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FINANCIAL

POLICY IN ENSURING MACROECONOMIC BALANCE

POLÍTICA FINANCIERA PARA GARANTIZAR EL EQUILIBRIO MACROECONÓMICO

Ilhama Eibulla Aslanova gizi [1*]
E-mail: aslanovailhama220@gmail.com
ORCID: https://orcid.org/0000-0001-8399-6285
Ulviyya Adil Shirinova gizi [1]
E-mail: ulviya.sirinova@gmail.com
ORCID: https://orcid.org/0000-0003-3514-8825
Vusala Maarif Bayramova gizi [1]
E-mail: bayramovav210@gmail.com
ORCID: https://orcid.org/0009-0005-6633-4075
Shahla Musa Alijanova gizi[2]
E-mail: shahla.alijanova@unec.edu.az
ORCID: https://orcid.org/0000-0002-3115-2635
[1] Baku Eurasian University. Azerbaijan.
[2] Azerbaijan State University of Economics. Azerbaijan.
* Author for correspondence

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ABSTRACT

In this research, the role of financial policy in ensuring macroeconomic balance will be examined, taking a comparatiev case of United States and Azerbaijan. Macroeconomic equilibrium is one of the most important and complex categories within the modern economic mainstream. Different approaches and concepts regarding this category have been developed from the perspectives of various economic schools. In economic theory, macroeconomic balance, in its broadest sense, is characterized as the state in which economic processes in the national economy are harmonized and equalized, encompassing aggregate demand and aggregate supply, accumulation and investment, production and consumption, and the real and financial sectors, while ensuring equality in development rates. Equilibrium at the macroeconomic level represents a distinct concept compared to equilibrium in microeconomic theory, which primarily focuses on individual markets. Macroeconomic equilibrium emerges from the interaction and influence of all markets collectively, rather than the behavior of individual markets. In this state of balance, adverse effects caused by fluctuations or changes in supply and demand within one market are not confined to that specific market or its participants but instead impact the equilibrium conditions and elements across all remaining markets. In the broadest sense, economic equilibrium reflects the persistent issue of mismatches between economic resources and demands. Considering economic realities, where demands consistently exceed available resources, complete compatibility cannot be fully achieved, even within the framework of economic equilibrium. Therefore, equilibrium is only possible through limiting demands in some manner and ensuring the efficient utilization of available resources.

Keywords: Macroeconomic balance, Security, Financial policy, Azerbaijan, USA.

RESUMEN

En esta investigación se examinará el papel de la política financiera para garantizar el equilibrio macroeconómico, tomando como caso comparativo los Estados Unidos y Azerbaiyán. El equilibrio macroeconómico es una de las categorías más importantes y complejas dentro de la corriente económica moderna. Se han desarrollado diferentes

enfoques y conceptos con respecto a esta categoría desde las perspectivas de varias escuelas económicas. En la teoría económica, el equilibrio macroeconómico, en su sentido más amplio, se caracteriza como el estado en el que los procesos económicos de la economía nacional están armonizados e igualados, abarcando la demanda agregada y la oferta agregada, la acumulación y la inversión, la producción y el consumo, y los sectores real y financiero, al tiempo que se garantiza la igualdad en las tasas de desarrollo. El equilibrio a nivel macroeconómico representa un concepto distinto en comparación con el equilibrio en la teoría microeconómica, que se centra principalmente en los mercados individuales. El equilibrio macroeconómico surge de la interacción e influencia de todos los mercados colectivamente, en lugar del comportamiento de los mercados individuales. En este estado de equilibrio, los efectos adversos causados por las fluctuaciones o cambios en la oferta y la demanda dentro de un mercado no se limitan a ese mercado específico o sus participantes, sino que afectan las condiciones y elementos de equilibrio en todos los mercados restantes. En sentido amplio, el equilibrio económico refleja el persistente problema de los desajustes entre los recursos económicos y las demandas. Teniendo en cuenta las realidades económicas, en las que las demandas superan sistemáticamente los recursos disponibles, no es posible lograr una compatibilidad total, ni siquiera en el marco del equilibrio económico. Por lo tanto, el equilibrio sólo es posible limitando de algún modo las demandas y asegurando la utilización eficiente de los recursos disponibles.

