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Exploiting a natural resource in a poor country: The good, the bad and the ugly sides of the Kyrgyz Republic's gold mine

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Exploiting a natural resource in a poor country: The good, the bad and the ugly sides of the Kyrgyz Republic's gold mine

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Abstract

What is required for a poor country to turn a valuable resource endowment into a driver of development? The resource curse literature highlighted the importance of institutions and the nature of the resource, neither of which is a useful policy guide. A more recent literature views resource exploitation as a series of hurdles that must be negotiated: ensuring production, dividing revenues, and using the added public finance. The Kyrgyz Republic's Kumtor gold mine is a useful case study in that the country cleared the first hurdle but over almost a quarter century was embroiled in negotiating the second hurdle. The paper assesses the extent to which such problems are inevitable for a small poor country, and the consequences of an extended conflictual process.

JEL-Classification: Q32, O53, L72, N55

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Introduction

The idea that resource abundance can be a mixed blessing has a long history, which received quantitative support from the cross-country econometric evidence of Sachs and Warner (1995). The subsequent literature established that a “resource curse” outcome is conditional on variables proxying for institutions and that the negative relationship tends to be stronger for point-sourced resources such as oil or minerals.¹ There also appears to be a learning process insofar as the increased popularity of sovereign wealth funds since the late 1990s helped to ensure that “curse” outcomes might be less likely from the twenty-first century boom than from the 1970s resource boom.

A more recent approach focuses on the need to surmount several hurdles in order to realize the potential bounty from resource abundance (Pomfret, 2012; Venables, 2016). First, the resources need to be exploited, which may require collaboration with a foreign company that has the required technical capacity and access to capital. Second, the revenues, which often are largely economic rent once production has started, need to be divided between the foreign firm and the host country and within the host country. Third, rents accruing to the state must be used wisely, both at the time of receipt and across generations. This approach eschews the curse/boon dichotomy and sees resource abundance as an opportunity, that may be seized to different degrees. Falling at a hurdle will lead to failure to maximize benefits from the resources. A “curse” outcome is possible if the struggle over rents leads to institutional degradation or if over-ambitious spending of revenues is a catalyst for future debt crises.

The development of the Kumtor gold mine in the Kyrgyz Republic provides a good case study of the hurdle approach. After the dissolution of the Soviet Union in December 1991, the government of the new country moved quickly to surmount the first hurdle and reaped substantial benefits from the timing as world gold prices rose rapidly after the mine entered into production. Addressing the second hurdle has been much more difficult, in part because of the dynamic of production sharing agreements designed to address the issue of high up-front fixed costs for the foreign company and potential for expropriation once production is up and running,

¹ Frankel (2010) and van der Ploeg (2011) survey the literature. The potential for a resource boon is clear from the success of resource-rich countries, such as Australia, Canada, Norway Botswana or Malaysia. A well-managed sovereign wealth fund reduces the likelihood of Dutch Disease effects or of the excessive fiscal procyclicality identified by Frankel as a major source of curse outcomes. If institutional degradation is the transmission mechanism for a curse outcome, then the sovereign wealth fund may be raided.

and in part because of the volatility and unpredictability of world prices; the windfall from the gold price boom of 2001–11 created a specific background to conflicts over rents.² The third hurdle has been less controversial in the context of debates over value of the natural resource, and is not addressed here.

The next section provides a brief introduction to the Kumtor gold mine and its place in the Kyrgyz economy. The good part of the Kyrgyz experience (hurdle 1 – section 2) has been that the resource was developed and provided benefits to both the foreign investor and the host country. The bad part was that competition over rents (hurdle 2 – section 3) spilled over into increasingly confrontational social conflicts. Some consequences were good as autocratic leaders were brought to account and political reform ran far ahead of elsewhere in Central Asia, but the parliamentary democracy established since 2010 has been tarnished by populist grandstanding over the distribution of the revenues for gold exports. The ugly part (section 4) is that inevitable public policy choices that have to be made, e.g. about trade-offs between financial returns and environmental degradation, are not being seriously addressed. The final section attempts an assessment of past resource exploitation in the Kyrgyz Republic and of future prospects.

