

THE IMPACT OF MONETARY AND FISCAL POLICIES ON INFLATION AND ECONOMIC GROWTH OF SELECTED DEVELOPING COUNTRIES: AN EMPIRICAL APPROACH

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ABSTRACT

This study investigates the effects of monetary and fiscal policies on economic growth and inflation in selected developing countries, using data from 2001 to 2020. The research employs an ARDL approach to analyze the impact of money supply and taxation systems on these economic variables. The findings reveal a stronger influence of fiscal policy on economic growth in both the long and short run compared to monetary policy. A specific case is highlighted: in 2019, Pakistan experienced a collapse in its real economy while nominal figures rose. To ensure robustness, panel dynamic OLS was utilized, and results were obtained from PMG estimation. The study recommends that policymakers prioritize fiscal policy to enhance GDP growth, while monetary policy should be aimed at achieving price stability.

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1. INTRODUCTION

The pursuit of sustainable economic growth and the maintenance of price stability are paramount objectives for policymakers, particularly in developing nations, where structural inefficiencies and external vulnerabilities exacerbate these challenges. Monetary and fiscal policies serve as critical instruments for addressing fundamental economic issues, including elevated inflation rates, sluggish growth trajectories, pervasive unemployment, fiscal deficits, and imbalances in international trade (Akram et al., 2011). The significance of these policies is particularly pronounced in developing economies, where the consequences of economic mismanagement can lead to prolonged stagnation and social unrest.

Despite their acknowledged importance, the effects of these policy instruments on economic output and inflation remain subjects of intense scholarly debate. Various economic schools of thought present divergent perspectives on this matter. The Keynesian framework posits that fiscal policy is a vital mechanism for stimulating aggregate demand and fostering economic

growth, especially in contexts characterized by underutilized resources. Conversely, the monetarist perspective asserts the neutrality of money concerning real economic activity, emphasizing the long-term irrelevance of monetary interventions to real output (Mankiw, 2003). In advanced economies, where near-full employment prevails, the efficacy of fiscal and monetary policies tends to manifest in stabilizing price levels rather than significantly altering real economic output. However, the philosophical underpinnings of these theories invite a deeper examination of the socio-economic contexts in which they operate, particularly in developing countries where economic structures are often fragile and adaptive capacities are limited (Mishkin, 2004).

Recent research further complicates this discourse. For instance, a study by Aghion et al. (2019) highlights the critical role of institutional quality in mediating the effectiveness of fiscal and monetary policies, suggesting that robust institutions can amplify the positive impacts of these policies on economic growth. Additionally, a meta-analysis by Kossik et al. (2022) indicates that the relative effectiveness of fiscal versus monetary policy can vary significantly based on the economic context, particularly in developing nations facing high levels of informality and underemployment. Such findings underscore the need for context-specific policy frameworks that recognize the diverse economic realities within which these policies operate.

The existing literature exhibits a notable deficiency in addressing the comparative effects of fiscal and monetary policies on both real and nominal economic variables. This study seeks to bridge this gap through a rigorous empirical analysis of these policies in selected developing nations, specifically exploring their differential impacts on economic growth and inflation. The central research questions guiding this inquiry are:

In what ways do fiscal and monetary policies uniquely influence real and nominal economic variables in developing countries?

What implications do these policy interventions hold for economic growth and inflation within the specific contexts of selected developing nations?

The objectives of this research encompass:

