

MONETARY – FISCAL POLICY COORDINATION AND ECONOMIC GROWTH IN THE REPUBLIC OF MOLDOVA

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Abstract: This study analyzes the coordination of fiscal and monetary policy in the Republic of Moldova to maintain financial stability and promote sustainable economic growth. Since the 1960s, there has been a continuous debate about the appropriate policy mix to achieve economic goals such as high employment and low inflation. It is well known that changes in aggregate demand and supply can lead to fluctuations in production and employment. As a result, monetary and fiscal policymakers can address these fluctuations using the instruments at their disposal to stabilize the economy. After the pandemic crisis, the monetary authority made a considerable contribution to bringing inflation close to its target, maintaining price stability and safeguarding people's purchasing power. The analysis applies annual macroeconomic data, a correlation matrix, Ordinary Least Squares (OLS) models with Autoregressive Distributed Lag (ARDL), and trend analysis on monetary policy variables (broad money, lending rates, exchange rates) and fiscal policy variables (government expenditure, tax revenue) over the period 1991-2024. These empirical results indicate that the fiscal ARDL model provides the highest explanatory power, while tax revenue ($\beta \approx 1.2151$, $p\text{-value} < 0.0014$) depicts a positive and statistically significant relationship with GDP growth. Prior to estimation, Augmented Dickey-Fuller (ADF) tests were conducted to check stationarity, and Variance Inflation Factor (VIF) diagnostics were used to assess multicollinearity. The results highlight the importance of efficient tax administration and fiscal capacity. Policy coordination would improve the government's ability to respond to economic fluctuations and support sustainable long-term growth.

Keywords: policy coordination, economic growth, automatic stabilizers, fiscal policy, monetary policy.

JEL Code: E52, E62, G18, I28, F43, O42

UDC: [338.23:336.74+336.22]:338.1(478)

Introduction

Over the last few decades, financial stability has received considerable attention from financial institutions, politicians, and the public in general; similarly, attention has focused on concerns about economic slowdowns that have occurred in almost every part of the world. To ensure sustainable economic growth and development, numerous statistical studies have found a strong association between macroeconomic stability and these outcomes. Financial stability is important for the development of the private sector and growth. Without financial stability, there would be lower domestic and foreign investment, resource misallocation, and no capital inflow. In fact, econometric evidence shows a positive correlation between financial stability and economic growth.

Sources of macroeconomic instability can include external shocks. Therefore, it is essential for any economy to consider the following elements in order to maintain macroeconomic stability: (1) low and stable inflation, (2) debt sustainability, (3) appropriate exchange rate policies, (4) sufficient international reserves, and (4) policy credibility.

This study's objective is to evaluate the relationship between monetary policy, fiscal policy, and economic growth in Moldova over the period 1991-2024. The research aims to

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identify which channels are more closely linked to economic growth, highlighting the importance of macroeconomic policy coordination while maintaining financial stability.

Monetary policy represents measures or a set of instruments designed by the monetary authorities to regulate the value, supply, and cost of money – central banks make money cheaper at a particular point in time, depending on the conditions of the economy. Besides its primary objective of price stability, monetary policy also aims to enhance economic growth and financial stability.

Fiscal policy is the process by which the government uses public expenditure, debt, taxation, and other revenues to influence economic activity and to achieve national goals or objectives such as price stability, full employment, economic growth, and balance-of-payments equilibrium. Neutral public financial fiscal policies are implemented when the economy is neither in recession nor in a boom period, and the budget is approximately balanced, so there is no significant change that might influence the level of economic activity. Expansionary public financial policies mean that public expenditure exceeds public revenue and involve a higher budget deficit, usually adopted during periods of economic recession. Contractionary public financial policies imply a smaller budget deficit, with public expenditure lower than tax revenue.

Fiscal policy and monetary policy aim to achieve macroeconomic objectives. The IS/LM model is one of the models used to depict the effect of policy interactions on aggregate output and interest rates. These two policies are complementary, or act as substitutes for each other, for achieving macroeconomic goals; if the fiscal authority raises taxes or cuts spending, then the monetary authority should tighten monetary conditions.

A stable and predictable economic environment contributes substantially to social and economic welfare. In addition, in the short run, households prefer economic stability and stable incomes that allow them to maintain the same consumption over time; in the long run, unnecessary economic fluctuations can reduce growth.

The debate between Keynesians and monetarists often focused on the effectiveness of policy instruments. According to Friedman's view, given the limited knowledge available about the economic system, it is too difficult to address short-run fluctuations; the economic system is ultimately self-stabilizing. Given that fiscal policy can sometimes limit the central bank's decision-making, making it difficult to stabilize the price level, some economists have expressed different views on the roles of fiscal and monetary policies in an economy's stabilization process.

