

Article

# An analysis of fiscal management and macroeconomic stability: An econometric study of public policies in Latin American countries

Willian Sebastian Flores-Sotelo, Oscar Pongo-Águila, Cecilia Amanda Rivas-Peña, Jorge Miguel Chávez-Diaz\*

University Graduate School, Universidad Nacional Federico Villarreal, Lima 15001, Peru \* Corresponding author: Jorge Miguel Chávez-Diaz, 2021006676@unfv.edu.pe

#### CITATION

Flores-Sotelo WS, Pongo-Águila O, Rivas-Peña CA, Chávez-Diaz JM. (2024). An analysis of fiscal management and macroeconomic stability: An econometric study of public policies in Latin American countries. Journal of Infrastructure, Policy and Development. 8(8): 6547. https://doi.org/10.24294/jipd.v8i8.6547

#### ARTICLE INFO

Received: 21 May 2024 Accepted: 21 June 2024 Available online: 21 August 2024

#### COPYRIGHT



Copyright © 2024 by author(s). Journal of Infrastructure, Policy and Development is published by EnPress Publisher, LLC. This work is licensed under the Creative Commons Attribution (CC BY) license. https://creativecommons.org/licenses/by/4.0/ Abstract: The main objective of the study was to assess the impact of fiscal management on macroeconomic stability in emerging countries between 2012 and 2022. The study drew on macroeconomic theory, which postulates the importance of responsible fiscal policies for economic stability. Information was taken from ten emerging Latin American countries, and the analysis was carried out through a quantitative approach, using an econometric model. A significant relationship was found between fiscal management and macroeconomic stability, evidencing that effective fiscal policies are crucial for macroeconomic stability in emerging countries. The findings emphasize that balanced fiscal management, which avoids falling into cycles of debt and deficit, is essential for long-term stability. Practices that promote fiscal stability, such as greater efficiency in public spending and effective tax collection, can contribute significantly to economic stability and sustained growth. The results also suggest that fiscal policies should take into account human development conditions and annual particularities in order to formulate effective fiscal policies. It highlights those countries with best fiscal practices, reflected in low debt-to-GDP levels and high fiscal stability, are more likely to achieve macroeconomic stability and sustainable economic growth.

**Keywords:** fiscal management; public policies; tax collection; emerging countries; macroeconomic stability

## 1. Introduction

Macroeconomic stability issues have been a challenge for many countries in Europe, Latin America and Peru in the 2012–2022 period. According to a study by García and Fernández (2021), in Europe, inadequate fiscal management has led to an increase in inflation and a decrease in economic growth. In Latin America, countries have faced similar problems, but have also experienced volatility in exchange rates and a drop in foreign investment levels (Rodríguez, 2020). In Peru, macroeconomic stability has been affected by a combination of factors, including a high fiscal deficit and a decline in infrastructure investment (Pérez, 2019).

In recent years, fiscal management has been a topic of intense interest among economists and policymakers around the globe, especially in expanding nations. Economic growth and development depend on macroeconomic stability, and fiscal management plays a crucial role in achieving this stability. Using a variety of methodologies and economic models, numerous studies have analyzed the effect of fiscal management on macroeconomic stability (OCDE, 2021).

In a recent analysis, Reinhart and Rogoff (2021) argued that emerging countries have experienced greater volatility in their fiscal balances and economic cycles, which has generated greater uncertainty and increased the importance of fiscal management. On the other hand, in the Organization for Economic Cooperation and Development

OCDE (2022) discussed how prudent and proactive fiscal policies can help improve macroeconomic stability and lead to economic growth in emerging countries.

Effective fiscal management can create an enabling environment for economic growth and employment, which is essential for macroeconomic stability and the welfare of the population in these countries. For this reason, it is necessary for emerging countries to adopt responsible and effective fiscal policies to bring about economic growth and employment in these countries.

Fiscal management is a critical aspect for macroeconomic stability and sustainable economic growth in emerging countries. The literature suggests that effective fiscal management can improve the efficiency of public spending, control inflation, improve income distribution and promote employment in these countries. Therefore, it is important to analyze fiscal management and its impact on macroeconomic stability in emerging countries to better understand public policies in this area.

Research on fiscal management and its impact on macroeconomic stability is fundamental for the economic progress of emerging countries and for the formulation of public policies. This study will contribute to a better understanding of the importance of fiscal management in macroeconomic stability in emerging countries and will provide relevant information for future public policies. Specifically, two objectives will be addressed: (1) to analyze the evolution of fiscal policies in emerging countries, and (2) to identify best practices in fiscal policies that contribute to macroeconomic stability in emerging countries.

The article is of great relevance for Latin America and emerging countries, as they face recurring fiscal and macroeconomic challenges. Commodity price volatility, social inequality, public debt and inflation are common problems that impact economic stability and development. The study allows us to evaluate the impact of fiscal and macroeconomic policies implemented in the region, providing crucial information for their adjustment or reformulation. The conclusions can guide sound fiscal and macroeconomic management, which are the basis for sustainable and inclusive economic growth that benefits the entire population.

