

Journal of Business and Economic Options



Impact of Government Borrowing on Financial Depth: Evidence from Pakistan

Farooq Ahmed^a
Fazal Ur Rahman^b

Abstract

The study aims to explore the influence of government borrowing from both central banks and commercial banks on financial development, with a specific focus on private borrowing or credit to the private sector. By analyzing the relationship between government borrowing practices and financial development indicators, the research seeks to elucidate how government borrowing behaviors affect the overall financial depth of an economy. This paper utilizes government borrowing, represented by public domestic debt, as a proxy for government borrowing behavior. Conversely, private borrowing, specifically credit to the private sector, is employed as an indicator of financial development. The study aims to investigate the relationship between these variables, recognizing that increased government borrowing from banks often restricts the availability of funds for private borrowing. Consequently, this phenomenon may lead to a reduction in private investment, a trend that is explored in detail within this study. In addition to government borrowing, several other factors influence private borrowing, including taxes, savings rates, and inflation. This study focuses on analyzing the impact of these variables on private borrowing using time series data from Pakistan spanning from 1972 to 2016. The ARDL methodology is employed to examine the relationships between these variables and private borrowing over the specified time period. The data for this study has been sourced from multiple reliable sources, including the World Development Indicators (WDI), reports from the State Bank of Pakistan, and various issues of the Economic Survey of Pakistan. These sources provide comprehensive and authoritative data on economic indicators, lending credibility to the findings of the study.

Keywords: Government borrowing, Financial development, Private sector credit, ARDL methodology, Pakistan

JEL Codes: H63, G21, O16

1. INTRODUCTION

In the 1970s, financial development emerged as a key area of focus, prompting researchers to delve into metrics that could effectively capture the dynamics of financial systems within economies. One such measure proposed by Rajan and Zingales in 1998 was the ratio of private credit to GDP, which provided a glimpse into the extent of credit availability for private sector activities relative to the overall economic output. Additionally, the ratio of stock market capitalization to GDP offered insights into the size and importance of equity markets in facilitating capital allocation and investment opportunities. Over time, the significance of financial development in driving economic growth became increasingly apparent. Studies like that by Arcand, Berkes, and Panizza in 2012 underscored the critical role of well-functioning financial systems in fostering economic advancement. These systems not only facilitate the efficient allocation of resources but also enable access to credit for businesses and individuals, thereby fueling investment, entrepreneurship, and productivity enhancements. As researchers delved deeper into the intricacies of financial development, they recognized the multifaceted nature of this concept. Beyond mere credit provision and stock market activity, financial development encompasses factors such as banking sector efficiency, regulatory frameworks, and financial inclusion. Understanding the nuances of financial development and its interplay with economic growth has since become a central focus of policymakers and economists striving to foster sustainable development and prosperity. The ratio of private credit to GDP has been widely recognized as a key metric for assessing financial development, as highlighted by studies such as Dabla and Srivisal in 2013. This ratio provides valuable insights into the depth and accessibility of credit available to the private sector within an economy relative to its overall economic output.

However, the relationship between government borrowing and financial development has been a subject of debate among researchers. Studies by Ardagna et al. in 2007, Fielding in 2007, and Sah and Stiglitz in 1993 have suggested a negative impact of government borrowing on financial development. When governments heavily rely on borrowing, they tend to absorb a significant portion of available funds from the financial system, leaving fewer resources for private sector lending and investment. This crowding-out effect can hinder the growth and efficiency of financial markets, constraining the ability of private businesses and individuals to access credit for productive purposes. As a result, financial intermediation may be impaired, leading to suboptimal allocation of resources and reduced overall economic performance. Understanding the

^a Department of Economics, University of the Punjab, Lahore, Pakistan

^b Department of Economics, University of the Punjab, Lahore, Pakistan

interplay between government borrowing and financial development is crucial for policymakers seeking to foster sustainable economic growth. Balancing the need for government financing with the imperative of maintaining a vibrant and dynamic financial sector is essential for promoting long-term prosperity and stability.

The historical context of fiscal management in Pakistan underscores the challenges posed by a poorly managed tax system and inefficiencies within government departments. Persistent budget deficits have placed significant strain on the banking sector, limiting its capacity to extend credit to the private sector for investment purposes. As a result, the impact of government borrowing on the financial development of Pakistan has been substantial. The reliance on borrowing to finance government expenditures has crowded out private sector borrowing, constraining the availability of credit for businesses and entrepreneurs. This has hampered the growth and development of the financial sector, impeding its ability to support productive investment and economic expansion. Moreover, the erosion of confidence in the fiscal management of the country may have further dampened investor sentiment, exacerbating the challenges faced by the financial system. Without adequate measures to address fiscal imbalances and improve the efficiency of government spending, the prospects for sustainable financial development in Pakistan remain uncertain. Addressing these issues will require comprehensive reforms aimed at strengthening fiscal discipline, enhancing revenue generation through tax reforms, and improving the efficiency and transparency of government operations. By restoring fiscal sustainability and creating a conducive environment for private sector activity, Pakistan can mitigate the adverse effects of government borrowing on financial development and foster a more resilient and dynamic economy. The trajectory of government borrowing in Pakistan reflects a concerning trend, with figures reaching Rs. 567.5 billion in 2016, compared to Rs. 539.4 billion in the previous year. This escalating level of borrowing underscores the challenges faced by the country's fiscal management and the strain it places on the financial system. Meanwhile, the concept of financial development encompasses a broad range of factors, including the growth and sophistication of financial markets and institutions. A robust financial sector is widely recognized as a key driver of economic growth and stability in any nation.