Palabras clave: Equilibrio macroeconómico, Seguridad, Política financiera, Azerbaiyán, Estados Unidos de América.

INTRODUCTION

Macroeconomic equilibrium is characterized by two forms: real equilibrium and ideal equilibrium where he ideal balance means the theoretically desired balance. In other words, in all types of economic activity and in all areas where the production process takes place, optimal efficiency is achieved by fully satisfying the interests of economic subjects and individuals who are the main participants in the activity. To achieve this balance, the following prerequisites must be ensured (Rudd, 2024):

- Each individual must be able to obtain the goods and services they need in the consumption market;
- Each producer should be able to obtain the production factors they need in the markets;
- Since the economy is in equilibrium, the product produced every year should be fully realized without any residual.

The concept of general economic equilibrium has been interpreted by different economic schools. The first conceptual view of this idea was carried out by classical economists. This analysis, conducted based on micro-level examination, did not use macroeconomic indicators; instead, the mutual relations of producers and consumers pursuing their interests were taken as a basis. That is, the economic rules formed due to the pursuit of personal interests ensured the achievement of a situational balance that was profitable for all participants in economic activity. Since approaches to economic activity during this period were formed more from the context of the circulation sphere and there were no opportunities to use economic indicators, the category of balance was evaluated in this way (Dou et al., 2020).

With the emergence of the Great Recession and the introduction of the concept of macroeconomics into the history of economic thought, the approaches to the equilibrium problem have undergone serious changes. In the newly formed approaches, several other issues - gross national product production, adaptation of prices to the changing conditions of the world economy, and solving the employment problem - were brought to the fore within the framework of the problem of ensuring macroeconomic balance. Determining ways to solve this problem and formulating adequate economic policy frameworks is a very complex issue. This is especially true against the background of strengthening mutual relations between national economies, making it quite complicated to both implement and ensure the effectiveness of such policy strategies. One of the factors creating this complexity is the difficulty of evaluating the principles of macroeconomic regulation (Bougrine & Rochon, 2020; Lavoie, 2022).

With the emergence of new approaches in economic science, the view of the category of macroeconomic balance has also changed significantly. Various equilibrium models have been developed by several economists (Abel et al., 2023):

- François Kenin - “economic tables” model (includes circulation and simple reproduction processes).
- Karl Marx - «capitalist social reproduction» model.
- Walras - “general economic equilibrium” model.
- Vasily Leontev - “expenditure release” model.
- John Maynard Keynes - “short-term economic equilibrium” model.

- Hicks - "simultaneous macroeconomic equilibrium in the commodity and money market" model (IS-LM).
- John Neyman's "equilibrium expanding economic" model.

Unlike the classics, Keynesians believed that aggregate demand, rather than aggregate supply, had a greater ability to influence the level of employment. Therefore, they did not accept the idea that every offer in the market creates its demand. In addition, they believed that labor supply should not be considered as a function of real wages. This is because a decrease in nominal wages will have a reducing effect on labor supply. Consequently, equilibrium in the labor market is possible only in the absence of full employment. In this case, interventions in the labor market by the state or trade unions lead to long-term forced unemployment. Keynesians also argued that the level of investment and savings, which are the drivers of economic activity, are more closely related to the level of disposable income than to interest rates. Therefore, Keynes and his followers concluded that ensuring macroeconomic equilibrium under full employment conditions, as claimed by the classics, is only one of the possible scenarios (Ghosh & Ghosh, 2019).