² Another specific feature of the Kyrgyz case is the nature of a Soviet successor state, but there is little evidence that this was an important determinant of the consequences of resource abundance. Esanov et al. (2001) argued that such states' weak institutional development made them more vulnerable to a resource curse outcome, but Brunnschweiler (2009) provided evidence that resource abundance was especially positive among Soviet successor states. Alexeev and Conrad (2011), using a range of indicators, found that resource-rich economies in transition from central planning performed neither better nor worse than other transition economies. Pomfret (forthcoming) provides more country background.

1. The Kumtor Gold Mine in the Kyrgyz Economy

Before the Kyrgyz Republic became independent at the end of 1991, it was the third-poorest republic in the Soviet Union. Hit by the disorganization following the end of central planning, disruption of Soviet supply chains and hyperinflation, the situation became worse; by the mid-1990s the poverty rate, using the Soviet benchmark of around four dollars a day, had soared to 88% (Milanovic, 1998). On the bright side, the country was sitting on one of the world's largest unexploited gold mines, with estimated deposits of around 700 tons.

The Kumtor gold mine is in an inhospitable location 4,000 meters above sea level, and the ore content is so low that Soviet geologists put it in the too-hard basket. After independence, the Kyrgyz government identified a foreign firm, Cameco, with the capacity and desire to exploit the gold mine, and a production-sharing agreement (PSA) was signed in 1994. By the end of the 1990s gold accounted for about one sixth of the country's GDP, and production was occurring in time for the super commodity boom when the world price of gold would increase from \$260 an ounce in July 2001 to over \$1,800 in August 2011 (Figure 1). This was the good news, in contrast to a mineral-rich country like Mongolia which missed the mineral boom because it failed to agree with a foreign producer that could mine the country's copper.

Figure 1: 20 Year Gold Price in US-Dollar/oz



The bad news was that the agreement with Cameco was non-transparent, opening the way for protests over corruption and unfair distribution of revenues. More fundamentally, PSAs face a time-inconsistency problem, insofar as the foreign partner has large up-front costs, and once operations are running smoothly it faces expropriation risk. Thus, PSAs typically allow the

investor to recoup initial costs before revenues are shared more evenly between investor and host. In principle, a PSA is a long-term contractual agreement, although in practice they can be renegotiated if circumstances change dramatically and unexpectedly. The Kumtor project illustrated the potential for conflict over the life-cycle of the gold mine, and the potential for contentious rather than cooperative renegotiation.

The ugly side of Kumtor is that an open-cast mine in pristine mountain conditions is bound to have negative environmental consequences. Combined with global climate change, the threat to glaciers and to sustainable water supplies downstream is severe. Kumtor's owners and managers are aware of the issue; the questions are to what extent is the company responsible for countering environmental damage and what is the role of the government in protecting the environment? These questions became messily intertwined with the distributional issues as the government protected the project against protesters in order to ensure its revenue stream, and at the same time used environmental fines as bargaining chips in its quest to revise the PSA.

The Kumtor gold mine has been important to the Kyrgyz economy and has impacted the country's political evolution. The mine's history also provides a case study of changing perceptions and actions of affected groups over a large mining project's life-cycle. The foreign investor, national and local governments, opposition politicians, non-governmental organizations, the mine's employees, local action groups and residents have all played a part. These roles are played out against the backdrop of the PSA, which can be challenged and revised, and of world gold prices, which are exogenous.

