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LEVERAGING NATURAL WEALTH TO INVEST IN PEOPLE AND INSTITUTIONS

MONGOLIA COUNTRY ECONOMIC MEMORANDUM
SEPTEMBER 2020

THE WORLD BANK
MINES & MINDS

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MONGOLIA COUNTRY ECONOMIC MEMORANDUM
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MONGOLIA - GOVERNMENT FISCAL YEAR
January 1 - December 31

CURRENCY EQUIVALENTS
(Exchange Rate Effective as of September 6, 2020)
Currency Unit = Tugrug (MNT)
US$1.00 = MNT 2,853.40

ABBREVIATIONS

BoM  Bank of Mongolia
CGE  Computable General Equilibrium
DGE  Dynamic General Equilibrium
EITI  Extractive Industries Transparency Initiative
EIU  Economist Intelligence Unit
FDI  Foreign Direct Investment
FHF  Future Heritage Fund
FSC  Fiscal Stability Council
FSF  Fiscal Stabilization Fund
FX   Foreign exchange
GDP  Gross Domestic Product
GNI  Gross National Income
GRB  Gender Responsive Budgeting
ILO  International Labour Organization
IMF  International Monetary Fund
IT   Information Technology
MLSP Ministry of Labor and Social Protection
MoES Ministry of Education and Science
MoF  Ministry of Finance
MoFA Ministry of Foreign Affairs
MoMHI  Ministry of Mining and Heavy Industry
MTFF Medium-Term Fiscal Framework
NDA  National Development Agency
NFPS Nonfinancial Public Sector
NSO  National Statistics Office
OECD Organization for Economic Cooperation and Development
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<td>PPF</td>
<td>Production Possibility Frontier</td>
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<td>PPP</td>
<td>Purchasing Power Parity</td>
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<td>R&amp;D</td>
<td>Research and Development</td>
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<tr>
<td>RP-T</td>
<td>Residence Pass-Talent</td>
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<tr>
<td>SIRM</td>
<td>Systemic Investor Response Mechanism</td>
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<td>SME</td>
<td>Small and Medium Enterprises</td>
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<td>SOE</td>
<td>State-Owned Enterprises</td>
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<tr>
<td>STEM</td>
<td>Science, Technology, Engineering, and Math</td>
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<td>SWFs</td>
<td>Sovereign Wealth Funds</td>
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<td>TalentCorp</td>
<td>Corporation Malaysia Berhad</td>
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<td>TFP</td>
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I. OVERVIEW
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Mines represent Mongolia’s present, while minds - broadly defined to include people and institutions - are its future. Current policies are excessively focused on preserving the mining-driven prosperity at the risk of future stagnation. Such complacency is ill-timed when climate change concerns and the COVID-19 shock require an acceleration of structural transformation. Mongolia faces deep-rooted, interrelated challenges: macroeconomic policy mistakes have amplified external shocks, an oligopolistic ownership structure and limited competition have led firms to become more inward-looking and less inclined to innovate, and gross underutilization of human capital - evident by an unprecedented exodus of young and educated workers to foreign countries - has eroded the foundation of a diversified economy. Breaking this gridlock calls for a shift in approach that weighs the well-being of future generations as much as the welfare of the current one - the Golden Rule that Phelps (1961) has long advocated. Specifically, macroeconomic policies should aim to smooth consumption over the business cycle and mitigate the corrosive impacts of the resource curse (World Bank 2014). Second, microeconomic reforms should focus on enhancing competition, securing investor rights, and lowering the barriers to entry. Third, the country needs to diversify its endowments, and especially better utilize its skilled and female workers. Finally, there is an urgent need to reduce political interference, increase transparency, and improve regulatory quality throughout the economy.

I.1 Prosper now, stagnate later?

Unintentionally, Mongolia’s current prosperity is being built at the expense of its future stagnation. This is evident in the fact that the country has become increasingly reliant on mining-led growth, while at the same time, saving a measly one cent out of each dollar of its mineral output. It is seen in the dramatic rise in the country’s indebtedness and steadily falling saving rate, signaling a premium put on the present times. It is apparent in the rise of an oligopolistic ownership structure in key industries that is chipping away the country’s long-term competitiveness. It is visible in the growing exodus of skilled human capital and the falling female labor force participation rate, diminishing the prospects of diversified development. It is observed in the gradual weakening of the country’s institutions, where autonomy, transparency, and accountability are being sacrificed at the altar of preserving the status quo.

There is a great temptation to focus on the near term, given the significant and immediate benefits of mining-led growth. It is commendable that since the advent of large-scale mining in 2004, Mongolia’s economy has grown at an average rate of 7.2 percent per year, making it one of the fastest-growing economies in the world. Growth has translated to sustained poverty reduction without a significant increase in income inequality. Quality of life has improved, with Mongolia compared favorably with its peers in terms of the stock of human and physical capital. All these factors have been made possible by significant mineral revenues and a high level of external borrowing, providing the means to support a generous (but inefficient) social assistance system and a large public investment program.
In the shadow of success have grown many of Mongolia’s enduring challenges, further exacerbated by climate change and the COVID-19 pandemic. Mongolia’s rapid growth has been obscured by its extreme macroeconomic volatility and frequent boom and bust cycles. Growth has almost entirely come through capital accumulation and the intensive use of natural capital rather than through sustained productivity growth. Elimination of extreme poverty owes more to the generous social transfer system than to the creation of abundant well-paying jobs. Instead of using mineral wealth to gradually reduce its dependence on the sector, Mongolia has increasingly become more addicted to it. Such complacency is ill-timed as demand for key minerals is likely to tumble due to climate change concerns, a shift of investors’ preference toward sustainability, China’s ambitious goal to reduce coal consumption, and persistence of the COVID-19 shock.

Without a fundamental shift in approach that puts minds on an equal footing with mines, Mongolia risks resembling a resource curse economy in a few years. Mongolia must get more out of mining, as well as livestock, cashmere, and tourism. But to build the foundation of a diversified, high-income economy, it needs to do more. First, it should implement countercyclical fiscal and monetary policies - supported through transparent fiscal rules, an independent fiscal council, a market-driven exchange rate, and a well-functioning stabilization fund to smooth consumption over the business cycle rather than maximize current consumption. Second, the investment climate needs to be radically improved to enhance competition, secure investor rights, and create a more level playing field that enables productive firms to invest and grow. Third, the country needs to move away from the mindset of diversifying products to expanding endowments, especially better utilization of its young and educated, especially female, labor force. And finally, there is an urgent need to implement fundamental governance reforms to reduce political interference, increase transparency, and improve regulatory quality throughout the economy.

Fortunately, there are many encouraging signs of improved macroeconomic management in recent years, providing the newly elected government an opportunity to further strengthen its reform credentials. There appears to be an unprecedented shift in the fiscal management of the country since 2017. For example, the fiscal balance has been in surplus in two of the last three years, the public debt-to-GDP ratio has declined for three consecutive years, and more than 2.5 percent of GDP have been annually transferred to the Stabilization and Future Heritage Funds for the last three years - remarkable achievements given Mongolia’s checkered history of macroeconomic management. Interestingly, these impressive fiscal outcomes were achieved not by introducing new reforms but by effectively implementing the existing ones. They demonstrate that with the right political will and leadership, similar improvements are possible in other areas including monetary and exchange rate policy, the financial sector, the business environment, and the labor market. But rather than relying on reforms through an individual leader, which are susceptible to reversal when the leader leaves office, the new administration has an opportunity to institutionalize these reforms and avoid policy regression in the future.
I.1.1 Mining has served Mongolia well, in the near-term…

Mining has always been an important part of Mongolia’s economy, and this dependence has intensified in recent decades. Following the discovery of major new mineral resources (coal deposits and gold-copper ore) in the early 2000s, the economic significance of the mining sector has increased, surpassing that of the traditional livestock sector.¹ Today, mining accounts for nearly one-quarter of GDP, up from one-tenth in 2000. Foreign direct investment (FDI) inflows are mainly concentrated in the mining sector, whose share has gone up from 44 percent of total FDI in 2000 to 73 percent in 2019. Mineral exports represent around 90 percent of total exports and 26 percent of fiscal revenue (figures 1.1 and 1.2).²

Mining wealth has been associated with rapid growth, low poverty headcount, and a moderate level of inequality. Since the commencement of large-scale mining in 2004, Mongolia’s economy has grown at an average rate of 7.2 percent per year, making it one of the fastest-growing economies in the world. Extreme poverty has been eliminated and inequality has not increased dramatically, although 28 percent are poor according to the official poverty line (figure 1.3).³ The country enjoys relatively strong human capital, and the quality of infrastructure, though scarce given the size of the country and low population density, is nevertheless comparable with other lower middle-income countries. Many of these gains can be traced to generous social assistance and a large public investment program, financed by mineral revenues and external borrowings (World Bank 2018a). Yet, as the analysis in this report shows, such spending has often been poorly targeted and inefficient, failing to lay the foundations for more diversified growth.

1 Erdenet copper was opened in 1974 and for quite some time was one of the largest copper mines in the world.
2 Mongolia’s mining sector concentrates on a few products and export destinations. In fact, coal, copper, and gold made up an average of 70 percent of total exports over the past five years; and exports to China alone reached over 90 percent of total exports.
3 While inequality indexes in Mongolia have remained stable over time, in recent years they have increased in urban areas and decreased in rural areas, offsetting each other’s impact (World Bank, 2018a).
I.1.2 ...but has weakened the prospect of a diversified economy

The focus on preserving mining-driven prosperity has come at the expense of underutilization of other factors of production. Mongolia ranked 51st globally in the Human Capital Index, higher than its income level ranking (92nd), largely due to its high educational attainment (World Bank 2018b). This implies that Mongolia’s people have the skills, health, knowledge, and resilience - their human capital - to become more productive, flexible, and innovative. Alas, Mongolia does not make full use of this capital, as evidenced by the country’s status as an outlier among its peers when it comes to the utilization of human capital wealth in its production process (figure 1.4). At the same time, Mongolia's performance on institutional capital (for example, corruption control and rule of law) has deteriorated in recent decades. It has substantially underperformed vis-à-vis all its aspirational peers, as its growth process remains widely dominated by the exploitation of natural capital (figure 1.5).

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4 Human capital wealth is defined as the present value of future earnings for the labor force in The Changing Wealth of Nations (World Bank, 2018c).

5 Strikingly, Mongolia’s natural capital accounted for 63 percent of its total wealth in 2014, the highest among its resource-dependent peers. However, a significant portion consists of non-renewable natural capital, as Mongolia focused mostly on non-renewables in the past two decades. This dramatic expansion of non-renewable natural capital has led to an increase of the natural capital rents that account for about 30 percent of GDP in recent years, up from 7 percent of GDP in 1990.

6 The buildup of social capital is an important driver of economic growth, just as is the accumulation of human capital, physical capital, and natural capital. While the buildup and use of physical capital boosts growth directly, human capital, social capital, and natural capital, if judiciously managed, encourage growth indirectly by underpinning efficiency and technology.
Mongolia has not only consumed almost all its mineral outputs, but has also borrowed heavily against them, bequeathing negative wealth to the next generation. Out of every dollar of mineral wealth that has been generated during the past 20 years, Mongolia has consumed 99 cents and saved one cent (figure 1.6) (through its Stabilization and Future Heritage Funds). Since the realization of sustained mineral revenues in 2004, Mongolia has successfully produced nearly US$28 billion worth of mineral outputs. These proceeds have generally been split across three broad categories: salary, profits, and taxes and royalty payments. Taxes and royalties amounted to nearly US$9 billion in the last 15 years. In addition to the royalties, the government has borrowed US$8.7 billion, mostly by leveraging its mineral revenue. From 2011, the government started to save some of the revenue in stabilization and heritage funds. In the last nine years, nearly US$1.4 billion were deposited and US$1.2 billion were withdrawn from these two funds, leaving a net saving of US$0.2 billion. In short, Mongolia has spent almost all its mineral revenues.
Much of the mineral revenue has been spent on programs that are politically popular. With such a measly amount of mineral revenue saved, it raises the question of how the money was spent. Since mineral revenues are part of the consolidated budget, and money is fungible, it is not possible to track how every tugrug was spent. But a comparison of the spending pattern before (1998–2003) and after the advent of mineral wealth (2004–19) is revealing (figure 1.7). It shows that the public spending pattern did not change in the first few years of realization of mineral revenue, which also overlaps with the period of a declining ratio of public sector debt to GDP. But coinciding with the 2008 general elections and continuing through the next two general elections in 2012 and 2016, there were significant spikes in spending on social transfers (3.1 percent of GDP), public investment (6.3 percent of GDP), and wages and pensions of civil servants (1.8 percent of GDP). Since mineral revenues account for 6.7 percent of GDP during this period, some of the additional spending was financed through new borrowings.

Political convenience and not economic merit appear to determine how mineral revenue has been utilized. Based on our analysis, and under the assumption that mineral revenues were largely spent on the above three items, one can conclude that nearly 56 percent of mineral revenues were spent on public investment, 28 percent on social transfers, and 16 percent on wages and pensions. It is later shown that Mongolia’s public investment program is inefficient by global standards, and the generous social transfers have been cited as a possible cause for anemic productivity growth.

There are encouraging signs of mineral revenues being invested more prudently in recent years, giving the newly elected government an opportunity to build on its own reforms. Mineral revenues averaged 7.2 percent of GDP during 2017–19, one of the highest levels in the last decade. But instead of using it to further top-off social transfers and public investment programs – as has been done in the past – the government has allocated a large part of it to the two funds and to retire the high-cost debts (figures 1.8 and 1.9). In fact, 2017–19 marked a decisive shift in the fiscal management of the country, with the fiscal balance in surplus in two of the three years, three consecutive years of decline in the public debt-to-GDP ratio, and more than 2.5 percent of GDP transferred to
the Stabilization and Future Heritage Funds. While significant, these improvements are susceptible to reversal should the political architects of these reforms leave the office. The new administration should build on its recent track record to introduce institutional changes that ensure that mineral revenues are prudently used irrespective of which party and people are in power.

I.1.3 Climate change and COVID-19 pandemic will put pressure on accelerating the transition

With global coal consumption expected to decline due to climate change concerns, Mongolia’s coal could become a stranded asset. China’s coal share in electricity generation is targeted to decline from 64 to 30 percent and non-electricity generating coal consumption to decline by 19 percent from 2018 to 2050 (figure 1.10). A simulation using a computable general equilibrium (CGE) model suggests that a steady decline in China’s coal demand would reduce Mongolia’s exports by 1.1 percent and economic growth by 0.7 percentage points on average each year if the country continued to rely significantly on mines (figure 1.11).
The COVID-19 pandemic has added a new type of external shock, with an economic impact similar to that of global commodity price shocks. Being a commodity exporter, Mongolia has been prone to frequent commodity price swings that are detrimental to sustained growth. The impact of COVID-19, without its health dimension, is like that of a commodity price shock. An event study analysis shows the behavior of macroeconomic variables such as mineral output, exports, FDI, and fiscal balance to the COVID-19 shock is fairly similar to what happened during the 2009 global financial crisis and the 2016 slowdown in China (figure 1.12). If anything, the COVID-19 pandemic reinforces the point that Mongolia needs to steadily diversify its economy away from minerals to avoid excessive instability in its macroeconomic environment.

I.2 An organizing framework

Mongolia’s economy suffers from three interrelated challenges: (i) excessive macroeconomic volatility, (ii) negative productivity growth, and (iii) excessive reliance on natural and produced capital and not enough on human and institutional capital. Each of these challenges implies a certain welfare loss and, hence, scope for improvement. Reducing volatility would lower uncertainty and thereby encourage firms and households to invest more, make long-term plans, and enter into long-term contracts, which would be positive for investment, productivity, and growth. The welfare losses from greater volatility are particularly high in Mongolia as most households and firms are credit constrained and the government, having spent most of its mineral revenues, is not in a position to compensate for the lost consumption or investment. Boosting productivity would imply moving from inside to the edge of the production possibility frontier (PPF), and hence would translate to higher levels of income in the future. And expanding and making better use of underutilized human and institutional capital in the production process would mean pushing the PPF outward. These three parallel transitions – through stabilization, higher productivity, and expansion or diversification of endowments – form the three pillars around which this report is organized. This is illustrated in figure 1.13 and expanded further in Annex 1.

Figure 1.12

The impact of COVID-19 is like the past economic crises

Source: NSO; BoM; World Bank staff estimation
Note: a. Values are indexed at period T = 100
I.3 Three pillars: stability, productivity, and diversity (of endowments)

The Report is organized around the three pillars. Pillar 1 explores the nature of macroeconomic volatility, its underlying causes, and how to tame the tide of volatility through fiscal, monetary, exchange rate, and financial sector policies. Pillar 2 examines the productivity problem at both the macro and firm level, identifies the factors behind low productivity, and discusses policy recommendations. Pillar 3 studies the extent of undiversified growth in Mongolia, what explains it, and what are its potential remedies.