## 2. Theoretical foundation

# 2.1. Fiscal management

Fiscal management is the accumulation of actions carried out by the State to obtain and manage public resources. Different theoretical authors have proposed different theories or models to guide fiscal management according to its principles and objectives. In the eighteenth century, Adam Smith put forward the principles of taxation (equity, certainty, convenience and economy), which are the criteria to be followed by the State to collect taxes in a fair and efficient manner (García, 2019).

For his part, Keynes (1936) argued that the State should increase public spending and reduce taxes when there is an economic crisis, in order to activate aggregate demand and generate employment and income. Conversely, the State should reduce public spending and increase taxes when there is an economic expansion, to avoid overheating and inflation.

The study of fiscal management distinguishes three functions: allocation,

distribution and stabilization. The allocation function refers to the provision of public goods, which are those that cannot be efficiently supplied by the market. The distribution function refers to the redistribution of income and wealth, which is necessary to correct social inequalities. The stabilization function refers to the maintenance of full employment and price stability, which is essential for economic growth (Musgrave and Musgrave, 1989).

On the other hand, it is important to point out that public agents act for their interests and not for the citizens. Public choice proposes limiting the size and scope of the state and encouraging citizen participation in fiscal decisions (Buchanan and Tullock, 1979). For other scholars, public deficits do not affect aggregate demand, since private agents expect that they will have to pay more taxes in the future. This implies that fiscal policy is irrelevant for the economy and that the state should maintain a balanced budget (Barro, 1990).

Alcántara et al. (2020) analyze the relationship between the level of public debt and economic growth in Latin America during the period 2000-2018. The authors use a panel data econometric model and find that there is a public debt threshold above which economic growth is reduced. According to the study, this threshold is 56.4% of GDP for the region. The authors rely on the endogenous growth theory, which argues that public spending can have positive or negative effects on growth, depending on its composition and financing. Another study by Bittencourt (2019) examines the impact of the fiscal deficit on inflation in Brazil during the period 1995-2016. The author finds that there is a positive and significant relationship between fiscal deficit and inflation. He argues that fiscal deficits generate pressures on aggregate demand and reduce the credibility of monetary policy, which translates into higher inflationary expectations. The author relies on the quantity theory of money, which states that an increase in the money supply generates inflation. A third study by Ojeda-Joya et al. (2018) evaluates the effect of the fiscal rule on public debt sustainability in Colombia during the period 1990–2016. The authors conclude that the fiscal rule has contributed to improve public debt sustainability by reducing the fiscal deficit and increasing public savings. These are some examples of research using the level of public debt (% of GDP) and fiscal deficit (% of GDP) as indicators to evaluate fiscal management.

In a study by Wang and Li (2021), it is shown that proactive fiscal management and the implementation of preventive fiscal measures can improve macroeconomic stability and reduce vulnerability to economic crises in emerging countries. According to the article by Zhang and Lu (2023), efficient fiscal management is key to achieving sustainable economic growth and macroeconomic stability in emerging countries.

The literature suggests that effective fiscal management is crucial to ensure macroeconomic stability and sustainable economic growth in these countries (Gómez-González, 2020). Also, it has been shown that proactive fiscal management can help prevent economic crises in emerging countries (Reyes-Herrera, 2019).

Inflation is another relevant factor in the fiscal management of emerging countries. Fiscal policies can have a significant impact on inflation in these countries (Bautista-Sánchez, 2019). Therefore, it is essential for emerging countries to adopt prudent and sustainable fiscal policies to control inflation and ensure macroeconomic stability.

In terms of income distribution, progressive fiscal policies can increase equity in

income distribution in emerging countries (Martinez-Perez, 2021). It is essential for emerging countries to adopt equitable fiscal policies to ensure a fair distribution of income.

In relation to fiscal management and employment, the scientific literature has shown that fiscal policies can have a significant impact on employment in emerging countries (Ramírez-Ortiz, 2022).

# 2.2. Macroeconomic stability

Macroeconomic stability is a basic objective of economic policy, since it is related to growth, employment, inflation and external equilibrium. However, there is no single way of achieving it or measuring it, but rather it depends on various historical, institutional and theoretical factors. In this sense, a review can be made of the main theories and models that have tried to explain and guide macroeconomic stability over time.

The first milestone in this journey is the work of Keynes (1936), who argued that aggregate demand determines the level of production and employment, and that the State must intervene through expansionary fiscal and monetary policies to stimulate demand when there is insufficient demand. Thus, macroeconomic stability would be achieved through equilibrium between aggregate supply and aggregate demand.

The second milestone is the Phillips curve (Phillips, 1958), which established an inverse relationship between inflation and unemployment, based on empirical data from the United Kingdom. According to this relationship, there is a trade-off between the two policy goals, i.e., to reduce unemployment one must accept higher inflation and vice versa (Phillips, 1958; Samuelson and Solow, 1960).