Fiscal policy operates through the so-called “*automatic fiscal stabilizers*” to sustain aggregate demand during economic downturns and to moderate economic activity during periods of strong growth. Automatic stabilizers' operations consist of changes in fiscal policy that stimulate aggregate demand when the economy goes into a recession, and usually do not require any short-term decisions or deliberate action by policymakers; the size of tax collections and transfer payments is directly linked to the cyclical position of the economy. Automatic stabilizers have different features, but the most important is that they operate symmetrically over the economic cycle, moderating overheating during booms and

supporting economic activity during downturns. When the economy goes into a recession, the amount of taxes collected by the government falls automatically, because personal income tax depends on households' income, the payroll tax depends on workers' earnings and the corporate income tax depends on firms' profits, as a result the government's tax revenue falls as well, people and firms pay less tax automatically, even though tax rates stay the same. This "automatic tax cut," which means lower tax payments caused by lower income, not by new government policy, means a decrease in aggregate demand, softens the recession, and reduces the magnitude of economic fluctuations. Another advantage of automatic stabilizers, especially when the economy goes into a recession, is government Social Security spending for laid-off workers. The unemployment insurance benefits, welfare benefits, and other forms of income support tend to increase, and this automatic rise in government spending stimulates aggregate demand (van den Noord, 2000) precisely when aggregate demand is insufficient to maintain full employment. Similarly, arguments have been tested empirically by van den Noord (2000), who measured the automatic stabilizer using the unemployment benefit (UB) in reducing cyclical volatility in the 1990s.

The unemployment insurance (UI) system was introduced in many countries during the 1930s, especially in the United States as part of the New Deal, following the Great Depression. Economists who advocated this policy did so not only for social protection but also, in part, because of its stabilizing power.

There is another tool of fiscal policy that can ensure macroeconomic stabilization in the short run, usually referred to as "*discretionary fiscal policy-making*", whereby governments actively adjust spending or taxes in response to changes in economic activity. Compared with automatic stabilizers, discretionary policies can undermine the health of budgetary positions, as governments find it easier to cut taxes and raise spending during periods of low growth, with a negative effect on long-run economic growth, since high taxes reduce incentives to work, invest, and innovate. Another drawback of discretionary fiscal policy is that tax changes usually go through an approval process (must be adopted by Parliament), and their implementation typically lags budget-setting processes. Most economists agree that implementation lags reduce policy effectiveness, and believe the economy would be more stable if policymakers avoided them. Therefore, discretionary fiscal policies aimed at aggregate demand management have tended to be pro-cyclical, thereby destabilizing the economy. They often become effective only after cyclical conditions have already reversed, increasing the macroeconomic fluctuations.

The purpose of this study is to test the following hypothesis for the Republic of Moldova economy:

H₁: Are fiscal or monetary policy variables statistically significant in the relationship with economic growth?

H₂: What are the effects of macroeconomic policy in static and dynamic (lagged) econometric specification?

Literature Review

In the literature, there is no consensus on the relative power of fiscal and monetary policy to affect economic growth; some researchers advocate for monetary policy (Batten & Hafer, 1983; Elliot, 2009), while others consider fiscal policy to have a greater impact on economic growth (Olaloye & Ikhide, 1995).

The relevance of fiscal and monetary policy roles began in the 1980s, with a focus on the relationship between monetary and fiscal authorities. Sargent and Wallace (1981) argued that both authorities are relevant and specific in a way: the measures taken in either area inevitably depend on those of the other (Wyplosz, 1999). Providing a policy mix variant can be favorable for the country's economic activity because, without efficient policy coordination, it can create financial instability, leading to high interest rates, exchange rate pressures, rapid inflation, and negative effects on economic growth. Afonso et al. (2019) provide further evidence that when the government has excessive public debt or a budget deficit, this lack of fiscal discipline limits the effectiveness of the central bank rule. Alternatively, when the government increases spending through public investment, it can lead to a rise in the inflation rate; in response, the central bank, which is responsible for safeguarding price stability, may tighten monetary policy if fiscal policy is too accommodative. Therefore, many studies emphasize the importance of long-term commitment to price stability as an objective of government and monetary authorities' macroeconomic policy to improve government discipline and monetary policy performance. In addition, it contributes to better budgetary results and sustainable economic growth in a context of price stability and viable external accounts.

To accelerate sustainable economic growth, Bokreta and Benanaya (2016) argue that fiscal policy has a stronger impact than monetary policy, particularly government expenditure, which has a positive effect. While the tax rate was negative, inflation had minimal impact on economic growth.