I.3.1 Seeking stability

Mongolia’s macroeconomic environment is characterized by high levels of volatility. This is evident in most of its macro indicators, especially consumption, both at the aggregate and household levels (figure 1.14). Sharp variation in consumption over time, coinciding with the swings in global commodity prices, is known to lower welfare relative to a smooth consumption function. This also explains why the poverty headcount ratio sharply increases during recession and falls during boom periods. Such swings can be extremely costly for the economy, especially for the stability of the financial sector. Volatility is also likely to affect investment decisions as changes in macroeconomic variables (exchange rate, interest rate, inflation, real wages) affect the expected return on investment and, hence, affect the level of labor productivity in the economy.
Domestic policies have amplified rather than dampened volatility. Part of Mongolia’s macro instability is due to the economy’s increased reliance on the mineral sector, which makes Mongolia prone to frequent commodity price swings. But worryingly, Mongolia’s macroeconomic - fiscal, monetary, and exchange rate - policies are found to exacerbate the external shocks rather than mitigate them. For example, the exchange rate has not been allowed to depreciate during periods of low commodity prices, which has encouraged greater imports and higher current account deficits, culminating in larger required adjustments later and an overshooting exchange rate. The fact that consumption volatility exceeds output volatility implies that macroeconomic management has been a significant contributor to the country’s instability.

To maintain stability, macroeconomic policies should aim to smooth consumption over the business cycle rather than maximize current consumption. This calls for countercyclical policies through the introduction of transparent fiscal rules, a credible and autonomous fiscal council, a market-driven exchange rate and well-functioning stabilization and heritage funds. Specifically, policy settings should allow greater exchange rate flexibility to avoid real exchange rate appreciation while focusing monetary policy on anchoring inflation and addressing external imbalances. During boom periods with high commodity prices, some foreign exchange (FX) inflows should be sterilized by accumulating reserves accompanied by commensurate steps to mop up domestic liquidity. Macroprudential measures should discourage dollarization and FX indebtedness, while public debt management should focus on reducing the FX share in public debt, including deepening the domestic bond market. Fiscal policies should aim to support stabilization while securing long-term sustainability through the use of existing stabilization and savings funds. This should be underpinned by institutional reforms to strengthen the independence of the fiscal council and the Bank of Mongolia.
I.3.2 Boosting productivity growth

Over the past decade, Mongolia has experienced anemic productivity growth. A resource-intensive growth pattern with limited productivity gains is confirmed by a growth accounting exercise, suggesting that total factor productivity has contributed negatively to growth for most of the recent decade. Consequently, Mongolia’s total factor productivity registered at only around 35 percent of the U.S. total factor productivity level in 2017, considerably lower than all structural and aspirational peers. The mining sector remains capital intensive and thus exhibits the highest level of labor productivity. However, even in the mining sector, the level of labor productivity is lower than in structural peers.

Weak productivity growth reflects a resource allocation pattern that is driven by commodity cycles and macroeconomic mismanagement. While capital has gravitated toward the mining sector, labor has moved toward non-tradable services away from tradable goods and manufacturing, where the scope for productivity gains tends to be higher (figure 1.15). As a result, structural transformation – resources moving from lower to higher productivity activities – has contributed negatively to productivity growth in recent years. While labor reallocation into higher-productivity sectors generated about 35 percent of the labor productivity growth between 2001 and 2010, its growth contribution turned negative during 2011–17 (figure 1.16). At the same time, ownership has become more concentrated in key sectors and firms have become more inward-looking and less prone to innovate and adopt new technologies.

Mongolia needs to create an environment where more productive jobs are created to employ its young and well-educated labor force. To revive productivity growth, Mongolia would need macroeconomic policies to mitigate the erosive impacts of the resource curse while focusing microeconomic reforms on enhancing competition, securing investor rights, and creating a more level playing field that enables productive firms to invest and grow. Specific recommendations include (i) establish an effective public-private dialogue on investor-friendly reforms and promote effective collaboration on innovation; (ii) reform the business registration process to ease business entry; (iii)
strengthen the competition framework; (iv) facilitate trade across borders by reducing the cost and time for border clearance; (v) systematically review laws and regulations to identify and eliminate inconsistencies and discrepancies among them; and (vi) enhance investor protection.

I.3.3 Expanding endowments

Mongolia's growth process has over relied on mines and underutilized its minds. Human capital has been grossly underutilized, while institutional capital has deteriorated. Such inability to diversify the country’s endowments has resulted in limited diversification of outputs and exports and has further amplified its vulnerability to the swings of the global commodity markets.

Mongolia's failure to better utilize its human capital is largely the result of its inability to create adequate well-paying jobs. Mongolia has done well in dealing with the supply side of the labor market (investing in the health and education of its labor force), but less well with the demand side complements such as an enabling business environment, access to markets and complementary inputs, and well-functioning public services. There is also a mismatch between the supply of skills from the educational institutions and the demand from employers. The lack of complements has reduced the ability of the economy to produce enough jobs to absorb the new entrants to the labor market. Consequently, there is human capital flight, the majority of which are skilled workers with college degrees. Mongolia also lacks a sound public investment management system to effectively and efficiently allocate resource rents. These problems have been compounded by weak control of corruption and rule of law.

Mongolia's pathway to diversification is through expanding its intangible endowments by improving the functioning of its labor market, attracting and retaining talent, strengthening public investment management practices, and radically increasing the transparency of policymaking. Specifically, the report calls for (i) improving the quality and utilization of human capital and leveraging an effective migration policy to attract and retain talents; and (ii) strengthening the quality of institutions through improved transparency and public investment efficiency. For detailed policy recommendations, see table 1.1.
Table 1.1 Mines and Minds: Policy Recommendations

<table>
<thead>
<tr>
<th>Areas</th>
<th>Policy reforms</th>
<th>Institutional changes</th>
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<tbody>
<tr>
<td><strong>I. Seeking stabilization (Responsible agencies: MoF, BoM, Parliament, and the Cabinet)</strong></td>
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| Fiscal policy | • Simplify fiscal rules (public understanding and escape clause and sanction).  
• Prioritize debt reduction and functionality of the Fiscal Stabilization Fund (FSF).  
• Accumulate savings in the medium-to-long-term in the Future Heritage Fund (FHF). | • Re-establish the Fiscal Stability Council (FSC) to limit political influence.  
• Adopt a legal framework for GoM’s response to FSC findings on key budget documents. |
| Monetary, exchange rate, and financial sector policies | • Limit FX intervention and allow more flexibility of the nominal exchange rate.  
• Strengthen prudential countercyclical measures (capital buffers, loan-to-value, and debt-to-income ratios). | • Strengthen the independence and governance of BoM (including prudential supervision and financial stability functions). |
| **II. Boosting productivity (Responsible agencies: MoF, BoM, NDA, and Parliament)** | | |
| Macro management to mitigate the resource curse | • Strengthen sterilization policy during the boom and busts.  
• Discourage dollarization and reduce FX indebtedness through macroprudential tools. | • Focus on anchoring inflation and addressing external imbalances.  
• Strengthen debt management focusing on reducing FX share and deepen domestic bond market. |
| Business environment reforms | • Approve a revised national competition policy.  
• Reduce cost and time for border clearance.  
• Enhance access to credit (e.g., credit bureaus). | • Establish an effective Public-private Dialogue (PPD) on investor-friendly reforms. |
| Attracting high quality FDI | • Support a Linkages Program to foster connections between FDI and domestic firms to increase overall in-country value addition. | • Enhance investor protection (implementation of investment protection guarantees and SiRM). |
| **III. Expanding endowments (Responsible agencies: MoESC, MLSP, MoMHI, MoFA, the Cabinet)** | | |
| Labor market reforms and migration policy | • Design a human resources development plan focusing on education quality and STEM.  
• Redesign school curriculums to match future needs.  
• Provide high quality affordable childcare service.  
• Improve census of Mongolian migrants.  
• Encourage diaspora’s involvement in the Mongolia’s economic development. | • Establish a strict control system for quality of education and training.  
• Leverage the private sector for better skills matching.  
• Create a nodal agency for diaspora. |
| Investing in institutions (transparency/accountability/PIM) | • Revise existing laws and regulations in the mineral resource sector (e.g., a new EITI and mineral law.  
• Improve management and governance of public investment projects (planning, parliamentary approval).  
• Reexamine the rationale of the state holding equity in all mining companies considering conflict of interests of being an owner as well as a regulator. | • Improve transparency in contracts, licensing, and disclosure of ownership (including politicians).  
• Adopt an integrated/holistic approach of digitalization of public sector. |
| Leveraging comparative advantage | • Provide incentives for developing manufacturing industries (meat and cashmere) consistent with diversification away from mining.  
• Develop infrastructure selectively to unlock specific value chains. | • Leverage existing and potential trade agreements and cooperation (e.g., Japan, USA, China, Russia). |
II. SEEKING STABILITY
II. SEEKING STABILITY

Mongolia’s macroeconomic environment is one of the most volatile in the world. This is partly due to increased reliance on the mineral sector, which makes Mongolia prone to frequent commodity price swings. But worryingly, Mongolia’s macroeconomic – fiscal, monetary, and exchange rate – policies are found to amplify the external shocks rather than mitigate them. To maintain stability and lessen the corrosive impacts of the resource curse, macroeconomic policies should aim to smooth consumption over the business cycle rather than maximize current consumption. This calls for countercyclical fiscal policies anchored in transparent fiscal rules and underpinned by a credible and autonomous fiscal council and well-functioning stabilization and heritage funds. Prudent monetary and financial sector policies, and a more flexible exchange rate rooted in greater central bank independence would also help reinforce a stability-oriented macroeconomic policy framework.

II.1 Volatility is the norm not the exception

Macroeconomic volatility in Mongolia is not only elevated among its peers but has increased substantially in the past two decades. In addition to exacerbating an already fragile financial sector, such heightened volatility is also observed at the level of household consumption and business revenues and investment (box 2.1).

Box 2.1 Cost of macroeconomic volatility

The cost of macroeconomic volatility is assessed in the literature chiefly in terms of its impact on economic efficiency, investment, and growth as well as on inequality. Households and firms’ spending and investment decisions are typically disrupted by increased volatility. Volatility creates uncertainty. Financial institutions hesitate to transform liquid financial instruments into long-term capital investments, as households and businesses become uncertain about future prospects and thereby reluctant to enter into long-term contracts. Macroeconomic volatility hurts efficiency and growth, especially during crises. The inverse association between the first and second moment of per capita growth is documented in Ramey and Ramey (1995), Hnatkovska and Loayza (2005), Loayza et al. (2007), and Rancière et al. (2008), among others. Cross-country evidence reveals that heightened volatility (a one-standard deviation increase) during crisis episodes will cut the long-term rate of growth per capita by 2.2 percentage points (Hnatkovska and Loayza 2005). Further, this impact is often transmitted through reduced investment (Aghion and Banerjee 2005): specifically, about one-third of the impact of volatility on growth is explained by lower investment spending (Fatás 2002).

Source: Compiled by World Bank staff based on World Bank (2015a)

II.1.1 Mongolia’s macroeconomic variables are uncommonly volatile

Mongolia’s output and consumption are more volatile than many of its peers. Mongolia’s output growth volatility was higher than the East Asia and Pacific and world averages during 1998–2019. This is not unexpected given Mongolia’s status as a commodity producer, which exposes the country to frequent and large swings in global commodity prices.
markets. But it is worrisome that even among its peers of commodity producers, Mongolia has one of the highest growth volatilities (figure 2.1). The degree of volatility in aggregate consumption growth is particularly striking, where Mongolia exceeds all but Guyana, the United Arab Emirates (UAE), and Qatar (figure 2.2). The volatility in consumption is more troubling than production, as government policies can significantly influence the former through appropriate macroeconomic policies.

Even more troubling is the heightened volatility in the non-mining sector relative to the mining sector. Non-tradeable sectors associated with higher employment changes such as construction and trade, saw their output volatility increase during 2004-19, exerting an additional stress on household welfare (figure 2.3). In fact, consumption volatility is policy-induced while mining output is not, since the latter is responding to global price cycles that Mongolia has no control over.

**II.1.2 Mongolia’s macroeconomic volatility has increased over time**

Mongolia’s output and consumption volatility increased during the mining boom period. Mongolia along with a few comparators (including Armenia, Chile, and Qatar), experienced increasing output volatility between 1998-2003 and 2006-2019 (figure 2.4), while more peers saw their consumption volatility increase including Chile, Guyana, and the United Arab Emirates (figure 2.5).

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7 The high volatility of Mongolia’s GDP growth has coincided with a volatile macroeconomic environment in terms of current account balance, credit growth, inflation, and fiscal balance.

8 The median welfare cost of aggregate fluctuations in developing countries is at least 10 times the cost of that in the United States, while the average benefits from consumption stabilization amount to a perpetual increase in per capita income of at least 0.34 percent (World Bank 2015a).
II.1.3 Heightened macroeconomic volatility and financial sector fragility are intertwined

While macroeconomic volatility may have contributed to the fragility of the financial sector, procyclical credit policies have exacerbated volatility. Mongolia credit growth has been highly volatile since the onset of the mining boom (figure 2.6). Commodity price fluctuations influence bank profitability and business viability. The evolution of commodity prices has a direct impact on the financing of the mining sector, but also indirectly affects the rest of its loan portfolio including retail. Figure 2.7 shows the relationship between commodity prices and bank profitability, including failed banks. Rapid deterioration of the domestic economy due to the global financial crisis resulted in the closure of two Mongolian banks within less than two years. Given high levels of macroeconomic volatility, banks should maintain prudent capitalization levels to cushion macroeconomic shocks. However, weak credit standards, questionable business models and related party lending have contributed to financial sector fragility and procyclical credit policies have exacerbated macro-financial risks. A notable feature of Mongolia’s financial sector in this regard is the high ratio of household indebtedness, which increased dramatically in the last 10 years on the back of the subsidized mortgage program, reaching close to 35 percent of gross domestic product (GDP). In fact, household loans make up 50 percent of total credit outstanding and are concentrated in overleveraged borrowers. Although NPLs on individual loans currently stand at only 3.7 percent, potential losses from these loans could hurt bank profitability and combined with the high household leverage, could exacerbate financial sector vulnerability. 

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9 In addition to such common exposure to commodity price fluctuations, the cycles of real business and the financial market often drive each other and result in deeper and painful recessions.

10 The NPLs for corporate loans represent about 15 percent.
II.2 Macroeconomic policies amplify rather than dampen volatility

Mongolia’s macroeconomic policies amplified rather than mitigated the impact of external shocks on its economic performance. This section makes the following complementary points to explain Mongolia’s increased macroeconomic volatility.

(i) Mongolia’s increased reliance on mining has naturally brought macroeconomic volatility given its link to fluctuating commodity prices. In fact, as a country becomes tightly linked to the world markets of goods and assets, it becomes exposed to frequent external shocks.

(ii) However, macroeconomic policies fell short in mitigating the external shocks. The fact that consumption volatility exceeds output volatility implies that macroeconomic policies and financial markets are not smoothing consumption in Mongolia (see Section 2.1).

Empirical evidence indicates that policy shocks are the second most important factor explaining Mongolia’s GDP variance, following external shocks. First, Mongolia’s macroeconomic volatility hinges on its strong dependence on mining and limited export destinations, both of which have intensified over time. Our analysis indicates that policy shocks (fiscal, monetary, and exchange rate) are the second most important factor explaining output variance, accounting for nearly 20 percent of the output volatility. External shocks including FDI inflows, commodity prices (mainly copper price), and China’s GDP explain close to 50 percent of Mongolia’s output volatility. Building on these empirical findings, the following subsections will discuss the underlying causes of the predominant external and policy shocks (figure 2.8).

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11 Note that erratic and unsustainable fiscal and monetary policies have led Mongolia to face twin deficits (Fatas and Mihov 2013).

12 We used the variance decomposition in the Bayesian Vector Autoregression (BVAR) to determine factors that explain output variance. Policy shock is a combined impact of budget expenditure as share of GDP, M2 money, and nominal exchange rate.
II.2.1 Dominance of the mining sector is the source of much of the macroeconomic volatility

The economic significance of the mining sector since in the mid-2000s has increased, surpassing the traditional livestock sector. Following the discovery of new major mineral resources (coal deposits and gold-copper ore), the importance of the mineral sector increased substantially. In fact, relative to structural and aspirational peers, Mongolia has, since 2004, had the highest ratio of natural resource rents to GDP, averaging about 30 percent of GDP (figure 2.9).\(^{14}\)

The increased dependence on the mining sector is associated with increased volatility in output and consumption. Mongolia’s growth volatility is strongly associated with the fluctuations of commodity prices (figure 2.10). In the absence of sound macroeconomic policies to mitigate the impact of shocks, the economy’s exposure to commodity shocks led to external imbalances and macroeconomic volatilities given the heavy dependence on commodity exports. Figure 2.11 also shows the positive association between real consumption growth and commodity price volatility. As Loayza et al. (2007) have found, consumption volatility represents a net welfare loss because households’ and firms’ spending and investment decisions are typically disrupted in an environment with heightened volatility.\(^{15}\) Hence improving macroeconomic management in Mongolia would have a direct positive welfare impact.