The Great Depression demonstrated that an economic system can only achieve equilibrium in the presence of imperfect labor. Therefore, state intervention is crucial to ensure balance. Without government intervention, the existence of equilibrium in the economic system is merely accidental. The Keynesian approach posits that the level of output under conditions of equilibrium between aggregate demand and aggregate supply often does not coincide with the level of output obtained by using economic resources under conditions of full employment. The reason for this paradox is the difference between firms' investment planning and households' propensity to save. Many factors contribute to this difference. For this reason, Keynes and his followers believed that the process of ensuring macroeconomic balance was insufficient to guarantee investment equality. It is precisely why Keynes proposed the concept of "effective demand" to ensure equilibrium. He examined this question on two levels - in the context of consumption and investment expenditures (Rochon & Rossi, 2023).

To achieve these objectives, Keynes considered it important to link investment growth with increasing demand efficiency. Increasing demand efficiency creates a multiplied amount of investment through a multiplier effect. In fact, every investment ultimately becomes income for the investor, with part of this income going to consumption and part to savings. As incomes increase, personal consumption will also increase. Keynesians thought that because economic individuals act under the influence of various psychological factors, not all income is consumed or directed towards accumulation. Since this process is continuous, the proportion of consumption in total income decreases in each subsequent cycle. This, in itself, negatively impacts the multiplier and leads to a decrease in national income. Therefore, Keynes and his followers believed that preventing this process could only be achieved through purposeful state interventions (Harvey, 2018; Watkins, 2023).

One of the established models of economic equilibrium is the classical general economic equilibrium model. The main point of this model is that any imbalance occurring while the economy operates under conditions of perfect competition can be eliminated without outside intervention. In other words, the levels of production and employment can balance each other if there are no negative external factors. According to this theory, since the economy is at full employment, the incurred costs are always at the desired level. The classical model was based on Jean-Baptiste Say's idea that each offer creates its own demand. That is, each producer creates a product in the amount of his need, and consumer demands were formed by this offer. This model was central to economic thinking for a long time.

One of the model's shortcomings is the notion that market imbalances are random and temporary. Additionally, in the classical model, the role of money in the process of goods exchange was not very prominent. However, further studies demonstrated that money is not the only unit of account in the exchange process. Therefore, at the end of the 19th century, Alfred Marshall created a new market equilibrium model to address this deficiency. According to Marshall, the concept of equilibrium price and its fluctuations in different periods are responsible for forming equilibrium in various markets and in the general economic system.

Among the initial concepts formed about general macroeconomic equilibrium, the model created by Walras attracts more attention. The mathematical model of economic equilibrium developed by L. Walras, while having an abstract character, also reflects the conditions for achieving market equilibrium under free competition. According to this model, general economic equilibrium is possible only under these conditions:

1. Completely free competition.
2. Equality of all market participants.
3. Stability of the economic situation.
4. Existence of a closed economic system.

Within the framework of the model, the equality of supply and demand for each commodity is determined based on the price function of all commodities. As a result of the interaction between the quantity of goods and their prices, demand and supply become equal. Aggregate demand and aggregate supply are among the factors considered by various economists during the formation of balance at the national economic level. These factors are the primary elements that create equilibrium and explain fluctuations in both classical and Keynesian approaches (Barro, 2019).

Considering the above discussion, the main goal of this study is to analyze the role of financial policy in achieving macroeconomic balance, focusing on the United States and Azerbaijan as comparative cases. It seeks to explore how various economic approaches address the complexities of macroeconomic equilibrium and examine the influence of fiscal and monetary policies on economic growth and stability. The research methodology includes both empirical and theoretical analyses, encompassing a review of existing literature on macroeconomic equilibrium and an evaluation of the policies implemented in both countries to assess their effectiveness in achieving long-term economic objectives.

