INTERNATIONAL MONETARY FUND

Fiscal Multipliers in Mongolia

Tigran Poghosyan

WP/25/101

2025
MAY

WORKING PAPER

 WP/25/101

IMF Working Paper
Asia and Pacific Department

Fiscal Multipliers in Mongolia

Prepared by Tigran Poghosyan

Authorized for distribution by Thomas Helbling
May 2025

ABSTRACT: Fiscal policy plays an important macroeconomic role in Mongolia. On the one hand, fiscal expansion is seen as a measure to boost aggregate demand. On the other hand, import leakages mitigate the impact of fiscal expansion on growth. Applying a structural vector autoregressive model, this paper finds that Mongolia's total spending and revenue multipliers are below 1, peaking at 0.3 and -0.1, respectively. The lower than 1 multiplier can be explained by import leakages in Mongolia. Capital spending multiplier peaks at 0.6, exceeds and remains more persistent than the current spending multiplier, suggesting that public investment is more efficient in boosting growth than current spending. Tax revenue and non-tax revenue multipliers peak at -0.1 and -0.2, respectively, and are short-lived. Revenue multipliers are broadly comparable in size, but their assessment is challenging due to lack of sizeable tax policy measures in Mongolia.

RECOMMENDED CITATION: Poghosyan, T. "Fiscal Multipliers in Mongolia." IMF Working Paper 25/101.

JEL Classification Numbers:	E31, J31
Keywords:	Fiscal Multipliers; Structural VAR; Mongolia
Author's E-Mail Address:	TPoghosyan@imf.org

* I would like to thank Angana Banerji (mission chief for Mongolia) for overall guidance and feedback. I would also like to express sincere gratitude to Khulan Buyankhishig and Gerelmaa Baatarchuluun (IMF Resident Representative Office in Mongolia) for invaluable assistance throughout this research. Tahsin Saadi Sedik, Anar Zorigtbaatar, as well as Jose Luis Diaz Sanchez and Batmunkh Undral (World Bank office in Mongolia) and Martin Fukac (CCAMTAC) provided helpful comments and suggestions. Judee Yanzon provided excellent production assistance. The usual disclaimer applies.

WORKING PAPERS

Fiscal Multipliers in Mongolia

Prepared by Tigran Poghosyan

Contents

FIGURES

I. Introduction

Fiscal policy, particularly the use of government spending and taxation to influence economic activity, plays a crucial role in shaping macroeconomic outcomes in both developed and developing economies. Mongolia is no exception. With a relatively stable exchange rate, fiscal policy remains an important lever for macroeconomic management in the country. In this context, assessing the impact of fiscal policy measures, particularly fiscal multipliers, is essential for informed policy decisions aimed at promoting sustained economic growth and macro-financial stability.

Historically, Mongolian authorities have frequently relied on increases in current spending—such as public wages, pensions, and social assistance programs—to stimulate economic activity, often at the expense of public infrastructure investment. Tax exemptions and other measures to reduce the tax burden were also commonly used to boost the economy. However, some argue that this choice of fiscal instruments has reduced the economy's competitiveness, undermined private sector growth, increased imports, pressured the exchange rate, and contributed to inflationary pressures.

Moreover, the high share of rigid current spending in total government expenditure makes the budget vulnerable to sudden drops in mineral revenues driven by commodity cycles and external shocks, leading to rapid expansions of the deficit and public debt. Currently, the elevated level of public debt necessitates fiscal consolidation to reduce fiscal risks, including those arising from its composition dominated by foreign currency-denominated instruments.

The purpose of this paper is to estimate fiscal multipliers for Mongolia, which quantify the change in output relative to the baseline following an exogenous change in the fiscal deficit resulting from a change in revenue or spending policies. A fiscal multiplier greater than one indicates that a one-unit increase in government spending or a reduction in taxes leads to a more than proportional increase in GDP, while a multiplier less than one suggests a less than proportional response.

Applying a structural vector autoregression, the empirical results show that Mongolia’s total spending and revenue multipliers are below 1, peaking at 0.3 and -0.1, respectively. This low multiplier can be explained by import leakages in Mongolia. The capital spending multiplier peaks at 0.6 and remains more persistent than the current spending multiplier, suggesting that public investment is more effective in boosting output growth than current spending. Tax revenue and non-tax revenue multipliers peak at -0.1 and -0.2, respectively, and are short-lived. Revenue multipliers are broadly comparable in size, though their assessment is challenging due to the lack of significant tax policy measures in Mongolia.

The remainder of the paper is structured as follows. Section II presents the literature review. Sections III describes the empirical methodology. Section IV presents the data. Section V summarizes the estimation results. Section VI concludes.