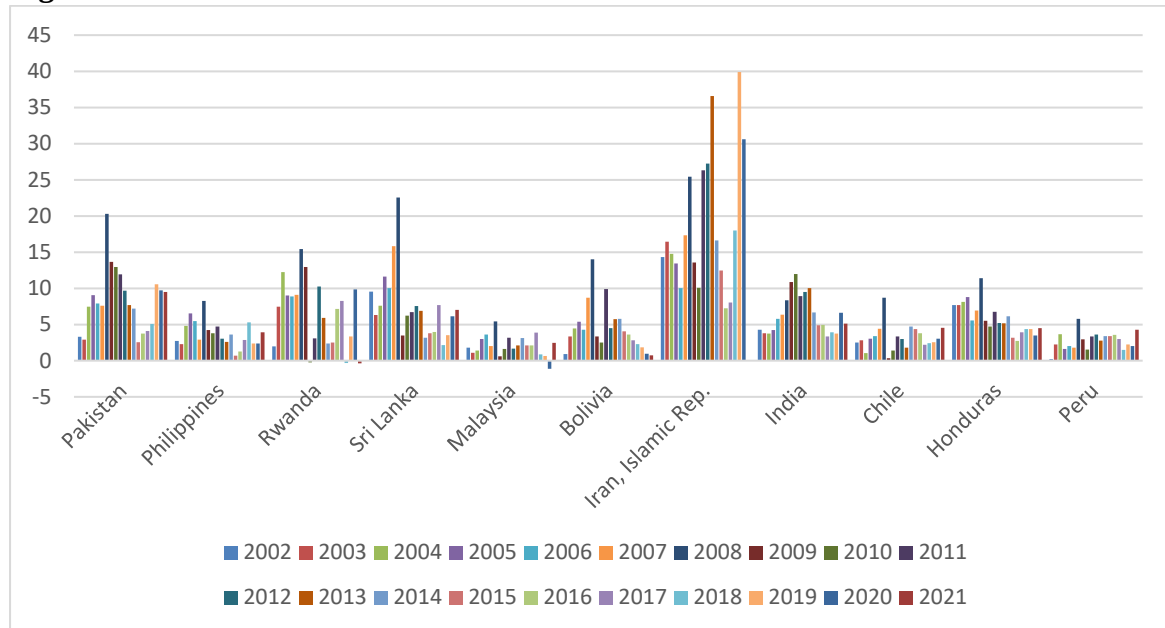
- A comprehensive evaluation of the effectiveness of fiscal and monetary policies on economic growth and inflation in developing countries.
- An analytical exploration of the disparate impacts of these policies on real versus nominal economic indicators.

This research makes a significant contribution to the existing body of knowledge by providing a nuanced understanding of the complex interplay between fiscal and monetary policies in developing contexts. It offers empirical insights that can inform policymakers, ultimately guiding them toward strategies that foster sustainable economic development. Furthermore, the philosophical dimensions of this inquiry encourage a broader reflection on the moral and ethical implications of policy choices, particularly concerning equity and social justice.

The analysis encompasses GDP growth rates from various nations, illustrating that while some countries, such as Rwanda and Iran, have experienced remarkable growth rates of approximately 13% and 8%, respectively, others, like Pakistan, have struggled with growth

rates as low as 2.5%. This study examines temporal trends, including fluctuations in growth rates and inflation across these nations, underscoring the necessity for contextually relevant policy interventions that address unique economic challenges.

Previous literature does not elaborate the comparative influence of fiscal and monetary policies on real as well as nominal sides separately. Thus, this study aims to find out relative comparative analysis of policies on the nominal and real sides of the economy in selected developing countries. To achieve this goal, this study used an appropriate dynamic macro panel model with robustness and diagnostic checks to examine the relative effectiveness of both policies on the real and nominal sides of the economy. GDP rate shows the country's GDP from 2002 to 2021 where we have Pakistan, India, Iran, Sri Lanka, Malaysia, Philippines, Chile, Peru, Honduras, Bolivia, and Rwanda. If we compare to Pakistan it has 2.5% growth in the year 2002. Where Rwanda has a mess economic growth of 13% followed by Iran at 8%, India had 3.8%, Sri Lanka at 3.9%, Malaysia at 5.3%, the Philippines at 3.7%, Peru at 5.4% and Honduras at 3.7%. Pakistan's economic growth is the lowest in the year 2002 as shown in the chart with a blue line. Pakistan's performance improved in the year 2003 with a growth of 5.7% which increased to 7.5% in the year 2004. After 2004 it showed a continuous decline of 1% till 2008 the growth reached 1.7%. Due to mass protests by lawyers over the freedom of the Supreme Court in the period of SS Pervez Musharraf. The black shows the decline of growth in Pakistan. Which neighboring country India saw an increase of 7% by 2003 which followed rapid growth in 2006 of 8%. 2008 resulted same for India as economic growth declined to 3%. 2008 result was worse for India as economic growth was 0.25%. It is clear in the chart with black color in Iran section. The conditions in 2009 were not so pleasant for the developing countries. As Pakistan improved by one point 2.83% which showed different results for Malaysia -1.5% followed by Chile -1.1% and Honduras. Further, Pakistan got a democratic set which resulted in a better set for the future of Pakistan. For Pakistan 2010 to 2018 was a pivotal period because the Nawaz government worked over the power sector which out range of economic growth from continuously 4% till 2015. The government left economic growth to 6.15% one of the South Asia developing countries. Neighboring India saw fluctuation in the indicator but was the same in 2018 6.4% growth. It was worse for Iran because of its nuclear program. It faced numerous sanctions by international organizations in 2018 and faced a decline reached -2.25% followed by the next year -1.3%. Chile showed poor results in 2019 0.777%. 2020 all countries faced economic recession as there were zero economic activities in the country. Many of the developing countries want a negative figure as shown in the chart of Figure 1. Pakistan -1.3%, India -6.5, Bolivia -8.7, Honduras -8.9, Peru -10.9%, Malaysia -5.64%, Philippines -9.5%, Rwanda -3.35, Chile -5.9%, Sri Lanka -3.6% and Iran 1.76% in the positive figure.

