

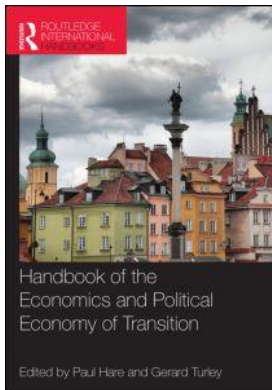
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### **Resource-Rich Transition Economies**

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## 33

# RESOURCE-RICH TRANSITION ECONOMIES

*Richard Pomfret*

## Introduction

This contribution analyses the experience of the resource-rich southern Commonwealth of Independent States (CIS) countries and Mongolia during the transition. The seven countries faced similar challenges in the early 1990s: nation-building, transition from central planning, and realizing their resource wealth. Mongolia, as a nominally sovereign state and only informally the 'sixteenth' Soviet republic, faced an easier political task and could tackle macroeconomic problems (i.e. high inflation) faster. Tajikistan experienced civil war and Azerbaijan fought an interstate war against Armenia, while the other four Central Asian republics had a peaceful path to independence, with the Communist First Secretary becoming in each case the national President.

A central question is whether countries in transition from a centrally planned economy and Communist polity were particularly vulnerable to a resource curse owing to their fragile and changing institutions and to their inexperience with policy-making in a market-based economy. Esanov *et al.* (2001) argued that resource abundance was particularly harmful in the Soviet successor states because it allowed reform to be postponed and encouraged rent-seeking behaviour, while Brunnschweiler (2009) reaches the opposite conclusion, that among former Soviet and Eastern European countries in transition oil had a positive impact on growth between 1990 and 2006. The seven countries' comparative experience illustrates how a resource curse is possible and how it can be avoided.

The seven countries covered here are small open economies whose exports are concentrated in a few primary products. They had reasonably high levels of human capital in the Soviet era, as measured by literacy rates and life expectancy, and since 1991 have experienced an increase in per capita income at purchasing power parity (Table 33.1), although economic growth has been uneven.<sup>1</sup> The energy exporters, Azerbaijan, Kazakhstan and to a lesser extent Turkmenistan, attracted inflows of capital in the 1990s (Table 33.2) and enjoyed exceptionally rapid growth in the period 2000–07 (Table 33.3). Oil is the principal export of Kazakhstan and Azerbaijan. Natural gas is more important for Turkmenistan and Uzbekistan, and increasingly significant for Kazakhstan and Azerbaijan. Minerals (copper for Mongolia, gold for the Kyrgyz Republic and Uzbekistan) involve related issues of large capital requirements, technology, timing, rents and price volatility. In Central Asia water is a source of conflict between upstream countries, the Kyrgyz Republic and Tajikistan, wanting to develop hydroelectric capacity, and downstream countries, Uzbekistan and Turkmenistan, for whom water is a critical agricultural input.

Table 33.1 Demographic data, output and income, 1991 and 2007

	1991						2007					
	Population (million)	GDP (USD billion)	GNI per capita (PPP in current international \$)	Life expectancy (years - 1991)	Adult literacy (per cent 1991)	Population (million)	GDP (USD billion)	GNI per capita (PPP in current IS\$)	Trade/GDP (per cent)			
Azerbaijan	7.3	8.8	2,100**	65	97	8.6	33.0	6,630	97			
Kazakhstan	16.5	24.9	4,680	68	98	15.5	104.9	9,520	92			
Kyrgyz Rep.	4.5	2.6	1,690	69	97	5.2	3.8	1,980	133			
Mongolia	2.2	2.0	1,987	61	98	2.6	3.9	3,160	130			
Tajikistan	5.4	2.5	2,080	63	97	6.7	3.7	1,710	87			
Turkmenistan	3.8	3.2	2,200**	63	98	5.0	9.5	5,510	153			
Uzbekistan	21.0	13.8	1,290*	69	97	26.9	22.3	2,430	71			

Source: World Bank, *World Development Indicators* at [www.worldbank.org](http://www.worldbank.org).

Notes: \* 1992, \*\* 1993; trade/GDP = (exports + imports)/GDP. National accounts data should be treated with caution, especially for the 1990s; data for Turkmenistan are particularly dubious.