II. Literature Review

There is a large empirical literature on fiscal multipliers, which shows that multipliers vary across country groups, types of fiscal instruments, and economic structure (Spilimbergo and others, 2009; Batini and others,

2012; Batini and others, 2014a; Batini and others, 2014b; Baunsgaard and others, 2014; Ilzetzki, 2011; Ilzetzki and others, 2013):

- **Country groups**. Advanced economies often have higher fiscal multipliers, since more developed financial markets and higher levels of consumer and investor confidence can amplify the effects of fiscal policy. In contrast, emerging economies may face constraints such as limited access to international capital markets, higher levels of public debt, and more significant external vulnerabilities, which can dampen fiscal multipliers.
- **Institutional quality**. The quality of institutions, including the efficiency of government spending and the effectiveness of tax collection, plays a crucial role. Advanced economies typically have stronger institutions that can implement fiscal policy more effectively, leading to larger multipliers. Emerging economies often struggle with issues like corruption, inefficiency, and weaker governance structures.
- **Openness of the economy**. Open economies are more integrated into global trade and financial markets and tend to have smaller fiscal multipliers. This is because a portion of the increased demand from fiscal stimulus leaks out through imports.
- **Fiscal instruments**. The impact of fiscal policy can also vary with its composition. Public investment typically has a higher multiplier than current spending, especially in emerging economies where infrastructure deficits are more significant. Tax cuts targeting low-income households tend to have higher multipliers due to their higher marginal propensity to consume.
- **State of the economy**. Multipliers tend to be higher during periods of economic slack when there are idle resources and higher unemployment. In advanced economies, where monetary policy may be constrained by the zero lower bound, fiscal policy can be particularly effective. In emerging economies, multipliers may also be higher during downturns, but structural issues can limit their effectiveness.

Comparing fiscal multipliers across studies is challenging due to variations in methodologies, the types of fiscal shocks analyzed, and the techniques used to identify those shocks. Nevertheless, Batini et al. (2014b) provide a survey of estimates from 26 developing countries, including commodity exporters and panel data studies. Their findings indicate an average fiscal multiplier of 0.41 for government spending and -0.26 for government revenue. However, these estimates vary significantly across countries, with standard deviations of 0.65 for government spending and 0.32 for government revenue. This suggests that country-specific characteristics listed above can have a big impact on the size of multipliers.

In Mongolia, the presence of a large public sector and a relatively stable exchange rate historically suggests that tax and public spending policies can have a notable effect on growth. However, the impact of fiscal policy on economic activity may be weakened by Mongolia's high degree of trade openness, underdeveloped financial markets, evolving institutions, and relatively high public debt.

Similar to our study, Erkhembayar and Enkhbayar (2017) employ a Blanchard-Perotti SVAR model to analyze fiscal multipliers in Mongolia using quarterly data over the 2000Q1-2016Q1 period. They find that expenditure multiplier is 0.5 on impact, while revenue multiplier is -0.6 on impact. Both multipliers gradually decline and become insignificant in later quarters. However, they do not assess multipliers for components of government spending and revenue.

Another study very similar to ours is Gantungalag and others (forthcoming). Using the Blanchard-Perotti SVAR on a quarterly series from 2000Q1 to 2022Q4, they find that the impact expenditure and revenue multipliers are 0.17 and 0.18 (unexpected sign), respectively, and they gradually decline to zero in later years. They also find

that the current spending multiplier (0.3) is lower than the capital spending multiplier (0.5). However, they do not report confidence intervals of their estimates.

III. Methodology

Our empirical assessment of fiscal multipliers for Mongolia is based on the estimation of a structural vector autoregression (SVAR) model. The endogeneity of fiscal policy and GDP is addressed by applying quarterly data, as in Blanchard and Perotti (2002), for tax revenues, government spending, and GDP.

The reduced form VAR model takes the following form:

$$X_t = \mu_0 + A(L)X_{t-1} + EXOG + u_t \quad (1)$$

where μ_0 is a constant, X is a vector of endogenous variables, $EXOG$ is a set of exogenous variables (quadratic time trend, seasonal dummies), $A(L)$ is a 4th-order lag polynomial, u_t is a vector of reduced-form disturbances with mean zero. In line with Blanchard and Perotti (2002), we use the following endogenous variables: real government total spending (G), real government total revenue (T), and real GDP (Y). All variables are transformed to real values using the GDP deflator. We use quarterly data from 2000Q1 to 2023Q4. G, T, and Y are seasonally smoothed by using 4 quarter rolling sums divided over four. We calculate y-o-y growth rates to make these variables stationary.

Structural form VAR model for a vector of endogenous variables $X_t=[G_t, T_t, Y_t]'$:

$$A_0X_t = A_0\mu_0 + A_0A(L)X_{t-1} + A_0EXOG + Be_t \quad (2)$$

where $Be_t = A_0u_t$ describes the relationship between the structural disturbances e_t (uncorrelated with each other) and the reduced-form disturbances u_t (correlated with each other). Need to impose restrictions on matrices A_0 and B to identify the structural model.

The Blanchard-Perotti approach relies on institutional information about tax and transfer systems and timing of tax collections to identify the automatic response of taxes and government spending on economic activity.

Following Blanchard and Perotti (2002), the relationship between reduced form (u) and structural (e) disturbances can be written as:

$$\begin{bmatrix} 1 & 0 & -\alpha_{GY} \\ 0 & 1 & -\alpha_{TY} \\ -\alpha_{YG} & -\alpha_{YT} & 1 \end{bmatrix} \begin{bmatrix} u_t^G \\ u_t^T \\ u_t^Y \end{bmatrix} = \begin{bmatrix} 1 & \beta_{GT} & 0 \\ \beta_{TG} & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix} \begin{bmatrix} e_t^G \\ e_t^T \\ e_t^Y \end{bmatrix} \quad (3)$$

This system of equations is not identified. The variance-covariance matrix of reduced-form disturbances has three distinct elements, whereas the system of equations contains six free parameters. Therefore, we need to impose three restrictions to achieve identification:

- Set α_{TY} to output elasticity of government revenue.