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\(^{13}\) Erdenet copper was opened in 1974 and for quite some time was one of the largest copper mines in the world.

\(^{14}\) The estimates of natural resources rents are calculated as the difference between the price of a commodity and the average cost of producing it. This is done by estimating the world price of units of specific commodities and subtracting estimates of average unit costs of extraction or harvesting costs (including a normal return on capital). These unit rents are then multiplied by the physical quantities countries extract or harvest to determine the rents for each commodity as a share of GDP.

\(^{15}\) We also found that the high concentration of FDI flows to the mineral sector has been another source of macroeconomic volatility, evidenced by the positive association between real GDP growth volatility and FDI volatility. This relationship has been more pronounced for Mongolia relative to aspirational and structural peers since 2010, reflecting the dominant role of the mineral sector in the economy.
II.2.2 Policies magnified rather than reduced volatility

Mongolia’s higher consumption volatility relative to output volatility indicates the ineffectiveness of macroeconomic policies and financial markets to smooth consumption. Moreover, the fact that non-mining activities experienced higher volatility than mining activities also reinforces our argument that policies may have magnified the impact of external shocks.

Fiscal, monetary, and exchange rate policies

Macroeconomic policies have tended to amplify rather than dampen volatility. Figure 2.12 shows that fiscal, monetary, and external sector policies tend to be generally insensitive to business cycles. In fact, during years of boom and bust, macroeconomic policies move broadly in the same direction and almost in the same magnitude.16

Mongolia’s fiscal policy seems to have been sensitive to the business cycle. Figure 2.12 shows that the fiscal balance worsened during busts as an increase in public spending was coupled with a decrease in revenue during busts. Interestingly, public debt also increased more during busts (61 percent of GDP compared to 57 percent).

Figure 2.12

Evidence points to the procyclicality of macroeconomic policies

Panel A  Monetary policy (%)
- Inflation rate  Boom: 6, Bust: 3
- Leading rate  Boom: 19, Bust: 14
- Deposit rate  Boom: 11, Bust: 13
- Non-Crude growth  Boom: 34, Bust: 31

Panel B  Fiscal policy (% GDP)
- Budget balance  Boom: 10, Bust: -5
- Revenue  Boom: 0.40, Bust: 32
- Expenditure  Boom: 28, Bust: 31
- CAB/GDP  Boom: 57, Bust: 33

Panel C  External sector (%)
- Depreciation rate  Boom: 13, Bust: 2
- Cab/GDP  Boom: 0, Bust: -14
- TB/GDP  Boom: 11, Bust: -4

Source: BoM; MoF; WB staff estimates

16 Macroeconomic policies in developing countries are generally procyclical; thus, interest rate hikes and government spending cuts are implemented during downturns (Kaminsky, Reinhart, and Végh 2005).
Mongolia’s monetary policy is broadly insensitive to business conditions. Figure 2.12 shows that all the selected indicators move in the same direction irrespective of booms or busts. However, the magnitude over the cycles does seem to be materially different. For instance, credit growth increased on average by 14 percent during busts compared to 34 percent during booms. Exchange rate policy has been sensitive to the business cycles, but not sufficiently to avoid losing foreign reserves. The central bank intervened in the foreign exchange market to mostly ease the depreciating pressure. The tugrug depreciated by 13 percent during busts relative to only 2 percent during booms, as one should expect. Significant foreign reserves intervention by the central bank during busts suggests depreciation would have been larger without it.17 There are good reasons why the central bank may wish to limit exchange rate fluctuations, including a high level of dollar-denominated external debt, and the limited price elasticity of mining exports to changes in the tugrug-dollar rate. Nonetheless, by reducing foreign exchange buffers, the “fear of floating” leaves Mongolia exposed to the accumulation of external pressures, which may lead to disorderly adjustment, as last happened in 2016, for instance (see also Gopinath 2019).

Taken together, Mongolia’s fiscal, monetary, and exchange rate policies have been procyclical and therefore unable to smooth high volatility in consumption. Figure 2.13 indicates that Mongolia’s policies have been positively correlated with output variance during booms and busts, suggesting that macroeconomic policies have been procyclical. This finding is also confirmed by the positive association between macroeconomic policies and external shocks, which indicates that these policies have rather amplified external shocks in both booms and busts (figure 2.14).18 The same result applies to consumption volatility. The procyclicity of economic policy has led to short-term economic volatility, thus hindering long-term development. Even though Mongolia has fiscal and monetary institutions to manage macroeconomic volatility on paper, namely fiscal rules, stabilization funds, fiscal responsibility laws, and a monetary policy committee along the lines of many resource-rich countries, the implementation of countercyclical policy measures apparently has not been effective enough.

17 Consistent with the Law on Central Banking, keeping the nominal exchange rate as stable as possible has been essential to avoid social unrest and build the central bank’s reputation, and was often politicized for reputational gains.

18 Like most of its structural peers, Mongolia exhibits fiscal and monetary policy procyclicality. The fiscal and monetary policies are generally procyclical in structural peers, while countercyclical in aspirational peers.
Mongolian banks fall short in mitigating risks associated with rapid economic expansion triggered by commodity price booms and are slow to adjust when the tide turns. Foreign capital inflow during a commodity super cycle is likely to boost both bank assets and liabilities (Avdjiev et al. 2018). In this case, banks turn increased liquidity to credits, and increased domestic demand results in greater but not “genuine” deposits. However, while doing so, banks often fail to conduct proper assessment of the risks, and with increased opportunity to invest in the mining sector, they tend to increase their exposure asymptotically to the mineral sector.\(^\text{19}\)

**Persistent governance weaknesses exacerbate macro-financial risks emanating from the banking sector.** Although Mongolia carried out a detailed Asset Quality Review (AQR) in 2018 to identify capital shortfalls in the banking sector and thus identify measures needed to strengthen its resilience, the subsequent recapitalization process has remained incomplete in the face of resistance from existing bank owners. Indeed, the BoM’s efforts to strengthen its regulatory and supervisory framework have been plagued by significant forbearance, such that existing regulatory standards are not strictly enforced and lack of transparency is tolerated to hide underlying prudential concerns. High levels of concentration in bank ownership exacerbate governance weaknesses and reduce market pressures to change existing practices. The main areas for improvement in corporate governance of Mongolia’s commercial banks include business policies and procedures, the professional qualification of directors, involvement of committees in technical matters, the role of independent directors, and internal reporting lines. Moreover, credit risk management and control need to be further strengthened, especially regarding project finance and the selection of collateral. For instance, in the mining sector, which naturally accounts for a significant share of corporate exposure, banks are not familiar enough with specific project finance techniques or able to effectively differentiate between fully enforceable collateral in practical terms and collateral that is valuable only on an ongoing concern basis.

II.3 Policy priorities - Escaping from the procyclicality trap

Mongolia’s macroeconomic management has improved considerably during the past three years. Particularly, the country’s fiscal stance has improved substantially following two consecutive years of budget surplus, leading to a significant reduction in the public debt-to-GDP ratio during this period prior to the COVID-19 shock. Successful debt issuance, taking advantage of enhanced policy credibility and good market conditions, also contributed to reserve accumulation.

However, there are areas where policy improvements are needed. The diagnostics on the sources of Mongolia’s macroeconomic volatility reveal that fiscal, monetary, and exchange rate policies have been ineffective in mitigating volatility brought by the increasing dependence on the mining sector, which has exposed Mongolia’s macroeconomy (output and consumption) to commodity price fluctuations. Financial sector fragility induced by factors including weak corporate governance and systematic regulatory forbearance has exacerbated the strong association between financial and business cycles. Accordingly, the main thrust of the policy recommendations on these issues is that sound macroeconomic policies should aim to smooth consumption rather than production. More specifically, the report proposes policy and institutional strengthening measures articulated around

\(^{19}\) Once the system is overleveraged during a commodity boom, it becomes difficult to adjust to a deleveraging process when local politics becomes unfavorable and commodity prices start to decline.
fiscal policy (for example, fiscal rules credibility); monetary (including exchange rate) and financial sector policies (for example, an independent and accountable central bank); and the role of stabilization funds, intergenerational sovereign wealth funds, and debt sustainability (for example, prioritizing debt reduction).

II.3.1 Fiscal policy

Mongolia passed the Fiscal Stability Law in 2010 to make fiscal policy more predictable in the face of volatile mining revenue and to ensure debt sustainability. However, the implementation of the law has encountered a series of issues since 2013. These include:

(i) **Noncompliance with the rule parameters mainly due to ambitious budget submissions or weaker economic outturns.** Since 2013, the effectiveness and compliance with the rules weakened as governments did not abide by the original parameters in the law (National Resource Governance Institute 2019; IMF 2019).

(ii) **Frequent amendments to the debt limit and deficit ceiling (2015-17), and flexible present value terms, which are subject to manipulation.** The authorities repeatedly changed the parameters in the law through four amendments to the debt limit and the deficit ceiling in 2015-17 (for example, the debt ceiling was lifted permanently in 2016 from 40 percent to 60 percent of GDP in present value terms), whereas the law states that budget balance targets shall be reestablished every four years.

(iii) **No stipulation on the length of suspension or correction mechanism for the post-suspension period.** The Fiscal Stability Law has a clause allowing for a temporary suspension of the fiscal rules, but it does not stipulate the length of the suspension or any correction mechanism for the post-suspension period.

(iv) **Absence of a credible and capable Fiscal Stability Council.** As legally established under the Budgetary Standing Committee of the Parliament, Mongolia’s Fiscal Stability Council is not likely to be independent. Its current staffing structure (two permanent staff at the secretariat office) makes it difficult to monitor structural balance targets.

The fiscal policy recommendations proposed to build on best practice principles including simplicity, wide coverage, flexibility, and enforceability. Box 2.2 presents lessons from Peru’s fiscal rules.

**Box 2.2 Peru’s fiscal rules – Lessons for Mongolia**

Best practice suggests that formal, numerical fiscal rules can enhance the credibility of fiscal policy and reduce procyclicality. Fiscal rules should be simple to calculate and easy to monitor and enforce, especially in countries where there is no established oversight actor with strong technical capacity. They also require effective public finance management institutions to ensure consistency between the proposed budget and the fiscal rule, appropriate reporting and corrective action during budget execution, and adequate and transparent enforcement mechanisms. The lack of an independent oversight body with adequate capacity makes it difficult to scrutinize the technical assumptions supported by the rules.

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20 Key fiscal objectives include fiscal balances, expenditure, public debt, and assets of the Fiscal Stabilization Fund. Three fiscal rules became effective in 2013. The law requires the budget proposal for each fiscal year to comply with these rules and is complemented with a medium-term budget framework intended to incorporate policy objectives and guide expenditure beyond the initial budget year. Macroeconomic forecasts covering three years are produced at least once a year.
Fiscal rules

Simplify the objectives so the public can understand and monitor them.

(i) Use objectives such as the overall fiscal balance instead of structural balance, which is difficult to explain. Introducing expenditure ceilings calibrated to rapid debt reduction can operate as an automatic stabilizer. More specifically, the following can be explored:

- An expenditure rule committed to a predetermined nominal growth rate of public expenditure would curb the tendency to increase public spending in good years, while allowing automatic stabilizers to operate on the revenue side. It is also easy to communicate and monitor. However, it may not address procyclical tax cuts.
- A non-mining balance rule could be calibrated to achieve debt sustainability. This is easy to observe and monitor, and it also mitigates some cyclicality.
- An overall balance rule with deficit calibrated to achieve debt sustainability is also easy to observe and monitor. However, it is inherently procyclical.

(ii) Consider reducing the debt ceiling from its current level given Mongolia’s high level of debt and ideally measured not in Net Present Value terms.

(iii) Consider introducing a rule for election years inspired by the Peru’s example (box 2.2).

Legally specify the escape clause for abandoning the rules. Peru’s fiscal rules include an escape clause that allows deviations from numerical targets during periods of low growth. Mongolia can follow the example of Peru in specifying its escape clause in terms of duration of temporary suspension and the modalities of the post-suspension period (box 2.2).

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**Peru’s exception rules:** Congress can suspend the application of the fiscal rules for up to three years in cases of national emergency or international crisis with considerable impact over the national economy, by request of the executive. In the request, the executive should specify the limits to be applied for the fiscal deficit of the non-financial public sector (NFPS), and for the annual increase of NFPS spending. For instance, if real GDP is decreasing, the deficit of the NFPS should be between 1 percent and 2.5 percent of GDP for up to three consecutive years. However, under the exception rule, the fiscal deficit should decrease by 0.5 percent of GDP every year until it is below 1 percent of GDP.

Peru’s fiscal rules for election years, which could be considered in Mongolia, stipulate that the nonfinancial expenditure of the general government executed in the first seven months of the year cannot exceed 60 percent of the budgeted nonfinancial expenditure for the whole year. These rules also indicate that the fiscal deficit of the NFPS in the first half of the fiscal year cannot exceed 40 percent of the budgeted deficit for the whole year.

Source: World Bank 2012

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21 Another option is Botswana’s 1994 Sustainable Budget Index, which rules that the ratio of non-education and non-health recurrent spending to non-mining revenue should not exceed unity. This policy prevented excessive spending and ensured fiscal sustainability in anticipation of the future depletion of diamond deposits (World Bank 2016).

22 Calculation of the debt ceiling in present value terms is likely to open doors to manipulation through the interpretation of the discount rate.
Implement sanctions such as parliamentary censure in case of violation of the rules. Absence of an independent, accountable, transparent, and capable fiscal council makes it difficult to conduct credible assessments of any violation of the fiscal rules and trigger sanctions mandated under the law.

Strengthen the Medium-Term Fiscal Framework (MTFF) Law to better align the public investment budget with strategic priorities and budget constraints. This involves (i) estimating sustainable levels of public investment spending, separate from proposed public investment spending levels, and publishing it in the MTFF; (ii) publishing project appraisal and selection criteria; (iii) expanding the MTFF and annual budget narrative to highlight maintenance needs and the allocation in the budget for routine maintenance, capital repairs, ongoing investment projects, and new investment projects; and (iv) specifying in the MTFF an appropriate balance among saving, consumption, and investing mining revenue, including in the Fiscal Stabilization Fund in a context of depleting mineral reserves.

**Debt reduction and sustainability**

Adopt a debt policy that aims to (i) establish clear rollover, interest, and exchange risk parameters; and (ii) create a sufficiently strong and independent treasury/debt department function to carry out the policy. Moreover, publishing consolidated information on state majority-owned and state-owned enterprise liabilities (debt, guarantees, and obligations for public-private partnership projects) would be critical.

**Fiscal Stability Council**

The following policy actions are recommended to strengthen the role of the Fiscal Stability Council for efficient fiscal policy management (box 2.3).

Re-establish the Fiscal Stability Council (FSC) through a law to limit political interference. This will require abolishing the existing relevant parliamentary resolution, which created this institution under the Budget Standing Committee.

Improve public trust in the FSC to fulfill its mandate to monitor fiscal discipline. A fair and competitive appointment process of FSC members and an appropriate communication and dissemination strategy will be critical in this regard.

Consider adopting a framework that requires the government to respond to recommendations and conclusions by the FSC on budget proposals, the Medium-Term Fiscal Framework, and budget laws. In relation to the fiscal rules, the FSC could take on the new role of reviewing and evaluating potential modifications in fiscal rules or issues related to the escape clause (for example, the length of suspension and correction mechanism after the suspension) (IMF 2019).

Strengthen the capacity of the FSC to assume its mission effectively. This will require (i) sufficient staff and independence in hiring, (ii) adequate budget resources to fulfill its tasks independently, and (iii) full access to all necessary information that has a significant impact on fiscal sustainability.
Box 2.3 International practices suggest independence is a key condition for the effectiveness of the Fiscal Stability Council

The independence of the newly created Fiscal Stability Council (FSC) of Mongolia has been questioned in several forums. Given the history of independent oversight actors in Mongolia and elsewhere, the existing framework for the FSC in Mongolia has several weaknesses related to its independence, ability to influence the budgeting process, the quality of work the FSC is able to provide given limited resources and staff, and the political context related to gaps and overlaps in the work of the FSC and other existing institutions. In fact, Mongolia’s FSC currently has insufficient staffing (only two employees are allowed under the current arrangement) and limited independence in hiring. A key concern is the FSC’s ability to champion transparency and promote public engagement in fiscal policy debates.