Table 33.2 Inward Foreign Direct Investment (US\$ million)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Azerbaijan	0	0	22	155	591	1,051	948	355	130	227	1,392	3,285	3,556	1,680	-584	-4,749	14	473
Kazakhstan	100	1,271	660	964	1,137	1,322	1,161	1,438	1,284	2,836	2,593	2,082	4,131	1,982	6,360	11,096	15,775	12,649
Kyrgyz Republic	na	10	38	96	47	83	109	44	-2	5	5	46	132	43	182	208	265	60
Mongolia	2	8	7	10	16	25	19	30	54	43	78	132	93	185	191	360	683	437
Tajikistan	9	9	12	10	18	18	30	7	24	9	36	32	272	54	339	360	376	8
Turkmenistan	na	79	103	233	108	108	62	125	131	170	276	226	354	418	731	804	820	1,355
Uzbekistan	9	48	73	-24	90	167	140	121	75	83	65	83	177	192	174	705	711	750

Source: UNCTAD at <http://unctadstat.unctad.org/TableViewer/tableView.aspx> (accessed 4 July 2011).

Table 33.3 Growth in real GDP 1989–2007 (per cent)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	1999; 1989 = 100
Azerbaijan		-1	-23	-23	-20	-12	1	6	10	10	45
Kazakhstan	0	-13	-3	-9	-13	-8	1	2	-2	2	63
Kyrgyz Republic	3	-5	-19	-16	-20	-5	7	10	2	4	63
Mongolia	-3	-9	-10	-3	2	6	2	4	4	3	
Tajikistan	-2	-7	-29	-11	-19	-13	-4	2	5	4	44
Turkmenistan	2	-5	-5	-10	-17	-7	-7	-11	5	16	64
Uzbekistan	2	-1	-11	-2	-4	-1	2	3	4	4	94

Source: European Bank for Reconstruction and Development, *Transition Report Update*, April 2001, p.15.

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Azerbaijan	10	11	11	10	11	11	10	24	31	23	11	9	9
Kazakhstan	-2	3	10	14	10	9	10	10	11	9	3	1	6
Kyrgyz Republic	2	4	5	5	0	7	7	0	3	9	8	2	-4
Mongolia	4	3	1	1	4	6	10	7	9	10	9	-2	7
Tajikistan	5	4	8	10	9	10	11	7	7	8	8	3	6
Turkmenistan	7	17	19	20	16	17	15	13	11	12	11	6	11
Uzbekistan	4	4	4	4	4	4	8	7	7	10	9	8	8

Source: European Bank for Reconstruction and Development at <http://www.ebrd.com/pages/research/economics/data/macro.shtml> (accessed 4 July 2011).

Notes: 2010 = preliminary actual figures from official government sources.

### Country experiences

The varieties of transition among the seven countries reflected differing resource endowments, and also the state of their resource sectors at the time of independence. Turkmenistan and Mongolia had recently developed gas and copper facilities, which meant that, as with the readily exportable cotton from Uzbekistan and Turkmenistan, the governments were under less intense pressure to reform the economy quickly. Tajikistan could also have been in a favourable position, with a modern aluminium smelter (benefitting from abundant hydropower) and the third-largest cotton crop in the region, but the economy was ravaged by a destructive civil war until 1997. Azerbaijan and Kazakhstan had abundant energy reserves, but needed foreign capital and expertise to develop them; the same applied to the Kyrgyz goldmines.

The varieties of transition were the result of these objective factors, as well as of political decisions by autocratic rulers. All but Mongolia have super-presidential regimes in which the personality of the president plays a role. Each president is concerned about personal power and survival, but demonstrations in 2005 met diverse responses in the Kyrgyz Republic, where a relatively liberal president exited peacefully, and Uzbekistan, where hundreds of civilians were killed. Corruption is a feature of all seven economies, but there is a distinction between Kazakhstan, where the sums were large in the 1990s but less blatant in the 2000s, and Turkmenistan where the President squandered the nation's resource revenues on monuments to



Figure 33.1 World cotton prices (Cotlook A Index), annual averages, January 1991 to June 2010, US cents per kilogram.

Source: World Bank Global Economic Monitor – at <http://data.worldbank.org/data-catalog/global-economic-monitor>.

himself, without concern for the future. The Presidents of Azerbaijan and Uzbekistan oversee less personalized regimes, displaying concerns that they be seen as wise and competent.

