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ФІСКАЛЬНІ МУЛЬТИПЛІКАТОРИ В УКРАЇНІ

Фіскальна політика відіграє важливу стабілізуючу роль в економіці України. Сьогодні, навіть після недавнього падіння української гривні, фіскальна політика залишається ключем до економічної стабілізації. Зіткнувшись з оновленим кризою, бюджетне коригування має вирішальне значення для відновлення економічної довіри на тлі підвищеної невизначеності і геополітичних ризиків. Застосовуючи структурний вектор авторегресії, емпіричні результати показують, що в найближчій перспективі фіскальні мультиплікатори України значно нижче одного. Зокрема, мультиплікатори витрат впливу є -0,3 доходом від 0,4, відповідно. Це наводить на думку, що, якщо комбінація доходів і заходів по консолідації витрат ростуть, в короткостроковій перспективі незначний вплив на зростання буде скромним.

В Україні низька гнучкість обмінного курсу, це означає, що податкові і державні витрати можуть зробити істотний вплив на економічне зростання. Державні витрати і доходи більше в Україні більші в порівнянні з Європейськими країнами, які розвиваються. Проте, вплив фіскальної політики на економічну активність може бути ослаблене високим ступенем відкритості України до торгівлі, менш розвинених фінансових ринках, високим суверенним ризиком, і зростаючий державний борг.

Емпірична оцінка фінансових мультиплікаторів для України ґрунтується на оцінці моделі структурної векторної авторегресії (SVAR). Ендогенні фіскальної політики і ВВП вирішується шляхом застосування квартальних даних за період з 2001 року: Q1 до 2013: Q4 для податкових доходів, державних витрат і ВВП. Включення екзогенних змінних контролює зміни входу і виходу, пов'язані зі змінами в економічній відкритості, грошово-кредитної політики, а також боргового тягаря, а не зміни у фіскальній політиці (доходів або витрат). Як результат, розширена специфікація дозволяє підвищити точність доходів оцінки мультиплікатора витрат. Проте, ми також перевіряємо стійкість результатів, використовуючи специфікацію, яка виключає екзогенні змінні.

***Ключові слова*:** фіскалізація, мультиплікатори, економіка, капітал, борг, Україна.

Літ. 22.

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ФИСКАЛЬНЫЕ МУЛЬТИПЛИКАТОРЫ В УКРАИНЕ

Фискальная политика играет важную стабилизирующую роль в экономике Украины. Сегодня, даже после недавнего падения украинской гривны, фискальная политика остается ключом к экономической стабилизации. Столкнувшись с обновленным кризисом, бюджетное корректировки имеет решающее значение для восстановления экономического доверия на фоне повышенной неопределенности и геополитических рисков. Применяя структурный вектор авторегрессии, эмпирические результаты показывают, что в ближайшей перспективе фискальные мультипликаторы Украины значительно ниже одного. В частности, мультипликаторы расходов влияния является -0,3 доходом от 0,4 соответственно. Это наводит на мысль, что, если комбинация доходов и мероприятий по консолидации расходов растут, в краткосрочной перспективе незначительное влияние на рост будет скромным.

В Украине низкая гибкость обменного курса, это означает, что налоговые и государственные расходы могут оказать существенное влияние на экономический рост. Государственные расходы и доходы больше в Украине больше по сравнению с

европейскими странами, которые развиваются. Однако, влияние фискальной политики на экономическую активность может быть ослаблено высокой степенью открытости Украины к торговле, менее развитых финансовых рынках, высоким суверенным риском, и растущий государственный долг. Эмпирическая оценка финансовых мультипликаторов для Украины основывается на оценке модели структурной векторной авторегрессии (SVAR). Эндогенные фискальной политики и ВВП решается путем применения квартальных данных за период с 2001 года Q1 до 2013: Q4 для налоговых доходов, государственных расходов и ВВП.

Включение экзогенных переменных контролирует изменения входа и выхода, связанные с изменениями в экономической открытости, денежно-кредитной политики, а также долгового бремени, а не изменения в фискальной политике (доходов или расходов). Как результат, расширенная спецификация позволяет повысить точность доходов оценки мультипликатора расходов. Однако, мы также проверяем устойчивость результатов, используя спецификацию, которая исключает экзогенные переменные.

Ключевые слова: фискализация, мультипликаторы, экономика, капитал, долг, Украина.