- Set α_{GY} – output elasticity of government spending – to 0, since government is unable to immediately adjust spending in response to economic shocks on a quarterly basis and assuming automatic stabilizers on the spending side are negligible.
- Set β_{GT} to 0, assuming that government decisions on spending are taken before decisions on revenue and the possible shortfall of spending relative to revenues is financed via fiscal deficit.[1]

Next, using the above assumptions on α_{TY} and α_{GY}, cyclically adjusted reduced form residuals, $\tilde{u}_t^G = u_t^G - \alpha_{GY} * u_t^Y = u_t^G$ and $\tilde{u}_t^T = u_t^T - \alpha_{TY} * u_t^Y$ are calculated. The cyclically adjusted reduced form residuals can be mutually correlated but are not correlated with e_t^Y, because both are linear functions of the other two structural errors (e_t^G and e_t^T). Hence, they can be used as instruments to estimate α_{YG} and α_{YT} from the last row of (3).

Finally, we estimate fiscal multipliers for government spending ($\Delta Y_{t+i}/\Delta G_t$) and revenue ($\Delta Y_{t+i}/\Delta T_t$), which show the effect of one real MNT increase in the respective fiscal variable on output in real MNT terms. Given that the endogenous variables used in estimations are measured in logarithms, the obtained impulse response functions (IRFs) are elasticities measuring the percentage change in output in response to one percentage point change in fiscal variables. To convert these elasticities to multiplier units, we need to correct IRFs by the average ratios of the respective fiscal variable and GDP. For example, in the case of the government spending IRF, the impact multiplier can be calculated as: $\Delta Y_{t+i}/\Delta G_t = \Delta y_{t+i}/\Delta g_t \, \bar{Y}/\bar{G}$, where lower case letters denote logarithms and superscripts denote sample averages of respective variables. We estimate multipliers for up to *16* periods or 4 years (*i=[0,…16]*).

In addition to total spending and total revenue, we also estimate multipliers for current and capital spending, as well as tax and non-tax revenue, by extending the model to a 4-variable SVAR:

- For current spending, the vector of endogenous variables becomes $X_t=[GC_t, T_t, Y_t, GK_t]'$, where *GC* stands for current spending, while *GK* stands for capital spending. The introduction of the fourth variable allows controlling for the residual component of total spending when shocking the current spending. The structural form of the model for first three variables remains unchanged, while for the fourth variable there are no restrictions imposed. Similarly, for capital spending the vector of endogenous variables becomes $X_t=[GK_t, T_t, Y_t, GC_t]'$.
- For tax revenues, the vector of endogenous variables becomes $X_t=[G_t, TT_t, Y_t, TN_t]'$, where *TT* stands for tax revenue, while *TN* stands for non-tax revenue. The introduction of the fourth variable allows controlling for the residual component of total revenues when shocking the tax revenues. The structural form of the model for first three variables remains unchanged, while for the fourth variable there are no restrictions imposed. Similarly, for non-tax revenues the vector of endogenous variables becomes $X_t=[G_t, TN_t, Y_t, TT_t]'$.

Finally, we also estimate multipliers for non-mining GDP by extending the model to a 4-variable SVAR. The vector of endogenous variables becomes $X_t=[G_t, T_t, YN_t, YM_t]'$, where *YN* stands for non-mining GDP, while *YM* stands for mining GDP. The introduction of the fourth variable allows controlling for mining GDP when assessing the impact on non-mining GDP. The structural form of the model for first three variables remains unchanged, while for the fourth variable there are no restrictions imposed.

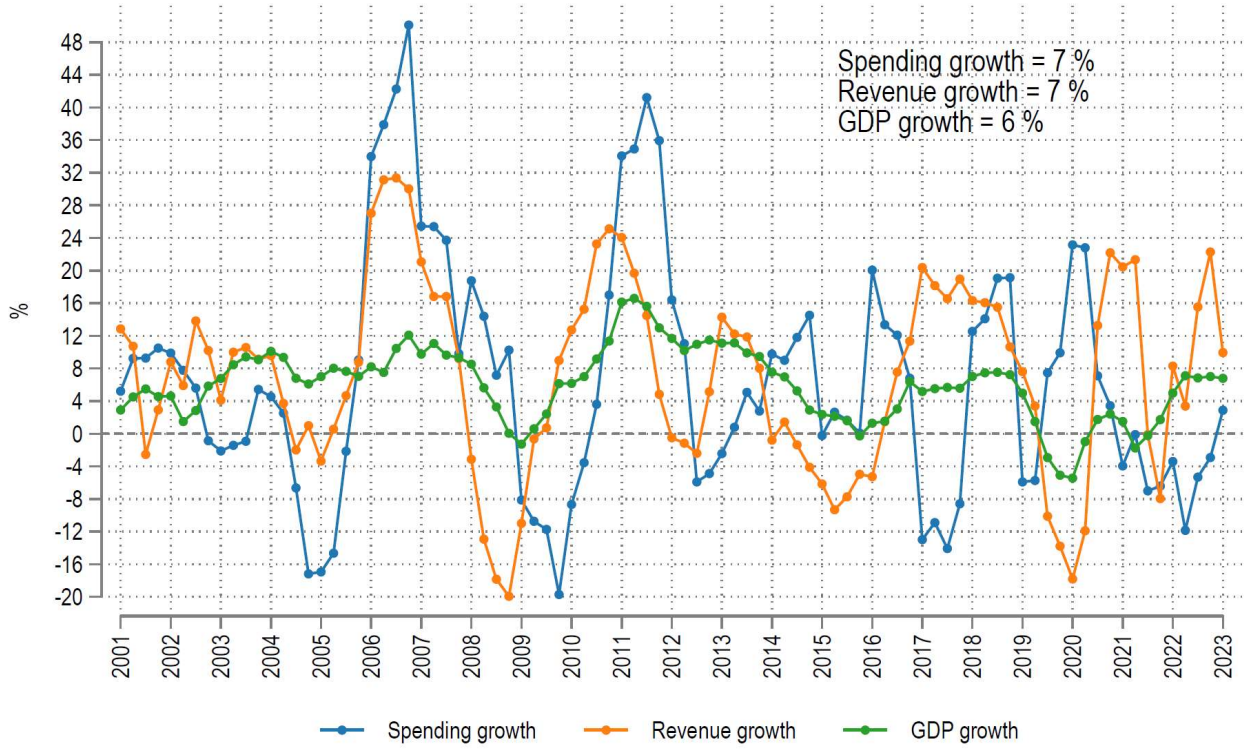
[1] The alternative assumption would be that government decisions on revenue taken before decisions on spending ($\beta_{TG} = 0$), but this is not realistic in the case of Mongolia given large development needs and persistent fiscal deficits historically.