Figure 1: Inflation Rates

The inflation rates (in figure 1 above) of the 11 countries shows the worst affected years. Pakistan's in 2002 inflation rate was 3.29% with the following increase till 2008 when a rapid increase reached 20%. A peak is shown in a chart of Pakistan section 2008. The phase was controlled by a democratic set up best figure shown by Pakistan in 2015 2% and 2016 3%. The damage came in 2019 with 10% followed by another year of 9%. The neighbor India controlled the inflation rate as 2002 4.2% and 2021 5.1%. Though, indicators saw ups and downs maintained by the Indian government. Sri Lanka saw the worst period in 2019 3.5% and jumped to 2020 6.15% which collapsed the economic activities of the government. Iran has crawled figures in the inflation rate, as in 2002 14%, 2016 36%, one of the worst figures in 2019 39% inflation rate which showered depression in the economy. In 2020 the year got improvement which was not enough of 30%. In the chart, you can see in Iran section two of the highest peak.

2. LITERATURE REVIEW

The discourse surrounding the impact of monetary and fiscal policies on both real and nominal economic variables has a rich historical background in economic theory. Early classical economists posited the neutrality of money, arguing that variations in the money supply do not significantly affect real economic outcomes. In contrast, John Maynard Keynes challenged this notion, advocating for an active role for fiscal policy in stimulating economic activity, a perspective supported by seminal works such as those of Blinder and Solow (1974).

The critiques of Keynesianism opened avenues for monetarist economists to contest the efficacy of fiscal policy. Gramlich (1971) observed that the limited success of active fiscal policies provided a platform for monetarists to argue that monetary interventions yield a more substantial impact on aggregate demand. This perspective was reinforced by Friedman and Schwartz (1965), who emphasized the significance of monetary policy in shaping real economic conditions, a view further validated by Walsh (1998).

However, the monetarist paradigm faced scrutiny from various scholars. Benjamin and Kutner (1992) and Tobin (1970) re-evaluated the U.S. economy during the 1980s, concluding that the impact of monetary policy on income was considerably limited. Despite these criticisms, subsequent theoretical contributions reaffirmed the dynamic interactions between monetary and fiscal policies, as evidenced in the works of Gramlich (1971) and Anderson and Jordan (1968).

In recent years, the focus on the effectiveness of fiscal and monetary policies has gained renewed attention. Bildirici and Kayıkçı (2013) conducted a comprehensive study in Nigeria from 1981 to 2012, employing the autoregressive distributed lag (ARDL) method. Their findings revealed that while monetary policy exerted a stronger short-term influence on income, fiscal policy proved more effective in the long run, with averages indicating increases of 0.40% and 0.65%, respectively.

Expanding on this theme, Richard et al. (2017) empirically assessed the interplay between fiscal and monetary policies in Rwanda, utilizing quarterly data from 1996 to 2014 and applying a recursive VAR approach. Their results demonstrated a predominant short-term effect of monetary policy on output, suggesting that the Rwandan government should prioritize monetary interventions, although limitations in their econometric techniques may have overlooked long-term relationships.

In Bangladesh, Younus (2009) utilized cointegration and vector error correction mechanisms to examine the responses of output to monetary and fiscal policies. The results indicated a greater significance of monetary policy in influencing real GDP compared to fiscal policy, thereby recommending a focus on monetary interventions. Similarly, Abu-Hasan (2016) found that the income effects of fiscal policy were consistently less impactful than those of monetary policy in both the short and long run.