The third milestone is the monetarist theory of Friedman (1963), who criticized Keynesian theory and the Phillips curve for ignoring the expectations of economic agents and the long-term effect of economic policies. Friedman asserted that monetary policy is the most effective tool for controlling inflation and maintaining long-term economic growth, while fiscal policy has transitory and distortionary effects. Thus, macroeconomic stability would be achieved through constant and moderate growth of the money supply (Friedman, 1963).

The fourth milestone is the rational expectations theory of Lucas (1979), who further criticized the Keynesian model and monetarism for being based on structural equations that do not take into account the optimizing behavior of economic agents. Lucas argued that economic agents form their expectations about the future based on all available information and on the economic models they know, so they anticipate economic policy actions and neutralize them. Thus, economic policies only have real effects if they are unexpected or surprising, but not if they are systematic or announced. Thus, macroeconomic stability would be achieved through compliance with pre-established economic policy rules and respect for the credibility and independence of the central bank.

The fifth milestone is the Taylor rule (Taylor, 1993), which proposed a mathematical formula to determine the optimal interest rate to be set by the central bank to achieve macroeconomic stability, taking into account inflation, output and monetary policy targets. The Taylor rule is based on the principle that the central bank

should react to deviations of inflation and output from its targets by increasing or decreasing the interest rate according to response parameters. Thus, macroeconomic stability would be achieved through the timely and proportional adjustment of the interest rate to maintain inflation and output at their desired levels (Taylor, 1993).

There are different economic approaches and models that have attempted to explain and guide macroeconomic stability over time, as well as various indicators that have tried to capture its fiscal, monetary, financial and external dimensions (Céspedes et al., 2016; Gómez-Pineda, 2018; Kose et al., 2019).

Studies on emerging economies, such as those of Pakistan, indicate that there is a long-term relationship between fiscal vulnerability, financial stress and macroeconomic policies in the economy and a bidirectional causality between fiscal vulnerability and macroeconomic policies (Chandia et al., 2022a). In turn, they also show us that there is a long-run equilibrium relationship between fiscal deficit and its influencing factors (Chandia et al., 2022b).

In Pakistan, all macroeconomic indicators have been affected by high fiscal deficits and financing strategy for the last two decades (Chandia and Javid, 2013). In this regard, other studies show that primary budget deficit and current account deficit have played a major role in the accumulation of public debt and external debt of Pakistan, respectively, however, they are sustainable in few years (Ejaz and Javid, 2012).

## 2.3. Econometric model

Stability\_Macro<sub>i,t</sub> =  $\beta_0 + \beta_1$ Tax\_Management<sub>i,t</sub> +  $\beta_2 X_{i,t} + \alpha_i + \delta_t + \varepsilon_{i,t}$  where: i denote country; t denote year; Stability\_Macro is the dependent variable proxy for stability (e.g., GDP volatility); Gestión\_Fiscal denotes fiscal indicators of interest; X is a vector of control variables;  $\alpha_i$  are country fixed effects;  $\delta_t$  are time fixed effects;  $\varepsilon$  is the error term.

The  $\beta$  parameters would allow estimating the impact of fiscal management on macroeconomic stability controlling for unobservable characteristics invariant across countries and time. This base model could be expanded to include interaction terms, instrumental variables to deal with possible endogeneity, and econometric techniques for dynamic panel data. But the panel data approach with fixed effects would capture the essence of the research question by taking advantage of the panel dimension provided by multiple countries over multiple years.

## 3. Method

## 3.1. Spatial and temporal scope of the study

The research will focus on emerging countries, according to the classification of international organizations such as the World Bank (2022a) and the Economic Commission for Latin America and the Caribbean (CEPAL, 2019). The temporal scope will cover the period from 2012 to 2022.

## 3.2. Universe or sample of the study

The CEPAL web page contains statistical information on twenty countries

located in Latin America. In order to obtain a representative sample, we worked with the ranking of countries by Gross Domestic Product generation. The countries (five) whose Gross Domestic Product together represent 80% of the region's total were identified. In order to obtain the economic performance of the remaining 20%, another five countries were randomly selected. This resulted in ten countries with which the research was carried out.

# 3.3. Unit of analysis

The unit of analysis will be the country, and the fiscal policies implemented and their impact on the macroeconomic stability of each of the countries in the sample will be analyzed.

# 3.4. Data collection techniques

A combination of techniques will be used, including literature review and secondary data analysis. Secondary data will be obtained from sources such as the World Bank (2022b) and the Economic Commission for Latin America and the Caribbean (CEPAL, 2019).

## 4. Results and discussions

#### 4.1. Results

A description of the dimensions of the model is presented in **Table 1**. The number of subjects observed is 10.

		Number of levels	Covariance structure	Number of parameters	Subject variables	Number of subjects
Fixed effects	Intersection	1		1		
	Fiscal stability	27		26		
Random effects	development index human IDH	1	Variance components	1	Country	
Repeated effects	Year	11	Diagonal	11	Country	10
Total		40		39		

Table 1. Model dimension<sup>a</sup>.

a. Dependent variable: Macroeconomic stability = VAR. GDP (%).

In the model used, fixed effects and random effects were considered, where fiscal stability acts as a fixed effect and the human development index (HDI) as a random effect, with year as a repeated measure. This suggests that the model seeks to capture how each country's fiscal stability and HDI (considering 10 countries in total) influence macroeconomic stability over time.

