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Policy Brief №8

The Pursuit of Strategic Autonomy:
Addressing Less Visible Supply Chain Risks

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06/16/2026

Table of Contents

01

MONGOLIA'S STRATEGIC PRIORITY FOR SUPPLY CHAIN RESILIENCE

02

GRID CONSTRAINTS HINDERING ECONOMIC GROWTH (*RISK 1)*

03

NO FERTILIZER, NO HARVEST *(RISK 2)*

04

THE MINING EXPLOSIVES CONSTRAINT *(RISK 3)*

05

MANAGING WHAT MONGOLIA CAN CONTROL

06

USEFUL REFERENCES

1. Mongolia's Strategic Priority for Supply Chain Resilience

In March 2026, Iran's closure of the Strait of Hormuz triggered an immediate spike in oil prices and raised concerns across global markets over access to fuel, fertilizers, and other critical inputs. The lesson is undeniable: countries that depend heavily on a single supply route can be affected by disruptions far beyond their own borders.

Amid rising geopolitical and economic uncertainty, countries are placing greater emphasis on reducing critical dependencies on external actors. Indeed, **self-sufficiency** in strategic sectors is increasingly intertwined with **economic security and strategic autonomy**.

Mongolia's current reality is as follows: the country is not only dependent on a single market for its exports, but is also placing a high-stakes bet on a single supplier for critical economic inputs. Should Russian supplies be disrupted or China's borders close, Mongolia would face immediate and significant disruptions that would reverberate throughout the economy.

Capacity exists, but strategic choices are required

With its abundant natural resources, Mongolia has the potential to reduce several of its key supply chain vulnerabilities. Realizing this potential, however, will require long-term deliberate policy decisions.

- Ultimately, these issues should not be evaluated solely from a commercial standpoint. Strengthening domestic capacity is an investment in Mongolia's economic resilience and, in turn, its ability to maintain strategic autonomy in an increasingly uncertain world.

While fuel and food security are the most visible dimensions of supply-chain vulnerabilities, three deeper risks deserve greater attention**.**

2. Grid Constraints Hindering Economic Growth *(Risk 1)*

THE PROBLEM

For decades, Mongolia's energy system has been built around a small number of centralized coal power plants serving major urban and industrial centers, alongside electricity imports from Russia and China, which account for roughly a quarter of total supply.

However, at present, many of Mongolia's promising resource and industrial projects are located hundreds of kilometers from existing transmission infrastructure. This geographic mismatch has created a persistent bottleneck to investment and economic growth.

Expanding the grid to serve these remote projects can be both costly and time-consuming. In some cases, the cost of transmission infrastructure can approach or even exceed the cost of generation itself. Delays in grid expansion can also undermine project viability by increasing financing risks and exposing investments to shifting commodity cycles and market conditions.

As a result, Mongolia's underdeveloped grid, with its limited geographic coverage, is increasingly becoming a risk to economic growth.

POTENTIAL SOLUTION

Mongolia's abundant uranium, wind, and solar resources enable a more flexible, distributed energy strategy

Rather than following the sequence of "build grid first, then attract investment," a more adaptive model of deploying energy infrastructure in response to where investment is already materializing may be more suited to Mongolia's vast geography, dispersed mineral deposits, growing AI and data center opportunities, and abundant renewable resources.

In this context, renewables, well suited to modular deployment, play an immediate and scalable role. Importantly, the South Gobi wind and solar resources offer both domestic supply and export potential to China.

In the long term, Mongolia's substantial uranium reserves (ranking ~12th in the world) provide a pathway toward energy diversification. The Zuuvch-Ovoo uranium project, being developed through Mongolia's partnership with France's Orano, lays the groundwork for the country's potential future development of **nuclear energy**.

Small Modular Reactors (**SMRs**), in particular, could provide Mongolia with a reliable source of energy capable of supporting industrial clusters. Experts highlight the suitability of SMRs for Mongolia's geography and energy needs, citing their scalability, shorter construction timelines, and affordability.