The most successful fiscal councils foster independence and transparency, promote a culture of macroeconomic stability, and provide nonpartisan advice regarding the budget process. However, because politics has often played a role in the budget process, a fiscal council with a greater degree of independence should be considered. While more traditional institutions have relied on reputation and established practice, a more common feature of the new generation of institutions has become strict legal independence. The ability to operate independently should also be considered, as the adequate availability of resources would enable the FSC to effectively fulfill its technical mandate. A larger proportion of new fiscal councils around the world has also guaranteed legal access to information and has benefited from safeguards on their budget.

To promote public engagement in the policy debate, it is important for the FSC to maintain a strong media presence in its assessment of the government’s fiscal policy. It is particularly important when FSCs need to raise the alarm, for example, when proposed budget documents are not in line with stated objectives, when forecasts are unreasonable, when unsustainable spending or tax policies is being debated, or when fiscal outturns are significantly different than projected. International best practice suggests that effective communication by an FSC is crucial for fiscal sustainability. The Dutch experience through the 2000s provides a good example of effective communication, with the council increasing its public activity, as evidenced by spikes in media reports, at the specific times where fiscal policy was going off course.

Source: IMF 2013; World Bank 2018f

Stabilization and sovereign wealth funds

Mongolia has mechanisms such as stabilization and sovereign wealth funds, as in many other resource-rich countries. The Fiscal Stabilization Fund (FSF) was established in 2010 and went into effect in 2013 to cushion the impact of revenue downturns caused by falls in commodity prices and to help sustain expenditure during such periods. In terms of savings, the Future Heritage Fund (FHF), which is aimed at providing financial savings for future generations, was established in 2016 and came into effect in 2017. According to the relevant law on the Future Heritage Fund, no withdrawals from the fund, other than management fees, are allowed until 2030.23

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23 These funds are only useful if they are predicated on a robust fiscal framework. There is no use in accumulating savings if the savings are effectively financed by running up debt. The fiscal rule is the prerequisite for the funds to operate as intended.
Box 2.4 Sovereign wealth funds as effective instruments for stabilization and saving for future generations

Some countries have used sovereign wealth funds (SWFs) as an instrument to save part of mineral revenues. Nonetheless, challenges could arise if the SWF’s accumulation and withdrawal rules are somewhat rigid and disconnected from overall fiscal targets. In fact, after the oil price collapse of 2014, commodity exporters that had buffers in their SWFs (Algeria, Azerbaijan, Iran, Kazakhstan, Kuwait, Qatar, and the United Arab Emirates) used them to smooth the adjustment and avoid exchange rate pressures, but this use was not always governed by clear fiscal rules. Given issues such as capital scarcity, absorption constraints and volatility of commodity and asset prices, Van der Ploeg et. al 2014 argue for three types of fund: an intergenerational fund to smooth consumption across generations, a liquidity (or stabilization) fund to collect precautionary buffers to hedge against residual, non-diversifiable risk, and an investment fund to park funds until the economy is ready to absorb new spending on investment projects.

The national wealth should be managed according to the following guidelines:

(i) Net saving of non-resource assets by the nation, whether an accumulation of net foreign assets, capital, infrastructure, or human capital, should react to the temporary component of natural resource revenue.

(ii) Consumption should be a fixed proportion of the nation’s total wealth. Specifically, consumption should react to the equivalent permanent value of natural resource income and not to current natural resource revenue.

(iii) If a country has access to international markets to finance infrastructure and human capital, and runs current account deficits for that purpose, then the size of such investments should be independent of the size of the natural resource windfall.

(iv) Besides an intergenerational sovereign wealth fund, a resource-rich country should have a liquidity fund to channel the precautionary buffers necessary to cover commodity price uncertainty.

(v) Sovereign wealth fund managers of resource-rich countries should hold bigger shares of risky assets, go short in risk-free assets, and invest more in assets that are negatively correlated or not correlated with returns on natural resources, and gradually undo this position as resources are depleted, and accumulate precautionary saving buffers to deal with residual non-diversifiable risk.

(vi) Building an intergenerational fund to smooth consumption helps to smooth the real exchange rate and smooth Dutch disease effects. Rather than having lots of deindustrialization all at once, which reverses when the natural resource windfall and spending stop, there will be a smaller amount of deindustrialization over a longer time. To relieve absorption problems, it is wise for resource-rich countries to park some of the resource windfall in an investment fund until the economy is ready to absorb an extra demand for non-tradable goods and services.

Source: Van der Ploeg and Wills 2014
The Future Heritage Fund’s rules dictate that the government can only withdraw for expenses related to administration and independent audit of the fund until 2030. However, a transitory law (2018) made it possible to finance the budget deficit from the fund until 2022, and it is also used to repay the debt of the Human Development Fund. As a result, the fund received revenue of 2 trillion tugrug during 2017-19, while it transferred about 1.4 trillion tugrug for above-mentioned purposes.

The following recommendations are proposed:

(i) **Prioritize debt reduction and functionality of the Fiscal Stabilization Fund (FSF) over immediate accumulation in the sovereign wealth fund.**
   - Prioritize bringing Mongolia’s debt to a sustainable level, as large debt hinders Mongolia’s access to the international capital market. A model simulation of an increased accumulation in the FSF indicates that the external debt premium could drop due to the signaling effect, thus contributing to debt sustainability (box 2.5).
   - Undertake rigorous implementation of the FSF’s deposit and withdrawal rules consistent with effective smoothing of consumption (box 2.4, above).

(ii) **Target saving in the Future Heritage Fund only in the longer term.** This will require:
   - Reassessing the management and operational framework of the Future Heritage Fund.
   - Simplifying its framework, reducing its operational and administrative costs through professional foreign management arrangements.

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**Box 2.5 Model simulation of a partial saving rule for mining revenue**

A dynamic general equilibrium (DGE) macroeconomic model was used to simulate the partial saving rule of mining revenue in the Fiscal Stabilization Fund (FSF) and its impact on total public debt. The fundamental role of this policy is to accumulate a fiscal buffer to allow the government to smooth spending in bad times, that is, in periods when there are unfavorable shocks to mining prices. More specifically, simulation consists of a permanent increase from 2021 of (i) the share of mining revenues allocated to the FSF from zero percent to 10 percent, and (ii) the fraction of the stabilization fund’s resources transferred to the budget from zero percent to 4 percent.

Simulation results indicate that, at horizon 2046-50, the total public debt decreased, by about 4.1 percentage points of GDP (figure 2.15), which is entirely due to a decrease in external debt. This is because there may be benefits from asset accumulation in the FSF -

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24 The Future Heritage Fund’s rules dictate that the government can only withdraw for expenses related to administration and independent audit of the fund until 2030. However, a transitory law (2018) made it possible to finance the budget deficit from the fund until 2022, and it is also used to repay the debt of the Human Development Fund. As a result, the fund received revenue of 2 trillion tugrug during 2017-19, while it transferred about 1.4 trillion tugrug for above-mentioned purposes.
with a signaling effect that lowers the cost of borrowing abroad (the external debt premium falls by 0.1 percentage points at horizon 2046-50 due to the signaling effect), and lower debt service payments (figure 2.16).

Thus, there is a dynamic resource distribution effect: putting more resources in the fund today raises the primary deficit immediately, but tomorrow, as assets in the fund accumulate, more resources can be transferred back to the budget, thereby mitigating the initial increase in the deficit. The higher the share of mining revenues allocated to the stabilization fund, the starker this trade-off will be.

Source: World Bank staff estimates based on DGE model (Agénor 2019)

### II.3.3 Monetary and financial sector policies – independence and professionalization of the central bank and the prudential supervisory function

An amendment to the Central Bank Law strengthened the independence of the Bank of Mongolia, but further improvement is needed. The 2018 amendment introduced notable changes including (i) restriction of the bank’s involvement in quasi-fiscal spending and direct lending to the government, (ii) legalization of the Monetary Policy Committee and qualifications of its members, and (iii) expansion of policy instruments.25

Meanwhile, several recent incidents have highlighted that the central bank’s independence still remains limited, both de jure and de facto. In a resolution to write off pension-backed loans in early 2020, the parliament temporarily reversed the clause in the central banking law that limited its quasi-fiscal involvement. In addition, the governor is appointed by the parliament based on the speaker’s proposal, and the appointment of governors has become closely linked with the election cycles, even though the term of a governor is legally defined as six years. Although the central bank is transitioning to an inflation targeting framework, its objective is vaguely set as “stability of the national currency tugrug” in the law, and consequently the public and the politicians often pressure the bank to stabilize the nominal exchange rate, reduce interest rates, and increase money supply, and criticize the bank for not maintaining good coordination with fiscal policy. Unfortunately, attempts by the central bank to improve its de jure independence faced strict opposition both from politicians and the general public.

Several concerns remain about the independence and governance of the central bank in Mongolia:

25 Previously, the governor appointed members of a Monetary Policy Council, which basically had a role to consult the governor in policy decisions. The Council was established by the governor’s decree but was not included in the Central Bank Law.
Similarly, the registration of regulations by the Ministry of Justice should be strictly limited to ensuring conformity with higher laws, without allowing banks to lobby the ministry for changes, and legal protection for supervisors needs to be significantly strengthened.

(i) Legally, the central bank remains dependent of the parliament to set its policy objective. The parliament still approves the inflation target each year, which complicates the setting of a longer-term objective for monetary policy.

(ii) The independence of the Bank of Mongolia’s (BoM’s) supervision function is undermined by several laws. For example, the Infringement Law requires some supervisory measures to be executed by the general prosecutor, instead of allowing the BoM to require these measures directly from banks.

(iii) A lack of supervisory independence results in ineffective bank supervision and encourages forbearance. For example, prompt preventive and corrective action for weak banks is complicated in an environment where major bank shareholders are politically connected, and thus expose the BoM supervisory staff to intimidation.

(iv) The BoM’s multiple functions have, at times, conflicting policy objectives, weakening the effectiveness of its instruments. The BoM is in charge of multiple policy objectives, including financial stability, monetary policy, micro- and macroprudential supervision, bank resolution, and anti-money laundering/countering the financing of terrorism, to name a few. Bringing different objectives under one roof does not eliminate the potential for tensions among those policies but internalizes them (D’Hulster and Unsal 2019). These interrelations among the BoM’s functions could be even more challenging and complex in crisis times, when critical decisions encompassing all the financial stability functions must be made quickly.

The following recommendations regarding prudential rules and governance are warranted.

**Prudential rules**

**Adopt prudential countercyclical measures to mitigate the volatility of bank balance sheets and returns due to macroeconomic factors.** Commodities exports have an important direct impact on the financing of the mining sector, but also affect bank balance sheets. Countercyclical measures, such as capital buffers, loan-to-valuation ratios, and debt-to-income ratios, should be adequately used by the BoM to mitigate the impact of macroeconomic factors on the banking sector.

**Governance**

**Strengthen the governance of the Bank of Mongolia and ensure its stronger legal and de facto independence and accountability.** The governance of the BoM needs to be assessed and strengthened in accordance with international standards and practices (box 2.6). The different policy functions (including monetary policy, micro- and macroprudential supervision, resolution, financial stability) should have clear mandates in both normal times and crisis times. However, strong opposition from the public and of elected officials could make it difficult for the central bank to strengthen its independence by law at this stage.

**Strengthen the independence of the prudential supervision and financial stability functions housed in the BoM.** Many politically connected persons own banks in Mongolia, which reinforces the need to have independent bank supervisors overseeing them.

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26 Similarly, the registration of regulations by the Ministry of Justice should be strictly limited to ensuring conformity with higher laws, without allowing banks to lobby the ministry for changes, and legal protection for supervisors needs to be significantly strengthened.
A first effective step could be to improve its de facto independence, especially when it comes to funding government programs and the prudential supervision function. To place checks and balances on independence, the BoM must be accountable, which means that it is able to “justify and explain” to external stakeholders, such as the parliament, the government, and the public, how its actions have contributed to accomplishing its mandate. Accountability and independence go hand in hand, as increased transparency functions as a restraint on government involvement and strengthens independence (Amtenbrink 2008). Moreover, through better public outreach and financial education, the public and politicians will be more informed about the BoM’s mandate and the importance of an independent central bank.

Reserves management and exchange rate policy

The BoM should limit its foreign exchange intervention and allow more flexibility of the nominal exchange rate. Reserves are likely to fall to a precarious level if the central bank continues to intervene to support the local currency. While the level of gross international reserves appears high, the level of net reserves is modest and inadequate to mitigate a large external shock. Defending the exchange rate amidst growing balance-of-payments pressure could erode international reserves to a level where Mongolia will be exposed to the risk of a currency crisis. In the previous three crises (the 2009 Global Financial Crisis, 2013 commodity price, and 2016 domestic demand), the central bank spent US$0.6 to US$3.7 billion on FX intervention. However, the nominal exchange rate depreciated by 7.9 to 36 percent while the FX reserves declined by 39 to 67 percent, from peak to trough.

Box 2.6 Independence and governance of the central bank

The minimum requirements for independence for the prudential supervisory function are laid out in the Basel Core Principles for Effective Banking Supervision (2012), Principle 2 “Independence, Accountability, Resourcing and Legal Protection for Supervisors.”

A central bank is considered more independent if (i) the governor is appointed by the central bank board rather than by the government, is not subject to dismissal, and has a long term of office; (ii) policy decisions are made without government involvement; (iii) the policy objective is set by the bank and the number of objectives is limited; and (iv) there are limitations on the government’s ability to borrow from the central bank (Cukierman 1992). There are four essential dimensions in the independence of the prudential supervision function: regulatory, institutional, supervisory, and budgetary.

Greater central bank independence has significant implications for macroeconomic stability and improved performance, in both developing and transition economies (Dumiter 2011). In the case of a central bank dependent on the government, it is easier for elected politicians to be tempted by the short-term benefits of an expansionary monetary policy and to finance a budget deficit and complicate the central bank’s efforts to achieve long-term stability (Amtenbrink 2008).

Source: Compiled by World Bank staff

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27 It is also for the BoM to emphasize better reserve accumulation during upturns.
28 Peak to trough is considered July 2008–March 2009, January 2013–November 2014, and August 2015–February 2017. IMF Article IV 2019 also found that public debt as a share of GDP increased by 14 to 26 percentage points, while the reserves fell by 49 to 67 percent in these episodes.
III. BOOSTING PRODUCTIVITY GROWTH
III. BOOSTING PRODUCTIVITY GROWTH

Mongolia needs to foster an environment where more productive jobs are created outside the mining sector to employ its young and well-educated labor force. Weak productivity growth reflects a resource allocation pattern that is driven by commodity cycles. While capital has gravitated toward the mining sector, labor has moved toward non-tradable services away from tradable goods and manufacturing, where the scope for productivity gains tends to be higher. At the same time, Mongolian firms have become more inward-looking and less prone to innovate and adopt new technologies. To revive productivity growth, Mongolia would need macroeconomic policies to mitigate the erosive impacts of the resource curse while focusing microeconomic reforms on enhancing competition, securing investor rights, and creating a more level playing field that enables productive firms to invest and grow.

III.1 An environment marked by weak productivity growth and declining innovation

Induced by the mining sector, inefficient allocation of labor and capital has hampered productivity growth in Mongolia for the past two decades. Moreover, declining innovation and limited technology adoption of Mongolian firms outside of the mining sector are not supporting productivity either.

III.1.1 Productivity growth has been weak

Over the past decade, Mongolia has experienced anemic productivity growth. Instead, growth was driven by extracting largely non-renewable natural capital and by accumulating physical capital – with the latter also largely being channeled into the mining sector to valorize and extract Mongolia’s abundant mineral resources. This resource-intensive growth pattern with limited productivity gains is confirmed by growth accounting, which suggests that total factor productivity has contributed negatively to growth for most of the recent decade (figure 3.1). As a consequence, Mongolia’s productivity gap with the global frontier has converged more slowly than in structural peers. By 2017, Mongolia’s total factor productivity was at only around 35 percent of U.S. total factor productivity, considerably lower than all structural and aspirational peers (figure 3.2).

While labor productivity has risen gradually, it remains lower than in peer countries. Labor productivity growth varies greatly across sectors (figure 3.3). The mining sector remains capital intensive and thus exhibits the highest level of labor productivity. However, even in the mining sector, the level of labor productivity is lower than in structural peers (figure 3.4). For both manufacturing and services, labor productivity in Mongolia remains low compared to its peers and has stagnated in these sectors over the past decade (figures 3.5 and 3.6).