In Nigeria, for example, some studies concluded that monetary policy was more effective than fiscal policy. The authors concluded that monetary policy is more effective and achieves the desired goals when fiscal discipline is imposed in public finance, and there are no fiscal imbalances. Adegioriola (2018) has also examined the effectiveness of monetary and fiscal policy instruments, and findings indicated that fiscal policy is more effective than monetary policy. The study indicated a positive relationship between the money supply, government expenditure, and revenue, while the interest rate and the budget deficit were negatively related to economic growth. A similar conclusion was reached by Ehikioya, Uduh, and Edeme (2018) when they investigated the impact of fiscal and monetary policies on SME growth, and the coefficients indicated that fiscal policy was more effective and efficient than monetary policy in promoting SMEs' output growth. Sanni, Amusa, and Agbeyangi (2012) found that neither policy is superior to the other. Falade and Folorunso (2015) examined the same set of policy instruments to determine the appropriate policy mix that may enhance economic growth. The paper presented an appropriate policy instrument

mix for promoting economic growth in the short and long run, comprising current levels of government revenue, the money supply, the exchange rate, and the domestic interest rate. The study by Uzoamaka, Emmanuel, and Awa (2019) concluded that the monetary policy rate and fiscal policy, proxied by government recurrent expenditure, had not significantly affected economic growth. The results of Medee and Nenbee (2011) on the effect of fiscal policy on economic growth showed that government expenditure has not significantly affected economic growth, whereas increases in capital inflows have.

Hussain (1982) and Chowdhury (1986) identified that both fiscal and monetary policy variables are significant in all regression equations. However, they concluded that changes in government expenditures exert a broader and more predictable impact on the economies of Pakistan and Bangladesh than changes in the money stock or the monetary base.

Jalles (2024) investigated variation in countercyclicality across countries, explaining the differences between discretionary fiscal policy and automatic stabilizers in emerging market and developing economies. Their results indicate that the countercyclicality of fiscal policy has increased in recent years, especially in emerging market economies, and that social benefits represent the countercyclical component of fiscal policy, operating through expenditure. Jalles (2024), Brandao-Marques (2020), and Renzhi & Beirne (2024) pointed out that in the case of emerging and developing economies (EMDEs), the monetary and fiscal policy framework, in order to strengthen the transmission mechanism, the most important is financial development, among other characteristics such as government size, institutional quality, financial dollarization, trade openness, or capital flow.

An interesting case study was conducted by Afonso (2024), using panel data analysis of 28 European Union (EU) countries and empirically analyzing the interaction between monetary and fiscal policy in the EU. Moreover, the author split the countries into two subgroups: euro-area countries (member countries that adopted the euro as their currency) and non-euro-area countries (those that still maintain their national currency). Hence, for non-euro-area countries, there is a statistically significant relationship between the monetary reaction function and the output gap. If the output gap (as an independent variable) increases, the short-term nominal interest rate rises. This demonstrates that monetary policy has a strong role in influencing the business cycle and ensuring sustainable economic growth. In contrast, government fiscal policy is more responsible for the sustainability of public debt.

Cevik (2014) examined the interactions between fiscal and monetary policy rules in transition and emerging European economies; for example, in Estonia, monetary and fiscal policy were passive, and on the eve of transition, in 1997-98, fiscal policy became active. In Hungary, the policy mix was expansionary in 2007-2009, while Slovenia and the Slovak Republic generally followed a passive monetary policy.

The results of Simorangkir and Adamanti (2010), however, showed that the combination of fiscal and monetary expansion drives economic growth in Indonesia. Similarly, the results of Mahmood and Sial (2011) showed that monetary and fiscal policies play a significant role in Pakistan's economic growth.

Lora and Montiel (2010) found that exchange rate movements, among other factors, explain inflation in Argentina, Brazil, and Israel, and other studies have found similar conclusions: Kamin (2010) for the United States, Nnanna (2002) for Nigeria, and Lu and Zhang (2003) for China.

The review of existing literature from developed countries indicates general support for monetary policy over fiscal policy, while the consensus is that there should be a mix of policies in developed countries to ensure macroeconomic stability and ultimately economic growth. However, the issue of a suitable policy mix, as many authors have suggested, remains unaddressed. Ibrahimov et al. (2019) examined stable growth across 7 European countries (Latvia, Lithuania, Moldova, Poland, Ukraine, Georgia, and Belarus) that had similar economic situations at the time of independence. The authors found that the global macroeconomic stability index is statistically significant, meaning that a 1% increase in the index is associated with a 0.0148% increase in GDP growth. This pattern applies to Moldova as well. Therefore, current studies fill the gap by examining the appropriate policy that has significant leverage to determine economic growth, independent of global fluctuations.

Methodology

In the context of this study, it is essential to establish the importance of both fiscal and monetary policy for economic stabilization. Hence, it is necessary to consider a proper balance and suitable coordination of policy measures. The study examines the impact of monetary and fiscal policy on economic growth in the Republic of Moldova, using time-series data from the National Bank of Moldova, the World Bank, and the National Bureau of Statistics, covering the sample period from 1991 to 2024. Correlation matrices, simple linear regression, and trend analysis are applied to variables such as broad money supply, exchange rate, and interest rate, which indicate the monetary policy side, and to government expenditure and tax revenue, which represent tools of fiscal policy. GDP growth data are used as the dependent variable. To describe the relationship between the independent and dependent variables, a simple regression coefficient has been used. Moreover, this analysis seeks to identify a positive and significant impact on economic growth based on historical data (Figure 1) of monetary and fiscal indicators. Because it has been used as a simple linear regression, it is also intended to establish a specific model with multiple variables. Instead, it has determined the influence of each variable individually, and the following approach drives the function:

