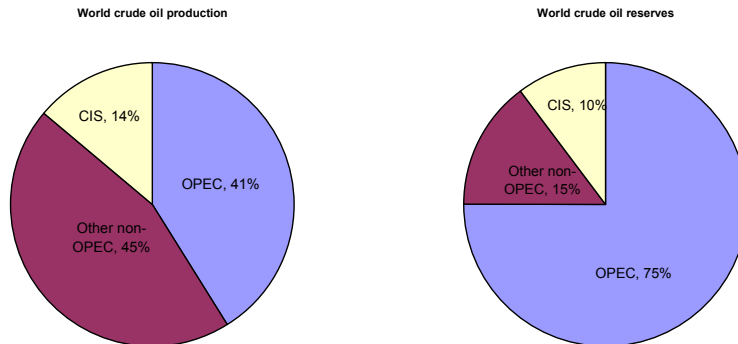
Caspian oil in global perspective

Any assessment of the Caspian region's long-run supply potential must be set in the context of growing global dependence on OPEC over the long term. The IEA (2004) sees OPEC's market share rising from somewhat under 40% in 2002 to 53% in 2030, slightly above the historical peak recorded in 1973. Total non-OPEC reserves are being depleted faster than those of OPEC, and the world's oil reserves are more and more concentrated in a limited number of OPEC states – specifically, Middle Eastern OPEC. This means, *inter alia*, that world oil supplies will depend increasingly on developments in countries where investment is not allocated according to market forces and where there are serious questions about long-term political stability.

The CIS is both the largest oil-producing region outside OPEC and, at present, the region with the largest concentration of non-OPEC reserves (Figure 1). It is not destined to become in any sense a real rival or alternative to OPEC, but the prospect of rising dependence on OPEC – and, in particular, on Middle Eastern OPEC – makes the potential development of non-OPEC supply even more important, for at least three reasons: the general desirability of maintaining diverse supply channels; the potential for instability or threats to supply within much of the OPEC area; and the fact that what the cartel does, as reliance on OPEC increases, will depend in part on the elasticities of both non-OPEC supply and oil demand.

1. Senior Economist for Russia and the NIS, Economics Department, Organisation for Economic Cooperation & Development. The views expressed in this presentation are those of the author and do not necessarily reflect the position of the OECD or its member states. The author is grateful to Corinne Chanteloup of the OECD Economics Department for preparing many of the graphics included in the paper.

Figure 1. Crude oil production and reserves, 2004



Source: BP (2005)

Nevertheless, Azerbaijan and Central Asia are, by world standards, relatively modest suppliers of oil. Russia alone still accounts for over three-quarters of CIS oil production and exports, with Kazakhstan making up most of the rest. These two states together account for over 90% of both proven reserves and crude production in the CIS (Table 1). It is worth noting that Kazakhstan, alone among the CIS producers, has a significantly larger share of estimated global reserves than of current production, suggesting that its relative weight in global oil supply is likely to grow substantially. By contrast, unless reserves growth in Azerbaijan and Russia accelerates substantially over the coming years, their role as oil suppliers appears likely to diminish. A significant question mark hangs over Turkmenistan: as will be seen below, there are grounds for believing that Turkmenistan's oil potential is considerably greater than might be inferred from current reserve estimates – which are themselves subject to a high degree of uncertainty, owing to the secrecy of the Turkmen regime.

Table 1. CIS oil sectors, 2004

| | Proven reserves | | Production | | Exports |
|--------------------|-----------------|------------|-------------|------------|-------------|
| | bn bbl | % of world | 000 bbl/day | % of world | 000 bbl/day |
| Azerbaijan | 7 | 0.6 | 318 | 1.3 | 211 |
| Kazakhstan | 39.6 | 3.3 | 1295 | 1.6 | 997 |
| Russian Federation | 72.3 | 6.1 | 9285 | 8.7 | 5140 |
| Turkmenistan | 0.5 | 0.4 | 202 | 0.3 | 80 |
| Uzbekistan | 0.6 | 0.05 | 152 | 0.2 | 0 |

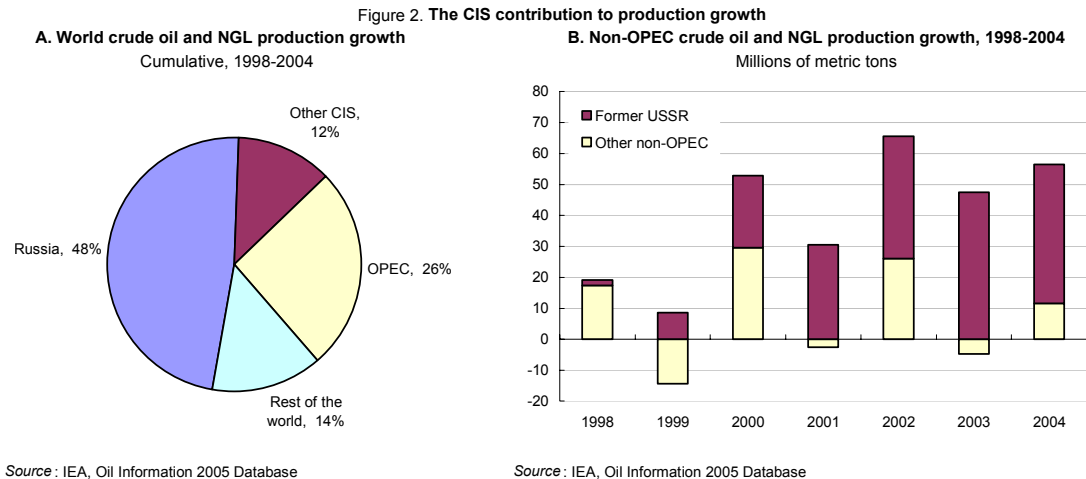
Source: BP, USEIA, OECD calculations

Yet if the CIS is very much a second-tier producer behind OPEC in absolute terms, the same cannot be said of its contribution to *incremental* supply. During the six years to end-2004, CIS producers accounted for just over 60% of the increase in world output and 82% of the increase in non-OPEC output (Figure 2). In 2005, despite a marked slowdown in production growth, the CIS contributed one-third of incremental supply and offset falling production in other non-OPEC regions. The CIS share of global production climbed by almost half over the period, from 10.0 to just under 15%, while the former Soviet Union's (FSU) share of world exports rose from 8.9 to 13.5%.² This contribution was critical at a time of rapid demand growth. Increases in

2. Unfortunately, the available data on net exports are for the region of the former Soviet Union as a whole, not just the CIS, as the available data series do not separate out the Baltic states – their consumption is counted as

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CIS output during 1998–2004 came close to matching the combined consumption growth of the United States and China (roughly 4.2mbd), by far the two largest sources of demand growth over the period. The IEA (2004), moreover, expects the non-OPEC share of world supply to continue growing to the end of the present decade, albeit with Kazakhstan and Azerbaijan accounting for an increasing proportion of incremental CIS supply. In both republics, projects now well under way should assure continued robust output growth through 2010.