An important variation is between more dirigiste regimes (Uzbekistan and Turkmenistan) and more liberal regimes in the other resource-rich transition countries.<sup>2</sup> The dominant role of cotton in the Uzbek and Turkmen economies at the time of independence contributed to a rent-appropriating policy stance. Cotton was easy to redirect from Soviet to global markets, and during the 1990s the largest cotton exporter, Uzbekistan, had the best GDP performance of all Soviet successor states. With world cotton prices rising from under US \$1.35 per pound in 1992 to over US \$2.25 in mid-1996 (Figure 33.1), the cotton-producing countries were able to maintain public expenditure relatively well and were under less pressure to reform their economic and political systems. Turkmenistan and Uzbekistan are, with Belarus, the least-reformed Soviet successor states. Cotton required extensive government presence in maintaining irrigation channels and other functions, and this presence spilled over into the maintenance of state marketing monopolies which squeezed farmers' margins. Control over the economy was exacerbated after cotton prices fell and Uzbekistan in 1996 and Turkmenistan in 1998 resorted to foreign exchange controls, which in turn led to other restrictions on economic freedom. Slow reform contributed to a relatively shallow transitional recession during the 1990s, when Uzbekistan was the best-performing of all former Soviet republics, but also to a disappointing longer-term growth performance in the 2000s. Both governments used buoyant export earnings as an opportunity to promote import-substituting industrialization and other inward-oriented policies. Although Uzbekistan is a large producer of natural gas and a minor producer of oil, this meets domestic demand and Uzbekistan is roughly self-sufficient in energy.<sup>3</sup> Turkmenistan with large offshore energy resources was better placed to adopt a more outward-oriented policy stance, but rigid economic policies left it poorly placed to attract foreign investors to develop the oil and gas fields.<sup>4</sup>



Figure 33.2 Oil prices 1987–2009, US dollars per barrel.

Source: US Energy Information Administration at <http://tonto.eia.doe.gov/dnav/pet/hist/wtotworldw.htm>

Note: Daily Europe Brent Spot price FOB.

The economies with abundant oil, gas and mineral reserves had poorer growth records than Uzbekistan during the 1990s. Apart from low world oil prices (Figure 33.2), they lacked the technical expertise to efficiently exploit their resources, especially offshore deposits in the Caspian Basin. Opening up new oil or gas fields or mineral deposits required a Production Sharing Agreement (PSA) with one of the few foreign firms with the necessary expertise (Pomfret, 2011). Azerbaijan and Kazakhstan negotiated with energy firms to exploit their oil and gas reserves, while Turkmenistan resisted foreign involvement. Similarly, the Kyrgyz Republic and Mongolia wanted to find foreign investors to exploit their gold, copper and other mineral deposits. All of these countries, especially the poorer non-oil producers, were under pressure to be market-friendly in their policies.

The most rapid exploitation of natural resources was in oil-rich Azerbaijan and Kazakhstan. In the early 1990s Azerbaijan produced half of the world's oil, but output stagnated in the second half of the 20th century as Soviet oil investment focused on Siberia. War with Armenia in 1992–93 over Nagorno-Karabakh further disrupted production, which by 1994 only just covered domestic demand. Military failure contributed to the overthrow of the Popular Front government, and Heydar Aliyev was elected president in October 1993. Aliyev negotiated a ceasefire in May 1994, and moved to kick-start oil production by signing the 'Deal of the Century' in September 1994; a consortium of foreign oil companies, committed to invest US \$7.4 billion in offshore oilfields over 30 years. Oil production increased rapidly (Table 33.4), and oil accounted for almost 90 per cent of exports by 2002. The Baku–Tbilisi–Ceyhan pipeline to the Mediterranean was completed in 2005. Following the 2003 PSA for the Caspian Sea's largest gas field, Shah Deniz, a gas pipeline linking to the Turkish network was completed in 2006.

With increasing output of oil and gas and increasing energy prices, the state oil company SOCAR's financial position strengthened after 2003. Ilham Aliyev, who succeeded his father as

Table 33.4 Production of Crude Oil (million tons) and Natural Gas (billion cubic meters), Azerbaijan, Kazakhstan, Turkmenistan and Uzbekistan, 1985–2010

Oil	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Azerbaijan	13.2	13.1	13.9	13.7	13.2	12.5	11.8	11.2	10.3	9.6	9.2	9.1	9.0	11.4	13.9
Kazakhstan	22.7	23.3	24.1	25.0	25.4	25.8	26.6	25.8	23.0	20.3	20.6	23.0	25.8	25.9	30.1
Turkmenistan	6.8	6.6	6.5	5.7	5.8	5.7	5.4	5.2	4.4	4.2	4.1	4.4	5.4	6.4	7.1
Uzbekistan	2.3	2.5	2.7	2.4	2.7	2.8	2.8	3.3	4.0	5.5	7.6	7.6	7.9	8.2	8.1