Y. Aleskerova, V. Todosiychuk
FISCAL MULTIPLIERS IN UKRAINE

Fiscal policy plays an important stabilizing role in the Ukrainian economy. Today, even after the recent float of the Ukrainian hryvnia, fiscal policy remains key to economic stabilization. Faced with renewed crisis, durable fiscal adjustment is critical to restoring economic confidence amid heightened uncertainties and geopolitical risks. Applying a structural vector auto regression, the empirical results show that Ukraine's near term fiscal multipliers are well below one. Specifically, the impact revenueand spending multipliers are -0.3 and 0.4, respectively. This suggests that if a combination of revenue and spending consolidation measures were pursued, the near-term marginal impact on growth would be modest.

In Ukraine, low exchange rate flexibility observed until recently implies that tax and public spending policies may have a significant effect on growth. Public spending and revenues are larger than in most Emerging European economies. However, the impact of fiscal policy on economic activity could be weakened by Ukraine's high degree of trade openness, less developed financial markets, high sovereign risk, and growing public debt. This is the first study to estimate fiscal multipliers for Ukraine.

The empirical evaluation of fiscal multipliers for Ukraine 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 inBlanchard and Perotti (2002), over the period 2001:Q1 to 2013:Q4 for tax revenues, government spending, and GDP.

The assumption is that fiscal variables impact GDP contemporaneously but GDP impacts fiscal policy decisions with a lag.

Inclusion of these exogenous variables controls for changes inoutput related to changes in economic openness, monetary policy, and debt overhang, rather than changes in fiscal policy (revenue or expenditure shocks).As a result, the expanded specification helps increase the precision of revenue and expenditure multiplier estimates (Ilzetzki et al., 2010). Nevertheless, we also check the robustness of results using a specification that excludes the exogenous variables.

Keywords: fiscal, multipliers, economy, capital, debt, Ukraine**.**

Problem definition and its relationship with important scientific and practical tasks. Fiscal policy plays an important stabilizing role in the Ukrainian economy. Since the 2008-09 global crisis, which hit Ukraine particularly hard, the government relied on fiscal stimulus to support recovery. In reality, it was the main lever for macroeconomic management

given an effectively pegged exchange rate regime. Today, even after the recent float of the Ukrainian hryvnia, fiscal policy remains key to economic stabilization. Faced with renewed crisis, durable fiscal adjustment is critical to restoring economic confidence amid heightened uncertainties and geopolitical risks.

In this context, the effectiveness of fiscal policy instruments and their pace of implementation have been under debate. Over the past five years, the government relied on real public wage and pension hikes to stimulate economic activity, sometimes at the expense of public infrastructure spending. Many argue that this choice of fiscal instruments undermined private sector growth and contributed to the economy falling back into recession in mid-2012. Currently, the severe crisis, its toll on tax revenues, and financing constraints, necessitate fiscal consolidation. But the challenge is to minimize its negative impact on growth. Will tax hikes or spending cuts harm growth more? Does capital or current spending have a stronger impact on economic activity? Despite their operational importance for policymakers, little work has been done to compare the economic impact of Ukraine's public policy choices across tax measures and government spending, as well as lags in fiscal policy transmission. Its quantification isfrequently referred to as the fiscal multiplier – the change in output, relative to baseline, following an exogenous change in the fiscal deficit that stems from a change in revenue or spending policies.

This is the first study to estimate fiscal multipliers for Ukraine. Applying a structural vector auto regression, the empirical results show that Ukraine's near term fiscal multipliers are well below one. Specifically, the impact revenueand spending multipliers are -0.3 and 0.4, respectively. This suggests that if a combination of revenue and spending consolidation measures were pursued, the near-term marginal impact on growth would be modest.

Over the medium-term, the revenue multiplier becomes insignificant, rendering it impossible to draw any conclusions on its strength. The spending multiplier strengthens to 1.4, with about the same impact from capital and current spending. However, the impact of the capital multiplier lasts longer. Against this backdrop, the adverse impact of fiscal consolidation on medium-term growth could be minimized by cutting current spending while raising that on capital.

Section II provides some background on fiscal multipliers. The methodology and data are discussed in Sections III and IV. Estimation results in Section V follow and section VI concludes. Given the severe challenges facing the Ukrainian economy, it is important that policymakers apply these results in conjunction with broader considerations –including public debt sustainability, investor confidence, credibility of government policies, public spending efficiency. These considerations combined with the large size of current spending in the budget, may necessitate larger near- and long-term current spending cuts than what multiplier estimates suggest.

Analysis of recent research and publications. Current problems regardingensuring the implementation of fiscal policy, widely reflected in scientific works of famous scientists, economists, financiers Marahovska T.M.[2], Auerbach, A. [1], Gorodnichenko, Y.[1], Ilzetski, E.[13], Ponomarenko A. [19], Vlasov S.[19], Šimović, H.[20] and others.