DEVELOPMENT

Problems of ensuring macroeconomic balance in the conditions of global economic recession

Monetary and fiscal policies are policy tools used to achieve economic growth, development, economic stability, and income distribution targets of economic policy. Fiscal policy refers to governments' influence on the general economy by using financial instruments such as taxes, public expenditures, budgeting, borrowing, and debt management. While monetary policy creates effects on different economic segments through quantities such as money supply, interest rates, and exchange rates, it is largely carried out today by central banks that are relatively independent of political will. Fiscal policy emerges through the effects of government decisions regarding collected revenues and expenditures aimed at achieving certain macroeconomic targets, and the changes in their budgets on macro quantities such as national income, unemployment, and inflation.

Fiscal policy affects the country's long-term output through its savings rate. Expansionary fiscal policy implementation causes a decrease in government savings, which is one of the components of the country's total savings, and reduces the country's future production capacity through lower investment and capital accumulation. Fiscal policy implementation also impacts savings and total demand through changes in the tax burden. Moreover, tax policy incentives can significantly affect the economy. A causal relationship exists between the budget balance—which reflects governments' fiscal policy practices—and economic fluctuations. Consequently, economic fluctuations may cause budget deficits and surpluses depending on public expenditures and tax structure. This mechanism, known as automatic stabilizers, includes unemployment insurance and agricultural support policies within the spending structure. In economies with a flexible, income-based tax system, it provides automatic economic expansion during contractions and automatic contraction during expansions.

Budget deficits and surpluses resulting from governments' fiscal policy implementations can also influence the magnitude of economic fluctuations. A critical feature of fiscal policy is its vulnerability to political will, which has the authority to spend and collect taxes for its benefit. This situation has been instrumental in the emergence of regular fiscal policy practices as an alternative to discretionary fiscal policy practices. Before delving into discussions on discretionary and regular fiscal policy, it is considered important to examine the approaches of economic schools regarding fiscal policy.

"Traditional deficit," which is the standard definition in measuring fiscal deficits, refers to the difference between total public expenditures and total public revenues when the change in debt is excluded. In other words, the conventional deficit measures the difference between the government's total cash outlays (including debt interest payments, excluding debt repayments) and the sum of tax and non-tax revenues (including donations, excluding debt proceeds). The traditional deficit measures the difference between the public's total savings and total investments. The cash basis measurement of the traditional budget deficit is expressed as the "Public Sector Borrowing Requirement" (PSBR). PSBR represents the difference between the total expenditures and total revenues of all units that comprise the public sector. In other words, PSBR refers to the expenditures that can be made by borrowing by the entire public sector in a specific period.

When ordinary public revenues are subtracted from public sector expenditures, the classical public deficit definition is reached. The difference between public expenditures and ordinary public revenues reveals the need for public sector financing. The current budget deficit measures the difference between non-investment public expenditures and revenues, assuming that borrowing for investment is normal and current expenditures should be financed with

tax revenues. In other words, the current budget deficit is the difference between the government's current revenues (normal revenues) and current expenditures (excluding investments). The larger this difference, the more it is concluded that the government's borrowing has a current (consumption-oriented) nature, indicating a negative situation. Consequently, the current account deficit can be considered an indicator of the prudence of state policy.

The inadequacy of classical deficits in measuring the public's contribution to total demand has led to the concept of "total demand-weighted deficit," which is measured by weighting the revenue and expenditure elements of the budget according to their expansionary and contractionary effects. When measuring the state's contribution to domestic demand in an open economy, the concepts of "domestic deficit" and "foreign deficit" are defined. While the domestic deficit takes into account only the budget elements that affect domestic demand in the measurement of the deficit, the foreign deficit considers the budget items directly related to the foreign world. When examining the causes and effects of budget deficits, determining how much of the deficit is structural and how much is caused by periodic factors is crucial in formulating appropriate policies. In this sense, distinctions have been made between:

- "Structural budget deficit": the budget deficit that would occur when the economy is at full employment.
- "Cyclical deficit": the deficit occurring due to economic fluctuations.