Oil	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Azerbaijan	14.1	15.0	15.4	15.5	15.6	22.4	32.5	42.8	44.7	50.6	50.9
Kazakhstan	35.3	40.1	48.2	52.4	60.6	62.6	66.1	68.4	72.0	78.2	81.6
Turkmenistan	7.2	8.0	9.0	10.0	9.6	9.5	9.2	9.8	10.2	10.4	10.7
Uzbekistan	7.5	7.2	7.2	7.1	6.6	5.4	5.4	4.9	4.8	4.5	3.7

Gas	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Azerbaijan	12.7	12.3	11.3	10.8	10.0	9.0	7.8	7.1	6.2	5.8	6.0	5.7	5.4	5.1	5.4
Kazakhstan	4.9	5.2	5.7	6.4	6.1	6.4	7.1	7.3	6.1	4.1	5.3	5.9	7.3	7.2	9.0
Turkmenistan	75.3	76.7	79.7	79.9	81.4	79.5	76.3	54.4	59.1	32.3	29.2	31.9	15.7	12.0	20.6
Uzbekistan	31.3	34.9	36.0	36.1	37.2	36.9	37.9	38.7	40.8	42.7	43.9	44.3	46.4	49.6	50.3

Gas	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Azerbaijan	5.1	5.0	4.7	4.6	4.5	5.2	6.1	9.8	14.8	14.8	15.1
Kazakhstan	10.4	10.5	10.2	12.6	20.0	22.6	23.9	26.8	29.8	32.5	33.6
Turkmenistan	42.5	46.4	48.4	53.5	52.8	57.0	60.4	65.4	66.1	36.4	42.4
Uzbekistan	51.1	52.0	51.9	52.0	54.2	54.0	54.5	59.1	62.2	60.0	59.1

Source: BP *Statistical Review of World Energy*, June 2011 <http://www.bp.com> (accessed 5 July 2011).

president in 2003, appointed younger senior officials, and oversaw a closer integration of state company and government; SOCAR's activities shifted from resource–rent management to a more pro-active role in knowledge transfer and geopolitics. Oil revenues accrue to the State Oil Fund (SOFAZ), which became operational in 2001 with a mandate to transfer some funds to the government budget and invest the remainder overseas. In 2002 SOFAZ supported a commercial venture, the Baku–Tbilisi–Ceyhan pipeline. There was also debate over the extent to which the fund should support social welfare spending; in 2003 the Fund provided US \$24 million to assist people displaced by the Nagorno–Karabakh conflict and transferred US \$115 million to the state budget for other purposes. Azerbaijan had by 2008 saved less than one-tenth of its oil windfall, in contrast to Russia and Kazakhstan, which both saved over half of their 2003–07 windfalls in oil funds.

Kazakhstan has the Caspian Sea region's largest recoverable crude oil reserves, and accounts for over half of the oil currently produced in the region (Table 33.4). The modern Caspian oil industry dates from the Tengiz agreement signed between Chevron and the USSR in 1990; the largest foreign investment deal in Soviet history, which was inherited by Kazakhstan after the

dissolution of the Soviet Union. During the 1990s, exploitation of the Tengiz oilfield and exploration for other oilfields was hampered by lack of technical expertise, lengthy negotiations with potential foreign partners, and Russian control over pipeline routes.<sup>5</sup> Despite the corruption, PSAs succeeded in developing energy resources, and foreign participation helped to ensure construction of new pipelines. Coinciding with the rapid rise in oil prices, Kazakhstan's oil exports drove growth rates of over 9 per cent per year in 2000–07, and accounted for a third of the country's GDP in 2005–07. The high growth was, however, associated with foreign borrowing based on a strong country credit rating and a real estate bubble, which led to a domestic banking crisis in 2007. When prices exceed reference prices extra revenues from oil, gas, copper, lead, zinc and chrome are transferred to the National Fund (NFRK), which must keep at least a fifth of its assets in the stabilization portfolio with specific criteria requiring investment in liquid foreign financial instruments. Following the 2007/08 financial crisis, NFRK funds financed a US\$10 billion (or 9.5 per cent of GDP) anti-crisis plan in late 2008.

Concerned that earlier PSAs gave too much to foreign partners, Kazakhstan strengthened local content requirements in 1999, and mandated a minimum 50 per cent participation of state-owned KazMunaiGas (KMG) in PSAs in 2005. By 2009 KMG owned about 30 per cent of oil production and 40 per cent of proven reserves. KMG has some resemblance to Russian state-owned energy companies, Gazprom and Rosneft, although KMG has generally acquired larger shares of energy projects in a straightforward and transparent manner by purchase or the transfer of state-held licenses. Kazakhstan has also increased pressure on western participants in its energy sector by accepting Chinese participation. The Chinese and Kazakh presidents, together with their Turkmen and Uzbek counterparts, opened a gas pipeline in December 2009, and an oil pipeline from western Kazakhstan to China is under construction.