2. The Good: Both the host country and the investor benefitted financially

The newly independent Kyrgyz government sought foreign developers for Kumtor, and in December 1992 the Canadian uranium company Cameco submitted a feasibility study based on cyanide-leaching, which can profitably process ores containing as little as .01 troy ounces per ton.³ Estimated production costs at Kumtor were around \$200 per ounce, while in 1993–4 the world price of gold fluctuated in a \$330–390 range. The PSA signed with Cameco in 1994 created the Kumtor Gold Company (KGC). Cameco's initial capital contribution was \$452 million, with \$45 million from its own resources and the remainder from loans guaranteed by Cameco.⁴ Additionally, Cameco had a \$100 million development contract for the decade 1997–2007. The PSA led to substantial foreign investment in 1995–7 and production began in 1997, with an anticipated life of the mine to 2021.

In 2009, Cameco divested its ownership in a public offering of 88,618,472 shares, for which it obtained a price of C\$10.25 per share, for a net return of around \$872 million. The gains to Cameco over the fifteen years of its involvement included returns of \$86 million in 1997–9, \$641 million in 1999–2009, and an estimated net \$756 million from the 2002–4 restructuring and the 2009 divestment. Cameco's total investment was reportedly \$584 million, although it is unclear what share of this was loans and how much the company benefitted from the \$100 million management contract.

The Kyrgyz government's net income from the project between 1997 and 2009 was \$543 million, or about 20% of government revenue and 7–10% of GDP over this period (Baxter and McMillan, 2012, 21). Intangible benefits to the host country are difficult to assess. Cameco transferred skills and provided access to capital markets. There were concerns that close ties between Cameco and senior officials led to other projects being ignored, and the corruption and physical danger surrounding gold-mining projects in the Kyrgyz Republic may have discouraged new investment.

³ Cameco had been founded in 1988, as a joint venture between the Saskatchewan government (62%) and the Canadian federal government (38%). The federal government floated its shares in 1991, and by 2002 Cameco had been fully privatized. According to Baxter and McMillan (2012), by 1992 the company wanted to reduce its dependence on uranium in light of the end of the Cold War and concerns about the safety of nuclear power plant.

⁴ Lenders included private sector investors led by Chase Manhattan, and public-sector investors such as the International Finance Corporation, the European Bank for Reconstruction and Development, and the Canadian Export Development Corporation.

The financial returns suggest that Kumtor was a project that benefited both the host country and the foreign investor. Cameco took the risk of investing when major gold producers shied away and appears to have made a reasonable return over the period to 2009. The Kyrgyz government received a considerable revenue stream; it may have been able to obtain a larger share of the pie with better negotiating of the PSA in the 1990s, but the risk was that a tougher line might have discouraged any foreign participation, as happened in Mongolia (Pomfret, 2011).⁵ Moreover, after 2009 the mine was still a productive asset, with projected returns to the Kyrgyz Republic between 2009 and 2021 of \$850 million. With subsequent discoveries, the expected life of the mine has been extended to 2026 and in 2012 the mine was estimated to contain 9.6 million ounces in proven and probable remaining reserves.⁶

⁵ Since the early 1990s, Mongolia's Oyu Tolgoi copper and gold mine has attracted over \$6 billion in foreign investment for the first phase and an estimated \$5 billion for the ongoing second stage. However, first stage commercial production only started in 2013 and second stage construction began in 2015, after years of dispute over taxes and other financial arrangements (Li et al., 2017). In Central Asia, Turkmenistan and Uzbekistan avoided foreign investment and in consequence failed to develop their abundant natural gas and mineral resources in time for the resource boom. Turkmenistan's natural gas output is lower than in 1991 and with the growth of maritime trade in liquefied natural gas the landlocked country's abundant reserves could become a stranded asset.

⁶ "Kumtor Mine Reserves Increase 58% to 9.7 Million Ounces of Gold 5 Year Extension of the Life-of-Mine to 2026" at <<http://www.centerragold.com/sites/default/files/cg-11072012-1.pdf>> 7 November 2012.