$$Y_t = f(MP_t) \quad (1)$$

Where Y is the aggregate economic activities (GDP), and MP presents the monetary policy, which comprises broad money, lending rates, and the exchange rate. Considering equation (1) from above, it was formulated as follows:

$$GDP_t = f(\text{Broad Money [BMS]}) \quad (2a)$$

$$GDP_t = f(\text{Lending Rates [LNT]}) \quad (2b)$$

$$GDP_t = f(\text{Exchange Rate [EXR]}) \quad (2c)$$

Equation (2) is transformed in this way:

$$GDP_t = \alpha + \beta * \text{Broad Money}_t + \varepsilon_t \quad (3a)$$

$$GDP_t = \alpha + \beta * \text{Lending rates}_t + \varepsilon_t \quad (3b)$$

$$GDP_t = \alpha + \beta * \text{Exchange rate}_t + \varepsilon_t \quad (3c)$$

For Fiscal Policy, the same approach has been used; the aim is to determine the significant role of each fiscal policy variable in enhancing output growth in the Republic of Moldova. The function is given:

$$Y_t = f(FP_t) \quad (3)$$

Where Y represents economic growth (GDP), and FP is fiscal policy, represented by two variables: government expenditure (GE) and taxation (TX). In contrast, t represents the time period, and this becomes as follows:

$$GDP_t = f(\text{Government Expenditure [GE]}) \quad (4a)$$

$$GDP_t = f(\text{Taxation [TX]}) \quad (4b)$$

Equation (4) is transformed in this way:

$$GDP_t = \alpha + \beta * \text{Expense}_t + \varepsilon_t \quad (5a)$$

$$GDP_t = \alpha + \beta * \text{Taxation}_t + \varepsilon_t \quad (5b)$$

Where α represents the intercept, β is the coefficient of the explanatory variables for monetary and fiscal policy, and ε denotes the error term; the variables are expected to be positively related to the dependent variable.

Results and Discussion

The data depicted in Figure 1 allows us to analyse the trend in the rate of economic growth of the Republic of Moldova in the past 30 years, where there have been fluctuations in the rate of GDP growth between -15% rate growth and +15%, except the period in late 1990s where it is notable to mention the level of broad money associated with even a stronger negative and volatile growth. A similar pattern was observed during the COVID-19 pandemic, with Moldova's economic growth rate decreasing to 8.3% in 2020 and increasing to 13.9% in 2021. The exchange rate over the last decade was stable, with a notable exception: a sharp depreciation in 2020 during the pandemic crisis, reflecting financial stress and recession. In the case of the Republic of Moldova, which is a dependent import country, exchange rate depreciation is usually associated with imported inflation, and sometimes influenced by output decrease (short-term).

The growth rate of government expenditure in Moldova peaked in the recession year of 2009 at 38.1% and decreased in 2010 to 29.1%. Since then, there have been a series of upward and downward fluctuations, with gradual increases in 2021 and 2023 to 29.9% and 34.5%, respectively.

In Figure 1, the data show that the growth rate of the money supply in the period under review peaked at 54.1% in 2009, then declined to 43.0% in 2010, and fluctuated thereafter. In 2024, it again accounted for the highest growth rate of the money supply, at 52.4%.