Paying tribute to these scientific developments should be noted that some of the formation and implementation of current fiscal Ukraine remain relevant and require continuation of theoretical studies supplement their analysis of the practical aspects of the national economy as fiscal instruments is a key factor in addressing obtained in lower revenues state budgets and their uneven distribution.

Formulation purposes of Article. The article is a comprehensive research of theoretical and practical aspects of the formation and implementation of current fiscal multipliers Ukraine.Today difficult situation prevailing in the budgets of local taxes and fees, which are the main source of income. According to the Budget Code of Ukraine clearly defined list of revenues to local budgets, which allowed local authorities to develop long-term plans for fiscal and tax

policies, define the strategic objectives of socio-economic development, improve the level of population.

The main material articles justification of scientific results. Fiscal consolidation measures are considered to have a large impact on growth when the spending multiplier or the revenue multiplier (in absolute value) exceeds one. A spending multiplier greater than one indicates that public spending cuts harm economic activity and produce a reduction in output larger than the initial drop in public spending. Similarly, a revenue multiplier less than -1 implies that raising one unit of taxes causes a decline in economic activity of more than one unit. A spending multiplier less than one, or even negative, reflects a reversal of the initial decline in aggregate demand due to confidence effects, the crowding-in of productive private sector activities, and reduced leakage through imports.

Distortions in private investment in centives, households' anticipation of future tax declines (or spending increases), or changes in inflation and imports caused by a change in tax policy could result in revenue multipliers that are larger than -1 and even positive in some cases.

Most of the literature focuses on advanced economies with very few studies on emerging economies. Baunsgaard and others (2014) provide a comprehensive literature review on fiscal multipliers in advanced economies based on 37 studies including both model-based and vector autoregressive (VAR) approaches. They show spending multipliers ranging between 0 and 2 and revenue multipliers between -1.5 to 1.4 during the first year after fiscal measures have been taken. Both spending and revenue multipliers are generally found to be lower in emerging economies [12]. This is likely due to their less developed financial markets and higher sovereign risk premia resulting in a stronger effect of fiscal policy on interest rates, which partly offsets the impact of the initial fiscal measures.

Despite an extensive literature, there is still no consensus regarding the size of fiscal multipliers. They tend to be smaller in more open economies and countries with larger automatic stabilizers, but vary widely across countries. Spilimbergo etal. (2009) find that inadvanced economies government consumption spending multipliers are larger than revenue multipliers, and in the long-term, smaller than capital spending multipliers. In contrast, emerging economies' revenue multipliers seem to be larger than spending multipliers [12.13]. The low spending multiplier could reflect concerns that, once implemented, spending measures (especially expansionary ones) are difficult to reverse. In some studies, it may also be due to the estimation of only one spending multiplier, instead of separately estimating the government consumption spending multiplier – which could be negative – and the government capital spending multiplier. Recently, several studies havealso found that multipliers are significantly larger when the economy is in recession thanin expansion [1].

In Ukraine, low exchange rate flexibility observed until recently implies that tax and public spending policies may have a significant effect on growth. Public spending and revenues are larger than in most Emerging European economies. However, the impact of fiscal policy on economic activity could be weakened by Ukraine's high degree of trade openness, less developed financial markets, high sovereign risk, and growing public debt.

Currently, public debt is projected to approach almost 70 percent by end-2014 and decline only gradually from 2016. But these projections are subjectto considerable upside risks (IMF 2014). More broadly, fiscal multipliers are one of many tools policymakers should use to guide their decisions. Given the severe challenges facing the Ukrainian economy – including public debt sustainability, low investor confidence, and subsequent limited availability of financing – it may be necessary for policymakers to undertake stark consolidation efforts across both revenues and expenditures, despite the adverse consequences for growth. For example, the rapid erosion of potential output may necessitatelarge increases in capital spending, which cannot be financed by revenue policies alone. If fiscalconsolidation is to take place insuch an environment, cuts in current spending may be warranted regardless

ofthe size of its multiplier – especially where current spending is a sizeable portion of the budget. [7]

Ukraine's impressive fiscal consolidation in 2015 will prove unsustainable in the coming years. The budget deficit narrowed to 1.4% of GDP in 2015, significantly lower than the original target of 3.7%, due to a combination of above forecast revenue growth and IMF-mandated expenditure restraint. Higher than forecasted inflation and a one-year import surcharge sharply increased government receipts (43.0% y-o-y), while lower global gas prices and higher tariffs reduced government spending on energy subsides. However, this deficit consolidation will not be sustainable in 2016, as various new measures including a cut to the employer's social contribution tax (from 44.60% to 22.0%) and suspension of the import surcharges will reinforce fiscal pressures. Accordingly, we expect the government's budget deficit to widen to -3.6% in 2016 and -3.0% in 2017. [3]