3. The Bad: Disputes over revenue shares undermined respect for the rule of law

The returns to Cameco were front-loaded, as is typical of a PSA for this kind of capital-intensive operation. Especially after gold prices started to increase in 2002–3, domestic critics complained that the country was gaining little benefit. As gold prices soared, it should have been possible to renegotiate the PSA. It is not unusual for PSAs or long-term contracts in resource sectors to be renegotiated if there is a major unanticipated change in circumstances, e.g. Kazakhstan and Azerbaijan renegotiated their oil PSAs once the oil price boom was under way in the early 2000s and Turkmenistan renegotiated long-term gas contracts with Ukraine and Russia. Renegotiation over Kumtor was more bitter, disorganized and disrespectful of the rule of law.

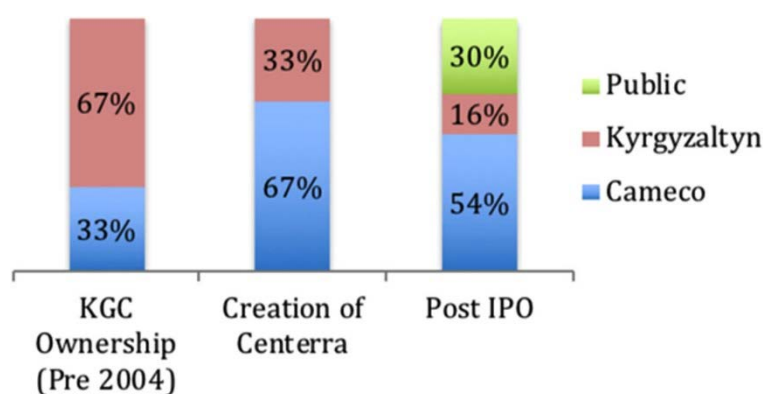
A financial restructuring of the KGC joint venture completed in June 2004 created a new company listed on the Toronto Stock Exchange, Centerra, of which Cameco owned two-thirds and a Kyrgyz parastatal, Kyrgyzaltin, owned one-third. Cameco's interest in replacing the PSA by a new publicly traded company was to put a market value on their stake in Kumtor. The Kyrgyz government's short-term goal was to sell shares to raise revenue; shortly after the Centerra initial public offering, the Kyrgyz government sold 7.5 million shares, reducing its holding to 16% and raising C\$116.25 million as current revenue. By the end of 2004, Cameco owned 54% of Centerra, Kyrgyzaltin 16%, the EBRD 4%, and other shareholders 26% (Figure 2).

The restructuring was politically controversial in the Kyrgyz Republic, with accusations that the presidential family and other high officials were personally benefiting. It contributed to the overthrow of President Akayev in the 2005 Tulip Revolution. After the 2005 change of power, President Bakiyev initially sought a simple revision of the 2004 arrangement to return Kumtor to a Kyrgyz-Cameco joint venture, with the Kyrgyz stake increased to 61%; this was, unsurprisingly, unacceptable to Cameco.

The validity of the 2004 agreement was challenged in the Kyrgyz Parliament in 2007. In 2009, the government and Centerra reached a new agreement, which expanded the company's concession area to include the entire area under its license and simplified the tax structure governing the project. The government's ownership stake was increased from 16% to 29% by a transfer of Centerra shares from Cameco to Kyrgyzaltyn and creation of new shares, i.e. a dilution

causing a one-time loss for other investors. The striking feature of the 2009 agreement was that for the first time a Kumtor deal was only reached after parliamentary approval. Nevertheless, the deal was widely seen as too favorable to the company, e.g. because its tax obligations were limited to 14% of gross revenues plus a small environmental fee (\$310,000 per year).⁷ Many Kyrgyz ascribed the favorable treatment to high-level corruption involving President Bakiyev's family and associates.

Figure 2: Evolution of Kyrgyz Ownership Structure in 2004



Source: Baxter and Macmillan (2012) from Cameco financial statements.

Parliament responded by establishing a Commission to assess Centerra's compliance with the 2009 Agreement. The Commission's Chair, Sadyr Japarov, presented his findings a year later, and introduced a motion in the Parliament to nationalize Kumtor. The motion was defeated, with most parliamentarians in support of changing the 2009 agreement, but not willing to go to the extreme of expropriation for fear of dissuading future foreign investors.⁸

⁷ "Gold in the Hills", The Economist (London), 16 March 2013. Mogilevskii et al., (2015, 13-4) provide more details, and estimated Kumtor's effective tax rate, when all payments to the public budget were accounted for, to be 24%, which is higher than for other active foreign-owned mine companies in the Kyrgyz Republic.