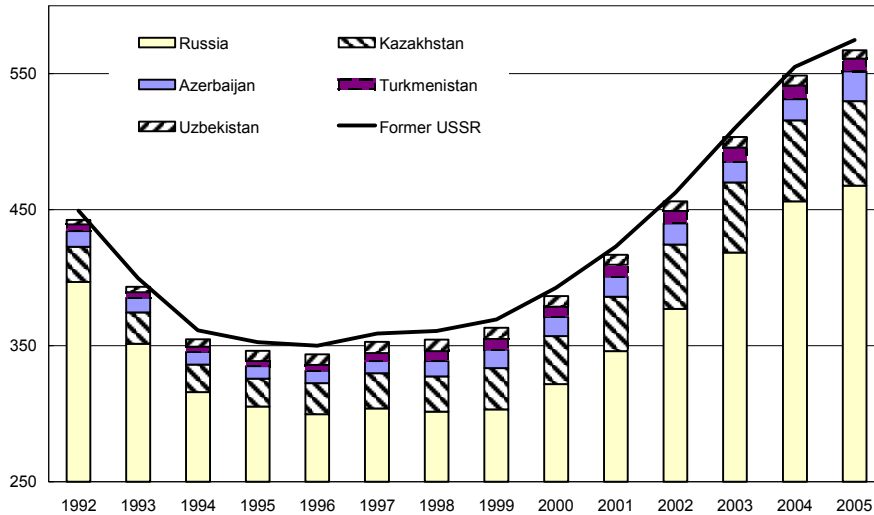


The rapid recovery in CIS oil output in recent years, driven chiefly by the turnaround in Russian production, has been one of the most important developments affecting world oil markets (Figure 3). From a peak of almost 12.7mbd in 1987,³ the region's oil output fell below 7.2mbd in the mid-1990s. In 1996, however, a recovery began in Kazakhstan, followed by Russia, Turkmenistan and Azerbaijan.⁴ By 2004, CIS output had reached 11.4mbd – still below the Soviet-era peak recorded in 1987 but up nearly 60% on the low of 1996. Russia alone accounted for about three-quarters of this increase (almost 3.2mbd), although Kazakhstan had recorded the most impressive growth rates, roughly tripling production in the ten years to 2004. Azerbaijani output and exports exploded in 2005 after the opening of the Baku–Tbilisi–Ceyhan (BTC) pipeline. The rapid expansion of Caspian output was not unexpected, in view of the on-going development of substantial new fields by foreign consortia, but the Russian recovery was a tremendous surprise to most observers.⁵

part of the FSU total, not in net exports. National export data for the CIS oil producers *is* available, but it includes exports to other CIS states and, indeed, to one another (some Kazakh exports go to Russia, thus freeing up Russian oil for export, etc). Thus, the best available measures of supply to the rest of the world are still the data series on the FSU.

3. Including both crude oil and natural gas liquids.
4. The exception to this trend was Uzbekistan, which managed to sustain production growth through the 1990s, with output nearly tripling to 191kbd in 1998–99 before falling just over 20% over the subsequent five years. However, in addition to being a minor producer, Uzbekistan was a significant oil consumer. Oil exports were limited, as rising output was needed to cover domestic consumption.
5. IEA (2004:525) notes that from 1995 through 2002, each of its successive global projections *raised* forecasts for non-OPEC supply to 2010, yet each was low of the mark, with the CIS accounting for most of the difference. The IEA was not alone: most forecasts, including those of CIS governments, pointed to slower growth than was actually achieved.

Figure 3. Production of crude oil and NGL
Millions metric tons



Source: IEA, Oil Information 2005 Database. Data for 2005 are preliminary.

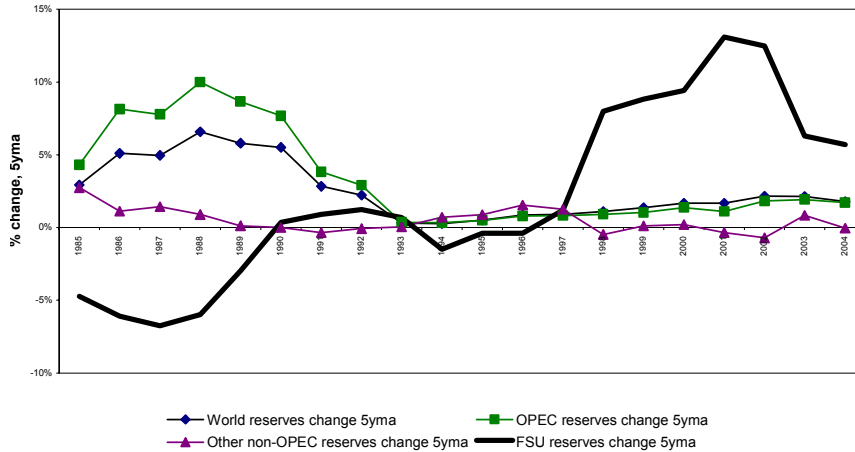
The CIS appears set to remain the most important oil-producing region outside the Middle East for some time to come. To be sure, assessments of its potential vary widely, depending on methods and definitions. There are considerable differences in estimates of the total volume of petroleum physically in place. Judgements about how much of this can be produced economically depend on assumptions about technological development, oil price trends and other variables. BP (2005) estimates CIS proven reserves⁶ at just under 121bn bbl, up 28.5% over five years. Russia accounts for 60% of the total, with 72.3bn. It is followed by Kazakhstan with 39.6bn.⁷ This leaves the CIS with 10.2% of world reserves but 40.5% of non-OPEC reserves. The Middle East as a whole contains over 60% of global reserves, led by Saudi Arabia's 22.1%. The CIS has, in recent years, been the only major region to record strong reserves growth, although this partly offsets very slow growth during the late 1980s and early 1990s (Figure 4).

6. 'Those quantities that geological and engineering information indicates with reasonable certainty can be recovered in the future from known reservoirs under existing economic and operating conditions'.

7. While all CIS reserves data must be treated with caution, estimates for Uzbekistan and Turkmenistan are particularly problematic, since foreign involvement is so limited and the regimes in question are so secretive. BP's estimates for these states have remained unchanged for some time, and may therefore be off the mark. In the case of Turkmenistan, however, alternative estimates suggest that reserves may be close to triple the levels reported by BP. IEA (2005:4) cites estimates running to around 11bn tonnes for the Turkmen section of the Caspian alone.

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Figure 4. Change in oil reserves



Source : BP Statistical Review of World Energy 2005, OECD calculations.

There is good reason to believe that the CIS share of both reserves and output could rise further. Much of the CIS, including some geologically promising regions of Russia and Kazakhstan, is still under-explored, and relatively little exploration is taking place at present. On the basis of data for 1996, the US Geological Survey (USGS) estimated that the CIS states held just under 17% of as-yet undiscovered, technically recoverable oil in the world. This is based on the mean probability for the USGS estimates, which cover a range of probabilities, from 5% to 95%. Significantly, the estimated potential CIS share is substantially larger than its actual 2004 share across the whole range of estimates for different probabilities.⁸ This conclusion is also supported by other recent estimates. De Golyer and MacNaughton suggest that the recoverable reserves of Russia alone could amount to about 150–200bn bbl and an assessment by IHS Energy (formerly Petroconsultants) put Russia's resource potential at 140bn bbl at end-2001.⁹

There are also wide variations in assessments for Kazakhstan and Azerbaijan. World Bank (2005b:3) cites estimates as high as 53.9bn bbl for the former, compared with BP's figure of 39.6bn. According to Energy and Natural Resources Minister Vladimir Shkolnik, a seismic survey of the North Caspian conducted in 1994–96 identified 23 areas with large or medium-sized structures likely to hold oil in the Kazakh sector of the sea. It would be unrealistic to expect that the North Caspian will yield any further discoveries on the scale of the giant Kashagan field, discovered in 2000. However, if only half of these prospects prove to be productive, they could add a further 5–6bn bbl. Together with enhanced recovery from existing fields, this could raise Kazakh reserves to 50–60bn bbl.¹⁰ Figures for Azerbaijan are far lower, but estimates of proven

8. It should also be noted that the USGS estimates cited here are for undiscovered oil; they do not include potential reserves growth via increases in the share of oil known to be in the ground that is assessed as economically recoverable. There is considerable scope for growth in the CIS here, too, although a great deal of the easiest growth in this respect has already taken place.