Taken together, integrating advanced nuclear technologies such as SMRs with wind and solar development could help unlock investment by bringing reliable energy closer to emerging mining, industrial, and data center projects, reducing dependence on costly grid expansion.

3. No Fertilizer, No Harvest *(Risk 2)*

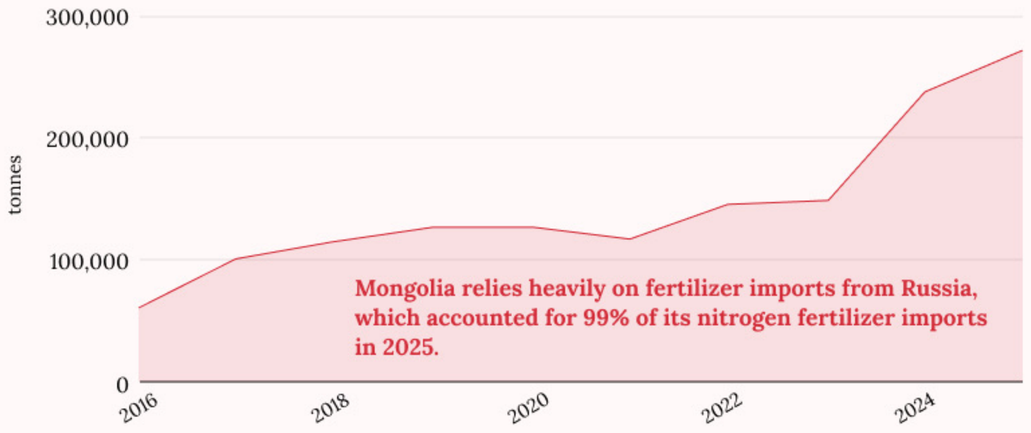
THE PROBLEM

Mongolia's great dependence on imported nitrogen

Mongolia imports around half of its food, and the crops it does grow domestically are limited by fertilizer availability. As of 2025, on average, Mongolia consumes more than 200,000 tonnes of fertilizer per year, of which about 95% is imported.

The majority of imported fertilizer consists of chemical fertilizers, particularly nitrogen-based fertilizers. Nitrogen fertilizers can only be produced by reforming natural gas or gasifying coal, and Mongolia currently lacks the capacity to manufacture them domestically, leaving the country dependent on imports from Russia.

Imports of nitrogen fertilizers from Russia have steadily increased



Source: Mongolian Customs data, Code: 3102

POTENTIAL SOLUTIONS

Mongolia has the potential to develop a domestic fertilizer industry, supported by its abundant resources

Solution 1: The country possesses potassium deposits associated with dried lake basins in the Gobi region and substantial phosphorus reserves, providing key inputs for **potash and phosphate** fertilizer production.

Solution 2: The planned Tavantolgoi Industrial and Technology Park may offer a feasible pathway for producing **nitrogen fertilizers**: its coal chemical plant will process 2.7 million tonnes of washed coal annually into 100,000 tonnes of ammonia, which can then be converted into urea, the world's most widely used nitrogen fertilizer.

- Precedent exists: China's reliance on coal-based urea production has strengthened its fertilizer security, reducing exposure to natural gas price volatility and external supply disruptions. Around 78% of China's urea output is produced from coal, allowing it to remain more self-sufficient despite recent turmoil in global fertilizer markets.

Solution 3: In principle, renewable electricity could be used to produce hydrogen via electrolysis, which is then combined with nitrogen from the air to make ammonia (**green ammonia**), the core input for nitrogen fertilizers. China recently commissioned the world's largest green hydrogen-ammonia project in neighboring Inner Mongolia.

As around 60% of Mongolia's farmland suffers from severe degradation, domestic fertilizer production could help increase agricultural productivity and **reduce food import dependence**.