Notwithstanding this budgetary slippage , we believe that IMF support and recent reform efforts will make the country's public finances more sustainable in the long term . The decisive factor in this regard is the resurgent reform momentum under the new Groysman government. As its first official act, the government passed household gas price reform which had been stalled under the previous government. This reform will equate household gas prices with the import price of gas by 2017, and hence cut back on government energy price subsidies (10% of GDP in 2015). Additionally, we expect the government to introduce a three tier pension scheme by the end of 2016, which will be crucial for the long-term sustainability of Ukrainian finances as state pension expenditure currently accounts for 13.4% of GDP.

The empirical evaluation of fiscal multipliers for Ukraine 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 inBlanchard and Perotti (2002), over the period 2001:Q1 to 2013:Q4 for tax revenues, government spending, and GDP.

The assumption is that fiscal variables impact GDP contemporaneously but GDP impacts fiscal policy decisions with a lag.

Similar to Blanchard and Perotti (2002), the endogenous variables (government spending, government revenue, and GDP) are assumed to havea deterministic trend and are cointegrated. We use both aggregate fiscal variables and their components (current versus capital spending, and direct versus indirect taxes). The unrestricted VAR is estimated using the logarithm of variables detrended from their linear and quadratic trends. We also include quarterly seasonal dummies as part of the exogenous variables, Z.

Following previous studies on emerging markets, other exogenous variables include:

*Current account balance-to-GDP ratio. This variable captures net international trade interactions of the economy. An improved (worsened) current account deficit driven by a lower (higher) propensity to import tends to increase (reduce) fiscal multipliers, because the demand leakage though imports are less (more) pronounced [13].

* Money supply (real M2). This variable captures the monetary policy stance. Expansionary monetary policy (increase in money supply) can cushion the impact of fiscal contraction on demand. In periods when the se of monetary policy is impaired by exchange rate stabilization objectives, fiscal multipliers can potentially be larger (WEO, 2010).

*General government debt-to-GDP ratio. This variable captures the credibility of fiscal consolidation. Fiscal multipliers tend to be lower in periods of high debt, as fiscal consolidation is likely to have positive redibility and confidence effects on private demand and the interest rate risk premium[13]. Nickel and Tudyka (2014) also show that prevailing confidence and public indebtedness are important underlying factors affecting the multiplier.

Inclusion of these exogenous variables controls for changes inoutput related to changes in economic openness, monetary policy, and debt overhang, rather than changes in fiscal policy (revenue or expenditure shocks).As a result, the expanded specification helps increase the precision of revenue and expenditure multiplier estimates (Ilzetzki et al., 2010).

Nevertheless, we also check the robustness of results using a specification that excludes the exogenous variables.

The findings of this study. In Ukraine, fiscal policy is an important instrument for acroeconomic stabilization. In the midst of the current severe crisis, durable fiscal adjustment can help restore economic confidence and rebuild buffers. But its impact on growth is frequently debated. In particular, how effective are revenue versus spending instruments? Does current or capital spending have a larger impact? A solid grasp of the effect of various government policies on the Ukrainian economy will contribute towards the resolution of these questions and help shape fiscal policy going forward [2,3].

The analysis in this paper finds that fiscalconsolidation pursued through a combination of revenue and spending measures would have a modest near-term impact on growth. Meanwhile, over the medium-term, adverse effects on growth from cuts in current spending could usefully be offset by higher spending on well-targeted growth promoting public capital, such as infrastructure. The effectiveness of such policies,of course, relies on a variety of other factors such as the quality, and efficiencyof public investment spending.

These conclusions reflect estimations based on a SVAR model, where Ukraine's near term fiscal multipliers are well below one. The impact revenue and spending multipliers are -0.3 and 0.4, respectively. Over the medium-term, the revenue multiplier becomes insignificant with a wide confidence interval, ranging from above 1 to below -4. This makes it difficult to predict whether revenue measures will have a small or large impact on growth. As such it is not possible to draw any conclusions on the medium-term impact of revenue measures. The spending multiplier, however, strengthens to above 1. The effect of capital and current spending multipliers are about equal, although changes in capital spending have a longer lasting impact.

Prospects for further research.Given the severe challenges facing the Ukrainian economy, it is important that policymakers apply these results in conjunction with broader considerations. Some key ones include the need to maintain public debt sustainability, improve investor confidence, and enhance credibility of government policies. These considerations, combined with the large size of current spending in the budget, may necessitate greater reliance on current spending cuts over other types of consolidation measures even though multiplier estimates suggest a more diverse combination of measures.

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