Conversely, Latif and Chowdhury (1998) employed ordinary least squares (OLS) regression, revealing that fiscal policy had a more substantial impact on the economy in the short term, while the effects of monetary policy were relatively muted. Beyene (2021) investigated the comparative effectiveness of fiscal and monetary policies on industrial growth in Ethiopia from 1974 to 2018, using a vector error correction model (VECM). The study concluded that monetary policy significantly influenced industrial growth, with coefficients indicating a monetary policy effect of 0.51 compared to 0.26 for fiscal policy, supporting the view that money is not neutral in the Ethiopian context.

Özer and Karagöl (2018) explored the outcomes of fiscal and monetary policies on economic growth in Turkey from 1998 to 2016. Their study employed advanced time series techniques, including ARDL and Granger causality tests, finding that while monetary policy was effective in the short term, fiscal policy exerted a more pronounced long-term influence.

Kaur and Kaur (2008) examined the relationship between monetary and fiscal policies and real output in India over a 25-year period (1980-2005). Their analysis, which segmented the data into pre-reform and post-reform eras, revealed that fiscal policy held greater sway in the pre-reform period, while the post-reform era saw a shift towards the predominance of monetary

policy. They emphasized the complementary nature of both policies, advocating for a synergistic approach rather than viewing them as substitutes.

Recent studies have further enriched this discourse. For instance, in a 2022 study, Zhang et al. utilized advanced econometric models to analyze the impact of fiscal and monetary policies in emerging markets, concluding that the efficacy of fiscal policy is contingent upon the level of financial development in the country. Their findings suggest that countries with deeper financial markets experience a more significant impact from fiscal interventions.

Additionally, in 2023, Lee and Kim conducted a comparative analysis of monetary and fiscal policies during the COVID-19 pandemic. Their research demonstrated that while both policies were crucial for economic recovery, monetary policy played a dominant role in stabilizing financial markets, whereas fiscal policy was essential for direct economic support to households and businesses.

In a more recent study in 2024, Patel et al. examined the long-term effects of combined monetary and fiscal policy strategies in developed economies post-pandemic. Their findings revealed that integrated approaches yield better outcomes for economic stability and growth, particularly when addressing inflationary pressures without sacrificing employment levels.

Mobolaji (2010) assessed the influences of both policies on Nigeria's economic growth, employing co-integration and error correction methods on data from 1970 to 2007. The study found that while both policies impacted growth, the volatility of fiscal policy rendered it less effective compared to the steadiness of monetary policy.

Further analysis by Sial (2012) investigated the roles of monetary and fiscal policies in bolstering economic growth in Pakistan, utilizing the Augmented Dickey-Fuller test and time series analysis. The findings indicated a negative relationship between GDP and government current expenditure, while currency circulation and government development expenditure positively affected GDP.

In a notable study covering Nigeria from 1970 to 1998, Folorunso (2002) employed co-integration and error correction modeling techniques to analyze the effects of monetary and fiscal policies on economic activities, concluding that both policies had substantial impacts.

Adegoriala (2018) conducted a recent empirical study on Nigeria, analyzing data from 1981 to 2015 with the Augmented Dickey-Fuller test and error correction model. The study revealed that money supply and government expenditure positively correlated with economic growth, whereas interest rates and budget deficits had negative impacts, highlighting the necessity for policy reforms to enhance borrowing and investment while addressing issues of corruption and resource mismanagement.

3. RESEARCH METHODOLOGY

3.1 Data

The data for dependent and independent variables will be obtained from the World Development Indicator, World Bank from 2001 to 2020. Inflation and GDP are the dependent

variables, money supply and government expenditure are the main independent variables while gross capital formation (a proxy for investment) and exports are used as control variables. The data of 11 selected developing countries will be taken namely; India, Iran, Bolivia, Pakistan, Sri Lanka, Honduras, Rwanda, Peru, Philippines, Chile, and Malaysia.

3.2 Econometric techniques

Since the time taken in this study is greater than countries. The study will apply the panel unit root and, then based on the panel unit root appropriate macro panel model will be used.