IV. Data

As mentioned above, we use the following endogenous variables: real government total spending (*G*), real government total revenue (*T*), and real GDP (*Y*).

Figure 1 shows time series of y-o-y growth rates of these variables. Growth rates of government spending and revenue are correlated, especially in the pre-2014 period. There is also some correlation between growth rates of GDP and revenues, consistent with the work of automatic stabilizers on the revenue side. On average, spending and revenue growth rates are comparable at 7 percent. Growth of real GDP is slightly lower at 6 percent, suggesting that both spending and revenue have increased as a share of GDP over the sample.

Figure 1. Government Spending, Revenue, and GDP Growth (real, % y-o-y)



Source: NSO, IMF staff calculations.

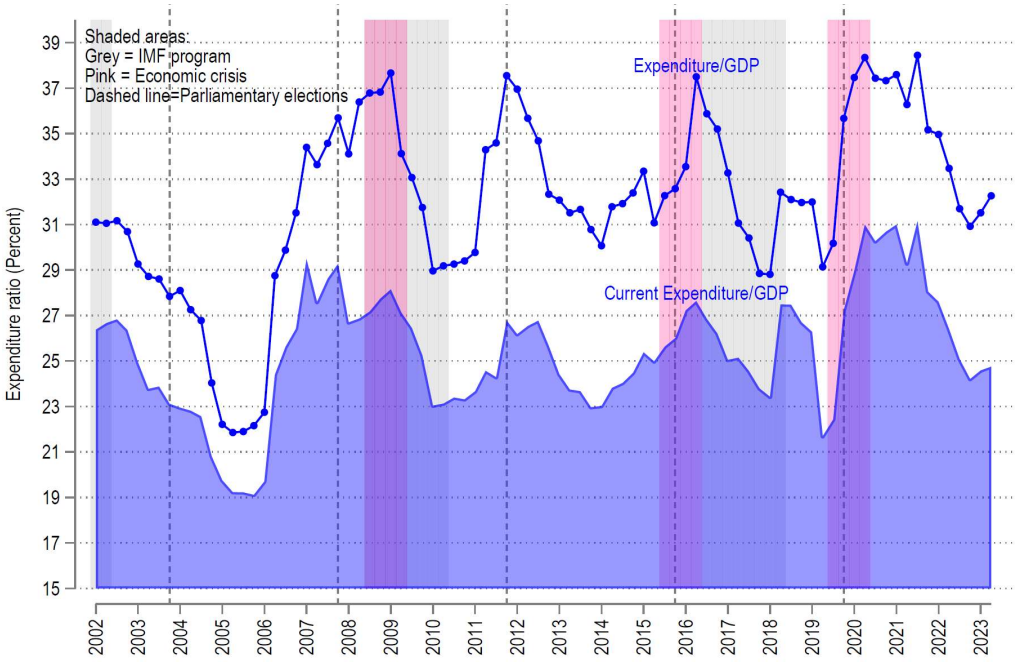
Figure 2 shows the ratio of government spending (Panel A) and revenue (Panel B) to GDP in the sample under consideration. The ratios fluctuate around an average over time, but some common patterns emerge.

- Spending ratio tends to spike ahead of parliamentary elections, indicating electoral budget cycles.
- Spending ratio tends to decrease and revenue ratio to increase during the IMF program periods, consistent with the fiscal adjustment needs associated with IMF programs.
- Spending ratio tends to increase and revenue ratio to decrease in periods of economic crises that usually precede IMF programs. The 2020 COVID-driven economic crisis had not led to an IMF program but led to an emergency support.