4. The Mining Explosives Constraint

(Risk 3)

THE PROBLEM

Mongolia is entirely dependent on imports for an input that is physically non-negotiable for mining operations

Mongolian companies holding import licenses bring in approximately 200,000 tonnes of explosive raw materials annually, sourced predominantly from Russia and China. In particular, Mongolia is heavily reliant on Russian **ammonium nitrate**, a key input in the production of mining explosives, for its mining sector.

- Russia has recently suspended ammonium nitrate exports for a month to prioritize domestic agricultural needs amid global supply concerns. Although Mongolia was not affected, the decision illustrates that export access is ultimately contingent on Russian domestic conditions, and that a disruption could materialize with little warning.

Despite its overwhelming importance to the mining sector, Mongolia currently holds no domestic ammonium nitrate production capacity.

POTENTIAL SOLUTION

A coal-chemical complex such as the Baganuur Industrial Technological Park could produce ammonia from coal, a key precursor to ammonium nitrate and, ultimately, mining explosives.

⛔ As the backbone of Mongolia's economy, the mining sector is of **critical importance**, making the reduction of external dependencies that constrain its operations essential to economic stability.

5. Managing What Mongolia Can Control

Some supply chain risks lie beyond Mongolia's control, including global commodity cycles, domestic conditions in neighboring countries, and geopolitical tensions. Others are **controllable**, determined by domestic choices in production, regulation, and infrastructure planning, among others. This brief has mapped three such controllable risks, but they are a starting point, not the full picture.

Two things are within Mongolia's power:

1. Map every controllable risk, sector by sector. Each ministry/industry should audit its critical inputs, supply concentration, and substitution capacity.

2. Build a strategic reduction plan for each identified risk. Vulnerabilities should be addressed through roadmaps outlining legal steps, financing, and timelines to reduce exposure.

Doing so requires sustained political and legal backing, paired with the policy support to convert Mongolia’s potential into reality.

- **Legislative speed is possible when the political will exists:** In November 2024, Parliament approved amendments to the Law on Nuclear Energy, establishing the legal framework for the Zuuvch-Ovoo investment agreement with Orano. A similar level of political commitment now needs to extend to SMR deployment, to the coal-chemical complexes that could reduce fertilizer and explosives dependencies, and to the broader set of controllable risks.

- **Strong policy support is essential:** Renewables illustrate the point– resource potential is established, but land allocation, multi-stage permitting, tariff approval, and PPA negotiation remain bottlenecks, requiring robust policy action. Moreover, given the state's limited fiscal capacity, strengthening the investment climate, expanding public-private partnerships, and exploring alternative financing mechanisms will be essential to addressing these risks.

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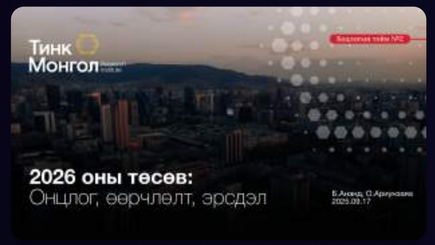

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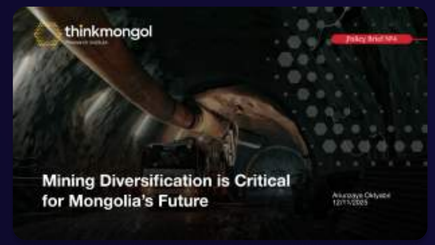

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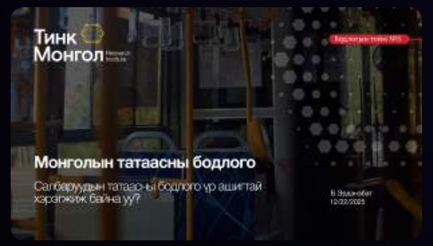

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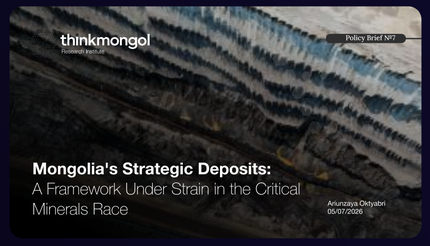

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