Tajikistan is the poorest of the former Soviet republics. Independence was accompanied by a civil war, which was not settled until 1997, and the government's hold over parts of the country remains tenuous. Tajikistan was a major cotton producer in the Soviet era, but the sector has declined since independence. The country also has substantial hydroelectric potential which has yet to be realized; the main use of existing hydro-power is in an aluminium smelter, which is by far the country's largest industrial facility. Tajikistan features little in this contribution because its main challenge continues to be the construction of a functioning state and economy.

The Kyrgyz Republic shares some of Tajikistan's characteristics – a poor mountainous country whose hydroelectricity development is stymied by opposition from downstream neighbours – but it has been more successful in nation-building. The Kyrgyz economy is the most liberal in Central Asia, although it does not function as well as a market economy should because institutional development is flawed and corruption remains a major feature. Uniquely in Central Asia, two presidents have been replaced by popular uprisings and in 2010 a constitution limiting presidential power and promising a parliamentary democracy was adopted.

The country's major resource is Kumtor, the eighth largest goldmine in the world. Kumtor was considered commercially non-viable by Soviet geologists, but in 1992 a Canadian company, Cameco, offered to take managerial control of the mine. The mine started operation in 1997 and accounted for about a sixth of the Kyrgyz Republic's GDP by the early 2000s; when the mine's production was disrupted in 2002, GDP growth dropped to zero. The mine was controversial, in part because, despite its substantial contribution to GDP, it appeared to contribute little to public revenues. Protests about environmental damage (e.g. a 1998 incident when a truck carrying 1,762 kg of sodium cyanide fell into a river) and mine safety (e.g. a 2002 death when part of the mine collapsed) were inflamed in 2005 when it turned out that compensation paid by the company to people suffering from the 1998 incident had ended up in a senior official's pocket. Between 2004 and 2009 the operation was restructured as a joint



venture, Centerra Gold, between Cameco and the state gold agency. Concerns about who benefited contributed to the public unrest leading to the overthrow of President Akayev in March 2005 and to dissatisfaction with President Bakiyev's role. The atmosphere of uncertainty and renegotiation deterred foreign investment in other projects.

Mongolia was an independent country before 1991, and since 1990 has a democratic political system with rotation of power following elections. Mongolia has established a market-based economic system, but as in the Kyrgyz Republic this has not brought the anticipated level of prosperity. Unlike the Kyrgyz Republic, Mongolia failed to exploit its mineral resources, perhaps because its existing mineral industry included some modern facilities. Mongolia's largest enterprise, the Erdenet copper and molybdenum complex, was established with Soviet aid in 1978; by 1989 Erdenet had produced a million tons of copper concentrate, and was the largest copper mine in Asia. Domestic coal production met most of the energy requirements of the main towns and industrial and mining sites. Gold was produced in many small-scale operations, and the Mardai mine produced uranium for Soviet nuclear warheads.

Although Mongolia was believed to contain unexploited mineral resources, little exploration took place during the 1990s. Democracy in Mongolia has been associated with large swings in economic policy from freewheeling but corrupt capitalism to a dirigiste approach, neither of which encouraged the long-term capital inflows necessary to fund copper or coal mines. In 1990–92 many Soviet technicians departed. Development of the Mardai uranium mine by a Canadian–Russian joint venture was dogged by mutual recriminations; the Canadian partner pulled out in 1998 after investing US \$6 million. During the commodity boom of the 2000s, Mongolia placed punitive taxes on foreign companies; in 2008 the World Bank estimated the effective tax rate was over 60 per cent, the second-highest in the world. The aim was to ensure that the state gained a large share of Mongolia's mineral wealth, but the effect was to deter investors.

Mongolia's first major new mining project should be the Oyu Tolgoi copper and gold mine located in the Gobi desert, and estimated to hold 45 million ounces of gold and 79 billion pounds of copper (nearly 3 per cent of the world's total supply). The mine was discovered by Canadian company, Ivanhoe, in 2001, but something always prevented an investment deal from being signed, notably laws passed by the government to capitalize on high metals prices. In October 2009, after the parliament revoked the most extreme tax laws, Ivanhoe and its partner Rio Tinto signed an investment agreement committing US \$6 billion investment in Oyu Tolgoi to begin production in 2013.