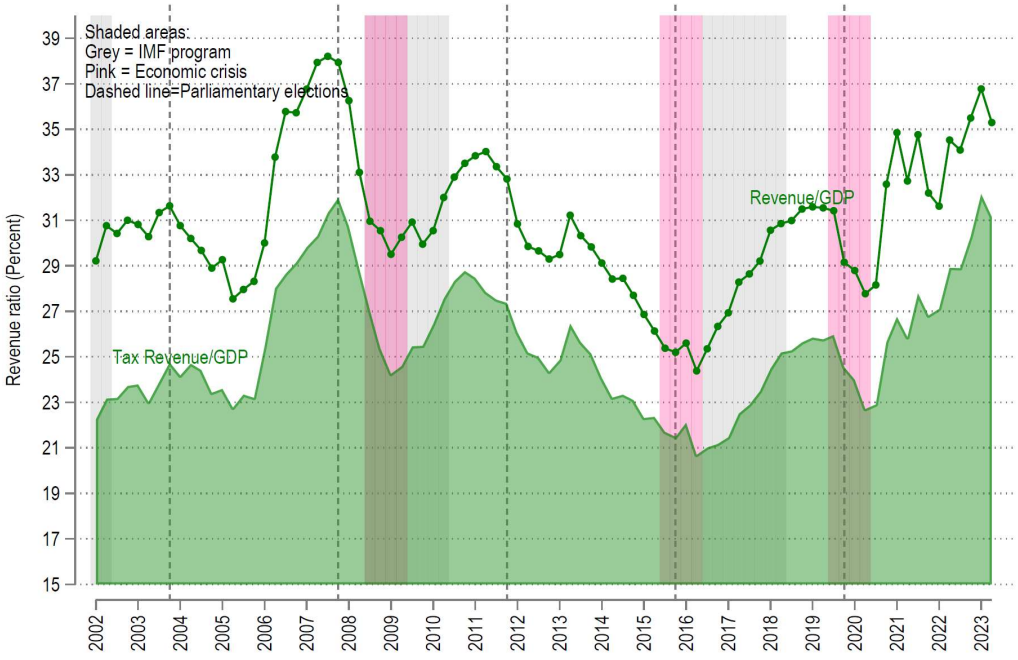
We also observe that total spending dynamics are mainly driven by current spending, with the share of capital spending in GDP remains broadly constant. Similarly, total revenues are largely influenced by tax revenues, while the share of non-tax (mostly mineral) revenues in GDP remains constant.

Figure 2. Evolution of Government Spending and Revenue

Panel A. Government Spending (percent of GDP)



Panel B. Government Revenue (percent of GDP)



Source: NSO, IMF staff calculations.

V. Estimation Results

In the baseline specification, we use data on total spending and tax revenues (see above). The predetermined reaction of revenues to GDP is proxied by the elasticity coefficient from the regression of revenues and GDP (both in logs) over the whole sample. The obtained coefficient (α_{TY} = 1.005) is half of the 2.08 number obtained by Blanchard and Perotti for the U.S. Furthermore, applying an instrumental variable regression for the third equation in system (2) we obtain coefficients α_{YT} =-0.08 and α_{YG} =0.23. Similar to Blanchard and Perotti, the elasticity of GDP to government revenue (spending) is negative (positive).

A. Aggregate Fiscal Variables

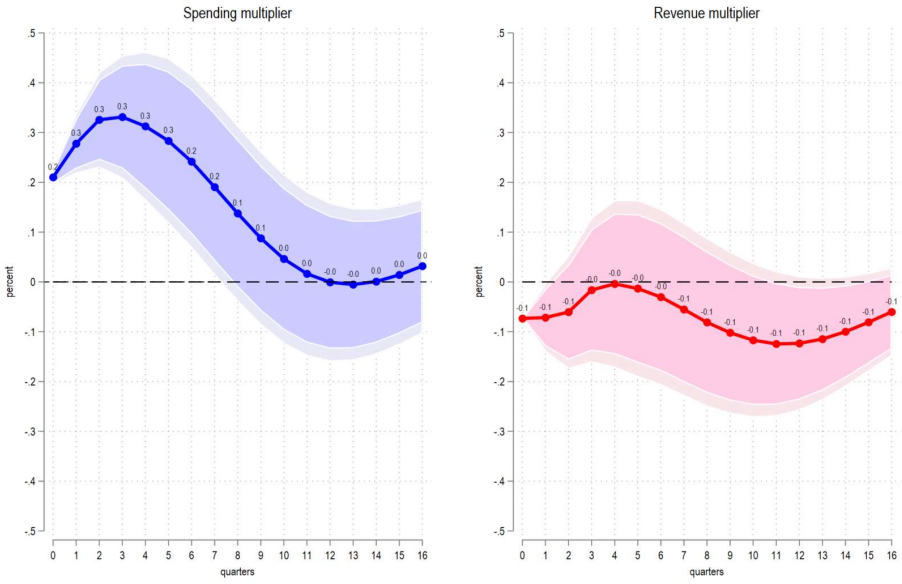
Using these coefficients, we estimated IRFs for the baseline model (Figure 3). The spending multiplier is 0.2 on impact and peaks at 0.3 within the first five quarters following the shock, which is close to the average spending multiplier of 0.41 surveyed for developing countries in Batini and others (2014b). It is also close to the 0.4 multiplier estimated using official development aid for developing countries by Kraay (2014) and the 0.37 multiplier estimated for a panel of open economies more recently by Sheremirov and Spirovska (2022). This suggests that for every real MNT increase in government spending, GDP increases only by 0.3 real MNT in the short term due to import leakages. The multiplier gradually diminishes and becomes statistically insignificant in subsequent quarters, suggesting that while government spending initially stimulates economic activity, the sustained impact diminishes over time.