Information criteria such as the Constrained Log Likelihood, the Akaike Information Criterion (AIC), the Hurvich and Tsai Criterion (AICC), the Bozdogan Criterion (CAIC), and the Schwarz Bayesian Criterion (BIC) are used to compare models; in this context, lower values suggest a better fit of the model to the data. As shown in **Table 2**.

In **Table 3** shows type III fixed effects tests indicate that both the intersection and fiscal stability are significant (with a significance value of 0.0000), implying that fiscal

management has a significant effect on macroeconomic stability in emerging countries.

**Table 2.** Information criteria<sup>a</sup>.

Logarithm of the constrained likelihood-2	-365,518
Akaike Information Criteria (AIC)	-341,518
Hurvich and Tsai Criteria (AICC)	-336,861
Bozdogan Criteria (CAIC)	-300,933
Schwarz Bayesian Criterion (BIC)	-312,933

The information criteria are displayed in the smallest format possible.

**Table 3.** Fixed effects type tests III<sup>a</sup>.

Origin	gl of numerator	gl of denominator	F	Sig.
Intersection	1	11,728	25,245	0.000
Fiscal stability	26	16,161	888,982	0.000

a. Dependent variable: Macroeconomic stability = VAR. GDP (%).

The covariance parameter estimates show the year-specific effects on the variance of macroeconomic stability. These parameters vary by year and there are significant annual differences in the influence of fiscal management on macroeconomic stability, possibly reflecting different fiscal policies or economic contexts over the study period. The interpretation of these results suggests that fiscal management, as measured by specific indicators not detailed in the cited fragment, has a statistically significant association with GDP variability in emerging countries, suggesting a notable impact of fiscal policies on macroeconomic stability during the period studied. As shown in **Table 4**.

**Table 4.** Covariance parameter estimates<sup>a</sup>.

Parameter		Estimate	Standard error
	Var: [Año = 2012]	$1.000000 \times 10^{-7b}$	0.000000
	Var: [Año = 2013]	0.000123	$7.716999 \times 10^{-5}$
	Var: [Año = 2014]	0.000148	$9.081930\times 10^{-5}$
	Var: [Año = 2015]	0.000696	0.000316
	Var: [Año = 2016]	0.000263	0.000138
Repeated measurements	Var: [Año = 2017]	$1.000000 \times 10^{-7b}$	0.000000
measurements	Var: [Año = 2018]	$9.416405 \times 10^{-5}$	$8.076349 \times 10^{-5}$
	Var: [Año = 2019]	0.000313	0.000158
	Var: [Año = 2020]	0.004605	0.002213
	Var: [Año = 2021]	0.001626	0.000798
	Var: [Año = 2022]	0.000393	0.000277
human development index IDH [Subject = Country]	Variance	0.001150	0.000553

a. Dependent variable: Macroeconomic stability = VAR. GDP (%)

a. Dependent variable: Macroeconomic stability = VAR. GDP (%).

b. This covariance parameter is redundant.

Public debt as a percentage of GDP is a critical indicator of a country's fiscal health. In the corresponding graph, trajectories vary significantly across countries, suggesting differences in debt accumulation relative to total economic output. An increase in this ratio indicates a higher debt burden compared to the country's economic capacity, which could signal expansionary fiscal policy or a response to economic shocks. In contrast, a decreasing or stable ratio could indicate prudent fiscal management and a policy aimed at fiscal sustainability. As indicated in **Figure 1**. In **Figures 1–6**, Indonesia appears twice because it is an interruption in the information.

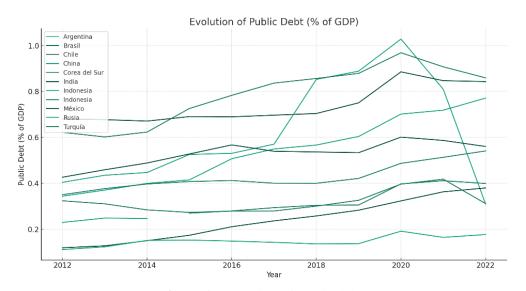


Figure 1. Evolution of public debt.

The fiscal stability index is built on risk score assignments (zero to five to each fiscal system) to four components: 1) the degree of change, 2) the rate of change (increase/decrease versus tax burden), 3) the applicability of change (application to the future investments versus all investments or renegotiation of existing contracts) and 4) the frequency of change.

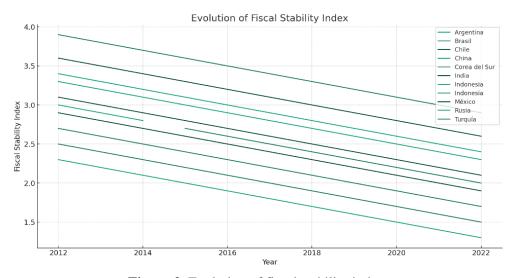


Figure 2. Evolution of fiscal stability index.

This indicator can be interpreted as the effectiveness of a country's fiscal policies.