### **The steps to avoiding a resource curse**

Governments of resource-rich countries must decide how and how fast to exploit their natural resources, how to share the revenues between companies and the state, and how to use the state's revenues. These are interconnected. If the 'how' is unacceptable to any company with the technology to exploit the resource, then the other questions are irrelevant. If the terms are too attractive to a private-sector partner, then the country may achieve rapid resource exploitation, but not have revenues to spend. Moreover, this is not a one-shot game: either side may try to recontract, leaving the other to accept, renegotiate or give up on the deal; the government may win a battle over division of the spoils, but deter future investors concerned about the credibility of government commitments.

### ***Speed versus caution***

Host countries negotiating PSAs may want to proceed cautiously in the face of asymmetric information: operating firms have a better idea of upfront costs, and may overstate these so that

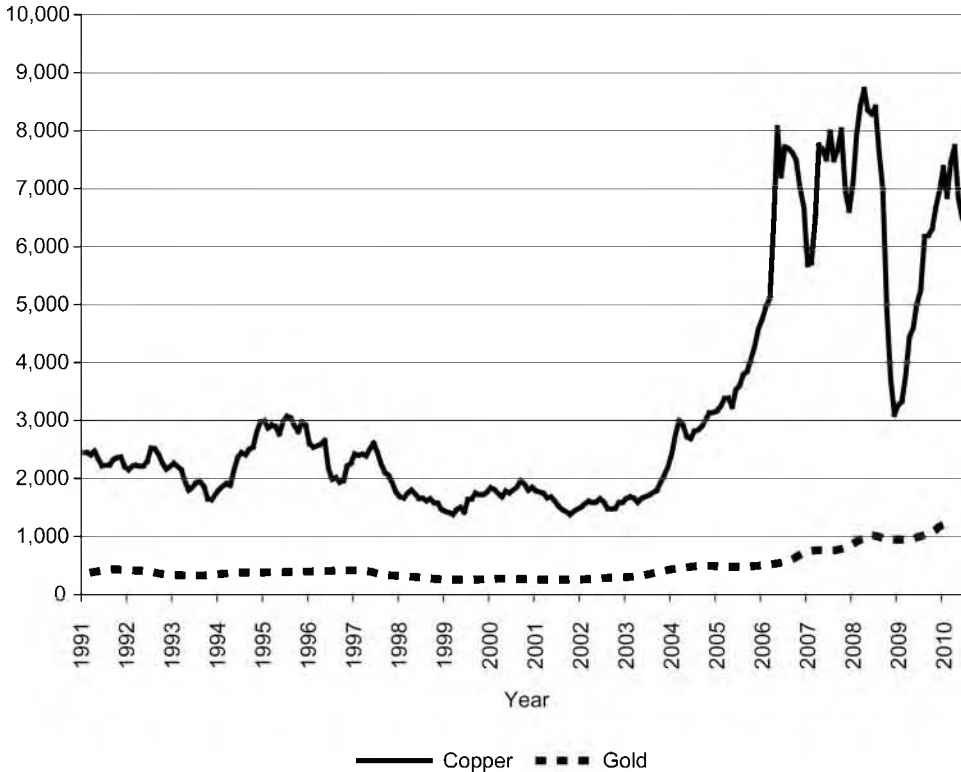


Figure 33.3 Copper (dollars per metric ton) and Gold (dollars per ounce) Prices, January 1991 to June 2010  
 Source: World Bank Global Economic Monitor – at <http://data.worldbank.org/data-catalog/global-economic-monitor>.

they recoup more money before the state starts to collect its share of revenues. Speed may lead to mistakes in the choice of partner; Kazakhstan came to rue its choice of Eni as lead operator for Kashagan. If the state fails to hold the partner responsible for negative externalities (e.g. by specifying environmental or work safety obligations), then the partner may not feel obligated to spend money on these, as at Kumtor. Rapid exploitation of resources may also create an absorption problem due to lack of capacity to efficiently use the windfall.

The Hartwick–Solow rule that a country should not deplete total capital (i.e. physical, human and natural resource capital) provides a guideline for protecting future generations from resource depletion. However, it is desirable to transform natural capital into physical or human capital when the relative price of natural capital is high. Azerbaijan and Kazakhstan increased their oil output as oil prices surged from US \$12 per barrel in 1998 to almost US \$150 in 2008. Turkmenistan was less prepared to take advantage of the energy boom because it did not have the capacity to increase gas or oil output substantially, nor to export gas to any market other than Russia. The Kyrgyz Republic reaped substantial export earnings and local employment when gold prices were high in the 2000s, while Mongolia’s drawn-out contractual negotiations meant that the country missed out on the boom in copper prices (Figure 33.3). In the worst-case scenario technical change can drastically reduce the value of specific minerals. Turkmenistan’s failure to take advantage of high energy prices may be especially damaging, because EU

gas markets are shifting towards liquefied natural gas, which will benefit producers with ocean ports (e.g. Qatar and Australia) and penalize land-locked gas producers.