The decline in labor productivity in manufacturing at the start of the 1990s reflects the shock of the dissolution of the Soviet Union. Mongolia lost its major market overnight and thus experienced a deep recession in its industrial sector. As figure 3.5 demonstrates, the manufacturing sector has not recovered the productivity level it had 30 years ago.
Mongolia's GDP growth has relied on factor accumulation, not productivity…

...while remaining below the global productivity frontier

Sources: World Bank (2018e); Penn World Table 9.1

Sources: World Bank (2018c); calculated based on Brandt et al. (2017)
Note: PPP = purchasing power parity; TFP = total factor productivity

Labor productivity has risen

Even in the mining sector, labor productivity is lower than in peer countries

Sources: NSO; World Bank staff calculations
Note: Thousand US$ per worker, 2010 prices

Sources: NSO; World Bank staff calculations
Note: Thousand US$ per worker, 2010 prices

Labor productivity in manufacturing remains low

Labor productivity in services is also low

Sources: NSO; World Bank staff calculations
Note: Thousand US$ per worker, 2010 prices

Sources: NSO; World Bank staff calculations
Note: Thousand US$ per worker, 2010 prices
III.1.2 Productivity growth is hampered by the allocation of labor and capital

Weak productivity growth reflects a resource allocation pattern that is driven by commodity cycles. Capital has gravitated toward the extractive sector, with the mining sector absorbing a significant portion of the gross investments in Mongolia, indicating an uneven distribution of capital formation (figure 3.7). Investment has flowed mainly into a small number of firms operating in the mining sector (figure 3.8). On the flipside, investment outside mining has been more limited, weakening the contribution of capital deepening to labor productivity growth. According to the National Statistics Office, around 40 percent of total investments were allocated to the manufacturing sector in the 1980s, but that has declined to 4 percent over the last decade. Similarly, the share of investment in the agriculture sector declined from 14 percent to 1 percent, while investment in the mining sector increased from close to zero percent to 38 percent over the same period.

While capital is concentrated in the mining sector, labor has moved toward less productive, non-tradable services. Outside the mining sector, labor has largely shifted toward non-tradable services, away from tradable goods, where the scope for productivity gains tends to be higher (figure 3.9). Labor has been moving out of the low-productivity agriculture sector, with the share of employment in agriculture declining from 42.6 percent in 1991 to 28.8 percent in 2017. However, labor has been mostly absorbed by relatively low-productivity services whose share in the labor force increased from 41 percent in 1991 to 52 percent in 2017. Within services, there has been limited job creation in more productive services, such as transport and communication, which lost employment to lower-productivity service sectors, such as public administration. In contrast, the employment share in the industry sector has remained nearly unchanged. Even so, labor productivity is comparatively high in the industrial sector, with value added per worker about two times that of services and four times that of the agriculture sector. Today, less than one-fifth of the labor force is employed in the more productive industry sector, and especially manufacturing – a traditional source of high-quality productive jobs – accounts for only 7 percent of total employment.
As a result, structural transformation - defined as resources moving from lower to higher productivity activities - has contributed negatively to productivity growth in recent years. While the labor reallocation into higher-productivity sectors generated about 35 percent of the labor productivity growth between 2001 and 2010, its growth contribution turned negative during 2011-17 (figure 3.10).

By limiting the creation of high-quality jobs and opportunities, the shift of resources away from the manufacturing sector is choking off an important source of human capital and organizational capital development. Aside from the immediate effect of diminishing the contribution of structural transformation to productivity growth, the erosion of manufacturing and export competency means the economy creates limited high-quality jobs and opportunities. This jeopardizes long-term growth potential by failing to use Mongolia’s existing human capital effectively and discouraging further human capital formation (which is also discussed in more detail in Chapter 4 of this report).

III.1.3 Low-productivity growth is also rooted in declining innovation and technology adoption by Mongolian firms

The low level of productivity growth is also linked to weaknesses in innovation and the adoption of new technologies (box 3.1). Outside the mining sector, results from enterprise surveys indicate declining innovative behavior among smaller firms. World Bank Enterprise Surveys conducted in Mongolia\(^{30}\) suggest that the percentage of firms that produce a new product has fallen from 66 percent in 2009 to 44 percent in 2019. Firms’ capacity to generate new processes is also on the decline. The share of firms adopting a new process has decreased from 61 percent in 2013 to 39 percent in 2019 (figures 3.11 and 3.12).

\(^{30}\) World Bank Enterprise Surveys are firm-level surveys that collect a representative sample of an economy’s private sector and cover a broad range of indicators on the business environment, such as access to finance, corruption, infrastructure, crime, competition, innovation and technology, and performance measures. For Mongolia, three waves of data for the years 2009, 2013, and 2019 were collected.
The regression deploys a panel dataset the exporter, Source: 2012–13, The export technology fell from 23 percent to 5 percent (figures 3.13 and 3.14). Consistent with the macro perspective of declining non-resource exports, fewer firms are engaging in export activities, with over 90 percent of Mongolian firms focused on the domestic market. Over the past decade the percentage of firms using foreign-licensed technology fell from 23 percent to 5 percent (figures 3.13 and 3.14).

Consistent with the macro perspective of declining non-resource exports, fewer firms are engaging in export activities, with over 90 percent of Mongolian firms focused on the domestic market. Over the past decade the percentage of firms using foreign-licensed technology fell from 23 percent to 5 percent (figures 3.13 and 3.14).

Figure 3.11
Mongolian firms innovate less today than 10 years ago…

<table>
<thead>
<tr>
<th>Year</th>
<th>Share of firms creating new products</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>66%</td>
</tr>
<tr>
<td>2019</td>
<td>44%</td>
</tr>
</tbody>
</table>

Source: World Bank Enterprise Survey

Figure 3.12
…and are not as creative as they used to be

<table>
<thead>
<tr>
<th>Year</th>
<th>Share of firms creating new processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>61%</td>
</tr>
<tr>
<td>2019</td>
<td>39%</td>
</tr>
</tbody>
</table>

Source: World Bank Enterprise Survey

Consistent with the macro perspective of declining non-resource exports, fewer firms are engaging in export activities, with over 90 percent of Mongolian firms focused on the domestic market. Over the past decade the percentage of firms using foreign-licensed technology fell from 23 percent to 5 percent (figures 3.13 and 3.14).

Figure 3.13
Firms have become more inward looking…

<table>
<thead>
<tr>
<th>Year</th>
<th>Share of firms that sell in national market only</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>89%</td>
</tr>
<tr>
<td>2019</td>
<td>92%</td>
</tr>
</tbody>
</table>

Source: World Bank Enterprise Survey

Figure 3.14
…and with limited technology diffusion

<table>
<thead>
<tr>
<th>Year</th>
<th>Share of firms using foreign-licensed technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>21%</td>
</tr>
<tr>
<td>2019</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: World Bank Enterprise Survey

Box 3.1 Factors leading to innovation in Mongolian firms

Firm-level regression results indicate that export orientation, management capabilities, access to finance, and a female top manager have positive and statistically significant effects on innovation. The regression deploys a panel dataset created by Enterprise Surveys, including three waves: 2008–09, 2012–13, and 2018–19. The findings suggest that investments in research and development, being an exporter, being a manufacturing company, access to a broader market, experience of management, ability to borrow, and having female management increase the likelihood of innovation (table 3.1). These findings are robust across different specifications of the model.
Mongolia dedicates limited financial and human resources to research and development (R&D), impairing innovation capabilities. R&D expenditures averaged only 0.22 percent of GDP during 1995–2017, which was below all its structural and aspirational peers other than Kazakhstan and Peru (figure 3.15). In addition, R&D activities have been mainly funded by the government. In 2018, only 8.5 percent of the R&D expenditures were provided by business enterprises. This share is far below the Russian Federation (30.1 percent), Kazakhstan (41 percent), and Canada (41 percent).

Table 3.1 Marginal effects of logit regression – Random effects model
Dependent [binary] variable: whether firm innovates (Yes / No)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of company (years)</td>
<td>-0.0007</td>
<td>0.0020</td>
<td>0.0022</td>
<td></td>
</tr>
<tr>
<td>Manager’s experience (years)</td>
<td>0.0049</td>
<td>** 0.0051</td>
<td>** 0.0053</td>
<td>** 0.0062</td>
</tr>
<tr>
<td>Top manager female (Yes)</td>
<td>0.0743</td>
<td>** 0.0591</td>
<td>* 0.0625</td>
<td>* 0.0631</td>
</tr>
<tr>
<td>Has a licensed foreign technology (Yes)</td>
<td>0.0518</td>
<td>0.0879</td>
<td>0.0937</td>
<td>0.0791</td>
</tr>
<tr>
<td>Percent of foreign ownership</td>
<td>-0.0012</td>
<td>-0.0009</td>
<td>-0.0008</td>
<td></td>
</tr>
<tr>
<td>Invested in R&amp;D</td>
<td>0.3573</td>
<td>*** 0.3771</td>
<td>*** 0.3820</td>
<td>*** 0.3839</td>
</tr>
<tr>
<td>Firm size: log(# of permanent employees)</td>
<td>0.0815</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has access to broader market (Yes)</td>
<td>0.0596</td>
<td>0.1046</td>
<td>*** 0.1095</td>
<td>*** 0.1112</td>
</tr>
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<td>*** 0.1301</td>
<td>*** 0.1247</td>
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<td>0.1471</td>
<td>0.1702</td>
<td>** 0.1724</td>
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<td>Exposed to informal competition (Yes)</td>
<td>0.0158</td>
<td>-0.0005</td>
<td>0.0085</td>
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<tr>
<td>Access to finance (has loan or credit line)</td>
<td>0.0638</td>
<td>* 0.0908</td>
<td>*** 0.0934</td>
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<td>0.0248</td>
<td>0.0270</td>
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<tr>
<td>Tax rate is obstacle</td>
<td>-0.0312</td>
<td>-0.0233</td>
<td></td>
<td></td>
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<td>Political instability is obstacle</td>
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<td>0.0087</td>
<td></td>
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<td>Corruption is obstacle</td>
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<td>-0.0267</td>
<td></td>
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</tr>
<tr>
<td>Licensing and permits are obstacles</td>
<td>0.0482</td>
<td>0.0508</td>
<td></td>
<td></td>
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<tr>
<td>Courts are obstacles</td>
<td>0.0101</td>
<td>0.0242</td>
<td></td>
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<tr>
<td>Number of observations</td>
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<td>61.28</td>
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<td>Log-likelihood</td>
<td>-432.71</td>
<td>-445.1</td>
<td>-446.3</td>
<td>-448.1</td>
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</table>

Source: World Bank staff estimates based on Enterprise Survey data, various waves
Note: * p < 0.05; ** p < 0.01; *** p < 0.001

BOOSTING PRODUCTIVITY GROWTH
Poor innovation performance is also associated with a shrinking percentage of the labor force involved in R&D activities. R&D personnel per million inhabitants in Mongolia has decreased from 1,243 in 1996 to 1,056 in 2017. A similar trend can be observed in the number of R&D personnel per thousand employed, which has declined from 3.6 in 1996 to 2.7 in 2017. Core R&D personnel has declined even more dramatically. Among R&D personnel, the shares of core researchers and technicians have fallen from 80 percent and 9.7 percent in 1998 to 55 percent and 7.4 percent in 2018, respectively, while that of support staff has increased from 10.3 percent to 37.6 percent during this period.

### III.2 Constraints to productivity growth

Macroeconomic factors including a volatile exchange rate and microeconomic factors such as limited competition and a weak overall business environment are among the most significant factors underlying weak productivity in Mongolia.

#### III.2.1 The macroeconomic environment: An overvalued exchange rate and volatility erode competitiveness and investment in non-resource tradable sectors

Mongolia’s macroeconomy is prone to the resource curse, as is the case in other resource-rich countries. This can lead to a loss of competitiveness of non-resource tradable sectors, which are typically a source of productivity growth. Mongolia’s real exchange rate tracks the commodity price cycle. As a result of large foreign exchange inflows related to both mining revenue and foreign direct investment in the extractive sector, Mongolia’s real exchange rate appreciated during the commodity boom of 2004-08, followed by a sharp adjustment in 2009 reflecting the commodity price shock during the global financial crisis. While the nominal exchange rate rebounded in 2010–11 as commodity prices recovered, Mongolia experienced continued real depreciation during 2013–17 in a context of more subdued commodity prices (figure 3.16).

The resource curse also manifests itself in wage growth outpacing productivity growth. Rapid wage growth, especially during periods of high commodity prices, is driven by the requirement to compete for employees with jobs in the mining sector. As a consequence, unit labor costs have been rising, which weighs on the competitiveness of non-extractive sectors, and shifts resources - capital and labor - away from tradable and import-Competing activities (figures 3.17 and 3.18).
These problems are compounded by large public sector employment which is diverting resources away from more productive uses. Mongolia has a large public sector, especially for its level of per capita GDP. Large public sector employment contributes to low productivity since productivity levels and growth rates in government services tend to be low (figure 3.19).

Finally, as discussed in Chapter 2, Mongolia’s macroeconomic environment is characterized by high levels of volatility. Mongolia’s macroeconomic management has exacerbated rather than dampened volatility emanating from commodity price fluctuations. Volatility is likely to affect investment decisions as changes in macroeconomic variables (exchange rate, interest rate, inflation, real wages) affect the expected return on investment and, hence, affect the level of labor productivity in the economy.

The current macroeconomic environment is not conducive to productivity growth. Most importantly, it has stifled export and manufacturing activity outside the mining sector. As indicated by the firm-level evidence presented above, and by a large body of empirical literature, competing in global markets can boost productivity by increasing scale, enhancing competition, and providing access to more advanced technologies and sophisticated consumer preferences. In addition, export firms have been shown to generate spillovers, suggesting that the effect of losing export competency in the non-resource sector is likely to contribute to the observed loss in aggregate productivity growth.

III.2.2 The microeconomic environment: Limited competition, high regulatory burden, and insecure property rights

Mongolia’s macroeconomic woes are compounded by microeconomic constraints. The low level of private investment and job creation in sectors outside mining has been due to low returns, which in turn are the result of lengthy and complex regulatory procedures, including customs and trade rules; distortionary taxes; and a lack of competition, with high
ownership concentration and entry barriers. At the same time, poor financial intermediation has kept the cost of finance high and access low, especially for small and medium-sized enterprises, which constitute the vast majority of firms outside the mining sector.

**Mongolia’s business environment is not conducive to fostering a vibrant and productive enterprise sector.** Mongolia ranks 81st among 190 countries in the 2020 World Bank Doing Business rankings, with getting electricity (ranked 152), resolving insolvency (150), trading across borders (143), and starting a business (100) being particularly challenging (figures 3.20 and 3.21). Across many dimensions of the Doing Business ratings, Mongolia is performing better than upper middle-income countries, yet firms in Mongolia still spend more time dealing with the requirements of government regulations than other countries in East Asia. Similarly, Mongolia is lagging compared to its peers such as Chile, Canada, and Malaysia on control of corruption, rule of law, regulatory quality, and government effectiveness in the Worldwide Governance Indicators. And Mongolia ranks 93rd among 180 countries in the latest Transparency International’s Corruption Perception Index. These ratings reflect that, despite progress, there are still significant regulatory barriers to business entry and growth. Corruption remains a pervasive barrier for doing business and tilts the playing field in favor of well-connected, older, and bigger establishments that enjoy greater access to credit, protection from insolvency, and forbearance on regulations. Ultimately, this prevents reallocation of resources to more productive firms.

![Figure 3.20](image1.png)  
While Mongolia has made progress in improving aspects of its business climate…

![Figure 3.21](image2.png)  
…the regulatory burden on firms remains high

The competition framework is weak, and several sectors suffer from high levels of ownership concentration. Competition perception indicators measured by the World Economic Forum’s *Global Competitiveness Report* 2019 suggest Mongolia performs badly in terms of the perceived extent of market dominance, intensity of local competition, and effectiveness of antimonopoly policies compared to its structural and aspirational peers (figures 3.22 and 3.23)\(^{31}\). Similarly, the Bertelsmann Foundation’s Transformation Index also indicates Mongolia’s antimonopoly policy is less effective.\(^{32}\) Like Kazakhstan, Mongolia has one of the highest levels of vested cronyism, discrimination against foreign firms, and unfair competitive practices. Faced with limited competition, the existing firms have less incentive to engage in innovation, while the potential higher-productive and innovative firms can hardly enter the market and grow.