During periods of economic contraction, public revenues decrease while public expenses increase due to the effect of automatic stabilizers. Conversely, during economic expansion and prosperity, public revenues increase while public expenditures decrease, causing the budget deficit to fluctuate accordingly. The structural deficit provides insight into the current contractionary or expansionary fiscal policy in a country. It allows for more accurate measurement of fiscal policy effects on the economy and a more precise evaluation of how changes in economic activity may impact the budget balance.

In addition to the previously discussed deficit types, several other deficit measurements have been defined:

1. "Cash Deficit": Expresses the difference favoring expenditures between cash payments made during a fiscal year and public revenues obtained.
2. "Accrual Deficit": Used to determine the real resources the state should use during the fiscal year, regardless of whether public sector transactions occur.
3. "Quasi-Fiscal Deficit": Accounts for the deficits of public financial intermediaries.
4. "Nominal Deficit": Reflects the difference between the nominal values of public revenues and expenditures.
5. "Real Budget Deficit": Occurs when inflation-adjusted public revenues and expenditures create a difference favoring expenditures.
6. "Sustainable Deficit": Aims to demonstrate consistency between budget deficits and macroeconomic targets such as growth and inflation rates.
7. "Optimal Deficit": Measured by the difference between the total benefit of additional public expenditures and their financing cost.
8. "Prudent Fiscal Deficit": A budget deficit method compatible with macroeconomic targets.

Concerns about budget deficit tendencies and fiscal sustainability stem from politicians' short-term perspectives and the time inconsistency problem in political economy literature. The time inconsistency problem refers to the changing of policy preferences over time based on short-term perspectives adopted by politicians to protect or maintain their political interests.

In 2008, a crisis began with the bankruptcy of the fourth-largest investment bank in the United States, quickly spreading to become a global financial and real sector crisis. According to several experts, the modern crisis actually began in 2006 with the crisis of substandard lending companies in the US mortgage market. The crisis escalated with the withdrawal of a second group of mortgage market participants. Estimates indicate that in the second half of 2008:

- Stock market indices dropped by 70-80 percent.
- The estimated damage to the international financial system was 3 trillion US dollars (approximately 4.3 percent of the global gross product).

These fluctuations and fragile growth trends under the pressure of global imbalances ultimately created conditions for a global post-crisis stagnation phase. Consequently, ensuring macroeconomic balance has become a primary global discussion topic due to its problematic nature. According to Lawrence Summers, former head of the US Treasury, the world economy has entered a period of global stagnation, making it increasingly difficult to maintain economic equilibrium at this stage (Baltagi, 2018).

At the stage preceding the global economic crisis, policy frameworks at the macroeconomic level emerged based on long-term empirical assessments and conceptual foundations. As a logical result of rapid economic changes

and globalization processes, fluctuations in economic cycles worldwide were significantly reduced, and inflationary pressures were mitigated. For global monetary policymakers, the primary focus at this stage was ensuring price stability. This was critical because inflationary pressures emerged as the main obstacle to rapid economic growth rates. The underlying reasoning was that if an economy experiences high asset price growth not based on fundamental economic principles or undergoes a credit boom, the subsequent bursting of these "bubbles" could lead to significant economic recession and volatility, even when core inflation remains stable.

The current state of the US economy, set against the backdrop of ongoing setbacks and fragile global economic growth trends, continues to attract significant attention. The nature of the US economy's current development rate is particularly important for assessing macro-level equilibrium challenges in developing countries. After the Great Depression, views on global macro-level equilibrium—utilizing the concepts of aggregate demand and aggregate supply—became widespread. However, the recent global financial crisis highlighted that studying the nature of changes in aggregate demand or supply components is insufficient for assessing economic balance. Traditional economic postulates revealed limitations in using pre-established "recipes" for regulating these components through macroeconomic policy measures during economic expansion and contraction stages. The last recession and current stagnation phase exposed these constraints. A clear example of this challenge can be found in the monetary policy measures implemented by the Federal Reserve System (FRS) from the initial stage of the crisis, as well as the non-traditional nature of the State Treasury's fiscal anti-crisis packages (Seyidoğlu, 2007).