9. Bush (2004). De Golyer and MacNaughton predict that by 2012 Western Siberia will be able to increase oil production from the current slightly less than 6 million barrels per day to 10 million barrels per day and to retain this level for at least a decade.

10. See Kochhar *et al.* (2005:23), table 3; and World Bank (2005b:3), table 5.

reserves run as high as 13bn bbl, and the government has claimed 17.7bn, albeit on the basis of the old Soviet system for classifying reserves.

Turkmenistan may be the most interesting case of all, however. While known primarily for its endowments of natural gas, Turkmenistan may have greater potential as an oil producer than is generally recognised. Turkmenistan is widely reckoned to be under-explored, and USGS (2000) estimates it to have exceptional promise with respect to as yet undiscovered oil reserves. While the country's *proven* reserves are currently estimated at around 500m bbl, the USGS mean probability estimate for *undiscovered* oil is 6.8bn, with the low (5%) and high (95%) probability estimates being 13.4bn and 1.8bn respectively. Given that larger volumes of oil have been located all around the Caspian basin, it is hardly surprising that Turkmenistan is reckoned to be so promising.¹¹ At the very least, Turkmenistan could have oil production potential comparable to that of its neighbour across the Caspian, Azerbaijan.

Patterns of ownership, control and taxation

In the years following the collapse of the Soviet Union, the petroleum producers among its successor states adopted a range of different strategies for managing and developing their hydrocarbons sectors. Patterns of ownership and control, as well as tax regimes, and attitudes towards both the extent and modalities of foreign involvement, varied widely.¹² There were and are, of course, a number of common features of the investment environment in all the CIS producers. These include a generally weak institutional framework, pervasive corruption, opaque and often changeable policy-making on the part of the authorities, and relatively high levels of political and economic uncertainty. To be sure, such problems are hardly unique to the CIS. Much of the world's oil production originates in countries afflicted by similar problems. However, there is some evidence to suggest that, even by the standards of oil-producing countries, the CIS is a particularly difficult place in which to operate, particularly with respect to corruption.¹³ In addition, the legacies of the Soviet past – including both physical infrastructure and institutions – and the problems of post-communist transition confront local and foreign oil companies with a unique set of challenges. Nevertheless, an awareness of the different paths taken by CIS producers is critical to understanding their development over the past decade and the challenges they now face.

At the beginning of the transition, the two most promising Caspian producers, Azerbaijan and Kazakhstan, badly needed foreign capital and technology to develop their hydrocarbon resources and, in the immediate post-Soviet period, they were inclined to welcome a high degree of western – as opposed to Russian – involvement, for both political and commercial reasons. Subsequently, they also developed increasingly close commercial links to Russia, with Lukoil, in particular, becoming active in both markets.

11. The corresponding figures for Uzbekistan are much lower – the USGS mean probability estimate is 140m barrels, and the upper and lower estimates are just 43m and 276m respectively, as compared with known reserves of around 600m barrels.

12. On the reasons for these divergent choices, see Jones Luong and Weinthal (2001) and Jones Luong (2004).

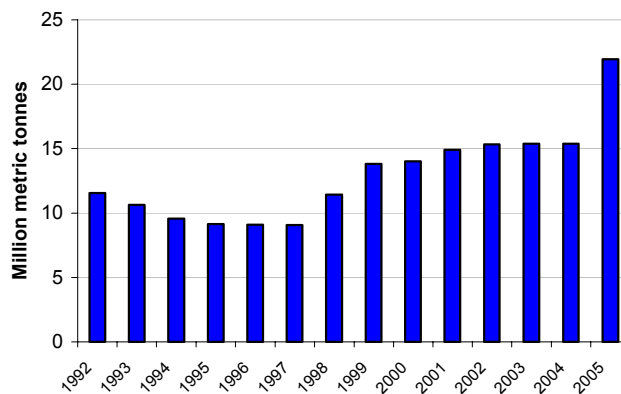
13. In recent years, former Soviet republics have consistently ranked below most other major oil exporters in Transparency International's Corruption Perceptions Index. The major exceptions are Angola, Indonesia (now, in any case, a net oil importer) and Nigeria (which consistently occupies second-to-last place in the index).

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The newly independent *Azerbaijan* inherited a mature oil industry, but its onshore fields were in decline and it required substantial new investment in order to develop large-scale new projects off shore and to refurbish existing fields. While maintaining full state ownership over energy companies, Azerbaijan was quick to invite foreign investors to assume a direct role in the development of its hydrocarbon reserves. Most of the state's existing oil-sector assets were consolidated in September 1992 with the merger of two state oil companies, Azerineft and Azneftkimiya, into the State Oil Company of the Azerbaijan Republic (SOCAR). While government ministries handle exploration and production agreements with foreign companies, SOCAR is party to all international consortia developing new oil and gas projects in Azerbaijan. SOCAR was created precisely for that purpose – to attract foreign players without compromising state control. The company accounts for around 60% of total oil output in Azerbaijan.

Azerbaijan has arguably been the most consistently accommodating CIS state in its dealings with foreign investors, relying more than its neighbours on project-specific arrangements tailored to meet investor/state needs – major deals have virtually all been done on a production-sharing agreement (PSA) basis.¹⁴ As a result of Azerbaijan's investor-friendly approach, an influx of foreign investment since independence has revitalized the country's oil sector. To date, Azerbaijan has signed over 20 major field agreements with approximately 30 companies from 15 countries. Between 1995 and 2004 Azerbaijan attracted more than \$11bn in foreign investment, as much as 90% of which was directed into its oil and gas sector. Crude oil output rose by just over 80%, from a post-Soviet low of 180kbd in 1996 to 460kbd in 2005 (Figure 5).¹⁵ Production actually fell slightly in 2004, owing to technical problems and planned maintenance in the main offshore fields, but with new fields raising production to fill the BTC pipeline, which began operations in the spring of 2005, oil production soared. Preliminary official data indicate that oil output rose by 42.5% in 2005, with exports rising by 48%.

Figure 5. Crude oil and NGL production in Azerbaijan



Source: IEA, Oil Information 2005 Database

14. In 2000, Azerbaijan decided to abolish joint ventures and convert them to the more investor friendly PSAs in an effort to spur increased development.
15. This is well below the 500kbd peak recorded during the Second World War in Azerbaijan, but above the level of 286kbd recorded in 1987.

Crude production growth since 1997 has mainly come from the international consortium known as the Azerbaijan International Operating Company (AIOC).¹⁶ The AIOC operates the offshore Azeri Chirag and deep water Gunashli (ACG) mega-structure, which is estimated to contain proven crude oil reserves of 5.4bn bbl. ACG production is slated to reach approximately 500kbd by 2007, rising to roughly 1mbd by 2009. Azerbaijan could be exporting 1.1mbd by 2010, as compared with roughly 211kbd in 2004.¹⁷ Not all foreign investment projects have been so successful, however. Several have announced disappointing drilling results in recent years, and a number of joint ventures and PSAs have shut down after failing to find the anticipated volumes of commercially recoverable reserves.¹⁸ Indeed, there has been only one major new discovery since the 1994 agreement with the AIOC was signed. While production from the ACG structure is set to grow rapidly between now and 2010, it is also expected to have a relatively brief production plateau. World Bank (2005a) thus estimates that, in the absence of substantial new discoveries, Azerbaijan's oil production will peak in 2010 at about 1.5mbd before going into decline.