### *Sharing the proceeds*

Once a resource has been explored and is being exploited much of the revenue is rent, i.e. excess payment above that required to induce supply. The structure of PSAs and inclusion of arbitration are designed to limit opportunistic behaviour by host countries, which might be tempted, once the foreign partners have incurred the up-front costs, to revise the agreement. If the host tries to renegotiate for better terms, it may be challenged under arbitration, and ignoring an arbitration decision risks serious loss of future FDI. Yet, once revenues are flowing and costs recouped, the foreign partner may acquiesce in contract revision rather than risk harassment or even expropriation and forego a share of future revenues. A constraint on treating foreign partners too negatively is that such behaviour will discourage future foreign investment.

Nevertheless, there is flexibility in long-lived energy or mining PSAs, as relative bargaining strengths shift with market conditions. The energy-rich countries were in a weak position in the 1990s when world oil prices were low, but as prices soared in the 2000s their position strengthened. The challenge was to find a balance between asserting rights to a greater share of the proceeds which are grudgingly accepted as fair and deterring future foreign investment by being too grasping.

The activities of the state energy companies in Azerbaijan and Kazakhstan since the mid-2000s are a form of contract revision. If domestic companies are part of a consortium, then more revenues accrue domestically. Domestic energy or mining companies often have little to contribute, because absence of technology and skills is usually the principal reason for having involved foreign companies. Thus, their participation is primarily about rent extraction, although there may be positive externalities such as skill and technology transfer. At the same time, state energy companies are often highly politicized, and rents may be siphoned off through a non-transparent state entity or in Turkmenistan's case simply placed into off-budget accounts under presidential control.

### *Using the revenues*

Once resources are being exploited governments face the question of how to use the revenues. As oil prices began to rise and then soared after 2003, revenues far exceeded domestic absorption capacity in Azerbaijan and Kazakhstan, which created sovereign wealth funds to manage the windfall. Both funds were established by presidential decree rather than by legislation which passed through parliament, thus leaving them subject to presidential discretion. For both countries a major issue has been making a credible commitment to avoid short-term plundering of the fund's assets, especially as both transition economies had reasons to increase social expenditures and to promote future growth.

Kazakhstan appears to have been more successful in this respect, at least before the 2007/08 financial crisis, whereas Azerbaijan saved little of the windfall revenues. Azerbaijan used its oil windfall to finance public expenditure, running a non-oil fiscal deficit equal to 30 per cent of GDP between 2003 and 2006 and borrowing abroad an amount equal to about 4 per cent of 2006 GDP. By contrast Kazakhstan was paying off external debts to reduce future obligations. The situation changed in Kazakhstan as the financial sector ran into serious problems in 2007; substantial funds were transferred from the NFRK in 2008–09 to help the ailing banking and construction sectors and to provide stimulus for small and medium-sized enterprises and fund public investment.

Reliance on resource revenues rather than taxes reduces the need for governments to seek popular support for spending, fostering undemocratic systems and lack of checks on executive power. An alternative is to redistribute resource rents to the population who can make private spending decisions, including voting on how much to devote to public expenditures through taxes. In Mongolia both major parties have promised cash handouts to the people, but doing this before earning substantial resource revenues looks like fiscal profligacy.

## Conclusions

Realizing the benefits from resource abundance is an obstacle race, where falling at a hurdle may forestall any benefits or turn resources into a curse. The experience of the countries covered here illustrates the pitfalls, but also suggests that some are more serious than others.

The volatility of oil and mineral prices highlights the importance of timing when it comes to resource exploitation. At the negotiation stage governments may make mistakes such as choosing an unqualified partner, placing inadequate controls on the project or winning inadequate revenue shares for the state. Azerbaijan, Kazakhstan and the Kyrgyz Republic illustrate flawed outcomes following quick deals with foreign investors. The missed opportunities of Turkmenistan and Mongolia from not involving foreign partners are more clearly negative.

The shares of revenue streams are a prominent part of negotiations, but in practice the shares can be revised. Depressed world oil prices during the 1990s meant that Azerbaijan and Kazakhstan negotiated PSAs under unfavourable conditions, making substantial concessions in order to ensure foreign companies' investment. During the oil boom they were able to obtain improved terms using the state oil company as a vehicle. There are, however, constraints in that a too rapacious or capricious state will not be an attractive partner in future projects.