⁸ Prime Minister Satybaldiyev reassured Centerra and investors that the government had no intention of expropriating the mine and President Atambayev declared that the Kyrgyz Republic would become a "rogue state" if Kumtor were nationalized ("Almazbek Atambayev: "Kyrgyzstan Will Become a Rogue State by Nationalizing Kumtor" at <http://kabar.kg/eng/economics/full/5909> 24 December 2012). Following the defeat of his motion to nationalize the mine, Japarov was jailed for inciting violent protests in favor of expropriating Kumtor (Radio Free Europe "Kyrgyz Opposition Protesters Demand Gold Mine's Nationalisation" at <http://www.rferl.org/content/kyrgyzstan->

In 2010, President Bakiyev was ousted following popular demonstrations. As in 2005, a major contributor to discontent was the corruption associated with the presidential family. Kumtor was not the principal area of corruption (fuel for the US transit center and mobile phone licenses were more salient areas of corruption associated with Maxim Bakayev, the president's son), but in the toxic atmosphere Kumtor's financial arrangements again became a source of controversy. Following the constitutional reforms of 2010–11, the parliament became more powerful and more rambunctious.⁹

A State Commission led by Temir Sariyev, the Minister of Economy and Antimonopoly Policy, reported in late 2012 and made allegations relating to “inefficient or improper management of the Kumtor mine regarding customs practices, tax and social fund payments, operational decisions, procurement practices and mill efficiencies.” As a result, \$467 million in fines were issued for alleged environmental damages, as well as for waste disposal and water treatment violations dating back to 1996. Centerra dismissed the allegations as “exaggerated or without merit” and stated that it would seek international arbitration if talks with the government broke down. In February 2013, the Parliament adopted a decree giving legislators the option to invalidate the 2009 contract if the two sides fail to reach an agreement.

A memorandum of understanding between the government and Centerra was rejected by Parliament in September 2013, but agreement appeared to have been reached in December. The deal let Kyrgyzstan trade its current 32.7% equity interest in Centerra for a 50% stake in a joint venture that would own and operate the mine. In February 2014, with 60 votes in favor and 35 against, the Parliament approved creation of a joint venture splitting control of Kumtor 50–50 with the Canadian company.¹⁰

The protracted negotiations reflected grandstanding in the newly strengthened Parliament by parties and politicians who appealed to Kyrgyz nationalism but were unclear about the content of an agreement falling short of nationalization. The February 2014 vote, for example, sought

kumtor/24966987.html 24 April 2013). Rejection of nationalization remained the policy despite changes of prime minister and apparent strengthening of resource nationalism in 2015 (Fumagalli, 2015, 2).

⁹ In contrast to the other Central Asian republics, the Kyrgyz Republic has seen two peaceful changes of president as the incumbent stepped down in 2011 and in 2017 to be replaced by an elected successor.

¹⁰ Cecilia Jamasmie “Centerra and Kyrgyzstan reach Agreement on Kumtor”, 24 December 2013 <http://www.mining.com/centerra-and-kyrgyzstan-reach-agreement-on-kumtor-mine-11719/> and “Big Win for Centerra”, 6 February 2014 at <http://www.mining.com/big-win-for-centerra-kyrgyzstans-parliament-approves-kumtor-joint-venture-80619/>. For more details and assessment see Gullette and Kalybekova (2014) and Fumagalli (2015).