The existence of *Kazakhstan's* considerable hydrocarbon resources was well known in Soviet times, but the Soviet authorities were slow to develop them. Soviet-era production nevertheless reached a peak of 569kbd by 1991. The Kazakh government quickly recognised the need for foreign capital and expertise, in view of the relatively under-developed state of its most important deposits, the technical problems posed by some of those developments and the desire to reduce the country's reliance on Russia. It began courting foreign investors more or less immediately after independence.¹⁹ Like Azerbaijan (and unlike Russia), Kazakhstan opted to rely heavily on tax and regulatory packages tailored to meet the needs of investors in large projects, whether in the context of PSAs, joint ventures or concessions. One important difference between Kazakhstan and Azerbaijan has been the greater willingness of the latter to operate on a case-by-case basis. While PSAs and concessions are negotiated as a matter of course in Kazakhstan – unlike Russia, where they are still exceptional – Kazakh contracts over time have come to be based increasingly on a body of law applicable to all projects. For investors in the 1990s, this was not a major impediment. The crucial factor was the readiness of Kazakhstan to conclude contracts that would protect them from subsequent changes in taxation or other policies. The tax regime was to be stable for the life of the contract. The question of contract sanctity and stability was central to Kazakhstan's drive to attract foreign investors. As will be seen below, it has more recently become the focus of conflicts between the state and foreign companies.

Unlike Azerbaijan, Kazakhstan privatised most of its existing oil and gas enterprises – mainly to foreign owners and often with significant social commitments included in the terms of the sales.²⁰ Numerous small, on-shore fields were also taken over by private companies under various contracts. Many of these private companies were controlled by interests close to the government or the state-owned companies involved, raising questions about the terms of these transactions, but the production performance of the small on-shore privates was generally good. The pipeline network constituted the major exception to the authorities' readiness to privatise – while Kazakhstan has been readier than Russia to accept the construction of new private

16. In addition to SOCAR, the AIOC consortium includes BP, Unocal, Inpex, Statoil, ExxonMobil, TPAO, Devon Energy, Itochu and Delta/Hess.

17. The government expects to reach this level by 2008.

18. This refers primarily to oil. Azerbaijan has lately enjoyed more success in finding new gas deposits.

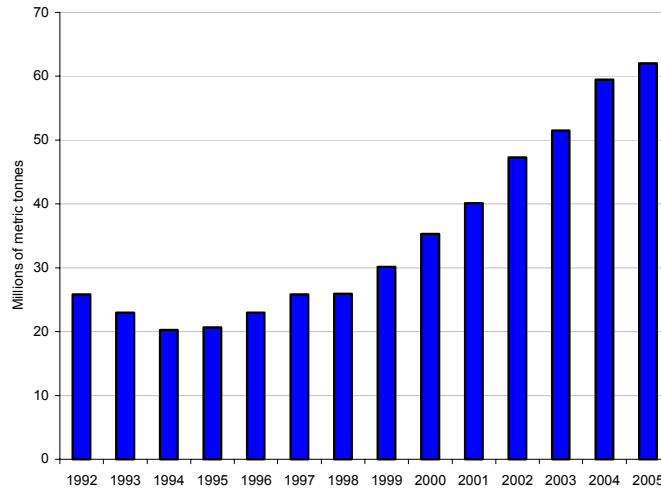
19. Jones Luong and Weinthal (2001).

20. During 1996–97, the government sold off the Chymkent Oil Refinery, Yuzhneftegaz, Mangistaumunaigaz, Aktyubinskneft and the Uzen oil fields.

pipelines, the network inherited from Soviet times has remained in state ownership, which may well make sense in view of its natural monopoly character.

The Kazakh approach was extremely successful in attracting western capital to the oil sector. Indeed, the country became the largest recipient of foreign direct investment (FDI) *per capita* in the CIS. During 2001–05, net FDI inflows averaged around 10% of GDP, as compared with levels of 1.5–2.5% in Russia. By end-2004, the cumulative stock of FDI in oil and gas extraction had reached around \$16bn.²¹ As successive projects have come on-stream, Kazakhstan’s crude oil production has soared (Figure 6), reaching approximately 1.22mbd in 2004 – roughly triple the post-Soviet low of 414.8kbd recorded in 1995. Most of this growth occurred towards the end of the period, as production grew at an average annual rate of just under 16% during 1999–2004. With domestic consumption of just 224kbd, the country generated net exports of almost 1mbd, rising to 1.1mbd during 2005. The government hopes to increase production levels to around 3.5mbd by 2015, a target that appears entirely feasible on the basis of projects already under way. Some western oil executives believe that Kazakhstan could reach 4mbd if the authorities wish to do so and are prepared to offer more attractive fiscal terms to investors interested in developing the remaining North Caspian blocs. As will be seen, however, there are questions as to whether or not the authorities really want even faster output growth, given the problems this could create for macroeconomic management.

Figure 6. Production of crude oil and NGL in Kazakhstan



Source: IEA, Oil Information 2005 Database

While the oil and gas enterprises inherited from the USSR were largely privatised in the mid-1990s, the authorities created a national oil and gas company, Kazakhoil, in 1997 to manage the state’s remaining oil-sector enterprises and its interest in PSAs, which had until then been held by the Ministry of Energy and Mineral Resources. In February 2002, the consolidation of state assets went a step further with the creation of a vertically-integrated state oil and gas company, Kazmunaigaz, via the merging of Kazakhoil and Transneftgaz. The latter was a state-owned oil and gas transport group made up of KazTransOil and KazTransGaz, the two companies

21. Unlike Azerbaijan, moreover, Kazakhstan has been relatively successful in attracting FDI to other sectors – the total stock of FDI is estimated to have reached \$29.75bn by the end of the third quarter of 2004.

that operated the country's trunk pipelines. The purpose of this integration was to ensure a united and coherent state policy on using the country's hydrocarbon resources. Kazmunaigaz was also given the task of overseeing a major licensing round, which began in 2003, involving over 100 blocks in the Kazakh sector of the Caspian shelf. Kazakhstan is also looking for Kazmunaigaz to compete with foreign energy companies.

The state's ambitions for Kazmunaigaz are linked to a broader trend towards greater state involvement in, and direct control over, hydrocarbon developments in Kazakhstan. This has led to increasing tension with foreign investors in the country and, at times, has raised questions about the Kazakh authorities' commitment to property rights and contract stability. Even Kazakh officials acknowledge that the authorities' attitude towards foreign investors has grown tougher. They argue that the state allowed investors to take advantage of it in the early post-independence period and that it is now merely reasserting its legitimate interests and trying to enforce rules and conflict provisions that it had previously been too weak or inexperienced to uphold.²² The shift in the authorities' stance vis-à-vis the industry has found expression in both formal and informal ways. Much of the conflict has centred on the interpretation of the major contracts concluded between investors and the state – both PSAs and the Tengiz contract. Since the contracts themselves remain secret, it is difficult for outsiders to judge the merits of any given dispute, but there is little doubt about the overall trend towards interpreting contested provisions in favour of the state. More generally, tax administration has become both tougher and more arbitrary.

The most prominent conflict during 2002–03 concerned ChevronTexaco's management of the Tengiz project. Officially, the main issue concerned the switch to an accelerated depreciation schedule and the financing of the investment programme for the next stage of the project, intended to raise output from 285kbd to 430–500kbd. The matter was settled after a dispute that lasted for over a year. ChevronTexaco was effectively compelled to pay a substantial advance on its royalties, and there have been hints that the authorities might revise the agreement again before the end of the three-year period. Canadian-based PetroKazakhstan, which was bought out by China's CNPC in 2005, found itself in a series of long-running conflicts with the authorities in connection with its development of the Kumkol field. At Kashagan, conflicts arose over the question of whether the field could be developed according to the original schedule. The authorities indicated that they might want to redraft the contract if the schedule were not met. Even after the two sides reached agreement on the delay in late 2003,²³ leading politicians suggested that original contractual obligations should be revised.²⁴ Some executives fear another 'renegotiation' once the infrastructure for the project is built.