Increasing values in this index suggest an improvement in fiscal stability, probably as a result of sound fiscal management, efficient expenditure administration and a tax policy that ensures sufficient revenues without discouraging economic activity. On the other hand, a decreasing index could indicate fiscal challenges that could destabilize the country's macroeconomy (see **Figure 2**).

GDP variability is a proxy for economic volatility. A lower degree of variability is generally associated with greater macroeconomic stability and reflects fiscal policies that promote steady growth and reduce vulnerability to economic cycles. The graph shows trends in GDP variability for each country, indicating how economic stability has changed over time and how fiscal policies have been able to dampen or exacerbate economic fluctuations (detail shown in **Figure 3**). The figure shows the abrupt fall in GDP in all countries as a result of COVID-19. In the 2020 period, some even fall to negative percentages. The contraction generated worldwide was even greater than the 2008 financial crisis (OCDE, 2021).

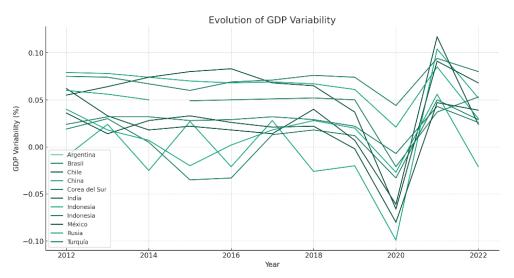


Figure 3. Evolution of GDP Variability.

Overall, the heterogeneity observed in the trends of these indicators underscores the importance of specific national contexts in fiscal policy formulation and implementation. Differences in trajectories suggest that while some countries have adopted fiscal consolidation approaches to strengthen their economies and reduce vulnerability, others have faced significant challenges, possibly due to structural factors, external shocks or less effective fiscal policies. This statistical analysis provides a quantitative basis for assessing the efficiency of fiscal policies and their impact on macroeconomic stability in emerging countries during the decade under study.

**Figure 4** shows countries with public debt as a percentage of GDP. These stand out as having fiscal practices that could contribute to greater macroeconomic stability, as a lower debt burden is generally associated with greater responsiveness to economic shocks and less pressure on public spending.

Countries with a higher average fiscal stability index suggest stronger and more effective fiscal management. These countries have possibly demonstrated a better ability to balance their budgets and maintain stability in their fiscal policies (**Figure 5**)

# shows the comparative).

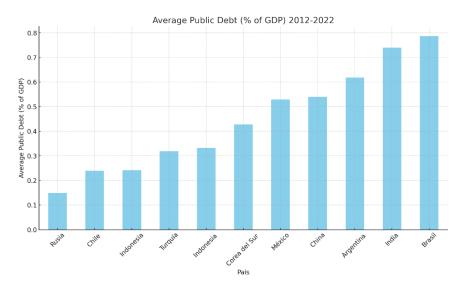
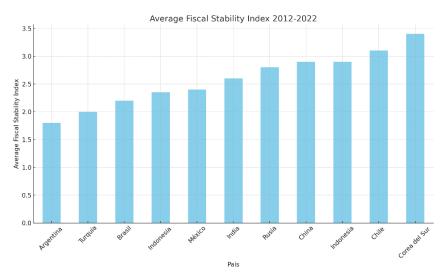


Figure 4. Average public debt (% of GDP) 2012–2022.



**Figure 5.** Average fiscal stability 2012–2022.

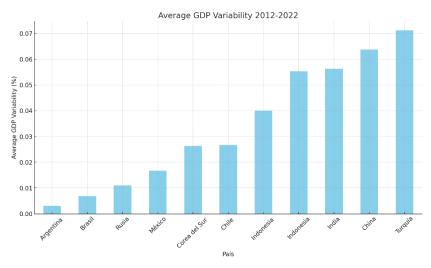


Figure 6. Average GDP variability 2012–2022.

Countries with lower average GDP variability have maintained greater economic stability, which is indicative of fiscal policies that foster sustained growth and reduce exposure to volatile economic cycles. As indicated in **Figure 6**.

#### 4.2. Discussion

The results obtained are consistent with macroeconomic theory (Alesina and Perotti, 1995; Barro, 1979), which postulates that sound and responsible fiscal policies are crucial for maintaining economic stability.

The model includes both fixed (fiscal stability) and random (HDI) effects, suggesting that both factors are important in understanding GDP variability. The HDI, acting as a random effect, reflects the intrinsic variability across countries in terms of human development that could affect how fiscal policies affect macroeconomic stability.

The relevance of these criteria is supported by statistical theories that stress the importance of model fit in the validity of research results (Burnham and Anderson, 2002). The covariance parameter estimates indicate that macroeconomic stability has varied from year to year. This could be represented in the framework of business cycle theory and the literature on the response of fiscal policies to economic shocks (Auerbach and Gorodnichenko, 2012).