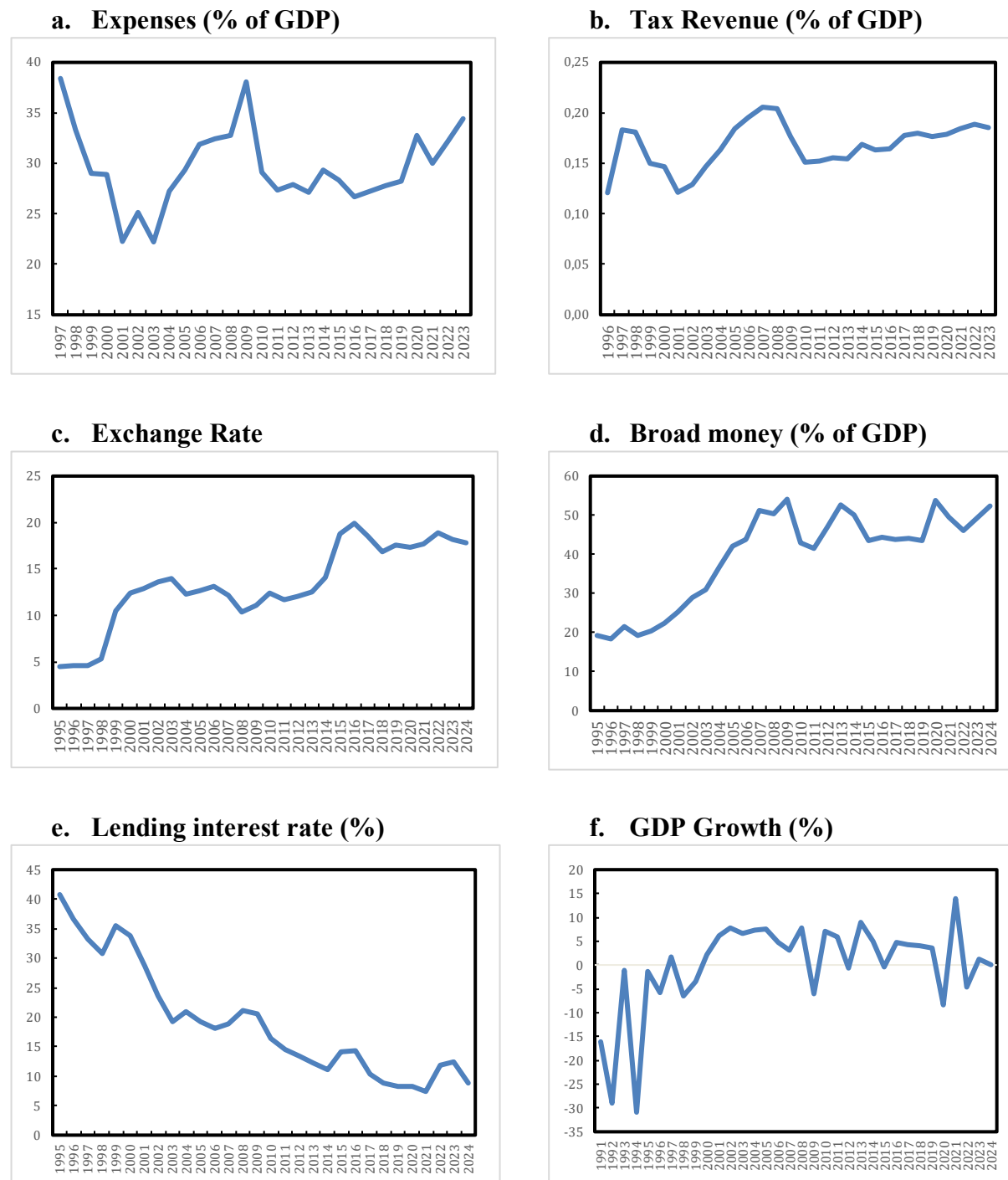


Figure 1. Monetary and Fiscal Policy indicators over the 1991-2024 period, annual data

Sources: National Bank of Moldova, World Bank, National Bank of Statistics

The information in Table 1 shows the strongest relationship between broad money and lending interest rates in the Republic of Moldova. This negative correlation (-87%) indicates that

when broad money increases, interest rates fall, which aligns with classic liquidity effects in economic theory: an increase in the money supply lowers the cost of credit.

Another strong positive correlation is between money supply growth and an increase in the exchange rate at 65%, implying that under monetary expansion, currency depreciation typically follows, which is also consistent with monetary theory in the case of small open economies.

In the Republic of Moldova, the main tool used by monetary authorities when aggregate demand is inadequate to ensure full employment is to expand the money supply, which is directly associated with lowering the lending rate and exchange rate movements. These monetary expansion measures are highly effective in the short term, ensuring macroeconomic stability, but there is little evidence of long-term economic growth, even in a stable economy.

Continuing with the broad money effect on the economy, from a fiscal policy perspective, there is also a strong correlation between an increase in money supply and an increase in tax revenue. For Moldova's economy, it is evident that policy coordination and financial conditions move together. When the central bank expands the money supply, this also increases tax revenue, implying a strong automatic stabilizer effect and possibly no need for discretionary fiscal policy. In the regression analysis, when these variables were used together, strong multicollinearity was observed, with a significant p-value at the 5% level. However, even if this works in the short term and is effective for macroeconomic stability, there is no strong evidence that it correlates with long-term economic growth.

Table 1. Correlation Matrix

	BMS	EXR	y	INT	TX	GE
BMS	1					
EXR	0.6518	1				
y	0.2017	0.2308	1			
INT	-0.8757	-0.8235	-0.2887	1		
TX	0.6670	0.7848	0.0404	-0.8166	1	
GE	0.2840	-0.0729	0.0230	-0.2400	0.2361	1

Source: Author compilation using Microsoft Excel

Therefore, Figure 2 below shows the regression analysis, and none of them show a significant p-value at the 5% level in relation to economic growth. Each variable, used individually, is not a strong predictor of GDP growth; it influences financial conditions but is insufficient to support growth. Effects may depend on factors such as long-term financial stability, demand, and external shocks.