50% Kumtor control, but gave up the country's equity interest in Centerra without consideration of whether a 32.7% share in Centerra's profitable operations outside Kumtor would yield more or less revenues for the Kyrgyz Republic than creation of the 50–50 joint venture. In April 2015, the Parliament passed a non-binding resolution calling the government's handling of Kumtor negotiations “unsatisfactory”, even though Parliament had acquiesced and offered no alternative non-nationalization strategy. The Kyrgyz Prime Minister was quoted as saying that a 50–50 deal would not be in his country's interests.¹¹

As state-investor relations deteriorated through 2015, the government threatened to withdraw Centerra's license.¹² In 2016 a Kyrgyz court ordered the company to pay about \$98 million in fines related to mine waste while another government body filed a \$230 million lawsuit against the firm. Security forces raided Centerra's offices, taking documents. In May 2016, following the Kyrgyz government's penalties, fines, accusations of environmental damage and violation of business deals, Centerra sought international arbitration. The Kyrgyz government accused Canadian managers of Kumtor of breaking Kyrgyz laws and prevented them from leaving the country.¹³

Finally, on 11 September 2017, Centerra announced a comprehensive agreement with the Kyrgyz Republic over Kumtor.¹⁴ The settlement ended mutual lawsuits, dropped all environmental claims, halted court proceedings and allowed Centerra to transfer funds from the country that had been frozen. All restrictions on the movement of Centerra employees were lifted. Centerra will pay \$50 million to a Nature Development Fund and make annual contributions to the fund of \$2.7 million. A cancer care fund set up by the government will receive a further \$10 million from the company. Centerra will also invest \$6 million annually

¹¹ Michael Allan McCrae, “Kyrgyz prime minister says 50/50 joint venture with Centerra Gold may not be in country's interests” 9 April 2015 at <http://www.mining.com/kyrgyz-prime-minister-says-5050-joint-venture-centerra-gold-may-not-countrys-interests/>

¹² Pete Baumgartner: “It's Not Just About the Horse Penis, It's About the Gold Mine”, Radio Free Europe/Radio Liberty, 5 January 2016 at <https://www.rferl.org/a/kyrgyzstan-kumtor-horses-penis-outrage-british-expat-mcfeat/27468972.html>, Claire Provost “Tensions flare over environmental threat of Canadian gold mine in Kyrgyzstan”, The Guardian, 5 January 2016 – at <https://www.theguardian.com/global-development/2016/jan/05/environmental-threat-canadian-gold-mine-kyrgyzstan> and Ryskeldi Satke “Conflict continues at Kyrgyzstan's massive Gold Mine”, at <https://www.aljazeera.com/indepth/features/2016/01/conflict-continues-kyrgyzstan-massive-gold-160128071445334.html> 19 February 2016.

¹³ Peter Koven “Centerra Dispute escalates as Executives barred from leaving Kyrgyzstan, Financial Post, 6 June 2016 – available at <http://business.financialpost.com/commodities/mining/centerra-gold-managers-barred-from-leaving-kyrgyzstan-as-miner-faces-new-criminal-probe>.

¹⁴ The official statement by Centerra is at <https://s3.amazonaws.com/cg-raw/cg/news-releases/nr-20170911.pdf>

in a Kumtor reclamation fund based inside the country to a minimum of \$69 million, a figure that broadly matches the company's own estimate of the site's total rehabilitation costs.

The bickering was intimately connected to the dynamics of the Kyrgyz Republic's nascent democracy and free society (relative to other Central Asian countries). The blatant corruption of the families of the first two presidents created an environment in which people readily believed that, absent the corruption, abundant profits could accrue to the state. Diminution of the power of the presidency and increased power to the Parliament encouraged parliamentarians to take populist positions against the foreign investor, even if alternatives were not well thought-out.

In the end a mutually acceptable agreement was reached and the various threats were dropped, but the process was poor. Resort to spurious taxes and legal challenges and freezing Centerra's assets and the mobility of its Canadian managers undermined respect for the rule of law and discouraged other foreign investors.