Triangulation of the results with economic theory and existing literature provides a solid basis for claiming that effective fiscal management is crucial for macroeconomic stability in emerging countries. Butkiewicz (2019) highlights that debt-financed fiscal policies tend to be destabilizing, as capital stock growth is necessary to increase aggregate supply and balance the budget, but debt financing raises interest rates and reduces investment, thus perpetuating deficits and debt. In turn, Goacher (1984) stresses the importance of balance in government fiscal policy and how changes in fiscal policy affect the macroeconomic economy, including investment and national saving, which has direct implications for government financial policy. Andres et al. (2003) analyze stabilization through distortionary taxes in a New Keynesian model with overlapping generations of consumers with finite lives. In this case, government debt is part of net wealth and affects output and inflation. Distortionary taxes, while reducing the volatility of consumption, increase the volatility of investment and real balances, so that the overall welfare losses associated with distortionary taxation are very small.

The research results reflect a complex interaction between fiscal policies and macroeconomic stability. On the one hand, debt-financed expansionary fiscal policies may stimulate aggregate demand in the short run, but in the long run they may lead to higher investment volatility and possibly macroeconomic instability, as suggested by Andres et al. (2003) and Butkiewicz (2019). The statistical analysis presented shows that countries with sounder fiscal policies and lower public debt to GDP have achieved greater macroeconomic stability, aligning with the theories of Goacher and Andres et al. that emphasize the importance of fiscal balance and the effects of fiscal policies on the volatility of the economy.

The results show that lower public debt relative to GDP, a higher fiscal stability index, and low GDP variability are associated with better fiscal practices and greater

macroeconomic stability. This finding is in line with Butkiewicz (2019), who warns about the dangers of debt-financed fiscal policies, which can be destabilizing by raising interest rates and reducing investment. Consistent with Goacher (1984), the results suggest that a balanced and considered fiscal policy is critical for macroeconomic stability. The inclusion of domestic savings assets and a thorough understanding of the implications of different financing instruments are essential for assessing the long-run impact of fiscal policy. Research supports the notion that prudent and sustainable fiscal policies are vital for macroeconomic stability. Practices that limit the growth of public debt and promote fiscal stability appear to contribute to lower GDP variability, which is indicative of a more stable economic environment. This idea is reinforced by Andres et al. (2003), who found that, although distortionary taxes can reduce consumption volatility, they can at the same time increase the volatility of investment and real balances, leading to small overall welfare losses associated with distortionary taxation.

# 5. Conclusions

In emerging Latin-American countries, it is critical for macroeconomic stability to implement effective and sustainable fiscal policies. Evidence suggests that macroeconomic stability problems persist and continue to be a challenge for many countries in Europe, Latin America and Peru. It is urgent that governments and international institutions continue to work together to address these problems and promote sustainable macroeconomic stability in the future.

Fiscal management plays a key role in macroeconomic stability, as reflected in significant statistical results. Fiscal policies that promote sustainability and efficiency may be effective in improving macroeconomic stability in emerging countries. In addition, the findings may have implications for policymakers, who may need to consider human development conditions and annual specificities when designing fiscal policies.

Fiscal management in emerging countries must be carefully balanced to avoid falling into debt and deficit cycles that can destabilize the economy in the long run. Policies that promote fiscal stability, such as greater efficiency in public spending and effective and equitable tax collection, can help reduce economic volatility and foster more sustainable growth. Research suggests that emerging countries should consider the long-term implications of expansionary fiscal policies, especially those financed by debt, given their potential consequences for investment, employment and the overall stability of the economic system.

The triangulation of empirical data with economic theories provides a solid framework for understanding the complex relationship between fiscal management and macroeconomic stability. While prudent fiscal policies and debt management are critical, so is careful consideration of the impact of such policies on all aspects of the economy. Emerging countries that manage to implement optimal fiscal practices, as evidenced by low debt-to-GDP levels, high fiscal stability and low GDP variability, are in a better position to achieve macroeconomic stability and sustainable growth.

Public debt levels, fiscal stability indexes (amount and rate of taxation) and sectoral GDP levels should not only be published and made available to the public,

but also be available at the level of an economic observatory. Likewise, they should be audited by the control bodies, with follow-up by the Public Prosecutor's Office or the Attorney General's Office. These transparency and monitoring and control mechanisms in emerging countries are necessary for government executives to serve the interests of the nation and not electoral partisan interests.

#### 6. Recommendations

It is recommended that emerging countries develop long-term fiscal frameworks that prioritize sustainability and efficiency. This includes implementing policies that ensure a balance between spending and revenues, avoiding debt overhang and excessive reliance on debt financing. It is also crucial to integrate human development considerations into policymaking to ensure that fiscal objectives are aligned with improved social and economic well-being.

To avoid damaging cycles of debt and deficits, it is imperative to strengthen fiscal institutions. This can be achieved through better management of public spending, ensuring that each unit of expenditure generates the maximum possible benefit, and through effective, equitable and efficient tax collection. In addition, policymakers should regularly assess the effectiveness of fiscal policies and adjust them accordingly to maintain stability and promote inclusive and sustainable growth.