The Federal Reserve System (FRS) began attempting to stimulate economic activity and eliminate deflationary threats by applying ultra-low interest rates from the initial stage of the crisis. However, in the face of global recessions and monetary easing policies implemented by other countries, the FRS encountered challenges in ensuring the effectiveness of its programs. At the current stage, the FRS has not yet realized its inflation target. However, due to improvements in employment and economic activity indicators, as well as the abatement of turmoil in financial markets and stock exchanges, it was evaluating the possibilities of transitioning to a normalization stage from 2016. As an initial step, after approximately 9 years, the dollar's interest rate would be raised to 0.25-0.50 percent. Significant skepticism exists about the permanence of this interest rate increase. As emphasized earlier, in addition to the FRS's failure to achieve the 2% inflation target, fluctuations in global markets preclude future interest rate increases. Abandoning the FRS's zero interest rate program could lead to macro-level economic problems in several countries and further destabilize the already fragile relative equilibrium conditions.

Particularly in the context of record-high foreign private and public borrowings, dollar appreciation would create conditions for new instabilities that would be extremely difficult to eliminate from the international economic system. Against the backdrop of fragile global demand and rapid declines in oil and other commodity prices, strengthening the dollar may generate additional balancing challenges for the US economy. The sharp decline in oil prices creates conditions for a significant decrease in income for US energy companies, which hold leading roles in international markets, potentially resulting in additional economic problems.

Against the background of existing difficulties in developing countries, ensuring macroeconomic balance becomes even more problematic. Following the initial stage of the global crisis, these countries—which constitute the primary dynamics of economic development—are experiencing difficulties adapting to changing economic conditions. The most critical issues are processes related to capital flows. The instability of capital flows is particularly notable: in 2014-2015, capital flight from 19 independent economic entities exceeded 1 trillion US dollars, dramatically increasing the complexity of maintaining macroeconomic balance. Significant changes have been occurring in capital movement directions since 2006:

- From 2009 to 2014, the total volume of international cash capital flow to emerging economies was 2.2 trillion dollars, primarily due to quantitative easing in monetary policy.
- In 2015 alone, capital outflows from the CIS exceeded 600 billion dollars, representing more than 25% of what those countries had attracted in the previous 6 years.
- Credit resources offered by international banks to these economic entities decreased by more than 800 billion dollars during the year, further exacerbating the current economic imbalance (Muinelo-Gallo & Roca-Sagales, 2014).

Econometric analysis of financial policy in ensuring macroeconomic balance in Azerbaijan

In this study, the effects of fiscal policy instruments on income distribution were analyzed for the US and Azerbaijan, to the extent permitted by data availability. The dataset regarding the growth rate, public expenditures, indirect

taxes on expenditures, direct taxes on income, unemployment, inflation, and population density variables used in the model was obtained from the World Bank. SWIID (Standardized World Income Inequality Database) data was used for the Gini coefficients. The method used in the econometric analysis is the panel data method, and the Least Squares equation for this method is expressed as follows (Equation 1):

$$\text{i} = 1,2, \ldots, \text{N and t} = 1,2, \ldots \text{T for } \boldsymbol{y_{it}} = \boldsymbol{\alpha_{it}} + \boldsymbol{\beta' x_{it}} + \boldsymbol{\mu_{it}} \quad (1)$$