Concerns about the Kazakh authorities' commitment to the sanctity and stability of contracts were further aroused by the government's pursuit of a stake in the 7–9bn barrel Kashagan offshore project. In 2003, UK-based BG agreed to sell its 16.7% stake in the field. Under the contract governing the project, the other members of the consortium had right of first refusal to the stake, which they wished to exercise. However, the government wished to secure the stake for Kazmunaigaz. When the investors proved unwilling to sell the stake to the state

22. Calls to revise long-standing contracts were sometimes justified with reference to allegations of corruption on the part of western advisors involved in negotiating the original deals; see Pomfret (2005); and Olcott (2002).

23. The fine for the delay was reportedly around 150 million dollars.

24. President Nursultan Nazarbayev himself spoke on several occasions of the possible renegotiation of terms for the North Caspian PSA (i.e. Kashagan), arguing that Western companies had taken advantage of Kazakhstan in the early years after independence.

company, Kazakhstan adopted a law giving the state the right of first refusal over stakes in existing projects, asserting that this right, once enshrined in statute, trumped the terms of the contract itself. In the end, the two sides reached a compromise under which the Republic settled for half the BG stake, with the investors buying up the other half.²⁵ The conflict marked an important turning point. Although there had been numerous disputes concerning the application of various contract provisions, this was the first time the authorities had openly violated the principle that contract provisions were protected from subsequent changes in national legislation.

The Kashagan row now appears to have been a harbinger of things to come: in October 2005, Kazakhstan adopted legislation stipulating that the transfer of rights and obligation under a contract on subsoil use or the transfer of a stake in the legal entity which has such a contract can be made only with the written sanction of the state if one contractor leaves and another takes its place. The measure grants the state pre-emptive rights to stakes in legal entities possessing the right to subsoil use.²⁶ The amendments also provide for the authorities to make decisions concerning the transfer of subsoil use rights on fairly wide-ranging – and ill-defined – ‘national security’ grounds.

Friction notwithstanding, the authorities have largely honoured the contracts concluded with investors in the first post-Soviet decade. Indeed, after a period in which senior officials frequently mooted the possibility of significant contract revisions, the Kazakh authorities have recently stated very explicitly that existing contracts would *not* be renegotiated.²⁷ However, legislative amendments have brought about a marked change in the conditions under which *new* projects can be launched. Perhaps the most visible sign of the new approach lies in the legal requirement, introduced in 2002, that Kazmunaigaz be given a 50% stake in all new projects.²⁸ This does not mean that all projects must be executed on a parity basis, as the law does not prohibit Kazmunaigaz from selling part or all of this stake. Nevertheless, the national company has the right to nominate the operating company²⁹ even if its share in the project is far below the 50% minimum. Perhaps most significant of all, new projects no longer enjoy the degree of protection for contract stability that has been available hitherto: the 2003 law ‘On investments’ states explicitly that contracts signed after its entry into force are subject to changes in legislation and obligations under international treaties that ‘change the procedure and conditions for the import, manufacture and sale of goods subject to excise duties.’

Some of the most dramatic changes have taken place in the field of taxation, although it should be stressed that these apply exclusively to new projects. Investors taking over a field from

25. It is worth noting that BG originally agreed to sell the stake to China’s CNOOC and China Petrochemical Group, but neither the consortium partners nor the authorities in Astana wished to bring the Chinese into the project.

26. The state’s pre-emptive rights even extend to the purchase of a stake in a legal entity which is in a position to influence, directly or indirectly, the decisions of a subsoil use company.

27. See, e.g. ITIC (2005b:3).

28. The legal status of this requirement is at least open to question, as the relevant decree states that a tender winner must form a consortium or joint venture with Kazmunaigaz in order to conclude a petroleum operations contract. However, other legislation, including the Petroleum and Subsoil Laws, require that such a contract be concluded directly with the winner of a tender, and not with any other person or entity. (See Decree of the Government of the Republic of Kazakhstan No. 708 (29 June 2002), ‘On Approval of Regulations for Representing the State Interest by the National Company in Service Contracts for Petroleum Operations through a Mandatory Share’.)

29. It thus appears that Kazmunaigaz has the power to demand this role for itself.

another company may inherit the tax regime under which the field was being developed, so the changes will only affect the country's ability to attract investment into new projects. When the new tax regime was introduced in 2004, critics argued that it would effectively freeze new developments in Kazakhstan, and there were some observers who argued that this was indeed the government's aim. There is no doubt about the Kazakh authorities' determination to capture a larger share of oil rents, but it is significant that the tax changes were adopted against the backdrop of growing concern about the possibly damaging impact of overly rapid development of the oil sector on the rest of the economy. While oil consumers might want Kazakhstan to press ahead with oil developments as rapidly as possible, there are indeed reasonable grounds for concern about the implications of too much oil-sector growth for macroeconomic management – specifically, the threat of 'Dutch disease' and the prospect of overheating. In mid-2005, Minister for the Economy and Budget Planning Kairat Kelimbetov publicly acknowledged that the 2004 tax changes were indeed linked in part to a desire on the part of his ministry and the Ministry of Finance to delay tenders for the development of the remaining blocks of the North Caspian. He indicated that this desire reflected macroeconomic concerns rather than any belief that an optimal depletion strategy would involve leaving more oil in the ground for future generations.³⁰

Modifications to the new regime in 2005 brought some improvement for investors, although Anderson (2004:70) estimates that these changes raise the investor's internal rate of return by around one percentage point. They nevertheless appear to have been enough to satisfy some investors: while the major western oil companies remained sharply critical of the revised regime, Russia's Lukoil agreed in early 2005 to join Kazmunaigaz in developing the Khvalynskoye field in the North Caspian, which holds an estimated 322bcm of natural gas and 53mt of oil and gas condensate. The tax take under the new regime is still heavier than that found in most other oil-producing states, including many with far lower lifting and evacuation costs.³¹

While the last years have undoubtedly seen growing friction between the Kazakh authorities and the major oil companies, the situation should not be over-dramatised. Kazakhstan has not witnessed anything like the large-scale assault on property rights mounted against Yukos in Russia. The fact that the major private investors are foreign companies would in any case constitute a significant deterrent to any such attack on private property. With the exception of the state's exercise of pre-emption rights to the BG Kashagan stake, the authorities have so far resisted the temptation to revise unilaterally the contracts concluded with investors – though they have sometimes pushed questions of contract interpretation as far as they could. The much tougher tax and regulatory regime created in recent years will undoubtedly slow the development of new projects in Kazakhstan, but, given the trajectories of projects like Tengiz and Kashagan, and the sums already committed by investors, Kazakhstan is still well placed to deliver continued strong growth in oil production over the years ahead.