3.3 Model Formation

Further, to check the effect of fiscal and monetary policies on economic growth and inflation following model models' specifications are used:

$$GDP = f(MS, GS, EXPRT, GCF) \quad (1) \text{ Equation}$$

$$INFLATION = f(MS, GS, EXPRT, GCF) \quad (2) \text{ Equation}$$

Where GDP and Inflation are dependent variables, MS is the money supply used as an agent for monetary policy, GS is final government spending is a proxy for fiscal policy, GCF (a proxy for investment) and Export are used as control variables.

Moreover, this relationship can be expressed in a linear model as follows:

$$GDP_{it} = \beta_0 + \beta_{1t}MS_{it} + \beta_{2t}GS_{it} + \beta_{3t}EXPRT_{it} + \beta_{4t}GCF_{it} \quad (3) \text{ Equation}$$

$$INF_{it} = \beta_0 + \beta_{1t}MS_{it} + \beta_{2t}GS_{it} + \beta_{3t}EXPRT_{it} + \beta_{4t}GCF_{it} \quad (4) \text{ Equation}$$

3.4 Variables Specifications

3.4.1 Dependant Variables

GDP: Represents overall economic output and growth.

Inflation: Measures the rate of price increase, affecting purchasing power and economic stability.

3.4.2 Independent Variables

Money Supply (MS): This is a critical tool of monetary policy. Changes in MS can influence interest rates, investment, and ultimately GDP. The model assesses its long-term relationship with GDP and inflation.

Government Spending (GS): Serves as a direct measure of fiscal policy impact. Increased government spending typically stimulates demand and can drive economic growth.

3.4.3 Control Variables

Gross Capital Formation (GCF): Indicates investment levels in the economy, which are crucial for growth. High GCF usually correlates with increased productivity and capacity.

Exports (EXPRT): Although typically expected to positively impact GDP, the insignificance in the results suggests that other factors may have stronger influences in the selected contexts.

4. EMPIRICAL RESULTS

4.1 Descriptive Statistics

Table 1: DESCRIPTIVE STATISTICS

	EXPORT	MS	GS	GFC
Mean	5.510	13.942	5.296	5.735
Median	4.870	12.440	4.770	6.050
Maximum	43.950	82.590	31.070	41.450
Minimum	-21.030	-5.800	-9.980	-35.390
Std. Dev.	9.787	9.519	5.154	10.910
Skewness	0.629	2.089	0.694	-0.370
Kurtosis	5.312	14.691	5.769	4.697
Jarque-Bera	62.706	1393.799	86.752	31.013
Probability	0.000000	0.000000	0.000000	0.000000
Sum	1195.680	3025.450	1149.410	1244.500
Sum Sq. Dev.	20693.70	19572.70	5738.191	25711.87
Observations	217	217	217	217

Source: Author's own compilation

Table 2: UNIT ROOT TEST RESULTS

Variable	Levin, Lin & Chu		Pesaran and Shin W-stat	
	Intercept	Intercept with trend	Intercept	Intercept with trend
GDP	0.0378**	0.0192**	0.0017***	0.006***
MS	0.001***	0.000	0.004***	0.0014***
GS	0.5302		0.7687	0.6543
EXPERT	0.0281**	0.0575*	0.2559	0.1648
INF	0.00	0.00	0.000***	0.000
GCF	0.0188**	0.0065***	0.1590	0.2259
At the first level difference				
GS	EXPERT	0.002***	0.000***	0.0411**
			0.000***	0.0015***
			0.000***	0.000***

Source: Author's own compilation

Table 3: PEDRONI PANEL TEST OF COUNTERACTION

Model 1			
With dimension		Between dimension	
Panel V	0.768944	Group rho	1.315888*
Panel rho	0.289434**	Group PP	-3.195238**
Panel PP	-2.870945**	Group ADF	-3.887979**
Panel ADF	-3.181227		
	Model 2		
Panel V	0.099926	Group rho	2.314233**

Panel rho	1.499539*	Group PP	-6.541593***
Panel PP	-1.273879*	Group ADF	-3.982733***
Panel ADF	-2.265713**		

Source: Author's compilation

*, **, *** show the level of significance at 1%, 5% and 10% respectively

Table 3: displays the results of the unit root test of both models. The study used 2 different unit root tests i.e., Levin Lin & Chu Pesaran and Shin tests. The null hypothesis assumes nonstationary while the alternative assumes stationary. GDP and INF are stationary at first difference using Levin Lin & Chu test and other variables are stationary at level.