The final challenge once revenues are flowing to the state is to ensure that they are used wisely, for present and future generations. If leaders enrich themselves rather than promoting the public interest, the outcome may be a rent-seeking society with ruthless power-holders. Turkmenistan highlights the potential for institutional degradation, and Kazakhstan seemed to be on that path in the 1990s. Even well-intentioned governments can run into problems if their spending plans exceed the country's absorptive capacity, and then revenues fall.

The impact of resource abundance on institutions depends upon many factors, including path dependence and the conjuncture of circumstances. Kazakhstan in the 1990s was an example of rent-seeking institutional degradation, but a positive conjuncture in the 2000s (soaring oil prices, large oil and gas discoveries and new pipelines) triggered institutional and policy evolution. Uzbekistan, by contrast, had less resource-rent-driven institutional degradation in the 1990s, but avoided reforms and stagnated in the 2000s. Both Azerbaijan and Kazakhstan have super-presidential regimes with high levels of corruption, but the regimes are less rigid than those of Turkmenistan or Uzbekistan, where economic development has been stifled by an overpowering state administration. A general conclusion from the experience of the Central Asian countries is that a more open approach to trade and investment may be a catalyst for positive institutional change either directly through greater exposure to ideas and practices or indirectly through rising expectations of social and political inclusion.

The formerly centrally planned economies may be especially prone to a resource curse outcome owing to their inexperience with policymaking in market-based economies and the absence of strong economic institutions, but the malleability of institutions can also be an advantage as adverse institutional consequences of initial decisions can be corrected. The experience of the seven countries studied here is mixed and in most cases the jury is still out. The worst outcomes, apart perhaps from Turkmenistan, are due to poor policymaking or

missed opportunities rather than a resource curse, while the more positive cases still face substantial challenges.

### Notes

- 1 Pomfret (2006) provides more general background on the five Central Asian countries' economies. Tajikistan's high growth in 2000–04 was recovery from the civil war that ended in 1997. The seven countries' resource sectors are described more fully in Pomfret (2011).
- 2 Of the seven countries covered here, only Mongolia (in 1997) and the Kyrgyz Republic (in 1998) have joined the World Trade Organization (WTO). Uzbekistan (1994), Kazakhstan (1996), Azerbaijan (1997) and Tajikistan (2001) have applied for WTO membership, but accession negotiations are stalled or moving very slowly. Turkmenistan has not applied.
- 3 Uzbekistan has been reluctant to involve foreign firms in its resource sectors, but the economy is better managed than that of Turkmenistan and cotton remains a major export. Uzbekistan's second largest export is gold, in whose production foreign partners have played a role, but the arrangements and gold output are not publicized by the government.
- 4 At independence the resource base was cotton and a recently developed natural gas sector, neither of which was in urgent need of foreign expertise. Cotton provided the revenues in the mid-1990s to fund populist policies and grandiose buildings, but the government offered little incentive to farmers and production declined. As cotton exports diminished, revenues from gas exports began to increase after 2000, largely owing to external price changes; the volume produced was lower in the 2000s than it had been in 1990 (Table 33.4). Involvement of foreign firms was minimized, and almost all gas exports went to or through Russia until 2009 when a pipeline to western China broke Russia's monopoly. At independence oil output was small, but onshore and offshore reserves were believed to be substantial; large western firms signed PSAs, but after the turn of the century involvement of ExxonMobil and Monument was changed in favour of smaller companies. Oil output of just over 7 million tons in 2000 was not much higher than in 1985, and less than the 1975 peak, and by the mid-2000s it was becoming clear that to increase oil and gas output Turkmenistan needed foreign capital and know-how. Kalyuzhnova (2008, pp. 83–86) emphasizes lack of technical skills after the departure of Soviet specialists as the cause of falling revenues per cubic meter of gas exports, and also highlights how much time in exploiting offshore oil reserves has been wasted due to lack of expertise. Turkmenistan has not yet created a positive environment for foreign investors.
- 5 The 1990s in Kazakhstan were characterized by a series of deals between the government and the oil majors to revise the shareholdings in Tengiz and for the development of other large energy projects such as the Kashagan offshore oilfield and the Karachaganak gas field. The process was opaque, leading to drawn-out legal proceedings in New York and elsewhere and imprisonment in the USA of a Mobil Vice-President for failing to declare a 'commission' in his tax return.

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