\(^{31}\) WEF 2019.  
Finally, access to finance remains a constraint facing firms, especially small and medium-sized enterprises. According to the 2019 Enterprise Survey, access to finance was the third most important business environment constraint for small and medium-sized enterprises (SMEs) in Mongolia (figure 3.24). Almost 40 percent of small and 34 percent of medium-sized enterprises identify lack of access to credit as a major business constraint. Several studies suggest that, among others, access to finance is a major constraint for business development, and most of the demands are for financing current assets. Mongolia has developed a basic infrastructure (the Pledge Law and collateral registry) to enable lending based on movable properties (for example, receivables, inventory, equipment), which is much needed by SMEs including herder families (for example, livestock is a type of inventory). Despite these efforts, access to credit remains hampered in part by high real interest rates, reflecting macroeconomic volatility, and bank corporate governance weakness that favors lending practices that channel credit to connected parties. In part because of the absence of a functioning credit reporting system, the use of moveable collateral also remains incipient, limiting SME access to finance.

In the mining sector, the reliance on state equity participation is not only imposing fiscal costs but also deterring productivity-enhancing private investment. In principle, the State Equity Policy is intended to capture mineral resource rents for the benefit of the nation. In practice, state equity is financed on a working interest basis that requires the state to finance a corresponding share of the cost of developing and operating mining assets. Given liquidity constraints, state equity has been financed by borrowing, either directly from banks or by having the state’s share carried by the non-state equity
holders, as in the case of the Oyu Tolgoi copper mining project. Mandatory state equity participation is also exposing the state to commercial risks, including cost overruns, while at the same time discouraging private investment in developing mining assets.

### III.3 Policy priorities - Addressing constraints to lift productivity growth

Mongolia needs to create an environment where more productive jobs are created outside the mining sector. Without higher productivity growth, the creation of high-quality employment will remain elusive, despite Mongolia’s young and well-educated labor force. This will require alleviating the macro- and microeconomic constraints to productivity growth.

To enhance macroeconomic management to mitigate the impact of the resource curse:

(i) **Strengthen macroeconomic institutions to enhance more countercyclical management.** Policy settings should allow greater exchange rate flexibility to avoid real exchange rate appreciation while focusing monetary policy on anchoring inflation and addressing external imbalances. During boom periods with high commodity prices, some foreign exchange (FX) inflows should be sterilized by accumulating reserves accompanied by commensurate steps to mop up domestic liquidity. Macroeconomic measures should discourage dollarization and FX indebtedness, while public debt management should focus on reducing the FX share in public debt, including deepening the domestic bond market. Fiscal policies should aim to support stabilization while securing long-term sustainability through the use of existing stabilization and savings funds. This should be underpinned by institutional reforms to strengthen the independence of the Fiscal Stability Council and the Bank of Mongolia.

To create a business environment that supports firms to grow and invest:

(i) **Establish an effective public-private dialogue on investor-friendly reforms and promote collaboration of the agencies on innovation.** The effective coordination of business environment reform remains limited. The public-private dialogue would help identify critical constraints and bottlenecks in general and in certain sectors. It would formulate reform recommendations and ensure an open channel of communication between the government and the private sector. To the extent possible, such a dialogue could also promote collaboration on innovation through leveraging the innovative power of large firms (box 3.2).

(ii) **Reform the business registration process to ease business entry.** Implement an online system to verify uniqueness of company names; introduce standardized application forms and articles of association; and abolish the company seal.

(iii) **Strengthen the competition framework.** More specifically, this reform will entail (a) approving a revised national competition policy to implement pro-competition intervention across both economy-wide and sector-specific policies (for example, public procurement, antitrust, state aid, state-owned enterprise strategy, public-private partnerships, price controls, and various network/input sectors), and (b) streamline rules on tender criteria and coordination among different government entities to promote entry and avoid collusion in public procurement, including adoption of penalties on collusive behavior, and modified standard tender documents to prevent coordination among bidders.
(iv) **Facilitate trade across borders by reducing cost and time for border clearance.** Improve automation of the customs clearance process that will allow electronic submission of transport documents, payments for all border agencies, plus railway and the national air freight forwarder, Mongolian Airlines; develop a pre-arrival processing system by Customs; develop an Authorized Operators program IT system to support self-declaration and payment processes; establish a more robust risk assessment and management system to substantially reduce physical inspections; and implement Standardized Operational Procedures to streamline procedures and eliminate uneven performance.

(v) **Enhance access to credit by improving the credit reporting system and development of supply chain finance and expanded use of movable collateral and secure transactions.** The government should allocate sufficient financial resources for the Bank of Mongolia to invest in the software and hardware required for the development of a real credit reporting system. The system should cover the entire adult population in Mongolia and include all types of creditors. It is one of the fundamental soft infrastructures for the economy to function efficiently. The authorities should also continue efforts to expand SME access to finance by focusing on the development of supply chain finance and expanded use of movable collateral and secure transactions.

**To attract high-quality foreign direct investment (FDI) to the mining and non-extractive sectors:**

(i) **Shift Mongolia’s mining sector value capture from equity participation to fiscal instruments.** Instead of direct ownership of mining assets – which is fiscally costly and also deters necessary private investment – a transparent and predictable fiscal framework with a competitive tax regime for the mining sector could be used to capture a portion of the resource rents. Royalties and profit taxes are more suitable instruments to capture resource value. This would not only relieve the government from having to make significant up-front capital investments but would be more conducive to mobilizing private sector investment in the mining sector. Any reassessment of the State Equity Policy will have to consider alternative models for developing the mining sector that are less reliant on public funding. Previous governments have tried a variety of approaches to gain access to private capital through the global capital markets and by offering concessions to private investors, including planned initial public offerings (IPOs). Several attempts to develop part of the Tavan Tolgoi coal complex via joint ventures with private consortiums were suspended. In relation to mining-related infrastructure, the past record of concessions issued to private entities to build road and rail on a build-operate-transfer (BOT) basis has been mixed, with several concessions cancelled. Close evaluation of why such approaches have faced challenges and how the mobilization of private capital could be approached in the future would be important.

(ii) **Systematically review laws and regulations to identify and eliminate inconsistencies and discrepancies among them.** Consolidate in one legal instrument the current restrictions to foreign participation and consider reducing some of these restrictions. Review local content requirements on an economy-wide basis, and specifically those applied in the mining sector. Abolish the minimum investment requirement of US$100,000 for foreigners to establish a venture.
(iii) **Enhance investor protection.** Investment protection guarantees that have been signed with key trading partners to provide legal predictability and local remedies should be fully implemented. In particular, the Investor Protection Council, established in 2016, should upgrade its capacity through training and more funding to enhance investor confidence. Fully implement the Systemic Investor Response Mechanism (SIRM) to address investor grievances while preventing some of these from escalating into full-fledged disputes by systematically handling and tracking cases, including a method to filter, analyze, and prioritize grievances.

(iv) **Support a linkage program to foster connections between FDI and domestic firms to increase overall in-country value addition.** The extractive sector may be the most likely sector for some linkages in the short term, but the new strategy should also consider linkages in other sectors such as tourism or agribusiness.

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**Box 3.2 Innovations of large firms**

Innovations of large firms usually (i) create new employment opportunities; (ii) generate positive spillover effects, especially along value chains and supplier networks; and (iii) engage with the academia and research communities, thus benefiting the education sector. To demonstrate the importance of innovation in large firms, two case studies are summarized below. The main takeaways are (i) investment in R&D leads to innovations that can reduce costs and provide competitive advantage by creating new products; and (ii) innovation can create a positive spillover effect on employment, economic activity, food safety, and the environment.

**Case 1. Premium Concrete LLC:** Constructed several decades ago, Mongolia’s main power plants are still using technologies harmful to the environment and human health. In particular, the use of thermal coal for combustion produces a by-product of fly ash, which has severe implications for human health. Although the plants started to collect the fly ash before it leaked to the surrounding area, there were no proper disposal methods, which resulted in large stockpiles near rivers and animal vegetation regions.

Prompted by the stockpile, Premium Concrete LLC, a local company that produces construction materials, adopted a new technology to mix the fly ash into construction materials. The company applied machine learning methods to determine the right proportions of fly ash in construction materials. In addition to substantially reducing leakages of this hazardous waste into the environment, the innovative technology significantly boosted the company’s competitiveness and demand in the market. In particular, the machine learning algorithm helped optimize the quality of the product (strength and durability) and reduce production costs.

**Case 2. Tumen Shuvuut LLC:** Following the government’s measure to revive production of crops and vegetables in 2008, demand for fertilizer increased significantly in Mongolia. Spotting the increased demand, a local poultry producer, Tumen Shuvuut LLC, invested in R&D to transform its animal manure into organic fertilizer. The company’s decision to invest in innovation instead of expensive waste management and disposal helped turn its weakness into a comparative advantage. As a result, the company’s production costs declined, its competitiveness improved, and it has created a positive spillover effect on the agriculture sector in the country.

*Source: Compiled by World Bank staff*
IV. EXPANDING ENDOWMENTS
IV. EXPANDING ENDOWMENTS

Mongolia’s overreliance on mines and underutilization of its minds, that is, its human and institutional capital, to generate growth is well established. Such inability to diversify its endowments has resulted in limited diversification of its products and has further amplified its vulnerability to the swings of the global commodity markets. Mongolia’s pathway to economic emergence and diversification is through expanding its intangible endowments by improving the functioning of its labor market, attracting and retaining talents, strengthening public investment management practices, and making policymaking radically transparent.

IV.1 Mongolia over relies on mines and underutilizes its minds

An influx of FDI into the mining sector has supported rapid accumulation of private capital, while production of public capital has stagnated. Unfortunately, Mongolia’s intangible capital in terms of human and institutional capital endowments contributed little to growth. Its limited progress in converting natural wealth into other forms of capital (assets diversification) has also constrained its ability to diversify outputs and export.

IV.1.1 Produced public capital has stagnated, while private capital has grown rapidly

The government’s large investment budget has failed to effectively materialize into growing produced public capital stock. Mongolia has one of the highest public investment budgets in the world, averaging 8.3 percent of GDP per year between 2004 and 2017. Yet, the contribution of its produced public capital in the growth process seems to have deteriorated during this period. While Mongolia’s private capital stock is broadly comparable to many of its peers, it is largely the result of massive foreign investment in the mining sector. Public investment, however, has suffered from high costs and completion delays due to weak management (figures 4.1 and 4.2). Considering the inefficiencies of public investment and the low level of population density, the government should be selective in the public capital investment.

Figure 4.1
General government capital stock per worker deteriorated…

Figure 4.2
…while private capital stock per worker improved

Source: PWT9.1, IMF Investment and Capital Stock Dataset
Note: PPP = purchasing power parity
IV.1.2 Growth has made little use of intangible capital

Human capital has been underutilized despite a relatively strong human capital endowment, while institutional capital has deteriorated, contributing little to Mongolia’s growth process. Mongolia ranked 51st globally in the Human Capital Index, higher than its income level ranking (92nd) largely due to its high educational attainment. While the use of human capital slightly improved during 1995-2014, Mongolia’s human capital has remained underutilized in production, as evidenced by the country’s status as an outlier among its structural and aspirational peers (figure 4.3).33 Mongolia’s performance on the key components of social capital (for example, corruption control and rule of law) deteriorated during 1995–2014. Although, it exhibited a higher score than Ecuador, Kazakhstan, and Russia in 2014 on those indicators, it substantially underperformed vis-a-vis all its aspirational peers, as its growth process remains dominated by natural capital inputs (figure 4.4).34,35

Mongolia has underperformed all its peers in the use of human capital... ...and its social capital endowment has deteriorated

![Figure 4.3](image1)

![Figure 4.4](image2)

**Sources:** World Bank (2018c); WDI; World Bank staff calculations

**Note:** a. Measured as a share of total wealth

**Sources:** World Bank (2018c); WDI; World Bank staff calculations

**Note:** b. Quality of institutions is the average score of Rule of Law and Corruption Control in the WGI

IV.1.3 Products are scarcely diversified

Mongolia’s inability to diversify its assets has also constrained its outputs and exports diversification (figure 4.5). A strong positive association between asset diversity and exports/product diversification is shown in figure 4.6. It indicates that Mongolia lags its peers in those measures of economic diversity. In fact, exports have become not only heavily concentrated in mining, but also to a single market. Exports to China represented around 20 percent of the total in the early 2000s but increased to over 90 percent since

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33 Human capital wealth is defined as the present value of future earnings for the labor force in The Changing Wealth of Nations 2018 (World Bank 2018c). In other words, it reflects the projected trajectory of wages in the country. Low wage levels are the corollary of a limited use of human capital.

34 Strikingly, Mongolia’s natural capital accounted for 63 percent of its total wealth in 2014, the highest among its resource-dependent peers. However, a significant portion consists of non-renewable natural capital, as Mongolia focused mostly on non-renewables in the past two decades. This dramatic expansion of non-renewable natural capital has led to an increase of the natural capital rents that account for about 30 percent of GDP in recent years, up from 7 percent of GDP in 1990.

35 The buildup of social capital is an important driver of economic growth, just as is the accumulation of human capital, physical capital, and natural capital. While the buildup and use of physical capital boosts growth directly, human capital, social capital, and natural capital, if judiciously managed, encourage growth indirectly by underpinning efficiency and technology.
This finding is confirmed by the Economic Complexity Index, which indicates that Mongolia’s product basket is less complex/sophisticated than its peers. Nevertheless, Mongolia is found to have a revealed comparative advantage in several merchandise sectors, including minerals, cashmere, and meat products, according to the Balassa’s revealed comparative advantage index (box 4.1).

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Box 4.1 Mongolia’s comparative advantage

Mongolia has a comparative advantage in several non-mining sectors (meat, cashmere, renewable energy). Mongolia’s comparative advantage as the second-largest cashmere wool producer in the world has been underpinned by the country’s vast grasslands and cold climatic conditions that are conducive to wool production, and related lower labor costs. In meat production, Mongolia’s advantage stems from its capacity to maintain significant numbers of livestock on its vast grasslands. Benefiting from its rich renewable resources such as solar, wind, and hydropower, Mongolia has the potential to boost its renewable energy generation. Mongolia has 270 to 300 sunny days a year, and around 10 percent of the total land area is classified as “excellent” for wind-based energy generation. It also has the potential to generate hydropower energy. As estimated by the United States National Renewable Energy Laboratory and the Mongolian National Renewable Energy Center, the combined electricity production output from wind and solar could reach as much as 15,000 terawatt-hours per year, which is enough to meet the Chinese total electricity demand in 2030.  

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The limited product diversity of Mongolia is confirmed by the Economic Complexity Index, which indicates that its product basket is also less complex/sophisticated compared to its peers.  

In fact, countries that produce complex goods as well as many products are typically more economically developed or likely to grow more rapidly in future than countries producing fewer and less complex products.  

The comparative advantage index gives a value greater than 1 for industries that have a comparative advantage.
While there is significant untapped potential, important logistical, financial, and regulatory challenges need to be overcome to make these activities grow faster.

**Mongolia’s cashmere sector is still catching up due to several challenges.** Though a few cashmere manufacturers like Gobi corporation produce cashmere yarn and knitted products, around two-thirds of cashmere manufacturers only produce preliminary processing products. In addition, small and medium-sized manufacturers have financial problems in buying raw cashmere or upgrading their processing capacity. The fragile ecological environment caused by overgrazing and climate change also hampers the growth of the cashmere sector in Mongolia.

**Mongolia’s meat-processing sector faces several challenges,** including high market concentration and lack of competitiveness. Of the 123 slaughtering and meat-processing companies in Mongolia in 2017, 79 were in Ulaanbaatar or the central region, and 44 were located in the countryside. The large manufacturers like Max Impex remain leading actors in the meat-processing sector, whereas small and medium-sized players lack core competitiveness to brand their products and maintain viable market share. (For more on this, see box 4.6.)

**Tapping the renewable energy potential, however, will require significant investments.** The Government of Mongolia has initiated policies to tap into this potential. For example, the Ministry of Energy has proposed privatizing the distribution and supply services and exporting energy to North Asian countries through high-capacity power lines. These proposals are akin to the actions taken by other renewable resource-rich countries like Australia, which is working toward exporting renewable energy to Asian countries. Comparatively, Inner Mongolia is the most wind resource-rich region of China and exports green electricity to provinces with rapidly growing power demand.

Source: Compiled by World Bank staff  

### IV.2 Explaining Mongolia’s limited progress in expanding its endowments

Mongolia is highly resource dependent and generates a significant share of GDP each year in resource rents at the cost of rapid depletion. As Mongolia’s growth process is dominated by natural capital, its high depletion rate relative to peers endangers the sustainability of the current growth model. Mongolia’s depletion of non-renewable assets as a percent of Gross National Income (GNI) rapidly increased during 2006-10 and remained high, even with a rising GNI (figure 4.7).

