Policy Brief

partnership for economic policy pep

No. 182 October 2018

Impact on the Mongolian economy of foreign direct investment in the coal export sector

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Key messages

- **Measures for economic diversification should accompany policies that aim to expand the mining sector.**
- **Foreign direct investment in the exported coal sector is positive for many key macroeconomic variables, including GDP and employment.**
- **But it also brings Dutch disease effects that deepen Mongolia's dependency on the mining sector, leaving the country even more vulnerable to mining-related shocks.**

Mongolia's dependency on mining

The Mongolian economy is highly dependent on the country's mining sector and coal is one of Mongolia's main export commodities, with exports mainly sold to steel producers in China.

Problems transporting coal exports by road

More than half of Mongolia's coal is exported by road through the Gashuun Sukhait-Gants Mod border. However, transporting by road is expensive and reduces the competitiveness of Mongolian coal when international prices are low.

When international prices are sufficiently high, the road system creates a bottleneck problem with coal trucks queuing for more than 100 km to the border.

Additionally, a high level of road transport has a significant environmental impact: dust, air and soil pollution.

New railway to replace coal trucks

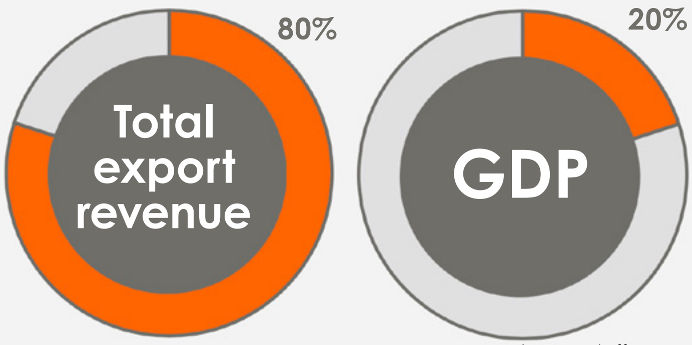
These factors have motivated the government and investors to build a railway system connecting the Tavan Tolgoi coal mine and the border.

While the investment to build the railway is expected to be up to seven times more expensive than building a road with one lane in each direction, the cost of transporting coal by railway is expected to be significantly lower than the current cost.

According to the government, the railway will be financed through foreign direct investment (FDI).

A team of local researchers examined the impact of foreign direct investment in the exported coal and railway sectors on the Mongolian economy.

Mining in the Mongolian economy



National Statistical office, NSO

The analysis

The research team used a dynamic Computable General Equilibrium (CGE) model to simulate the evolution of the Mongolian economy over 10 years under a "business as usual" (BAU) scenario and under a FDI scenario. The model was calibrated to the 2014 Mongolian Social Accounting Matrix (SAM) built by the team.

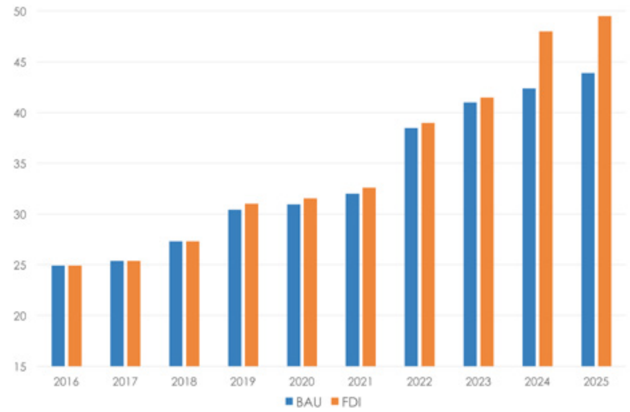
> **Business As Usual scenario:** Replicates the IMF's projections until 2022, after which similar assumptions are made. The metal ore sector (excluding coal) receives FDI over five years beginning in 2017 to reflect the second development stage of the Oyu Tolgoi copper mine. The world export price of coal is 50% higher than its 2014 value for the simulation period.
>
> **FDI scenario:** FDI of 1 billion USD in the exported coal sector: 60% of which is used to increase production capacity, 40% to establish the railway service to transport coal to the border for export.

Comparing the FDI scenario with the BAU scenario allowed the team to examine the impact of the FDI.

Key findings

Increasing the capacity of the exported coal sector and building a railway to serve that sector have a positive impact on key macroeconomic indicators, households, and employment.

Nominal GDP over time under BAU and FDI scenarios (trillion MNT)



Note: The nominal exchange rate is fixed at its 2016 value.

Compared to the BAU scenario, the FDI of 1 billion USD:

- Increases real GDP, real household consumption, real exports, real imports, and employment.
- Leads to higher domestic prices
- The exported coal, railway, construction, and trade sectors expand
- The increased production of exported coal leads to increased demand for rail and road transport.

However, this scenario also leads to Dutch disease effects in most sectors:

- Most other sectors see a decline in production, particularly for tradable commodities.
- The Mongolian economy becomes even more dependent on the mining sector.

Additionally, once the railway is built under the FDI scenario, it is used by the exported coal sector relatively more than the traditional transport service and at lower cost.

Land and water transport activities (excluding the new rail sector) decline slightly between 2017 and 2021 due to Dutch disease effects. Once these effects are combined with the railway becoming operational, these activities decline more sharply.

Conclusions and implications for policy

Foreign direct investment (FDI) in the exported coal and railway sectors has a positive effect on many macroeconomic variables of the Mongolian economy, including GDP and employment. However, increased production in the exported coal sector thanks to FDI has a Dutch disease effect that increases Mongolia's dependency on the mining sector.

Mongolia's economy is already highly dependent on the mining sector; deepening this dependency will leave government revenues and the wider economy especially vulnerable to international price shocks.

To protect the country from dependency on the mining sector, policies are needed to encourage economic diversification. Further research is needed to evaluate how profits from the booming mining sector can be best invested to promote economic diversification.

This brief summarizes outcomes from MPIA-19906, an institutionalization project supported under the second phase of the PAGE initiative (2016-2020).

PAGE is a global research and capacity-building initiative for Policy Analysis on Growth and Employment in developing countries. PAGE is supported by the Department for International Development (DfID) of the United Kingdom (or UK Aid) and the International Development Research Centre (IDRC) of Canada.