In managing its hydrocarbon resources, as well as other sectors of the economy, *Turkmenistan* has pursued, in some respects, a quasi-Soviet approach to economic policy throughout the post-independence period. The Turkmen system is characterised by the predominance of state ownership of the means of production, restrictions on foreign exchange activities, widespread subsidies and an approach to 'planned' development on the basis of import-substituting industrialisation. While some privatisation has taken place, the authorities remain

30. ITIC (2005a:4) and ITIC (2005b:3).

31. Anderson (2004).

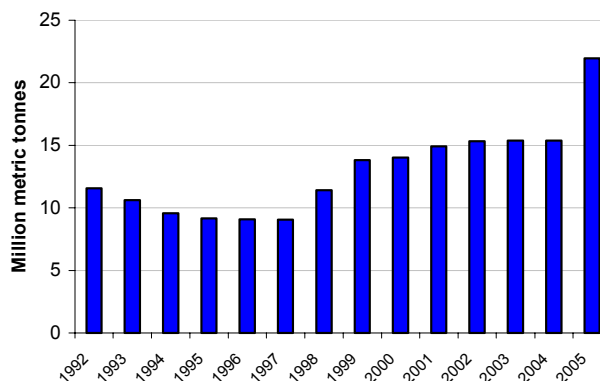
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explicitly committed to maintaining the major productive sectors in state hands. This has not prevented Turkmenistan from making some efforts to attract foreign investors to its hydrocarbons sectors – it has recently been particularly concerned to bring them into oil production and petroleum refining, in an effort to reduce its dependence on gas exports. In practice, however, Turkmenistan has proved an extremely difficult place in which to do business and has attracted little foreign investment. Arbitrary state action, high levels of corruption, poor infrastructure and a lack of export routes, together with the general unattractiveness of the heavily regulated business environment, have combined to deter investors. Another factor has probably been Turkmenistan’s refusal to sign up to the agreement on dividing the Caspian Sea, which has stalled any significant offshore development. This is a particularly significant opportunity foregone, given that 40% of its proven reserves are reckoned to be offshore.

It is thus hardly surprising that Turkmenistan has so far concluded only smaller-scale deals with outside investors – cumulative FDI is estimated at only about \$1.6bn as of end-2004 – and these have not always been handled in such a manner as to encourage others. Foreign investors have complained of extremely arbitrary treatment at the hands of the Turkmen authorities, including the unilateral, *ex post* revision of major contract terms.

In terms of output, however, Turkmenistan’s was initially rather good. Its resistance to structural reform and its readiness to invest heavily in raising oil output meant that it weathered the early transition better than some other CIS states and, after an initial fall in output, managed to increase crude production rapidly, reaching a level of over 200kbd. Since then, however, oil output has fallen (Figure 7), and there are questions about Turkmenistan’s ability to sustain production over the longer term in the absence of substantial new investment. Significantly, production has held up as well as it has in recent years thanks to rapid increases in the output of Burren, Dragon and other foreign producers involved in PSA projects, rather than from the state-owned Turkmenneft. The Turkmen authorities aim to raise oil production almost five-fold, to around 1mbd by 2010 and by a further 35% by 2015. Given the USGS estimates cited above, the country might well be capable of achieving such levels of production. However, it seems rather more likely that Turkmenistan will fail to achieve such growth, given its present approach to the governance of the sector.

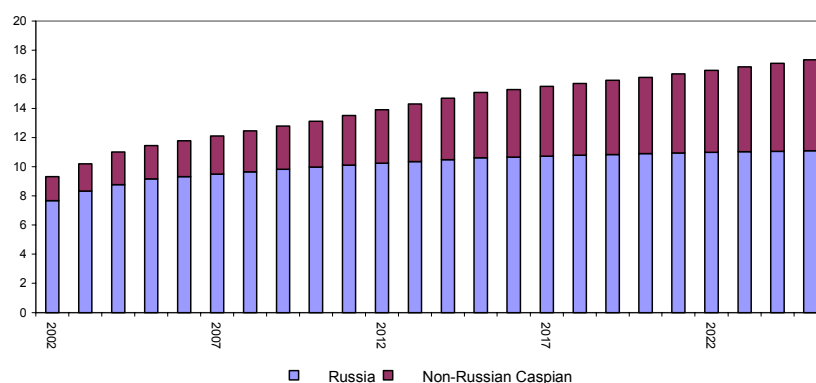
Figure 5. Crude oil and NGL production in Azerbaijan



Source : IEA, Oil Information 2005 Database

While its share of output is falling and will probably continue to fall in the coming decades, Russia is expected to account for well over half of CIS supply even in 2025.³² Its role in incremental supply, however, will decrease dramatically. For world oil markets, it is Central Asia that is now projected to constitute the major generator of supply *growth* in the region (Figure 8). How issues of ownership, governance and stability of contract are handled in Kazakhstan is therefore likely to be of considerable importance not only to the region itself, but to global oil consumers.

Figure 8. CIS oil production forecast, 2002-24, mbd



Source: USEIA (2005)

Policy change in Kazakhstan: the return of the ‘obsolescing bargain’?

In many ways, recent developments in Kazakhstan echo the history of the oil industry in other parts of the world. Until the 1960s, a handful of international oil companies dominated the market, and oil-producing states had little option but to accept a substantial degree of foreign ownership and control over their reserves. Over time, however, local elites’ bargaining power increased. This resulted from a combination of learning within the state administration and the emergence of competitors to the international majors who were willing to cede more revenue and greater managerial control to host governments in order to capture market share from their larger rivals. They also profited from the rise of western oil services companies, which provided yet another way to access the kind of technology and expertise that the majors provided. In these circumstances, developing countries were able to conclude more favorable contracts with foreign investors, and in many cases, to nationalise their respective oil sectors outright.³³ The capital-intensive nature of oil extraction also helped, since it imposed high barriers to exit when the state began to revise the bargain.³⁴ Initially, states’ need to attract large-scale investment gave the oil companies tremendous leverage over taxation, regulatory policies and questions of institutional design. However, once investments were made, and costs were sunk, it was relatively easy for states to revise the terms of their interaction with investors.

32. Based on estimates in USEIA (2005), which do not look especially bullish with respect to Russian production.

33. This is a clear example of the ‘obsolescing bargain model’ developed by Vernon (1971). See also Jones Luong (2004:6); Moran (1974); and Tugwell (1975).

34. Eden *et al.* (2004:6) argue that bargains between states and multinationals in manufacturing sectors are far less likely to obsolesce, not least because their investments tend to be smaller, more mobile and more closely tied to knowledge-based, firm-specific advantages.

One can identify similar patterns in Kazakhstan. Its political leaders believe – not without reason – that the state’s weak bargaining position in the very uncertain environment of the early 1990s led it to make concessions to investors (whether foreign or domestic) that it would not otherwise have made. These concessions have become ever less palatable as oil prices have risen.³⁵ The question of how oil rents are to be allocated has grown more, not less, acute as those rents have grown. At the same time, the strengthening of the state’s extractive and coercive capacities has made it much more assertive towards the oil companies. The accumulation of local experience in the oil industry has probably also contributed to a tougher stance vis-à-vis foreign investors. As in the developing world in the 1960s and 1970s, the problem of sunk costs clearly affects the bargaining power of the parties. The Kazakh authorities are counting on the reluctance of companies already heavily committed in the country to exit. Some western oil executives in Almaty acknowledge that this calculation has so far proved correct: while there have been numerous complaints about the authorities’ behaviour, no major player has opted to withdraw.³⁶ Finally, if the majors were undercut in the late 20th century by emerging competition from smaller rivals and oil services companies, Kazakhstan now also stands to benefit from the increased activism of national oil companies (NOCs) from large, rapidly growing consumer countries, most notably India and China.

As a number of observers have pointed out, the expansion of the state’s role in the hydrocarbons sector is hardly a novel phenomenon. On the contrary, it would not be difficult to argue that Kazakhstan is merely moving somewhat closer to the international norm in the oil business. Most of the world’s major oil exporters have oil industries dominated by the state. The extent to which the private sector dominated oil production in Kazakhstan in the early 1990s was undoubtedly highly anomalous. However, it appears to have been a *positive* anomaly, at least in terms of investment, efficiency and growth, and the country stands to lose much by moving towards something more akin to the international ‘norm’. The shift towards a very ‘hands-on’ approach, relying on direct control over assets and intervention in markets, is likely to contribute to poorer performance. Subsoil resources in Kazakhstan belong to the state, and it is certainly not difficult to understand the state’s desire to exercise its ownership rights more effectively than in the 1990s. However, the economic costs imposed by the new approach may not be fully appreciated by policy-makers, since the cost of this shift towards greater *dirigisme* are largely an *opportunity* cost – welfare losses arise from investment that does *not* take place and wealth that is *not* created. Since opportunity costs are ‘invisible’, they are often insufficient to deter the pursuit of economically inefficient policies.