4. The Ugly: The central government has been distracted from seriously addressing legitimate public policy issues

The Kumtor mine has been associated with environmental disasters such as hazardous material spills and pollution of rivers, whose full costs have never been publicized, and destruction of glaciers that affect long-term water flows in the Aral Sea Basin (French, 2014). The government has been accused of cover-ups following hazardous materials spills; in 1998, a truck crashed on the road leading to the mine spilling nearly 1,800 kilograms of cyanide into the Barskoon River, two months later there was a spill of 70 liters of nitric acid, and in 2000 of 1,500 kilograms of ammonium nitrate. Additionally, the rents associated with a major gold mine are believed to have nourished corruption and undermined political institutions as well as social harmony. These are potentially major costs that underlie most case studies of resource abundance turning into a curse.

In early 2011, in a series of sporadic demonstrations in the Issyk-Kul region, protestors claimed grievances over environmental damages dating back to the start of the mine's operations and criticized the company for not doing enough to develop the local economy. The regional economic impact of Kumtor is complex. Centerra contributes to local development through employment and training opportunities, in 2013 employing 2,741 people, 95 per cent of whom were local residents, and paying wages that are approximately ten times the national average.¹⁵ Under the provisions of the 2009 agreement, the firm also pays one per cent of its gross revenues into the Issyk Kul Regional Development Fund, an off-budget trust with few mechanisms for accountability or transparency; mismanagement of the Fund has exacerbated tensions within the community and generated mistrust of Centerra.¹⁶ On the other hand, after a careful inventory of Centerra's corporate social responsibility activities, Mogilevskii et al. (2015, 16–17) concluded that the company's voluntary contributions far exceed those of other mining companies.

¹⁵ "Kumtor Gold Company. Contribution to the Economy" at <http://www.kumtor.kg/en/media-relations/contribution-to-the-kyrgyz-economy/> 13 May 2013, and Dmitry Solovyov, "Young Nation Kyrgyzstan Fights over Gold at Top of the World", at <http://www.reuters.com/article/2013/04/03/us-kyrgyzstan-gold-insight-idUSBRE932-07920130403>, 3 April 2013. The number of employees increased to over 3,000 in 2014.

¹⁶ The former manager of the Fund went on trial for charges of corruption. Aigul Akmatjanova, head of the Kyrgyz chapter of Transparency International, argues that the company has been too hands-off in ensuring that the funding goes to worthwhile projects despite having the right to veto selected projects (Trilling, 2013).

Public concerns about foreign mining companies exploiting the nation's mineral resources have led to violent conflict over the privatization of the country's resources and discouraged other investors. In October 2013, for example, a crowd of about two hundred people attacked the local office of Z-Explorer, an Australian company developing a gold field in Batken province.¹⁷ The crowd looted computers and other equipment from the company office and burned documents. The rioters protested about damage to water supplies and orchards, but the company expressed its concerns over the participation of local political leaders, presumably hoping to force renegotiation of the contractual terms. Doolot and Heathershaw (2015) argue that decentralization of political decision-making after the fall of the Bakiyev regime in 2010 intensified these problems as local elites sought rents from mines but could not guarantee the security necessary for projects to go ahead successfully.

¹⁷ Cole Latimer "Aussie Mining Office attacked in Kyrgyzstan", Australian Mining, 21 October 2013, available at – <http://www.miningaustralia.com.au/news/aussie-mining-office-attacked-in-kyrgyzstan>. A subsidiary of Australian-listed Manas Resources, Z-Explorer discovered the Shambesai deposit in 2010 and in 2013 received a license to develop the field, which holds estimated gold reserves of 8.8 tons.

5. Conclusions

After the country became independent, the Kyrgyz government moved purposively to find an investor capable of developing the Kumtor mine. The move was successful insofar as the identified investor promptly invested in the project in 1995–7 and gold output flowed in time to reap returns from the windfall increase in gold prices. Successive governments have recognized the importance of the revenue flows and, through all of the conflicts over Kumtor, the mine continued to operate. Serious disruptions to gold production, as in 2002, were due to technical problems or natural forces. Flows to the public purse enabled the government to provide social services, education and healthcare at a level that might otherwise have been impossible. The mine creates employment for about 3,000 workers.