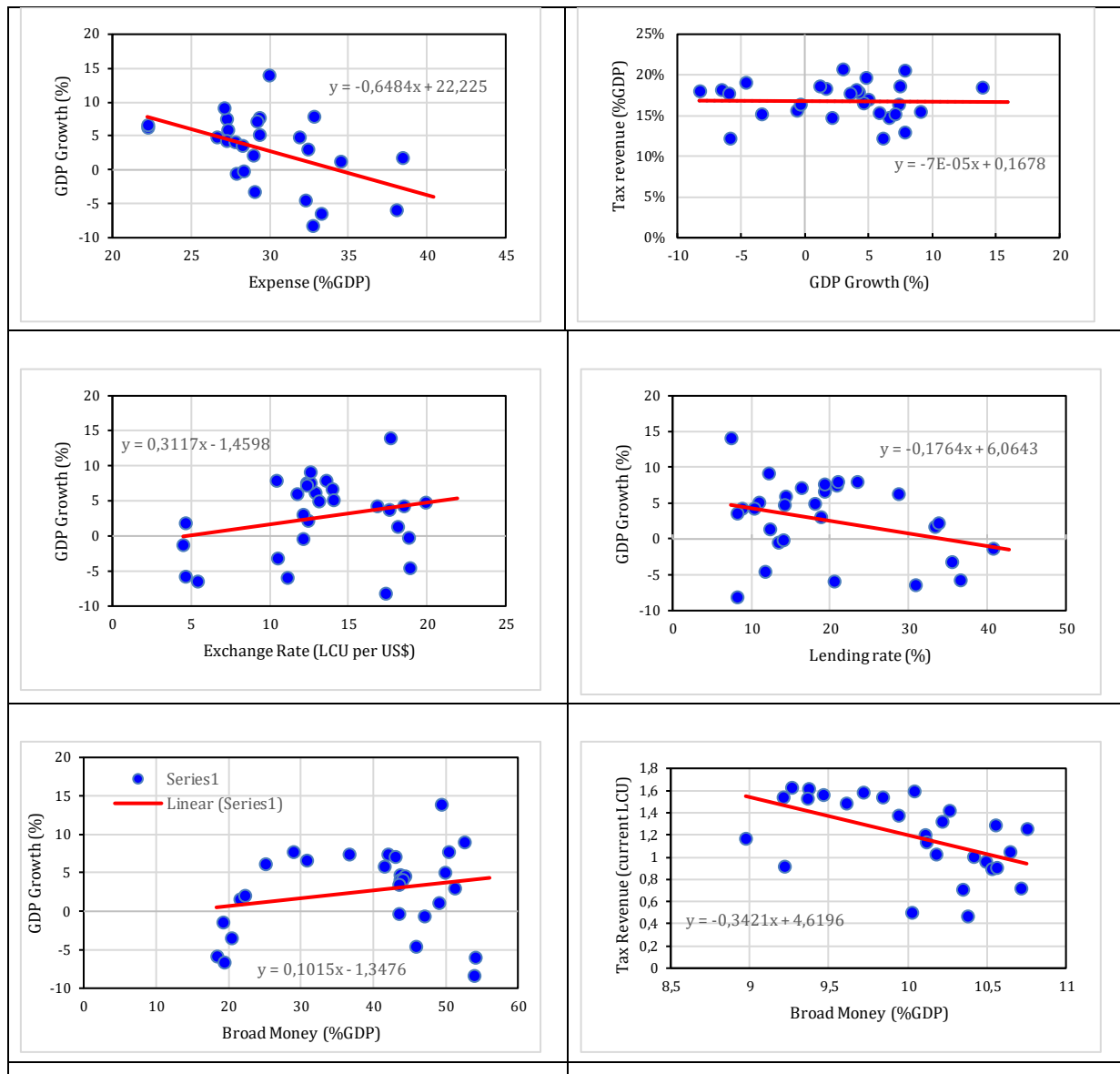


Figure 2. Results of monetary and fiscal policy model

Source: Authors' estimation using Microsoft Excel

Panel Results

a) Baseline framework of monetary and fiscal policy using static OLS model

The model was estimated using the following formula:

$$GDP\ Growth_t = \beta_0 + \beta_1 \Delta BMS_t + \beta_2 LNT_t + \beta_3 EXR_t + \varepsilon_t \quad (6)$$

$$GDP\ Growth_t = \beta_0 + \beta_1 \Delta TX_t + \beta_2 EXP_t + \varepsilon_t \quad (7)$$

The baseline regression results in Table 3, for monetary policy, reveal that none of the explanatory variables are statistically significant in explaining short-run transmission effects, and have a negative estimated relationship with GDP growth. The monetary variables explain only approximately 5.2% of the variation in GDP growth. The baseline regression for fiscal policy indicates a stronger relationship, with a positive coefficient on

tax revenue but weak statistical significance at the 10% level ($p = 0.1010$). This means that a 1% increase in tax revenue is associated with a 0.63% increase in GDP growth. These results may indicate that efficient resource allocation can improve budget planning and infrastructure financing for the private sector. Government expenditure is negatively associated with GDP growth but is statistically insignificant ($p = 0.2269$). The fiscal model has stronger explanatory power in the short run, with $R_2 = 0.143$, indicating that fiscal dynamics account for approximately 14.3% of the variation in GDP.