The revenue multiplier is -0.1 on impact and remains at this level during the first two quarters following the shock, which is lower compared to the average revenue multiplier of -0.26 surveyed for developing countries in Batini and others (2014b). This suggests that for every real MNT decrease in revenue (such as from taxes or other government income), GDP increases by 0.1 real MNT initially. However, similar to spending multipliers, the effect becomes statistically insignificant after the second quarter, indicating limited sustained impact on economic activity from changes in overall revenue. Notably, the significance of revenue multipliers diminishes much sooner, lasting only two quarters, whereas expenditure multipliers remain significant for eight quarters. A smaller revenue multiplier is consistent with expectations, since spending has a direct impact on aggregate demand, while revenue has only an indirect impact.

Next, we include dummies for IMF programs, economic crises, and Parliamentary election years as exogenous variables (Figure 4). Inclusion of these dummies does not have a substantial impact on the size of fiscal multipliers.[2] Spending multiplier declines from 0.3 to 0.1 while revenue multiplier remains broadly unchanged. This suggests that in “normal” periods (no IMF program, no economic crisis, and no election year) spending multipliers are somewhat lower.

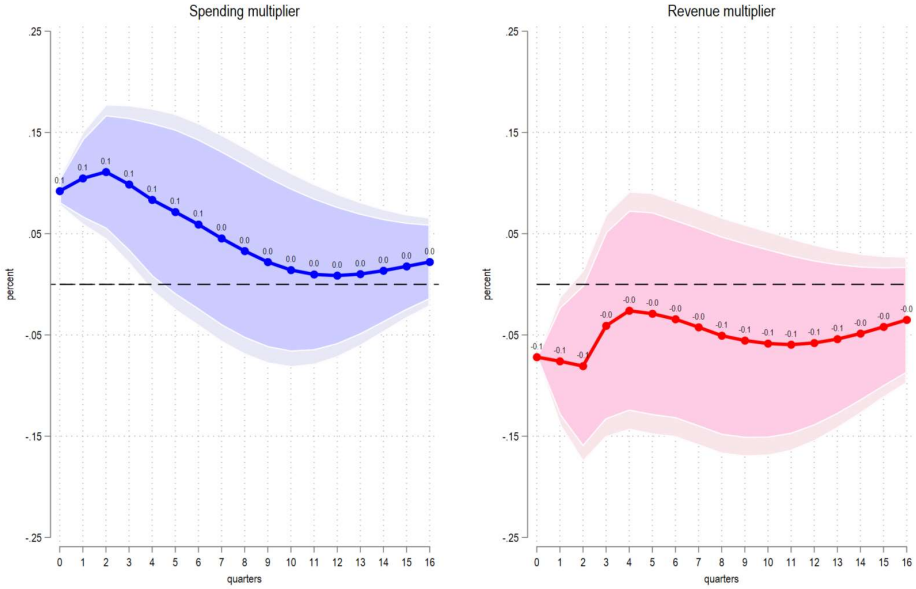
[2] We have also run regressions where these dummies were included separately. The results are broadly unchanged.

Figure 3. Baseline Spending and Revenue Multipliers



Source: NSO, IMF staff calculations.
Note: Reported are impulse response functions with 90-95 percent confidence bands (light and dark areas).

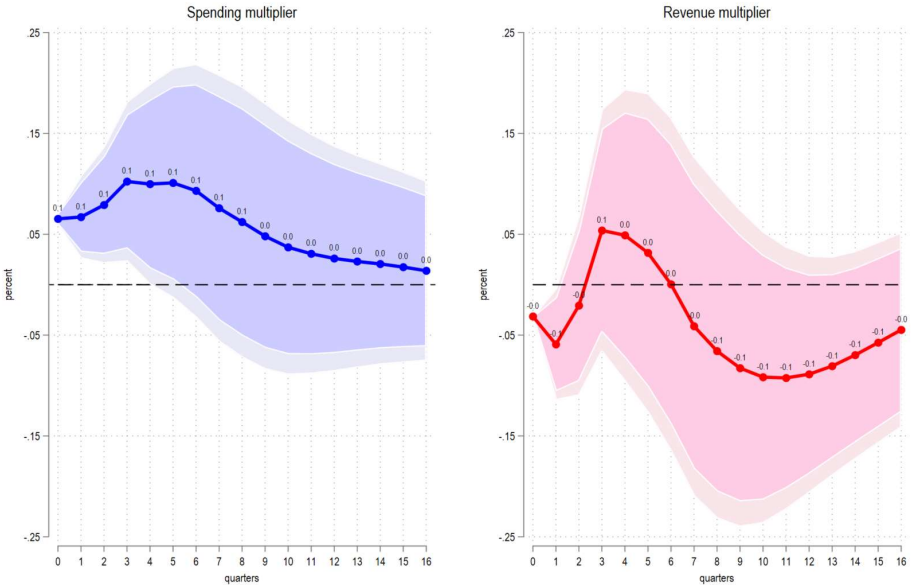
Figure 4. Spending and Revenue Multipliers, Controlling for IMF Programs, Economic Crises, and Parliamentary Elections



Source: NSO, IMF staff calculations.
Note: Reported are impulse response functions with 90-95 percent confidence bands (light and dark areas).

