

Panning for Gold: the Kumtor Mine in the Kyrgyz Republic

Teaching Notes

I have divided this case into two parts – A and B – to illustrate two different facets of resource exploitation in an emerging economy. They share the common theme that exploitation and international sale of a natural resource can be both a source of export-led growth and a threat to environmental quality. They are both set in the Kyrgyz Republic, a former Soviet republic that became independent in 1991. They both investigate the exploitation of the Kumtor gold deposit, a rich mineral bed found in a pristine environmental setting in the mountains above Lake Issyk Kul, the Kyrgyz Republic’s major center for tourism.

In part A we examine an environmental disaster due to the mine’s operation that occurred shortly after the mine began operations in 1998. I use it to have the students address and answer a fundamental question: “Is there an acceptable social tradeoff between the improvement of national income from discovering an exportable resource and the environmental degradation that could result?” The case puts the decision in the form of a recommendation to the Kyrgyz President from his advisor (the students’ role) on the appropriate government responses to the environmental disaster. I begin with a class discussion to have the students lay out the fundamental tension between economic growth and environmental quality in this context. We read xxx’s empirical paper on export-led growth and environmental quality in China, and translate her “scale”, “income” and “technique” effects into the Kyrgyz case. We conclude with an in-class simulation of a town meeting in Barskoon, the site of the environmental disaster: the President’s advisor presents her plan for coping with the disaster while other students play the roles of local families harmed in the disaster. I attach a “case preparation” document to assist the students in preparing for this town meeting.

In part B we examine a new crisis in the Kyrgyz Republic in 2013. In this part the students have more evidence of the positive macroeconomic benefits of the mine, but there is also additional evidence of the environmental damage. The role of partial foreign ownership of the mine is placed front-and-center as well, with the possibility of nationalization of the mine put on the table as a government option. The question of an acceptable social tradeoff remains, but is overlaid with the concern that the foreign partners in this joint venture are reaping too large a share of the economic benefits. In addition, this depletable natural resource is nearly depleted while the problems of disposing the hazardous waste from the mine are not yet completely addressed. This part, in other words, leads the students into a debate of encouraging and managing foreign direct investment in an environmentally hazardous sector.

I distribute part B after the students have completed part A. From part B they discover the Kyrgyz answer to the fundamental question of part A. This part of the case once again forces a decision by the President's advisor – a different President, but with a similar problem. The case provides sufficient macroeconomic data over time for the students to trace out a story of export-led growth from a natural resource boom. For advanced students, I introduce the “Dutch Disease” model of economic growth and de-industrialization. In the final session, I have the students come up with a plan for reaping the benefits of the final years of the mine while also dealing with the environmental damage that has accumulated. This must be done in the context of the joint venture with a Canadian corporate partner.

In considering foreign direct investment I begin with the OLI framework: ownership, location, internalization. For more advanced students we also consider the principal-agent model and ways a sophisticated government can manage the exploitation of these scarce natural resources. The case also provides sufficient evidence that you can ask the question in reverse: who is the principal, and who is the agent, in this episode?

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Panning for Gold in the Kyrgyz Republic

We will have a discussion in class of this case. There will then be an assignment handed out at the end to be completed before the next class period.

You've completed reading the case "Panning for Gold (A)".

Next class we will have a town meeting in Barskoon. The date is 10 June 1998. Present at the meeting will be representatives of:

Kumtor Gold Corporation
Kyrgyz Government Commission to Enhance Economic Growth
Kyrgyz Environmental Protection Agency
Residents of the Lake Issyk-Kul region

They will debate the appropriate government and local response to the recent cyanide spills into the Barskoon River (as documented in the case).

You will be assigned at random into one of the four groups at the next class. To prepare, review the materials in the case from the perspective of each of these actors. What will be the best response from your perspective to the recent incidents? Be prepared to explain your reasoning in economic terms. Also be prepared to discuss whether compensation is necessary for this incident and for any future incidents. If so, who should pay?

Barskoon Town Meeting, 10 June 1998

Kumtor Gold Corporation.

Be prepared to make the case that

(a) There is an externality in gold mining,

But (b) our corporation has internalized these costs by our internal controls and policies,

So (c) the best approach from here on in is to leave us to operate according to our operating procedures.

Specifically, we propose ...

Barskoon Town Meeting, 10 June 1998

Kyrgyz Government Commission for Enhance Economic Growth.

Be prepared to make the case that

- (a) There is a fundamental tension between economic growth and environmental quality.
- (b) Growth is good for all citizens.
- (c) The Kumtor operation is a major source of economic growth for our economy today
– one of the few.
- (d) In this case, we propose ...

Barskoon Town Meeting, 10 June 1998

Kumtor Environmental Protection Agency.

Be prepared to make the case that

- (a) There is a fundamental tension between economic growth and environmental quality.
- (b) We have valuable assets in our people and in Lake Issyk-Kul. Environmental disasters threaten the value of those assets.
- (c) It is the EPA's job to regulate businesses so that they internalize the external costs involved with their operation.
- (d) In this specific case, we propose ...

Barskoon Town Meeting, 10 June 1998

Residents of the Lake Issyk-Kul region.

Be prepared to make the case that

- (a) There are external costs to the Kumtor operations.
- (b) While the citizens of the Kyrgyz Republic share the benefits of the Kumtor operation, the people of Lake Issyk-Kul bear all the costs
- (c) We further have little confidence in the ability of national government to regulate this corporation.
- (d) Specifically, we propose ...