Empirical evidence suggests that fiscal practices that result in low debt-to-GDP levels, high fiscal stability ratios and low GDP variability are indicative of optimal fiscal management. Emerging countries are therefore advised to implement and maintain these practices, which involves careful debt management, prudent fiscal policy and consideration of the impact of fiscal policies on the economy as a whole. Attention to these factors can contribute significantly to macroeconomic stability and long-term economic growth.

The recommendations will be viable to the extent that the institutions pursue the objectives that constituted them and not the partisan political ideals of the government of the day or particular interests. Undoubtedly, it is a great challenge to serve the nation as a public official and not to serve it. In most emerging countries corruption is one of the main problems. The institutions of investigation and justice, therefore, must assume their key role in countries that wish to emerge to a sustainable, healthy economy and service to its citizens.

**Author contributions:** Conceptualization, WSFS, OPÁ and CARP; methodology, WSFS; software, JMCD; validation, OPÁ and CARP; formal analysis, WSFS; investigation, WSFS, OPÁ and CARP; resources, WSFS and OPÁ; data curation, JMCD; writing—original draft preparation, WSFS; writing—review and editing, JMCD; visualization, WSFS and CARP; supervision, WSFS, OPÁ and CARP; project administration, WSFS and JMCD; funding acquisition, OPÁ and CARP. All authors have read and agreed to the published version of the manuscript.

**Conflict of interest:** The authors declare no conflict of interest.

#### References

Alcántara, V., Cabello, A., & Gutiérrez, E. (2020). Public debt and economic growth in Latin America: empirical evidence for the

- period 2000-2018 (Spanish). Revista CEPAL, (132), 25-43.
- Alesina, A., & Perotti, R. (1995). Fiscal Expansions and Adjustments in OECD Countries. Economic Policy, 10(21), 207–248. https://doi.org/10.2307/1344717
- Andrés, J., López-Salido, J. D., & Vallés, J. (2003). Stabilisation Policies and the Effectiveness of Fiscal Policy in the EMU: The Role of National Saving. The Manchester School, 71(5), 487–511. https://doi.org/10.1111/1467-9957.00369
- Auerbach, A. J., & Gorodnichenko, Y. (2012). Fiscal Multipliers in Recession and Expansion. In: Fiscal Policy after the Financial Crisis. University of Chicago Press. pp. 63–98. https://doi.org/10.7208/chicago/9780226024106.003.0003
- Barro, R. J. (1979). On the Determination of the Public Debt. Journal of Political Economy, 87(5), 940–971. https://doi.org/10.1086/260807
- Barro, R. J. (1990). Are government bonds net wealth? In: Barro, R. J. (editor). Modern Business Cycle Theory. Cambridge: Harvard University Press. pp. 55–78.
- Bautista-Sánchez, R. (2019). The impact of fiscal policies on inflation in emerging economies. Journal of Macroeconomics Gestión Fiscal, 61, 101–112. https://doi.org/10.1016/j.jmacro.2019.03.001
- Bittencourt, M. (2019). Fiscal deficits and inflation: New evidence from Brazil. Economic Modelling, 83, 21–27.
- Buchanan, J. M., & Tullock, G. (1979). The calculus of consent: Logical foundations of constitutional democracy. Indianapolis: Liberty Fund.
- Burnham, K. P., & Anderson, D. R. (2002). Model Selection and Multimodel Inference: A Practical Information-Theoretic Approach, 2nd ed. Springer-Verlag. https://doi.org/10.1007/b97636
- Butkiewicz, J. L. (2019). Fiscal policy in a variable price IS-LM model with full employment constraint. Public Finance Review, 47(1), 3–24. https://doi.org/10.1177/109114219901700101
- CEPAL. (2019). Classification of emerging and developing countries (Spanish). Available online: https://repositorio.cepal.org/handle/11362/44050 (accessed on 27 April 2024).
- CEPAL. (2020). Survey on economic policies in Latin America (Spanish). Available online: http://repositorio.cepal.org/bitstream/handle/11362/45005/S2000538\_es.pdf (accessed on 27 April 2024).
- Céspedes, L. F., Chang, R., & Velasco, A. (2016). Macroeconomic performance during commodity price booms and busts. IMF Economic Review, 64(3), 570–599. https://doi.org/10.1057/imfer.2012.22
- Chandia, K. E., & Javid, A. Y. (2013). An Assessment of the Contributing Factors in Debt and Deficit: A Comparative Analysis of Pakistan, India and Bangladesh. Journal of Globalization and Business Management. https://doi.org/10.7726/jgbm.2013.1003
- Chandia, K. E., Iqbal, M. B., & Bahadur, W. (2022a). An analysis of the linkages among fiscal vulnerability, financial stress and macroeconomic policies: an econometric study. Fulbright Review of Economics and Policy. https://doi.org/10.1108/frep-06-2021-0036
- Chandia, K. E., Iqbal, M. B., Aziz, S., et al. (2022b). An analysis of the management of fiscal deficit of Pakistan: An Econometric study of the Autoagressive Distribute Lags (ARDL) Approach. The Singapore Economic Review, 67(02), 655–684. https://doi.org/10.1142/S0217590818500352
- Ejaz, K., & Javid, A. Y. (2012). An assessment of debt sustainability in scenario of Pakistan's debt burden. Munich Personal RePEc Archive.
- Friedman, M. (1963). Inflation: Causes and consequences. New York: Asia Publishing House.
- García, J. (2019). The principles of taxation according to Adam Smith: a critical review (Spanish). Revista Economía UNAM, 16(47), 103–124.
- García, J., & Fernández, M. (2021). A study on fiscal management and its impact on macroeconomic stability in Europe (Spanish). Journal of Economic Studies, 37(4), 329–342. https://doi.org/10.11648/j.jes.20210404.11
- Goacher, D. (1984). The Fiscal Policy Multiplier on Output and the Stability Characteristics of a Macroeconomic System. Public Finance Review, 12(4), 481–502. https://doi.org/10.1177/109114218401200404
- Gómez-González, M. (2020). The role of fiscal policy in stabilizing the economy in emerging countries. Journal of Economic Stability, 10(1), 45–55. https://doi.org/10.1186/s40659-020-0073-7
- Gómez-Pineda, J. G. (2018). Macroeconomic stability and economic growth in Latin America (Spanish). Revista CEPAL (124), 7–26.
- Keynes, J. M. (1936). The general theory of employment, interest, and money. London: Macmillan.
- Kose, M. A., Prasad, E., & Terrones, M. E. (2019). The drivers and implications of global macroeconomic stability. Journal of