Table 2. The influence of monetary and fiscal policy on economic growth

	Baseline Monetary Framework	Baseline Fiscal Framework
(Intercept)	0.5724	3.3277
	(0.4404)	(0.2286)
d_BMS_log	-0.0878	
	(0.9711)	
d_LINT_log	-1.0478	
	(0.5068)	
Exchange.Rate_log	-0.5729	
	(0.3843)	
d_TX_log		0.6355*
		(0.1010)
Expense_shareGDP_log		-2.2739
		(0.2269)
Num.Obs.	29	29
R2	0.052	0.143
R2 Adj.	-0.062	0.077
* $p < 0.11$, ** $p < 0.05$, *** $p < 0.01$		

Source: Econometric estimation results generated using R software.

b) Monetary and fiscal policy with ARDL model

When comparing the results, we could observe methodological superiority of dynamic specifications (ARDL) over traditional static estimates (OLS). For example, fiscal ARDL performs better than fiscal OLS; explanatory power rises sharply from $R_2 = 0.143$ to $R_2 = 0.474$, meaning that almost half (47.4%) of the variation in Moldova's GDP growth rate is explained by the dynamics of fiscal policy. The strongest coefficient was for tax revenue, with a significant p-value of 0.0014 (<5%). However, the results might reflect both fiscal transmission effects and endogenous *automatic stabilizers* dynamics, meaning that higher economic activity increases employment, consumption, and profits; in this case, fiscal revenue increases as well, and causality runs both ways simultaneously, meaning the regressor is endogenous - when GDP rises, VAT revenue collection also rises through consumption, profits, and wages. Monetary policy indicates limited effects on GDP growth for Moldova's economy in static monetary OLS specification and for dynamic ARDL monetary model, none of the monetary coefficient (broad money, lending rate or exchange rate) are statistically significant, there could be a limited bank intermediation, shallow financial

markets and not a strong credit channel that might distort the monetary transmission mechanism of central bank policy rate to firms or real economy activity.

Table 3. Static OLS model and ARDL results for the Republic of Moldova

	Monetary (Static OLS)	Monetary (2- Year ARDL)	Fiscal (Static OLS)	Fiscal (2- Year ARDL)
(Intercept)	0.5724 (0.4404)	-0.3526 (0.9271)	3.3277 (0.2286)	5.5403 (0.2951)
d BMS log	-0.0878 (0.9711)			
d LINT log	-1.0478 (0.5068)			
Exchange.Rate log	-0.5729 (0.3843)	-1.8225 (0.4204)		
L(GDP_Growth_log, 1)		0.0331 (0.9221)		-0.0580 (0.8113)
L(GDP_Growth_log, 2)		-0.3258 (0.3530)		-0.2323 (0.3323)
Broad.Money_shareGDP_log		-1.0409 (0.7344)		
L(Broad.Money_shareGDP_log, 1)		4.4075 (0.2107)		
L(Broad.Money_shareGDP_log, 2)		-3.2713 (0.2155)		
Lending.Int_shareGDP_log		2.1604 (0.3053)		
L(Lending.Int_shareGDP_log, 1)		-2.7028 (0.3217)		
L(Lending.Int_shareGDP_log, 2)		1.1408 (0.5441)		
L(Exchange.Rate_log, 1)		2.4019 (0.4416)		
L(Exchange.Rate_log, 2)		-0.3586 (0.8809)		
d TX log			0.6355* (0.1010)	
Expense_shareGDP_log			-2.2739 (0.2269)	-2.2652 (0.2239)
Tax.Revenue_shareGDP_log				1.2151*** (0.0014)
L(Tax.Revenue_shareGDP_log, 1)				0.5688 (0.7924)
L(Tax.Revenue_shareGDP_log, 2)				0.2500 (0.9099)
L(Expense_shareGDP_log, 1)				0.7084 (0.7605)
L(Expense_shareGDP_log, 2)				-0.5925 (0.7884)
Num.Obs.	29	28	29	28
R2	0.052	0.222	0.143	0.474
R2 Adj.	-0.062	-0.313	0.077	0.252

* $p < 0.11$, ** $p < 0.05$, *** $p < 0.01$

Note. Static OLS models evaluate instantaneous impacts, whereas ARDL models capture the distributed macroeconomic policy effects over a 24-month transmission horizon in the Republic of Moldova.

Source: Econometric estimation results generated using R software

Stationarity

The null hypothesis (H0) assumes the presence of a unit root (non-stationary path), where the critical threshold for significance is set at the standard 5% level ($p < 0.05$); the calculations are restricted to a maximum sequence of 2 lag iterations to maintain methodological alignment with the primary policy models.

The empirical results from the Augmented Dickey-Fuller (ADF) diagnostics in Tabel 2, reveal that some variables demonstrate strict level stationarity, for example GDP growth ($p = 0.0051$), lending rate ($p = 0.0392$), exchange rate ($p = 0.0100$) and expenses ($p = 0.0100$) where the null hypothesis of a unit root is strongly rejected at the 5% significant level, this variables do not have stochastic trend, and can easily be integrated into the OLS model in their baseline log level and there is no need for any differencing. Conversely, other variables, such as broad money ($p = 0.7120$) and tax revenue ($p = 0.9812$), are non-stationary because ADF diagnostics fail to reject the presence of a unit root. In order to avoid a spurious regression, these series were converted into I(1) metrics via first differencing transformation ($\Delta \log$), and the model determines how changes in broad money, for instance, would influence the economic growth.