We also estimate separately fiscal multipliers for non-mining GDP (Figure 5). Using non-mining GDP, instead of total GDP, does not have a substantial impact on the size of fiscal multipliers. Spending multiplier declines from 0.3 to 0.1 while revenue multiplier remains broadly unchanged. This suggests that the impact of fiscal measures on total and non-mining GDP is broadly comparable.

Figure 5. Spending and Revenue Multipliers for Non-Mining GDP



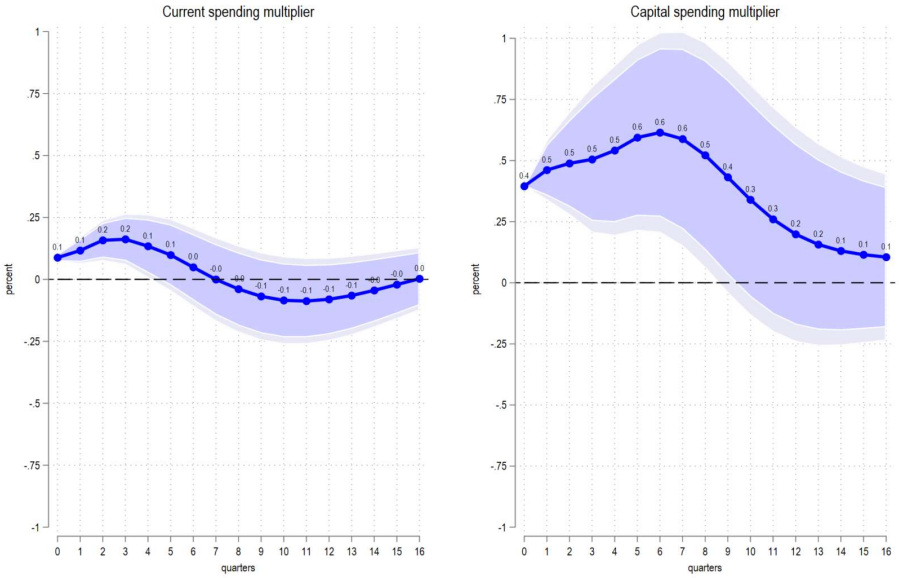
Source: NSO, IMF staff calculations.
Note: Reported are impulse response functions with 90-95 percent confidence bands (light and dark areas).

B. Disaggregated Fiscal Variables

The impact of fiscal policy can also vary based on the composition of revenue and expenditure measures. To evaluate the effects of specific fiscal actions, we estimate fiscal multipliers for disaggregated fiscal variables: current versus capital spending, and tax versus non-tax revenues.

Figure (6) presents results from disaggregated spending multipliers. The current spending multiplier is 0.1 on impact and remains at this level for 3 quarters following the shock, which suggests that immediate consumption and transfer payments, such as public wages and social assistance programs, provide a modest initial boost to GDP. On the other hand, the capital spending multiplier is 0.3 on impact and peaks at 0.6 in quarters 5-7, indicating that investments in infrastructure and long-term projects lead to a more substantial increase in economic output. Previous studies also found larger capital spending multipliers compared to current spending multipliers (see, e.g., Ilzetzki and others, 2013). Not only the capital spending multiplier is larger than the current spending multiplier, but it is also more persistent, suggesting that capital spending is more effective than current spending in boosting output growth. Nevertheless, both multipliers remail less than 1, suggesting that both current and capital spending stimulus leaks out through imports.

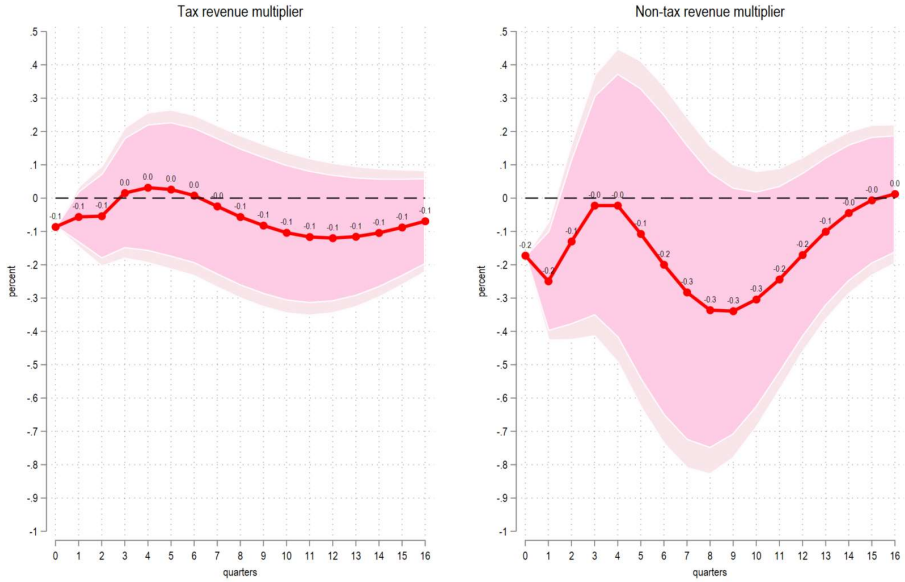
Figure 6. Disaggregated Spending Multipliers



Source: NSO, IMF staff calculations.
Note: Reported are impulse response functions with 90-95 percent confidence bands (light and dark areas).