Underlying all of this is a basic contradiction in the actions of the Kazakh authorities. The government has been seeking to capture a substantially larger share of oil rents, which, of itself, probably makes some sense, provided it does not overshoot the mark and discourage investment in future development. At the same time, however, the authorities have taken actions that effectively increase the risks faced by investors in the oil sector and thus the rate of return those

35. Ironically, the obsolescing bargain model anticipates that the host government’s perception of the cost-benefit ratio offered by the relationship with the foreign investor will be more likely to deteriorate if the investment turns out to be much more profitable than anticipated – oil booms are thus highly likely to cause oil-sector investment bargains to come under strain.

36. This may be one reason why there has been no parallel toughening of the state’s position in Azerbaijan: investors *have* been exiting – albeit because they have failed to find sufficient recoverable reserves rather than because of mistreatment at the hands of the authorities. Azerbaijan’s bargaining position now looks somewhat weaker, owing to growing scepticism about how much oil remains to be found there.

investors require in order to justify investment. In other words, investors have been asked to accept a lower rate of return in an environment of increased risk.

No significant renationalisation of oil industry assets has taken place, and the major projects now under way should be sufficient to deliver continued production growth for some time to come. Any further large projects, however, will almost certainly proceed more slowly. This appears to be what the Kazakh authorities want – as noted above, they seem inclined to slow down the further development of their hydrocarbon resources in the interests of macroeconomic management. However, it is increasingly likely that those projects which do go forward will involve Kazmunaigaz in cooperation with other state-owned companies – chiefly the NOCs of major consumer countries – or at least with companies subject to less capital discipline than the international majors. While the eagerness of the NOCs to participate in Kazakh projects may enable the authorities to get new projects under way without making big concessions to the international majors, the NOCs are likely to bring less efficient management to the projects, and their role increases the likelihood that oil-sector development will be shaped by political factors rather than market forces.³⁷

The geopolitics of transit and Central Asian development

For European consumers and Caspian producers alike, it is difficult to exaggerate the importance of Russia's position. The Caspian basin producers (except Russia) are landlocked and rely on a network of long overland pipelines to reach maritime export terminals. Moreover, the bulk of the region's export infrastructure was inherited from the Soviet Union. The pipeline network, in particular, was designed primarily for domestic distribution and with the needs of a centrally planned economy in mind. While there has been considerable investment in maintaining and expanding export infrastructure, much remains to be done if infrastructure constraints are not to become an impediment to future growth in oil exports from the region.

For the Caspian oil producers, the critical problem was – and to some extent remains – their reliance on evacuation routes that run through Russia. Diversification of export routes was recognised as an important goal after 1991 but was impeded by the the geopolitical difficulties presented by many of the possible alternatives. Geography and commercial expedience alike point to the desirability of a direct route to the Gulf via Iran, but financing such a route would be extremely difficult given Iran's international position, while routes through Transcaucasia and/or Afghanistan are exposed to high levels of political risk, and any route taking yet more Caspian crude to the Black Sea merely aggravates the increasingly tight bottleneck of the Turkish straits.

Azerbaijan's principal export routes since independence have included the Baku–Novorossiisk pipeline, which sends SOCAR crude to the Black Sea via Russia, and the Baku–Supsa pipeline, which mainly carries the Azerbaijani International Operating Company's (AIOC) 'early oil' from the Caspian to Georgia's Black Sea coast. In May 2005, however, Azerbaijan began filling the Azeri section of the long-awaited 1mbd BTC pipeline, which runs 1,760km from the Azeri capital to the Turkish Mediterranean port of Ceyhan. The BTC line allows oil to bypass the congested Turkish straits and is also the first pipeline exporting Caspian crude that does not transit Russia. The BTC's long and circuitous route to the Mediterranean betrays the geopolitical

37. It has also been suggested that the NOCs will tend to use less sophisticated technologies. However, this problem should, in principle, be relatively easy to overcome, given the potential for relying on western oil service companies, which employ the most advanced technologies available.

considerations that formed an important part of its rationale – while giving Azerbaijan an export route that does not transit Russia or go via the congested Turkish straits, it also avoids Iranian involvement. However, BTC is privately owned.³⁸ For Azerbaijan, the desire to diversify its export routes on geopolitical grounds was reinforced by a desire to reduce reliance on the Transneft system, in which the mixing of crudes works to the detriment of producers of better-quality oil. Azerbaijan estimates that the mixing of pure ‘Azeri light’ into the Urals blend in the Transneft system costs the country \$4–5/bbl. SOCAR is therefore to reduce exports via Novorossiisk in order to fill up the BTC. In due course, it may stop using Novorossiisk altogether. The AIOC, however, plans to continue to export via Supsa and Batumi on the Georgian Black Sea coast.

Early on, transit routes were a major problem for *Kazakhstan*, which accused Russia’s Transneft of such monopsonistic practices as imposing artificially high assessments for technical losses and assigning arbitrarily long routes. Russia used its transport network to pressure Kazakhstan in the dispute over ownership of the Tengiz field – the dispute was resolved, and pipeline constraints eased, after Russian equity participation was agreed. There was also evidence of discriminatory pricing: the IMF (2002) estimates that transit tariffs for Kazakh crude were typically double those of Russian crude, and Kazakh producers (like their Azeri counterparts) suffered significant losses as a result of the lack of a quality bank in the Transneft system, though it would be difficult to describe this as discriminatory against Kazakhstan, since it also imposed losses on Russian producers of better-quality crude. In 1994, the country negotiated an agreement with Russia providing Kazakhstan a 3mt per year (roughly 60kbd) quota to be exported via the Atyrau–Samara pipeline, half of which was to transit Russia for export to non-FSU markets. The quota was subsequently raised to 15mt, nearly all for non-FSU destinations. In 2002, Astana and Moscow concluded a 15-year transit agreement under which Kazakhstan will export 340kbd via the Atyrau–Samara line, which has recently been upgraded. Russia has promised to increase the capacity of the line to around 500kbd. Oil is also exported via the port of Aktau, which was expanded from 60 to 160kbd capacity in 2000, and barged to Makhachkala, in Russia, where it enters the Russian pipeline to Novorossiisk. Aktau’s importance is likely to grow if and when substantial volumes of Kazakh crude begin flowing into the BTC pipeline. Kazakhstan ships additional crude to Russia via the Kenkyak–Orsk line, which runs from the Aktobe fields to the Orsk refinery in Russia, and has a capacity of 130kbd.³⁹

Roughly 1600km in length, the pipeline operated by the Caspian Pipeline Consortium (CPC) connects Kazakhstan’s Caspian area oilfields with Novorossiisk. It is the only trunk pipeline in Russia not owned and operated by Transneft.⁴⁰ The CPC was built as an extension of the existing infrastructure in the region, with new components of the line running from Komsomolskaya in Russia westwards to Novorossiisk. The Soviet-era lines around the Caspian which feed the CPC have been extensively refurbished. Since the first oil flowed in late 2001, the CPC had raised its throughput to around 650kbd – roughly 550kbd from Kazakhstan and a further

38. Given its participation in ACG, Lukoil was originally keen to take part but the Russian government’s opposition to the whole concept of the pipeline meant that it ultimately declined to be involved.