- International Money and Finance (96), 1–14.
- Lucas, R. E. (1979). Expectations and the neutrality of money. In: Studies in business-cycle theory. MIT Press. pp. 111-130.
- Martínez-Pérez, A. (2021). Fiscal policies and income distribution in emerging economies. Journal of Income Distribution, 30(1), 1–16. https://doi.org/10.1186/s40659-021-00102-7
- Musgrave, R. A., & Musgrave, P. B. (1989). Public finance in theory and practice. New York: McGraw-Hill.
- OCDE. (2021). Tax and fiscal policies after the COVID-19 crisis. Available online: https://www.oecd.org/coronavirus/policy-responses/tax-and-fiscal-policies-after-the-covid-19-crisis-5a8f24c3/ (accessed on 27 April 2024).
- OCDE. (2022). The role of fiscal policy in promoting economic growth and stability in emerging economies. OCDE.
- Ojeda-Joya, J., Guzman-Gutierrez, C., & Gomez-Gonzalez, J. (2018). Fiscal sustainability in emerging market economies: A Markov-switching DSGE approach for Colombia. Economic Systems, 42(4), 616–626.
- Pérez, J. (2019). The decline in infrastructure investment and its impact on macroeconomic stability in Peru (Spanish). Revista de Desarrollo Económico, 35(1), 67–80. https://doi.org/10.3390/35.1.67
- Phillips, A. W. (1958). The relation between unemployment and the rate of change of money wage rates in the United Kingdom, 1861–1957. Económica, 25(100), 283–299. https://doi.org/10.1111/j.1468-0335.1958.tb00003.x
- Ramírez-Ortiz, J. (2022). The impact of fiscal policies on employment in emerging economies. Journal of Employment Research, 10(2), 123–139. https://doi.org/10.1186/s40659-022-00103-6
- Reinhart, C. M., & Rogoff, K. S. (2021). The role of fiscal policies in emerging market economies. Journal of Economic Perspectives, 35(1), 167–188. https://doi.org/10.1257/jep.35.1.167
- Reyes-Herrera, J. (2019). Proactive fiscal policies and the prevention of economic crises in emerging economies. International Journal of Economics and Financial Issues, 9(3), 149–157. https://doi.org/10.18488/journal.ijefi/2019.9.3/2019.9.3.149.157
- Rodríguez, M. (2020). Exchange rate volatility and its impact on macroeconomic stability in Latin America (Spanish). Revista de Finanzas, 55(3), 200–213. https://doi.org/10.3390/55.3.200
- Samuelson, P. A., & Solow, R. M. (1960). Analytical aspects of anti-inflation policy. The American Economic Review, 50(2), 177–194.
- Taylor, J. B. (1993). Discretion versus policy rules in practice. In: Carnegie-Rochester Conference Series on Public Policy. North-Holland. pp. 195–214.
- Wang, Y., & Li, X. (2021). The role of proactive fiscal management in improving macroeconomic stability and reducing vulnerability to economic crises in emerging economies. Journal of Emerging Market Economies, 9(3), 327–342. https://doi.org/10.1177/09749101211018632
- World Bank. (2022a). Global Economic Prospects, June 2022. Available online: https://www.bancomundial.org/es/publication/global-economic-prospects (accessed on 27 April 2024).
- World Bank. (2022b). Public debt (% del PIB) (Spanish). Available online: https://datos.bancomundial.org/indicator/GC.DOD.TOTL.GD.ZS (accessed on 27 April 2024).
- Zhang, Y., & Lu, X. (2023). The importance of efficient fiscal management for sustainable economic growth and macroeconomic stability in emerging economies. Journal of Emerging Economies, 23(3), 156–167. https://doi.org/10.1057/s41308-023-00156-1