A global transition to low carbon that would affect the Chinese demand for Mongolian coal also motivates expanding endowments beyond mines. China’s coal share in electricity generation is targeted to decline from 64 to 30 percent and non-electricity generating coal consumption to decline by 19 percent from 2018 to 2050. A simulation using a computable general equilibrium (CGE) model suggests that a steady decline in China’s coal demand would reduce Mongolia’s exports by 1.1 percent and economic growth by 0.7 percent on average each year if the country continued to rely significantly on coal mines mining (figure 4.8).
In other words, expanding Mongolia’s endowments beyond natural capital is becoming increasingly urgent considering the suboptimal investment of Mongolia’s resource rents. Several factors, examined below, are among the most important causes behind Mongolia’s limited progress in converting its natural resource rents into other forms of capital, namely, human and social capital. These include (i) public investment in human capital is not matched by adequate jobs and thus is at risk of dissipating through migration and declining female labor participation; (ii) public investment in infrastructure is poorly managed, leading to low returns; and (iii) poor governance that binds all of the above together.

**IV.2.1 Public investment in human capital is not matched by adequate jobs, which is exacerbated by skills outmigration and lower female labor participation**

Inefficiency in the labor market, including the inability to create well-paying jobs, has hampered the utilization of human capital. Educational attainment has increased dramatically over the past decade in Mongolia. The tertiary enrollment ratio in 2018 stands at 66 percent, the average level for advanced economies. While educational attainment has increased, lack of structural transformation has contributed to the limited creation of high-quality jobs and opportunities (see Chapter 3). Consequently, youth unemployment is rising. According to statistics released by the education ministry, an estimated 40 percent of higher education graduates were unemployed (Gantogtokh 2018).\(^{39}\) Kazakhstan also exhibited a similar performance in tertiary education enrollment accompanied by a decline in youth employment, but was subsequently able to reverse this trend (figure 4.9) by expanding the vocational training system to create employment opportunities for the youth.

**There is also a mismatch between the supply of skills from education institutions and the demand from employers.** A large number of Mongolia’s college graduates are from fields such as business and social sciences, where employment rates are relatively

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\(^{39}\) The unemployment rate of youth aged 15 to 24 in Mongolia has sharply increased from 9.6 percent from 2008 to 16.5 percent in 2019.
lower compared to the science, technology, engineering, and math (STEM) fields (figure 4.10). Moreover, the education and training available in schools are inadequate to prepare graduates with the skills and competencies that match employment needs. Firms complain about lack of adequate skilled workers, pointing to a potential mismatch in the labor market. “The Global Competitiveness Report 2019” rated the quality of vocational training in Mongolia at 3.7/7.0 (best), which ranked 100th out of 137 economies, and the skillset of graduates at 3.5/7.0 (best), which ranked 119th globally.\(^{40}\)

The outflow of skilled labor has also exacerbated the skills mismatch in the labor market. According to “The Global Competitiveness Report 2019,” Mongolia’s capacity to attract and retain talent is weak compared to its peers (figure 4.11). Mongolia needs high-skilled talent to accelerate growth, yet a large share of highly educated Mongolians migrates to Organisation for Economic Co-operation and Development (OECD) countries and the Republic of Korea. By 2017, outmigration of Mongolians to OECD countries already represented almost 1.5 percent of the total labor force (figure 4.12).

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\(^{40}\) WEF 2019.
The fact that the majority of emigrants are skilled workers with a college degree suggests that Mongolia’s existing human capital endowment has not been fully utilized in the absence of well-paying jobs. A significant share of Mongolian emigrants moving to OECD countries are skilled and qualified, motivated by higher wages and better job opportunities abroad (figure 4.13). As of 2015, 24 percent of Mongolians in the United States had a postgraduate degree and another 35 percent had a bachelor’s degree. The proportion of Mongolian migrants employed as managers or senior officials is relatively high: 5 percent in France, 4 percent in Hungary, and 10 percent in Poland. The proportion of professionals and technicians is 33 percent in France, 4 percent in Hungary, and 67 percent in Poland.

Mongolia’s inability to fully utilize its human capital can also be seen in its declining female labor force participation rates. Female labor force participation has been persistently low at around 53 to 56 percent over the last decade relative to peers and has been declining in recent years (figures 4.14 and 4.15). While lower rates of female labor force participation are seen across all age groups, the gender gap is especially large among the younger generations. For those aged 25–29, labor force participation for men is 87 percent while it is only 62 percent for women.
The absence of a diversified economy is one of the factors that could explain the lack of adequate job opportunities for female workers. Women in Mongolia, like in most other countries, are the primary caregiver as well as the primary household member responsible for other domestic work (World Bank 2018g). Moreover, women generally work fewer hours for paid jobs, earn less wage, and have to devote substantial time on household chores, particularly, in rural areas.\(^{41}\) Retirement age for women is 55 compared to 60 for men. In fact, about 10 percent of the female labor force is 55 and older. Given these societal norms, the authorities need to invest more in creating a women-friendly work environment, recognize and reward women entrepreneurs and leaders (especially given the finding in Chapter 3 on the positive association between women entrepreneurs and innovation) and eliminate gender pay gap.

### IV.2.2 Weak management of public investment in infrastructure leading to low returns

Mongolia lacks a sound public investment management system to effectively and efficiently allocate resource rents. State investment in infrastructure is poorly managed leading to low returns. Mongolia exhibits one of the lowest scores in the quality of overall infrastructure, suggesting significant inefficiency (figure 4.16). Fragmented institutional arrangements and use of multiple financing sources in Mongolia make it difficult to ensure cohesive management of public investment activities. Weak control of corruption also translates into low efficiency in government spending (figure 4.17). The current public investment management index for Mongolia suggests room for improvement. Mongolia scores below emerging market and developing economy averages in the selection and evaluation stage of public investment management.

![Figure 4.16](image1.png)  
**Figure 4.16** Government capital stock has been plagued by inefficiency

![Figure 4.17](image2.png)  
**Figure 4.17** Poor government spending efficiency is linked to weak control of corruption

Sources: World Bank; WGI; WEF

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\(^{41}\) Women tend to work in low-paying service sectors, typically in the trade and public sectors. According to the 2018 Labor Force Survey (LFS), female average wage income was 12 percent lower than that for male workers.
IV.2.3 Stagnant institutional quality compounded Mongolia's limited endowments diversity

Government seems to have deteriorated with the mining boom. Resource abundance can give rise to socially damaging rent-seeking activities and neglect of good governance, infrastructure, and institutions, as well as an overvalued currency (Auty 1993; Collier 2011). In fact, state capture by businesses has translated into low perceptions of the state’s ability to control corruption, maintain an independent judiciary, and run an effective government. Mongolia’s higher mineral rents seem to have prevented the nation from building its social capital, unlike many of its comparators (figures 4.18 and 4.19). Poor governance discourages private investment in mining and leads to poor mining deals. It also dampens private investment in non-mining jobs and thus accentuates the underutilization of human capital while contributing to the weaknesses in public investment management. Relating to, the resource curse has also contributed to complicating the creation of quality jobs because of the impact of an appreciating and highly volatile real exchange rate on competitiveness and investment risk perceptions.

One of the hallmarks of Mongolia’s development since 1990 has been the ascent of liberal democracy. The index of democracy, the Polity IV Project’s Polity2 variable, illustrates Mongolia’s strong position among its peers as the sole unfettered democracy along with Australia, Canada, and Chile (figure 4.20). In view of Mongolia’s geographical position, this is no small feat. Mongolia’s democratic credentials are also acknowledged by Freedom House. As the experience of, for example, Australia, Canada, Norway, and the United States bears out, a well-functioning democracy facilitates efficient and fair management of natural resources, including the avoidance of excessive dependence on natural resources through judicious economic diversification.

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42 Polity IV Project’s Polity2 variable reflects several characteristics of democratic compared to autocratic authority in governance (Polity IV Project 2019).
Mongolia’s strong position among its peers as the sole unfettered democracy

Source: Polity IV Project
Note: Vertical axes shows the Polity2 index of democracy (from -10 to +10). Data for EAP are not available

Mongolia can build on its solid reputation as a liberal democratic state in a challenging neighborhood to promote asset and product diversity. Mongolia’s democracy is an asset in that it creates greater accountability and thus may reduce the risk of grand corruption and state capture. However, this is not guaranteed, as the elites may buy off voters through electoral giveaways that generate short term improvements at the cost of exacerbating volatility and reducing long term prospects. It seems Mongolia has not avoided this risk. But through improved transparency and based on the strong popular mandate of the existing government which after 2016 resisted the temptation for electoral giveaways (not counting COVID-19), Mongolia now has a chance to break out of this cycle. This is what the following recommendations aim to convey.

IV.3 Policy priorities – Escaping the natural capital overreliance trap

Mongolia’s failure to better utilize its human capital and build its institutional capital is explained by several factors including the skills/education and labor market mismatch, and outmigration of skills. These are compounded by weak control of corruption and rule of law. Accordingly, the main thrust of the policy recommendations on these issues is articulated around (i) improving the quality and utilization of human capital and leveraging an effective migration policy to attract and retain talents; and (ii) strengthening the quality of institutions through improved transparency and public investment efficiency.

IV.3.1 Invest and better utilize human capital

Design a human resources development plan focusing on education quality and STEM areas

A human resource development plan can be a powerful policy tool to improve coordination of the private and public sectors, including universities, and to ensure that the education and training programs match market demands. Under the plan, the government can estimate the demands of educational facilities by type of education and by region and diagnose the supply capacity. Based on the demand analysis of occupations, skill levels, and sectoral and regional distribution of the labor force from
the private sector, the government can prepare specific goals and targets in education, training, labor, and employment policies. Throughout this planning process, the supply-demand gap by industry and occupation can be identified, which can help authorities redirect resources in a more efficient way and guide the reform direction of education and training programs.

**Establish a strict quality control system to enhance the quality of education and training**

**Mongolia should establish a strict quality control system to improve the quality of education and training programs.** The institutions that fail to meet the minimum requirements would be closed or turned into another educational institution at a lower level. For example, at the tertiary level, independent authorities comprised of domestic and global experts can review whether certain individual universities or departments can provide students with proper curriculums and training. If any college program does not pass the review, it would be given time to improve prior to the next review, and absent of sufficient progress, it would be restructured or closed.43 For vocational and technical training institutes, a group of independent experts can review their curriculums, management, and outcomes of the training programs. The decision-making process could be based on a standardized checklist or scoring system, with participation of foreign experts to minimize the risk of nepotism. Mongolia can also learn from Kazakhstan’s experience for promoting youth employment (see above).44

**Leverage the private sector for better skills matching (public and private dialogue with universities and foreign investors)**

A university and industry linkage program can be established to help educational institutions develop more market-friendly curriculums and improve the job readiness of graduates. Encouraging collaboration and communication between academia and industry would be mutually beneficial. The government could promote appropriate financial incentive mechanisms. Entrepreneurial leaders of universities could invite their partners from business and industry to improve curriculum design. Businesses and universities could mutually benefit from this program through collaboration on research and development and through contract-based training programs for potential and current employees.

**Redesign school curriculums to match future needs**

It is urgent that policy makers and teachers quickly adapt to dynamically changing socio-economic demands. The OECD recently revised its core competencies for better education. Education and Skills 2030 has replaced the Definition and Selection of Competencies: Theoretical and Conceptual Foundations project, which was developed between 1997 and 2003 with the aim of identifying the competencies needed for a successful life and a well-functioning society. Within the new project, the OECD has categorized the main themes as competencies, knowledge, skills, and attitudes under the title “Learning Compass 2030,” which is expected to be embedded in the curriculum. The World Economic Forum also recently listed the skills or competencies expected to be in high demand in the fourth industrial revolution (box 4.2).

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43 Note that the government is already doing such a review, but such a commission should be independent and comprise domestic and global experts.

44 In the aftermath of the global financial crisis, the authorities of Kazakhstan adopted a Regional Employment and Retraining Strategy supported by the International Labor Organization. The strategy aimed (i) to contain the rise in unemployment with the provision of short-term employment and job creation in public works and other social programs; and (ii) to rehabilitate social infrastructure and facilities as a necessary condition for sustainable development. The program also provided vocational training, retraining, and youth internships (IMF 2014).
Promoting female labor participation

Promoting female employment requires an integrated set of policies. These include: (i) improving the provision of high-quality affordable childcare for young children (Martínez and Perticara 2017); (ii) promoting better access to information technology to facilitate job search and increase opportunities for flexible work arrangements; (iii) improving the education system to provide equal opportunities to succeed in the labor market for both the males and females; (iv) allowing the retirement age to increase as was envisaged by the 2018 reform, which was then reversed; and (iv) implementing gender budgeting (box 4.3). These should coincide with efforts to tackle the slack in the labor market and promote job creation.

Martínez and Perticara (2017) found, in Chile, that offering after school care for children aged 6–13 increases employment by 5 percent and labor force participation by 7 percent.
Box 4.3 Gender Responsive Budgeting and female labor participation

Tackling gender gaps requires governments to commit resources to implementing targeted measures on a continuous basis and beyond interventions at a single line ministry.

Gender Responsive Budgeting (GRB) is a tool supported and recognized by leading multilateral organizations including UN Women (the United Nations Entity for Gender Equality and the Empowerment of Women), the World Bank, and the International Monetary Fund (IMF) and is important in several aspects. For example, GRB helps identify gender gaps in sectors and assess current policies, programs, and measures financed from the budget to determine their effectiveness and whether they contribute to addressing gender gaps.

The Government of Mongolia (GoM) has committed to introducing GRB in its public financial management (PFM). The lead role in the process is taken by the Ministry of Finance (MoF) and the National Committee on Gender Equality, in close cooperation with the National Statistical Office. The GoM has been implementing a PFM Strategy and Action Plan (2018–22), which includes a GRB framework to be integrated in the budgeting process. This approach is in line with international best practices (for example, Austria, the Republic of Korea, and Serbia). The GoM is starting pilot implementation of GRB through the MoF and two lines ministries (the Ministry of Education and the Ministry of Labor and Social Protection), but its further rollout through the national budget is expected by the end of 2021.

The GRB can contribute to a more efficient, effective, and equitable use of public funds and thereby address some of the issues endemic to Mongolia’s declining labor force participation. These issues include a skills gap, employment discrimination toward young women, the predominance of women in caregiving for children and the elderly, lack of access to affordable nurseries and kindergartens, lack of care services for the elderly, lack of jobs, lack of capital to start a business, lack of family support, a gender pay gap and low wages, and gender norms in the society.

Source: Compiled by World Bank staff
Note: a. GRB has been getting more attention in the last 10 years in light of public finance reforms and is gaining recognition by multilateral organizations such as UN Women (https://gender-financing.unwomen.org/en), the World Bank (http://boost.worldbank.org/tools-resources/topics/general-techniques/topics/gender-budgeting), and the IMF. The February 2019 publication, “IMF and Gender Equality – Operationalizing Change,” noted that gender is to be even more integrated into public finance reforms, including macroeconomic policies (https://www.brettonwoodsproject.org/2019/02/the-imf-and-gender-equality-operationalising-change/). In its brief published in February IMF. b. The Ministry of Finance has developed a gender strategy in which GRB is recognized as a priority

A migration policy to retain and attract talent

Migration can create a positive impetus for human capital accumulation and significant economic gains when skilled migrants return from abroad. For instance, the Returning Experts Program introduced by the Talent Corporation Malaysia Berhad (TalentCorp) in 2011, was highlighted by the World Bank as an effective measure to attract people with the skills the country needed. It had strategic importance in Malaysia’s plan to become a high-income economy. After assessing the talent needs of Malaysia, the TalentCorp designed a program that offered four benefits to emigrants upon their return and start of employment: (i) a flat income tax for first five years, instead of the standard progressive tax schedule; (ii) tax exemption on the purchase of vehicles; (iii) automatic permanent residency status for foreign spouses and children; and (iv) tax exemption for all personal effects brought back to Malaysia. The Returning Experts Program increased
the probability of return by over 40 percent and offered positive monetary value rather than a cost to Malaysia, with net fiscal benefits estimated at RM 27,000 per returned applicant (box 4.4).

**Mongolia also may benefit from the experience, outward-looking attitudes, and know-how of skilled emigrants (a brain gain).** To do so, Mongolia needs to do a delicate pivot whereby it attracts key talent and resources from among the diaspora. However, it is unrealistic to expect that some quick policy measures would encourage a mass return of skilled emigrants. Rather, there needs to be a concerted effort to engage with the diaspora and make them partners in Mongolia’s development. Such steps should be sustainable and backed up with concrete actions.

**Potential first policy steps include:**

(i) **Appoint a nodal agency to deal with emigrants and diaspora matters.** One quick action of such agency would be to organize a diaspora summit in an easily accessible location.