39. Some of this oil is used in swaps, as Kazakhstan supplies the Orsk refinery in Russia and processes Russian crude at its Pavlodar refinery.

40. The ownership structure of the CPC is as follows: Russian Federation 24%; Republic of Kazakhstan 19%; ChevronTexaco 15%; LukArco 12.5%; Rosneft-Shell 7.5%; ExxonMobil 7.5%; Sultanate of Oman 7%; Agip 2%; BG 2%; Kazakh Pipelines 1.75%; Oryx 1.75%.

100kbd from Russian producers prepared to pay a premium to export higher-quality crude via the CPC rather than accept the losses arising from the blending of crudes in the Transneft system.

The first section of a Kazakhstan-China pipeline was completed in 2003, running from the Aktobe region to Atyrau. Construction began on the second segment of the Kazakhstan-China pipeline in late September 2004, and the roughly 980-km pipeline from Atasu, in northwestern Kazakhstan, to Alatau Pass in China's Xinjiang province was completed in December 2005. A later stage of the project is to raise the pipeline's capacity from an initial 200kbd to 400kbd. In addition to the Kumkol crude which is to be pumped through the Chinese pipeline, there may be West Siberian crude delivered via the Omsk–Pavlodar pipeline. Lukoil is reported to be interested in using the line. Eventually, the Kazakh–Chinese line is to run almost 3,000km from Atyrau to Alashankou, in Xinjiang. Its construction faces major difficulties, because it is being laid in seismically active areas, characterised by extreme climatic conditions (both very hot summers and very cold winters), heavy rainfalls and flooding. In addition, for all these reasons, the region also has little pre-existing industrial infrastructure.

Yet despite the considerable progress Kazakhstan has made in easing transport constraints, it continues to incur costs as a result of its dependence on Russia. Plans to expand the CPC to 1.5mbd by 2008 were delayed for over two years owing to disagreements within the consortium. Only in October 2005 was agreement finally reached – largely on Russia's terms.⁴¹ The following month, Russian pipeline monopolist Transneft withdrew from an agreement with Kazmunaigaz concerning the transport of 12mt of Kazakh crude to Lithuania over a 10-year period. Transneft's action threw into question Kazmunaigaz's bid for the Yukos-owned Mazeikiu nafta refinery in Lithuania.⁴² Transneft blamed Kazmunaigaz for the disruption, saying that the latter had failed to secure the necessary changes in the inter-governmental agreement on oil transit, but the timing of Transneft's withdrawal from the agreement suggests it may have been intended to influence the outcome of the Mazeikiu nafta sale.⁴³ These disputes are merely the latest illustrations of the need for ratification of the Energy Charter Treaty and adoption of its transit protocols by CIS states, especially Russia. Kazakhstan's geographical position is such that its main alternative to Russia – further expansion of export infrastructure to, and thus commercial reliance on, China – also involves long-term geopolitical risks. Indeed, Kazakhstan's landlocked position means that, to a significant degree, decisions about what export infrastructure to develop are closely linked to decisions about to whom it should sell oil. This is unusual. Most major oil producers rely on maritime evacuation routes and thus have greater flexibility: in this respect, Kazakhstan's position as an oil exporter is not dissimilar to that of a gas exporter.

The choices made by Caspian producers will have lasting effects on their development even if the political conjuncture changes. This is because infrastructure development is highly path dependent: once costs are sunk, second-best solutions adopted in response to political pressures may trump more economically efficient options.

41. *Vedomosti*, 7 October 2005; *Moscow Times*, 7 October 2005.

42. *Vedomosti*, 18 November 2005.

43. The sale has yet to take place as of this writing. Kazmunaigaz insists it still wishes to buy the refinery and the Kazakh government is pressing Moscow to force Transneft to honour the transit agreement.

Conclusion

The impressive growth in CIS oil production since the mid-1990s has been overwhelmingly driven by the private sector – even in Turkmenistan, production has been sustained in recent years by fast growth among the handful of small private investors who are active there. Despite this success, there has been a marked trend in Kazakhstan towards a greater direct role for the state in oil production. This bodes ill for the future. Azerbaijan appears to remain far more investor-friendly, despite the large role assigned to SOCAR, but its oil potential looks far less promising than does Kazakhstan's. And Turkmenistan appears determined to cling to tight state control, even the price of forgoing a potentially enormous opportunity.

At issue is not merely the question of state vs private ownership in general but the capacity (or lack thereof) of state administrations in Kazakhstan and other CIS states to manage large state-owned companies in technically complex sectors. While private entrepreneurship is generally preferable to state ownership and control, the implications of the latter depend on the institutional context. A country where the democratic accountability of the rulers to the ruled is well established and the rule of law is relatively strong has a far better chance of ensuring that state-owned companies are reasonably well run. Where political accountability and the rule of law are weak, the creation of large state companies in the most lucrative sectors is likely to be associated with greater opacity, corruption and rent-seeking by insiders. Moreover, those in control of such companies will face strong incentives to resist steps to increase transparency and accountability.⁴⁴ The performance of large state-owned companies throughout the CIS suggests that such poor governance will contribute to higher costs, lower productivity and slower growth of output. Kazakhstan is now proceeding further down this path.

This point is extremely important in the larger debate over the so-called 'resource curse'. A number of scholars have suggested that state ownership rather than resource wealth *per se* may lie at the root of resource exporters' apparently chronic under-performance.⁴⁵ The expansion of state ownership in major minerals sectors may thus be detrimental to overall economic performance and not merely to the performance of the sectors in question. This line of argument would be even more persuasive if, as suggested above, under-developed state capacities increased the incentives for states to nationalise. The long-term consequences of further *dirigiste* policies are potentially serious. Given the sums already committed to existing projects, Azerbaijan and Kazakhstan are still well placed to deliver strong growth over the years ahead. However, major new projects are unlikely under the present tax and regulatory regime in Kazakhstan, and it is far from certain that the country will triple output by 2015 as planned, not least because of conflict with investors over the development of export infrastructure.

The drift towards tighter state control over the oil sector in Kazakhstan (as in neighbouring Russia) has largely been justified by the state's legitimate desire to capture a larger share of oil rents than it has hitherto been able to secure. However, it is not clear that

44. These conclusions are unlikely to sound in any way surprising or controversial to observers of Russia's gas monopoly or other large, state-owned oil and gas companies in the CIS.

45. See, e.g. Shafer (1994); Ross (1999); Jones Luong (2004); and Auty (2004). This proposition has not undergone much empirical analysis, for the simple reason that most of the literature focuses on minerals sectors in the period from the 1960s through the 1990s – a time during which the vast majority of mineral-rich countries opted for state ownership and control of mineral reserves. There were simply not very many cases with which to contrast the performance of state-owned enterprises.

nationalisation and heavy-handed regulation will achieve this end. The inefficiencies of sovereign monopolies in CIS countries, coupled with evidence of substantial rent-seeking by insiders in state companies, suggest that state ownership may not be sufficient to protect the state's property rights. Much more promising would be an approach emphasising clear, secure property rights, a stable, profit-sensitive tax system and reliance on competition, markets and private-sector initiative. In this context, 'secure property rights' must be understood to include those of the state itself as well as private owners. If private capital is to provide the sector with the dynamism it needs, it will be crucial to ensure that the state has the regulatory, monitoring and extractive capacities needed to ensure that it can protect its own rights, as the owner of subsoil resources, without resort to heavy-handed intervention. It must be able to devise and administer a depletion strategy that reflects its interests and to address such issues as transfer pricing in the industry. This implies that significant strengthening of state capacities will be needed alongside any renewed commitment to private-sector development. The question is not whether the state has a key role to play in the oil sector but what that role should be.

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