In panel data methods, micro and macro panels are used depending on the size of the dataset. In micro panel data, the number of N observations is greater than the number of T observation years. Macro panels are applied for T > N datasets. Panel data analysis simultaneously includes time series and cross-sectional data. The data obtained was arranged according to these conditions. Stata 14v and EViews 9 programs were used during the regression phases. Since the observation time series (T) is smaller than the number of country units (N), micro panel data analysis was applied. The dependent variable of the model is the Gini coefficient, and the independent variables are growth, public expenditures (Government Expenditure), indirect taxes (Taxes on goods and services), direct taxes (Taxes on income and profit), unemployment (Unemployment), inflation (Inflation), and population density (Population Density) (Equation 2). The model was estimated separately for the US and Azerbaijan.

$$\text{gini}_{it} = \boldsymbol{c_{it}} + \boldsymbol{\beta}_{1\text{Growth}_{it}} + \boldsymbol{\beta}_{2\text{GE}_{it}} + \boldsymbol{\beta}_{3\text{Tgs}_{it}} + \boldsymbol{\beta}_{4\text{Tip}_{it}} + \boldsymbol{\beta}_{5\text{Uemp}_{it}} + \boldsymbol{\beta}_{6\text{Inf}_{it}} + \boldsymbol{\beta}_{7\text{Pd}_{it}} + \boldsymbol{\varepsilon_{it}} \quad (2)$$

The Hausman test requires using fixed-effect models even though the structure of the dataset is heterogeneous. In his study, Hausman (1978) developed a method that ensures the asymptotical effectiveness of regression estimation methods and the consistency of the estimates. The existence of a systematic relationship between dependent variables and errors is tested. If the H_0 hypothesis is rejected, fixed-effect estimators will be consistent. If the alternative hypothesis is rejected, it would be appropriate to use random effect methods. For the Hausman test, within-group fixed-effect estimates and random-effect model estimations were made with the generalized least squares method, and the results are given in Table 1. According to the Hausman test results, the H_0 hypothesis is rejected, and in this case, it is consistent to use fixed-effect within-group estimators.

Table 1. Hausman test RE/FE.

	χ^2	Prob.
USA	(6)232.26	0.0000
Azerbaijan	(6)197.25	0.0000

Source: own elaboration.

One of the most common problems in panel data analysis is the problem of cross-section dependence. For the estimates to be consistent, there should be no cross-sectional dependence. For this, it is recommended to conduct a CD cross-section dependence test as shown in Equation 3.

$$\boldsymbol{CD = 2N(N-1)\sum i = 1N-1\sum j = i+1N\rho^{i}jCD} = \sqrt{\frac{2}{N(N-1)}\sum_{i=1}^{N-1}\sum_{j=i+1}^{N}\widehat{\rho_{ij}}} \quad (3)$$

Pesaran CD cross-sectional dependency test results are shown in Table 2. According to the test results, it is seen that there is no cross-sectional dependence in the models established for the US and Azerbaijan. This indicates that the β coefficients obtained are consistent.

Table 2. Cross-section dependence test.

Pesaran CD test H_0: There is no cross-section dependency	
USA	0.4163 (0.6771
Azerbaijan	0.8338 (0.4044

Note: Values in parentheses are the coefficients of Prob.

Source: own elaboration.

Estimation results for the US and Azerbaijan are shown in Table 3. The F-statistic values of the models estimated for both countries were found to be significant. It is observed that the R^2 values are at the level of 0.97. In other words, the explanatory power of the models for the dependent variable (Gini coefficient) is at an appropriate level. Most of the variables used in the models created for both the US and Azerbaijan are statistically significant. Although the growth and population density coefficients for the US are not statistically significant, other variables are significant at the 10%, 5%, and 1% levels. The results of the analysis reveal that growth rates and population density do not have a significant effect on the Gini coefficient. The finding that a 1% increase in public expenditures reduces the Gini coefficient by 0.09 points indicates that public expenditures have a reducing effect on income inequality in the US. While a 1% increase in indirect taxes increases the Gini coefficient by 0.13 points (1% significance), a 1% increase in direct taxes increases the Gini coefficient by 0.04 points (5% significance). Therefore, it is possible to conclude that taxes in the US have an increasing effect on income inequality. In other words, public expenditures are observed to be more effective than taxes in ensuring justice in income distribution as a fiscal policy tool in the US. On the other hand, while an increase in unemployment rates in the US exacerbates inequality in income distribution, a one-unit increase in the inflation rate reduces inequality in income distribution (Alirzayeva, 2023).