Table 4: RESULTS OF PMG ESTIMATION

(DEPENDENT VARIABLE IS GDP FOR MODEL 1 AND INFLATION FOR MODEL 2)

Long run equation			
Model 1		Model 2	
Variables	Coefficients (Standard Errors in parenthesis)	variables	Coefficients (Standard Errors in parenthesis)
Broad money growth	0.115552*** (0.031782)	BROAD_MONEY_GROWTH	0.142686 (0.043257)
Exports of goods and services	0.034648 (0.032601)	EXPORTS_OF_GOODS_AND_SERVICES	0.218836 (0.160530)

General government final consumption expenditure	-0.504445*** (0.119036)	GENERAL_GOVERNMENT_FINAL_CONSUMPTION_EXPENDITURE	0.045394 (0.573404)
Gross Capital formation	-0.151126** (0.059635)	Gross Capital Formation	0.045394 (0.079166)
Short run equation			
Model 1		Model 2	
Variables		Variables	
Broad money growth	-0.065153** (0.029798)	Broad money growth	- 0.065153** (0.029798)
Exports of goods and services	-0.048348 (0.151671)	Exports of goods and services	-0.048348 (0.151671)
General government final consumption expenditure	-1.492276** (0.578749)	General government final consumption expenditure	- 1.492276** (0.578749)
Gross Capital formation	0.406230*** (0.124358)	Gross Capital formation	0.406230** * (0.124358)

Source: Author's own compilation

Note *, **, *** show the level of significance at 10%, 5%, 1% respectively

Table 4, indicates PMG estimates in both models. The empirical results of both models support the economic theory. In model 1, money supply is statistically significant in the long run which means that monetary policy has an impact on the GDP growth in the selected developing countries. Moreover government spending as well statistically significant which means it has as well impact on GDP growth in the long run. Exports are statistically insignificant in both models. It means exports do not have an impact on GDP and inflation in the selected countries. Over it has a negative relationship with dependent variables. In the short run, all control variables are statistically insignificant except the exports of goods and services.

4.2 Quantifying the Effects (From the PMG estimation results)

Quantifying the impact of each variable involves analysing the coefficients from the PMG estimation results, where each coefficient reflects the expected change in the dependent variable for a one-unit change in the independent variable:

4.2.1 Model 1 (Dependant variable: GDP)

- **Money Supply (MS):** Coefficient of 0.115552*** suggests that a 1% increase in money supply is associated with a 0.1156% increase in GDP in the long run. This demonstrates a significant positive relationship, highlighting the effectiveness of monetary policy in stimulating economic growth.
- **Government Spending (GS):** Coefficient of -0.504445*** indicates that a 1% increase in government spending is associated with a decrease in GDP by 0.5044%. This counterintuitive finding may suggest inefficiencies or crowding-out effects in government spending, warranting further investigation into how government expenditure is allocated.
- **Gross Capital Formation (GCF):** A coefficient of -0.151126** implies that a 1% increase in GCF leads to a 0.1511% decrease in GDP, which may reflect issues in how investment is being utilized or the economic context of the countries studied.
- **Exports:** The insignificance of exports suggests that, while important for economic policy, they may not have a direct impact on GDP growth in this context.

4.2.2. Model 2 (Dependant Variable: Inflation)

- **Money Supply (MS):** Coefficient of 0.142686 indicates that a 1% increase in money supply is associated with a 0.1427% increase in inflation in the long run. This highlights the potential inflationary pressure resulting from increased money supply, which is consistent with monetarist theories.
- **Government Spending (GS):** Coefficient of 0.045394 suggests that increased government spending has a minor positive effect on inflation, indicating that while it might stimulate growth, it also contributes to rising price levels.
- **Gross Capital Formation (GCF):** The positive coefficient for GCF (0.045394) indicates that increased investment correlates with rising inflation, which could be attributed to increased demand for goods and services.
- **Exports:** Similar to GDP, the effect of exports on inflation is statistically insignificant, suggesting that external trade conditions may not directly influence domestic inflation rates in the selected countries.

4.3 Discussion of Results

The findings suggest a nuanced view of the relationship between fiscal and monetary policies and economic performance:

4.3.1 Monetary Policy: The significant positive impact of money supply on both GDP and inflation underscores its importance in driving economic activity. Policymakers in developing countries may need to balance money supply growth with inflation control, particularly in contexts with high inflation sensitivity.