The distribution of the financial returns appeared unfair to many Kyrgyz. This may have reflected the priority to reimbursing the foreign investor's up-front costs (a feature common to most PSAs) or nationalist response towards a foreign investor. In the conditions of a massive increase in gold prices, it should have been possible to renegotiate the PSA amicably. Instead, renegotiation became a litmus test of patriotism, with successive governments fearful of appearing weak in the face of popular protests against the company. The Kumtor issue contributed to popular opposition towards the country's first two presidents, and hence to their overthrow. After adoption of a parliamentary system in 2010, the political posturing became worse, as individual parliamentarians sought to benefit from discontent over Kumtor by criticizing any attempt at compromise with the foreign investor. At the same time, the parliamentary majority recognized that expropriation would have negative long-term consequences, and that compromise was necessary. Such negativity, without proposing a feasible alternative, undermined the parliament's claim to be the appropriate seat of power in the Kyrgyz Republic, and threatened to stall the most promising political reforms in Central Asia.

Finally, and especially in an age of increased awareness about climate change, large gold mines cause environmental damage. In the case of cyanide spills into rivers, there is human error that could be avoided with greater care. In the case of water pollution through tailings or damage to glaciers, the solution is more difficult, and could require collaboration among water users whose national interests differ. For the company the key question is whether it should pay more attention to environmental issues at the margin, while knowing that environmental degradation will be impossible to eliminate totally.

The policy challenge is to find measures that would provide an incentive for producers to find appropriate balance between output maximization and cost minimization on the one hand and environmental damage on the other hand. No Kyrgyz government has come close to establishing the appropriate balance or finding effective policy instruments to achieve that balance. Nor has the central government paid serious attention to regional development concerns of the communities most directly affected by the gold mine.

A second policy challenge is to balance competing interests. The revolutions of 2005 and 2010 have effectively curtailed presidential power and strengthened the parliament. However, there is little sense of balance, as parliamentarians promote their personal or local interests without serious concern for the national interest (Doolot and Heathershaw, 2015).¹⁸ Meanwhile all presidents have acquiesced in a contradictory stance for the central government under which the forces of law and order are used to prevent protestors from disrupting gold production, and at the same time the government panders to local complaints which are used as bargaining chips with Centerra. As instruments to meet competing goals, governments have played loose with human rights (beating and imprisoning protestors) and with the rule of law (levying imaginary taxes or making trumped up charges against the producer). Such actions undermine the institutional foundations of an efficient market-based economy.

In sum, in the quest to benefit from its resource endowment, the Kyrgyz Republic successfully negotiated the first hurdle but has experienced serious problems negotiating the second hurdle. The distribution of revenues has been a major source of dispute, whose negative impact was exacerbated by lack of transparency over the initial PSA and lack of a clear national negotiating process after 2005. Agreement was eventually reached in 2017, but the process had deleterious consequences for domestic institution-building and for the impression given to potential foreign investors. Among the consequences of the protracted and argumentative process has been distraction of national governments from addressing genuine public policy issues associated with environmental protection and regional development, as well as corporate management and corporate social responsibility.

¹⁸ This consequence of the shift from super-presidential power to a parliamentary system raises questions about the conclusion of Farzanegan et al. (forthcoming) that institutional degradation in resource-rich countries can be reduced by decentralization of power.

Future prospects are uncertain insofar as the Kyrgyz Republic has become the most democratic and open society in Central Asia, while remaining beset by widespread corruption and often dysfunctional institutions. These outcomes have been directly and indirectly influenced by the Kumtor saga. Future economic development will depend to a substantial extent on exploitation of mineral and potential hydroelectric resources. Key issues in assessing Kumtor's legacy are whether foreign partners will be encouraged or discouraged by that project's history and whether the Kyrgyz governments and other actors have learned useful lessons about resource management. Only then will it be possible to make a full assessment of the extent to which the Kumtor gold mine should be considered a boon or a curse for the country.

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