(ii) **Systematically map migrants in major host countries to gauge numbers, income, human capital, and financial endowments.**

(iii) **Accelerate transfers of technology and skills from the Mongolian diaspora by promoting return of foreign-educated students, establishing networks of knowledge exchange (Pack and Page 1994), and developing a form of mentor-sponsor model in key sectors (for example, telecoms, manufacturing).**

(iv) **Encourage the Mongolian diaspora’s involvement in the development of the country’s financial and capital markets, investment, and bilateral trade.**

**Once Mongolian emigrants are comfortable doing business with their country of origin, return and reintegration are logical next steps.** To further support the process of brain gain, returning emigrants could be incentivized through several measures similar to those used by Malaysia. These incentives include tax, housing, access to quality education for children, smoother transfer of assets, permits for foreign spouses or foreign-born non-citizen children, and dual citizenship.

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**Box 4.4 Mongolia can learn from the Malaysian experience of attracting talent**

To attract high-skilled immigrants and fill some of Malaysia’s skills gaps, the government introduced the Residence Pass-Talent (RP-T) in April 2011. The program confers six key benefits: (1) ability to live and work in Malaysia for up to 10 years; (2) flexibility to change employers without having to renew the pass; (3) spouse and children under 18 years old are eligible for the RP-T dependent pass; (4) dependents over 18 years old, parents, and parents-in-law are eligible for a renewable one-year Social Visit Pass for up to five years; (5) spouse can also seek employment without the need to apply for an Employment Pass; and (6) spouse and children under 18 years old are eligible to study in Malaysia.

The World Bank found that RP-T expatriates earn 4.3 times and Returning Expert Programme returnees earn 2.3 times the wages of comparable Malaysian professionals, suggesting the programs target highly skilled talent and that employers value international experience.

*Sources: World Bank 2015b; Del Carpio et al. 2016*
IV.3.2 Investing in institutions

Enhance transparency and accountability

Mongolia needs to continue strengthening its governing institutions and accountability systems to facilitate the transition from mines to minds. As a resource-rich country, Mongolia needs to build institutions to effectively use revenues from extractive industries for long-term growth, following the example of well-managed resource-rich countries.

Advance the Extractive Industries Transparency Initiative (EITI). EITI has laid the foundation for solid gains in transparency since 2006, but it must push further into some of the most contentious and difficult areas within the extractives value chain where company opacity, in particular, is a concern (beneficial ownership, licensing, commodity trades). Some of these actions should include:

(i) Introduce amendments to existing laws and regulations in the mineral resource sector and approve a new EITI and mineral law.

(ii) Improve the dissemination of the kind of regularly provided information promoted by EITI (and by some other forms of fiscal transparency initiatives), as they can play a valuable role in providing background information on the context in which corruption takes place, shedding light on the processes behind transactions, and highlighting risks.

(iii) Promote multistakeholder rules of engagement and strengthen coordination to reinforce the tripartite character of EITI itself, as these three parties (government, company, and civil society) have different interests and are pulling the implementation of the initiative in different directions. Fostering the leadership and monitoring capabilities of civil society organizations to keep in check the interest of government and the private sector should be considered.

Improve transparency in the management of natural resources through building a nationwide transparency and accountability coalition. This agenda will include government reform champions, accountability agencies, civil society organizations, the private sector, and international development agencies working across sectors. Transparency and accountability are potential areas of strength for Mongolia given its vibrant democracy. It should leverage this asset more.

Reform the public investment management framework

The new public investment management framework aims to build a unified, quality-based, single entry point for all forms of public investment, regardless of funding source or means of implementation. Some specific actions include:

Adopt an integrated, whole-of-government approach for digital investments and transformation of the public sector. A whole-of-government approach for digital government provides the commonly used information technology (IT) tools and services for shared use across all agencies on a “built once, reuse always basis.” This reduces the need for each agency to invest in their own IT resources, cuts IT operational and overhead costs, improves interoperability and coordination, and enables agencies to focus on core digital services delivery to citizens and businesses instead of technologies. It also enhances data and information sharing and collaborative decision making at the political and operational levels, and provides agencies integrated cybersecurity protection of their mission-critical systems.
Improve the management and governance of public investment projects through:

(i) Developing a medium-term strategic plan with a priority list of projects that is realistic, based on a rigorous economic and financial assessment of investment needs. Instead of projects being proposed by line ministries on an ad-hoc basis, the medium-term and subsequently annual plans should be informed by the national master plan and linked to the Public Investment Plan process.

(ii) Adopting sector-based investment planning, starting with the utility sector. Five- and 10-15-year investment plans for each utility should be drawn up based on projected need for increased supply and transmission or the replacement of existing supply and transmission. These investment plans should be subjected to independent audit.

(iii) Ensuring that large-scale projects are subject to parliamentary approval. This includes, for example, projects supported by Development Bank of Mongolia or Erdenes Mongol LLC, which would draw on public funds or guarantees.

(iv) Developing a policy that defines the selection of guarantees to be used in public-private partnerships for critical infrastructure development and a set of strict criteria by which they can be deployed.

Leverage Mongolia’s comparative advantage

Provide incentives for developing manufacturing industries (including meat and cashmere) consistent with Mongolia’s comparative advantage to facilitate diversification, upgrading, and preparedness for a low carbon transition. Mongolia’s small economy makes it easier to focus government efforts on specific value chains. Experience with industrial policies around the world suggests that governments can play an important role in overcoming information or coordination failures (box 4.5). By focusing on key value chains, such as meat production for instance (box 4.6), Mongolia can target public resources to help create better quality jobs. This includes targeting public infrastructure to maximize economic benefits through coordination with other policies and synergies across sectors and users. More specifically:

(i) Develop infrastructure selectively to unlock specific value chains most likely to support economic diversification and improve competitive advantage in the region (including infrastructure for the meat, leather, and milk value chain; tourism, services; and renewable energy).

(ii) Strengthen the infrastructure for Mineral Value Chains. Ultimately, the whole economy benefits as the tax base grows by lifting the infrastructure constraint which until now has limited mineral value chains to those projects that do not rely heavily on infrastructure or are able to absorb the high costs of self-supplied power and dedicated transportation.

- Power plant - Prioritize power sector investments that unlock unmet demand from mines and mineral processing for continuous grid-supplied electricity.
- Transport - Prioritize transport sector investments that help to enhance the competitiveness of traded goods generally by selectively piggybacking on rail investments needed for bulk minerals, while relying on upgrading the road network as far as possible.
Upgrade the current Trans-Mongolian Railway to improve the benefits for developing mineral value chains. The competitiveness of minerals already reliant on that rail line would be enhanced, since existing exporters would benefit from lost time reduction, which contributes to costs as much as tariffs.

Leverage existing and potential trade agreements and cooperation (including regional infrastructure) to facilitate Mongolia’s access to international market (for example, Japan, the United States, China, and Russia). More specifically,

(i) Strengthen the infrastructure for regional connectivity with China and Russia. This should also include a clear priority to upgrade the signaling system and other technical systems on the railway infrastructure for the central economic corridor connecting China and Russia. Moreover, the plans to construct a Russia-China gas pipeline going through Mongolia opens important opportunities for coal substitution in heat and power generation as well as use as a feedstock in industrial processes.

(ii) Establish preferential trade agreements or gain access to certain markets via trade negotiations in specific areas including meat exports. For example, the Economic Partnership Agreement with Japan can be used for the export of pet food produced from meat byproducts. The government also needs to accelerate progress on trade negotiations and commit to reaching a more liberalized and convenient trade arrangement under the World Trade Organization framework. This trade arrangement should enable progress on issues like market access, inspection and quarantine, export subsidies, domestic support, bilateral exchange rates, and product standards that are consistent with trade liberalization and investment facilitation.

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**Box 4.5 Industrial policy – Pros and cons**

The literature is divided on the effectiveness and therefore justification of industrial policy. For instance, potential advantages of picking winners to promote certain industries were widely considered to be outweighed by substantial drawbacks in terms of gross inefficiency, especially in Latin America. However, as in the case of Malaysia, Chile, and China, if carefully designed and implemented, industrial policy can be envisaged as part of a successful national economic diversification strategy. Therefore, as Stiglitz et al. (2013) put it, “the question is not whether any government should engage in industrial policy but how to do it right.” To tailor such policy according to a country’s characteristics and become one of the success stories, one must be familiar with its pros and cons, and conditions for successful implementation.

Industrial policies are advocated to correct two key market failures that deter the entrepreneurial drive to restructure and diversify (a process of self-discovery) in low-income economies. As Rodrik (2004) summarized, these market failures are related to the informational spillovers (cost of discovering new products) and the coordination of investment activities with scale economies.

For instance, subsidizing investments in new, nontraditional industries with high social returns is considered a policy response to the information externalities. While doing so, Hausmann and Rodrik (2003) argue that a carrot-and-stick strategy should be adopted. Providing rents to initial investors as compensation for the cost of new discovery would be considered the carrot, while these rents must in turn be subject to performance requirements or close monitoring, which is the stick, so that mistakes and bad projects are not perpetuated. Chinese experience in this sense can be a good example, where it showed that industrial policy in the form of cheap loans, public ownership, local-content requirements, export subsidies, and technology-transfer requirements can boost macroeconomic performance and growth.

In case of the coordination failure, industrial policy does not necessarily involve government
subsidies; rather, the government can create an environment so that simultaneous investments are made and new industries are formed in a cluster. For instance, the Taiwanese government’s upstream investment in a genetics laboratory, quarantine site, shipping and packing areas, new roads, water and electrical hookups for privately owned greenhouses, and an exposition hall, has supported individual farmers to form a cluster of an orchid industry.

In its modern guise, industrial policy should be about advancement of the economy as a whole and should emphasize external competitiveness and integration into global value chains, including foreign direct investment (Inter-American Development Bank 2014). The instruments include market-friendly policies that aim to promote innovation, human capital investments, entrepreneurship, the formation of clusters, globalization, and public and private partnerships. An important objective is the promotion of actual and potential comparative advantages through strategic export transformation rather than seeking to protect domestic producers against foreign competition.

Nevertheless, industrial policy is commonly criticized for two potential pitfalls, informational objection and political capture. Often referred to as “governments cannot pick winners,” some argue that governments cannot accurately identify market imperfections. Even if it could, some doubt that governments could withstand lobbying from powerful firms and therefore would use industrial policy to transfer rents for the incumbents (Rodrik 2019). In both cases, however, a well-designed public-private collaboration could ensure that governments are close enough with the private sector to understand market failure, but not so close that they are in bed together. In other words, striking a balance between full autonomy and full embeddedness can ameliorate both of these potential pitfalls. For instance, the Inter-American Development Bank (2014) argues that industrial policies should aim at strategic collaboration between private enterprise and the government to uncover the most significant obstacles to restructuring and to identify the interventions most likely to remove them.

Considering the above-mentioned potential benefits and pitfalls to look out for, policy experiments based on general principles and international experience and, at the same time, tailored to local circumstances, are proposed for effective implementation of industrial policy (Inter-American Development Bank 2014).

Source: Compiled by World Bank staff
Box 4.6 Meat exports offer significant potential

Mongolia has a comparative advantage in meat exports due to its vast grasslands and proximity to large markets in Asia. However, several factors limit its competitiveness including low quality of meat and meat products, prevalence of diseases, complex non-eco-friendly supply chains with limited traceability, and lack of quality assurance mechanisms and institutions. To become a key player in this field, Mongolia must make careful strategic choices that address these factors and leverage its comparative advantage.

Mongolia has failed to develop a cohesive, food safety-oriented, self-reliant meat industry that operates independently of, but in partnership with, the government, as in successful meat-exporting countries. Value addition for export involves sectioning and packing the carcass into individual cuts to suit markets, as well as heat-treated products. This requires a solid value chain beginning with animal production and health and ending with delivery of the finished product to the consumer. Unfortunately, some parts of the country are prone to several endemic animal diseases that threaten human health and thus limit Mongolia’s access to international markets due to the health standards and export certification. While the government has attempted to initiate insurance schemes for selected diseases, most herders remain reluctant to enroll due to poor understanding of potential risks and mitigation options. Meat processors also suffer from insufficient working capital to cover operational costs and face high interest on loans. Industry in general lacks the capacity to smooth its production, brand their products, and maintain viable market share. The bureaucracy of state organizations has also proven to be a serious problem. To export, companies are required to get clearances from multiple agencies, which can take up to three weeks.

Vast grasslands and free-range production practices can provide a competitive edge, but Mongolia needs to make strategic choices to leverage them. To its advantage, Mongolia hosts one of the world’s largest remaining grassland ecosystems of global environmental importance. However, degradation of this ecosystem due to growing market pressures and lack of a coherent resource management policy, have become a central challenge in sustainable animal production. It is argued that “the control of livestock numbers is a fundamental precondition for effective rangeland management.” In other words, the production must focus more on improving productivity and quality, and less on the number of livestock.

To tackle these constraints, action must be taken on several fronts:

(i) Improve the enforcement of domestic livestock product hygiene standards and ensure the safety of Mongolian meat and meat products. These include enhancing inspection work on meat factories and tightening legislation on food safety and production safety.

(ii) Attract investment in infrastructure, storage facilities, scientific labs, transportation, and cold chains.

(iii) Enforce more seamless institutional coordination - especially among the General Agency for Specialized Inspections, General Agency for Veterinary Services, and the private sector - to increase food safety standards and meet importers’ requirements.

(iv) Support breeding services, review permits and border clearance processes for importing high-quality semen and investing in capacity for genetic improvement of animals.
(v) Invest in sector-specific public-private dialogue platforms including business associations. Such platforms can be useful to lead marketing, branding, and setting industry standards, and their implementation.

(vi) Strengthen cooperation with trading partner countries to improve the domestic logistics infrastructure (efficiency of logistics clearance and logistics cost).

(vii) Increase cross-border law enforcement cooperation on food safety. For cross-border trade, it is more difficult to trace back once product quality and safety issues occur.

To further its competitive advantage, Mongolia could leverage digital technologies and e-commerce. These tools can further facilitate growth of exports by identifying target markets, reducing transactions costs, and bringing more transparency through the value chains. For instance, Mongolian SMEs could integrate operations with e-commerce platforms such as Alibaba and JD.com. The new marketing strategy may broaden the channels to enter new markets and reduce the high cost of the traditional trade model, which is currently employed in Mongolia.

In the long term, the government should support private sector linkages with regional or global value chains to attract FDI focused on exports (efficiency seeking FDI). The case of the cashmere sector is a good example of successful integration of Mongolian export products into the global chain. Leveraging investments from the United States, Japan, Italy, and China and the new technologies and know-how that followed, the cashmere industry is successfully integrated into the global chain and has become an integral part of worldwide brands such as Burberry, Loro Piana, Huckets, and Uniqlo.

Source: Compiled by World Bank staff
ANNEX 1. THE CONCEPTUAL FRAMEWORK

The basic goal of the Mines and Minds report is to identify policy and institutional reforms that can propel Mongolia to both expand its production possibility frontier (PPF) and operate at its most efficient point in the PPF. This transition is captured through a stylized theoretical framework as illustrated in the below figure.

We assume that Mongolia’s economy is currently operating below its current PPF, where the y-axis measures the endowment related to natural capital and public sector spending (the latter is closely linked to price of natural capital) and x-axis measures other endowments, namely human and institutional capital. We further assume that Mongolia operates at point A during boom years and at point B during bust years. The goal is to move from points A and B to point E in the long-term, where the latter represents the most efficient long-term production structure for Mongolia’s economy.

Note: PPF = production possibility frontier
The three transitions

As the figure shows, moving from point A/B to point E involves three transitions:

**Seeking Stability (moving from point A or B to C):** While retaining the current production structure, Mongolia can improve national welfare by smoothing aggregate consumption and thus behaving as if the economy is operating at C and not at A or B. This smoothing of consumption can be achieved by adjusting public sector spending, i.e., government saves excess commodity revenue in a stabilization fund during periods of high commodity prices (point A) and withdraws from that fund and spends more during periods of low commodity prices (point B) and de facto operates at point C year after year. This is the first transition that involves achieving macro stability, implementing counter-cyclical fiscal and monetary policies and effectively operating the Stabilization Fund.

**Boosting Productivity (moving from point C to D):** Point C, while an improvement, is below the PPF. And that’s because of inefficient use of its current endowments, both mines and minds. So the next set of economic gains can be achieved by moving from under the PPF (point C) to the frontier of the PPF (point D). This move would require better utilization of the endowments through improved business environment, foreign investments and technology, better trade and infrastructure outcomes—in short, by boosting productivity.

**Expanding Endowments (moving from point D to E):** Moving Mongolia to the frontier of its current PPF is important, but not enough in the long run. Given the challenges of climate change and China’s green growth ambitions, Mongolia cannot continue to rely on natural resources to achieve high-income status. It must diversify and produce goods that are more intensive in human capital. This is illustrated by an outward shift in the PPF and for Mongolia to move from point D to E. The last transition, labeled as expanding endowments, would involve diversifying its factor endowments, especially better utilization of its human capital and strengthening its institutions.
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