Figure 7 presents the results from disaggregated revenue multipliers. The tax revenue multiplier is -0.1 on impact and becomes insignificant thereafter, while the non-tax revenue multiplier is -0.2 on impact and peaks in the first quarter before becoming insignificant from the second quarter onward. Overall, there is little difference between tax and non-tax multipliers. Additionally, tax policy measures were not frequently implemented in Mongolia, making the assessment of revenue multipliers challenging. Unfortunately, there is no data to differentiate between mining and non-mining revenues on a quarterly basis for the sample under consideration.

Figure 7. Disaggregated Revenue Multipliers



Source: NSO, IMF staff calculations.
Note: Reported are impulse response functions with 90-95 percent confidence bands (light and dark areas).

VI. Conclusions

Fiscal policy plays a pivotal role in shaping economic outcomes in Mongolia, particularly through government spending and taxation measures aimed at stimulating economic activity. This study has employed a structural vector autoregressive model to estimate fiscal multipliers, providing valuable insights into the effectiveness of fiscal policy instruments in the Mongolian context.

The analysis reveals that while total government spending initially boosts GDP with a multiplier peaking at 0.3, the effect diminishes over time. Current spending, primarily comprising public wages and social programs, shows a peak multiplier of 0.2 on impact, indicating a moderate short-term stimulus. In contrast, capital spending demonstrates a more robust impact, with a peak multiplier of 0.6, underscoring the significant role of infrastructure investment in sustaining economic growth.

On the revenue side, both tax and non-tax revenues exhibit limited short-term impacts. Tax revenue shows a modest multiplier of -0.1 on impact, reflecting the immediate contractionary effect of reduced tax income. Non-tax revenue, predominantly from mineral resources, peaks at -0.2 initially but fades quickly, highlighting challenges in leveraging natural resource revenues for sustained economic growth.

In terms of policy implications, the lower than unity multipliers suggest that fiscal policy is not so effective in boosting growth due to import leakages. Notably, low tax multipliers indicate that the recent initiatives to lower tax rates are unlikely to significantly boost economic growth and should be carefully evaluated. The relatively higher multiplier for capital spending suggests that capital spending cuts can be more harmful to growth than current spending cuts. Addressing structural weaknesses in revenue collection, such as improving tax compliance and reducing dependence on volatile non-tax revenues, is critical for enhancing fiscal sustainability. Given Mongolia’s high degree of trade openness and vulnerability to commodity price fluctuations, proactive measures to manage external shocks and diversify the economy are essential.

Future research could explore additional factors influencing fiscal multipliers in Mongolia, such as the governance frameworks, state dependence, coordination between monetary and fiscal policies, and external economic conditions.

References

Batini, N., Callegari, G., and Melina, G., 2012, "Successful Austerity in the United States, Europe and Japan," IMF Working Paper 12/190 (Washington: International Monetary Fund).

Batini, N., Eyraud, L., and Weber, A., 2014a, "A Simple Method to Compute Fiscal Multipliers," IMF Working Paper 14/93 (Washington: International Monetary Fund).

Batini, N., Eyraud, L., Forni, L., and Weber, A., 2014b, "Fiscal Multipliers: Size, Determinants, and Use in Macroeconomic Projections," Technical Guidance Note, Fiscal Affairs Department (Washington: International Monetary Fund).

Baunsgaard, T., Mineshima, A., Poplawski-Ribeiro, M., and Weber, A., 2014, "Fiscal Multipliers," in *Post-Crisis Fiscal Policy,* C. Cottarelli, P. Gerson, and A. Senhadji (eds.), MIT press.

Blanchard, O., and Perotti, R., 2002, "An Empirical Characterization of the Dynamic Effects of Changes in Government Spending and Taxes on Output," *Quarterly Journal of Economics*, 117: pp.1329-68.

Erkhembayar, B., and Enkhbayar, J., 2017, "Assessment of Fiscal Multipliers in Mongolia," *Money, Finance, and Wealth*, 2017/01 (in Mongolian)

Gantungalag, A., Dolgorsuren, D., and Bodiragchaa, B., 2025, "The Impact of Fiscal Multipliers on the Mongolian Economy" (in Mongolian, https://mof.gov.mn/article/entry/20250327002)

Ilzetzki, E., 2011, "Fiscal Policy and Debt Dynamics in Developing Countries," Policy Research Working Paper Series 5666 (Washington: The World Bank).

Ilzetzki, E., Mendoza, E., and Vegh, C., 2013, "How Big (Small) Are Fiscal Multipliers?" Journal of Monetary Economics, 60, pp. 239-54.

Kraay, S., 2014, "Government Spending Multipliers in Developing Countries: Evidence from Lending by Official Creditors," American Economic Journal: Macroeconomics, 6(4): pp. 107-208.

Sheremirov, V., and Spirovska, S., 2022, "Fiscal Multipliers in Advanced and Developing Countries: Evidence from Military Spending," Journal of Public Economics 208: 104631.

Spilimbergo, A., Symansky, S., and Schindler, M., 2009, "Fiscal Multipliers," IMF Staff Position Note, SPN/09/11, May (Washington: International Monetary Fund).

PUBLICATIONS

Fiscal Multipliers in Mongolia
Working Paper No. WP/2025/101