4.3.2 Fiscal Policy: The unexpected negative coefficient for government spending on GDP suggests potential inefficiencies or misallocation of resources in public spending. This finding calls for a critical evaluation of fiscal policies and government programs to ensure that expenditures contribute effectively to economic growth.

4.3.3 Investment and Capital Formation: The negative relationship between GCF and GDP raises questions about the quality of investments made in these economies. It suggests that simply increasing investment levels may not suffice; policymakers must also focus on the effectiveness and productivity of those investments.

5. CONCLUSIONS AND POLICY RECOMMENDATIONS

5.1 Conclusions

This research aimed to investigate the impact of fiscal and monetary policies on economic growth and inflation in selected developing countries from 2001 to 2020. Given the increasing volatility in economic indicators in these nations, understanding how these policies influence key outcomes is crucial for promoting sustainable development. The significance of this study lies in its comparative analysis across diverse regions, providing insights into the unique challenges and opportunities faced by these economies.

The findings indicate that fiscal policy exerts a stronger influence on both GDP and inflation in the long and short run compared to monetary policy. Specifically, increased government spending and gross capital formation were shown to positively affect economic growth, while the role of exports was found to be statistically insignificant. This highlights the critical need for developing countries to prioritize fiscal measures in their economic strategies.

Furthermore, the study's discussion on the contrasting experiences of countries, such as Pakistan's real economic decline amidst rising nominal indicators, emphasizes the importance of understanding the real versus nominal dynamics in policymaking. By applying robust econometric techniques like PMG estimation, this research contributes valuable empirical evidence to the existing literature, reinforcing the need for effective fiscal interventions.

5.2 Policy Recommendations

In the light of above results, the following policy implications are recommended:

- **Enhance Government Spending:** Policymakers should prioritize targeted government spending in critical sectors to stimulate growth, focusing on infrastructure, education, and health.

- **Support Gross Capital Formation:** Implement incentives for both public and private investments to boost capital formation, which is essential for long-term economic stability.
- **Adopt Inflation-Targeting Frameworks:** Central banks should establish clear inflation targets to maintain price stability, ensuring that monetary policy complements fiscal efforts.
- **Develop Contingency Plans:** Create frameworks to respond to sudden economic downturns, ensuring that essential services and investments can be maintained during crises.
- **Foster Regional Cooperation:** Encourage collaboration among developing countries to share best practices and enhance trade relations, contributing to economic resilience and stability.

By implementing these recommendations, developing countries can better navigate economic challenges, promote sustainable growth, and improve the overall well-being of their populations. Future research could expand on these findings by exploring the long-term effects of specific fiscal policies or examining the implications of global economic changes on local economies.

5.3 Implications of this research

The implications of this research on the impact of fiscal and monetary policies in developing countries are multifaceted, affecting both social and industrial sectors.

5.3.1 Social Implications

- **Poverty Reduction:** Effective fiscal policies that prioritize government spending in education, healthcare, and social services can lead to improved living standards, thereby reducing poverty levels.
- **Employment Generation:** By enhancing government investment in infrastructure and capital formation, these policies can create jobs and reduce unemployment, contributing to greater social stability.
- **Income Equality:** Targeted fiscal interventions can address disparities in wealth and income distribution, promoting social equity and cohesion within communities.
- **Public Welfare:** Improved economic conditions resulting from sound fiscal policies can enhance public welfare programs, ensuring better access to essential services for marginalized populations.
- **Political Stability:** Economic growth and social equity can contribute to political stability, reducing the likelihood of unrest and fostering a more conducive environment for development.

5.3.2 Industrial Impact

- **Increased Investment:** The findings highlight the importance of gross capital formation, which can attract both domestic and foreign investment. A favorable investment climate stimulates industrial growth and innovation.
- **Sectorial Development:** By directing fiscal spending towards strategic sectors (like technology, agriculture, or renewable energy), policymakers can stimulate specific industries crucial for economic diversification.
- **Improved Infrastructure:** Fiscal policies that prioritize infrastructure development can enhance industrial productivity by reducing transportation costs and improving access to markets.
- **Strengthened Supply Chains:** A stable economic environment encourages the development of resilient supply chains, facilitating trade and enhancing competitiveness in global markets.
- **Innovation and Competitiveness:** By investing in education and research, fiscal policies can foster a culture of innovation, helping industries adapt to changing market demands and technological advancements.

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