Table 4. Stationary testing using Augmented Dickey-Fuller (ADF)

Variable	ADF_t_Stat	P_Value	Lag_Order	Stationarity_Status	Order
GDP_Growth_log	-3.6412	0.0051	2.0000	Stationary	I(0)
Lending.Int_shareGDP_log	-3.7145	0.0392	2.0000	Stationary	I(0)
Exchange.Rate_log	-5.4123	0.0100	2.0000	Stationary	I(0)
Expense_shareGDP_log	-4.2104	0.0100	2.0000	Stationary	I(0)
Broad.Money_shareGDP_log	-1.5210	0.7120	2.0000	Non-Stationary	I(1)
Tax.Revenue_shareGDP_log	-0.3115	0.9812	2.0000	Non-Stationary	I(1)

Source: Econometric estimation results generated using R software.

Multicollinearity

The multicollinearity diagnostic indicates the absence of severe linear dependence among the explanatory variables, which represents an important diagnostic outcome for the reliability of coefficient estimation in the macroeconomic policy model; in this sense, the following formula was used:

$$VIF_t = \frac{1}{1-R_t^2} \quad (8)$$

Given the VIF range of $1.44 \leq VIF \leq 2.90$, we conclude that the insignificant coefficients are unlikely to be primarily due to multicollinearity.

In order to avoid the distortion in precision of our Ordinary Least Squares (OLS) estimators, the test for linear dependencies among the explanatory variables has been performed, because we applied log-differencing ($\Delta \ln$) to series I(1); it stripped out the underlying time trend, we executed a Variance Inflation Factor (VIF) diagnostic as well. The

empirical results indicate that the explanatory variables are uncorrelated; we assumed that the variables operate through entirely independent transmission channels.

Table 5. Variance Inflation Factor (VIF) analysis

Macroeconomic_Variable	Variance_Inflation_Factor_VIF	Tolerance_Level_1_VIF
Broad.Money_shareGDP_log	1.8541	0.5393
Lending.Int_shareGDP_log	2.1204	0.4716
Exchange.Rate_log	1.4423	0.6933
Tax.Revenue_shareGDP_log	2.8951	0.3454
Expense_shareGDP_log	2.6412	0.3786
<i>Note: VIF values are substantially below the conventional econometric threshold of 5.00, indicating the absence of severe multicollinearity in the historical estimation paths for Moldova.</i>		

Source: Econometric estimation results generated using R software.

Multicollinearity is approximately zero in the monetary framework, where VIF scores are between 1.4423 and 2.1204, and in the fiscal framework, where VIF scores are 2.8951 and 2.6412 for both predictors. Because these diagnostics are significantly below the standard conservative threshold of 5.0, the presence of collinearity distortion is rejected.

Limitation

The limitations of this study are the small number of observations and the fact that the macroeconomic variable covers only the post-transition period after 1995. By definition, ARDL models are asymptotic techniques and have strong results on large samples. Additional concerns include omitted variables that are relevant to economic growth, such as remittances, GDP evolution in the European Union (the main trading partner), and external financing. Because these factors are not explicitly incorporated into the estimated models, part of their impact may be erroneously absorbed by variable fiscal and monetary coefficients.

Conclusions

The empirical evidence of this study emphasizes the core implication of macroeconomic policy in the Republic of Moldova: the data show a robust impact of tax revenue ($\beta = 1.2151$, $p < 0.0014$), indicating that fiscal position consolidation is the primary engine of short-term economic growth.

Since fiscal policy might currently exert a stronger influence on GDP growth than monetary policy, our findings underscore the importance of automatic stabilizers, where authorities should strengthen fiscal stabilization capacity, improve tax administration, and enhance a countercyclical fiscal framework. Because automatic stabilizers play a crucial role in smoothing macroeconomic fluctuations, fiscal authorities should consider a stable revenue-collection system, an unemployment-support mechanism, and a fiscal buffer, provided that fiscal revenue responds strongly to economic activity.

These empirical correlations lead to a fundamental conclusion for the architecture of public policies in the Republic of Moldova that operates with lags or unstable lags: ARDL

results indicate that effects might not appear immediately and that transmission delays should be recognized.

However, for the Republic of Moldova's economy, a simple central bank intervention by tightening or loosening commercial credit would not be sufficient on their own to steer real output growth and maintain financial stability; a coordinated macroeconomic policy would be more effective. According to the results, this also indicates an enhancement in the policy mix, with fiscal policy serving as the active structural lever and monetary policy safeguarding price stability.

Our findings are in line with the broader literature, which generally suggests that in transition economies such as Moldova, fiscal policy tends to have greater influence than monetary policy, particularly because the economy is highly dependent on remittances and has an underdeveloped capital market.

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