Table 3. Panel data estimation results.

	USA	Azərbaijan
C(sabit)	24.6538(3.6521)***	65.0576 (12.1471)***
Growth	-0.0096(0.0114)	0.0865(0.0362)**
Government Expenditure	-0.0911(0.0359)**	-0.0269(0.0745)
Taxes on goods and service	0.1360(0.0151)***	-0.0919(0.0264)***
Taxes income and profit	0.0449(0.0144)**	-0.1892(0.0417)***
unemployment	0.1156(0.0128)***	0.0856(0.0814)
inflation	-0.0169(0.0094)*	0.0366(0.0193)*
Ln Population density	0.4817(0.8281)	-3.0007(2.7797)
R2	0.9779	0.9789
F statistic	558.7155***	375.4497***

Note: Values in parentheses are t statistics. ***:1%, **:5% and *:10% indicate significance levels.

Source: own elaboration.

While it is expected that an increase in unemployment rates will exacerbate inequality in income distribution, the corrective effect of rising inflation rates on income distribution inequality is contrary to expectations. However, inflation

rates are at very low levels in the US, and a slight increase in inflation rates in this context has a positive impact on macroeconomic stability.

When the empirical findings for Azerbaijan are evaluated, it is observed that the public expenditures, unemployment rate, and population density variables are not statistically significant. A one-unit increase in the economic growth rate in Azerbaijan increases the Gini coefficient by 0.08 points. In other words, Azerbaijan's increasing economic growth rate leads to greater inequality in income distribution. This finding is consistent with the Inverted U hypothesis, which suggests that as economic growth increases at lower income levels, income distribution deteriorates, but after reaching a certain income threshold, growth has a positive impact on income distribution. This result indicates that Azerbaijan has not yet reached the threshold income level.

For Azerbaijan, the effects of indirect and direct taxes on income distribution are positive, unlike the situation in the US. A 1% increase in indirect taxes reduces the Gini coefficient by 0.09 points, and a 1% increase in direct taxes reduces the Gini coefficient by 0.18 points. Therefore, it can be concluded that taxes are a more effective fiscal policy tool than public expenditures in reducing income inequality in Azerbaijan. Additionally, a one-unit increase in the inflation rate in Azerbaijan increases the Gini coefficient by 0.03 points, indicating that inflation has a distorting effect on income distribution in Azerbaijan, a result consistent with expectations.

CONCLUSIONS

Ensuring justice in income distribution and determining how to distribute income more equitably among countries have been topics of discussion in recent years. It is well known that achieving income distribution justice in countries has economic, social, and political consequences. States, in turn, may opt to use taxes and public expenditures as fiscal policy tools to reduce income inequalities. At this point, progressive tax policies and public expenditure policies aimed at transferring resources to low-income individuals are typically implemented. In this study was analyzed some elements of the impact of fiscal policy on income distribution in the US and Azerbaijan. According to the findings, while public expenditures positively influence income distribution in the US, taxes (both direct and indirect) have a negative impact. In other words, spending policies are a more effective tool than taxes for achieving income distribution justice in the US. Conversely, in Azerbaijan, taxes yield more effective results than public expenditures in promoting income distribution justice. Therefore, reducing income inequality in Azerbaijan is closely tied to the application of appropriate tax policies. In this context, it is important to emphasize that decision-makers should exercise greater sensitivity in selecting suitable tax policies. However, it is equally necessary to consider the broader effects of tax policies on employment, economic growth, and other related variables within the economy.

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