In the case of Pakistan, the development of its financial sector has become increasingly critical as the economy evolves and diversifies. Access to finance, efficient allocation of capital, and effective risk management are all vital components of a well-functioning financial system. However, the elevated level of government borrowing poses significant risks to financial development. By absorbing a large portion of available funds, government borrowing can crowd out private investment and constrain the growth of the financial sector. This, in turn, may impede the flow of credit to businesses and households, hindering economic activity and undermining long-term growth prospects. To promote sustainable financial development, policymakers in Pakistan must address the root causes of excessive government borrowing, including fiscal imbalances and inefficiencies in public expenditure. By implementing prudent fiscal policies, enhancing revenue mobilization efforts, and improving the efficiency of public sector operations, Pakistan can create a more conducive environment for financial sector growth and economic prosperity. The primary objectives of any country's monetary policy include controlling inflation, managing the money supply, and maintaining a stable exchange rate system. Additionally, achieving equilibrium in the balance of payments is another key goal of monetary policy. In Pakistan, the external sector has witnessed significant progress, driven by factors such as the rise in foreign remittances and stability in the exchange rate. The State Bank of Pakistan has undertaken bold measures in its monetary policy, notably reducing the interest rate to 5.75 percent, the lowest level in forty-four years. This accommodative monetary stance aims to stimulate economic activity and support growth amid challenging economic conditions.

Over the past decade, credit to the private sector has experienced substantial growth, reaching Rs. 311.7 billion in 2016, compared to Rs. 171.2 billion in 2015. This surge in credit availability to the private sector has played a pivotal role in fostering the development of the manufacturing sector, which is essential for driving economic expansion and creating employment opportunities. The increased flow of credit to the private sector reflects a positive trend in financial intermediation, as businesses gain access to the funding needed to invest in capacity expansion, technology upgrades, and new ventures. This, in turn, contributes to productivity enhancement, innovation, and overall economic resilience. Moving forward, sustaining the momentum of credit growth while ensuring financial stability will be crucial for supporting continued economic development in Pakistan. Effective monetary policy measures, coupled with prudent regulation and supervision of the financial sector, will be essential in achieving these objectives and fostering sustainable economic growth. The limited access to the financial sector in Pakistan, where only 47% of the population utilizes banking services, highlights significant challenges within the system. Factors such as religious sentiments and cumbersome documentation procedures contribute to this issue, hindering broader participation in financial services. This paper seeks to address a crucial aspect of Pakistan's financial landscape: the impact of government borrowing on overall financial development. By examining how government borrowing practices influence the growth and accessibility of financial services in the country, this study aims to provide valuable insights into potential areas for improvement and policy interventions. The paper is structured to comprehensively investigate the impact of government borrowing on financial development in Pakistan. Beginning with an introduction, the first section provides context and rationale for studying this relationship. Following this, the literature review synthesizes existing research on the topic, identifying gaps and establishing the theoretical foundation for the study. Subsequently, the theoretical framework, data sources, and econometric methodology are detailed, outlining the approach taken to analyze the relationship between government borrowing and financial development. The findings and analysis section presents the results of the study, interpreting the empirical evidence and assessing the implications. Finally, the conclusion and recommendations

section summarizes the main findings, discusses their significance, and offers insights for policymakers based on the study's conclusions. This structured approach aims to provide a rigorous analysis of the topic while offering valuable insights for future research and policy formulation.

2. LITERATURE REVIEW

Demetriades and Rousseau (2010) conducted a comprehensive investigation into the impact of government spending on financial development, focusing initially on England from 1960 to 2010. Extending their analysis to encompass 84 countries, they discovered a complex relationship between government borrowing and financial development. In the short run, government borrowing appeared to crowd out financial development, while financial development also crowded out government borrowing. However, their findings revealed a more nuanced picture in the long run, where both government borrowing and financial development were mutually beneficial, exhibiting a crowding-in effect. Interestingly, they noted that low-income countries did not exhibit a positive impact of government spending on financial development, suggesting variations in the relationship across different economic contexts. In their comprehensive analysis, Hussain et al. (2009) offered valuable insights into the complex interplay between government spending and private investment, elucidating the differential effects of various types of government expenditures on private sector activities. Their study highlighted the importance of distinguishing between different categories of government spending, revealing how expenditures geared towards debt servicing and defense can potentially hamper private investment, while investments in development-focused areas like education and health can act as catalysts for private sector growth. By employing advanced econometric techniques such as the Johansen cointegration method, they provided a robust framework for understanding these relationships within the context of Pakistan's economic landscape over several decades. Their findings underscored the significance of strategic fiscal policies in fostering an environment conducive to sustained private sector investment and overall economic development. Rehman et al. (2009) embarked on a thorough investigation to discern the multifaceted influences on private investment within the context of Pakistan's economy. Their study, which spanned from 1972 to 2005, meticulously examined various factors impacting private investment dynamics. Leveraging the ARDL methodology, they meticulously scrutinized both the long-term and short-term relationships between private investment and government expenditures. Their findings underscored the pivotal role of governance quality, institutional robustness, and entrepreneurial prowess—attributes often categorized as non-traditional factors—in fostering an environment conducive to private investment growth. Notably, they highlighted that the conventional determinants exhibited only marginal or negligible impacts in comparison. This nuanced understanding offered by Rehman et al. not only deepened the comprehension of Pakistan's investment landscape but also provided actionable insights for policymakers and stakeholders aiming to catalyze private sector participation and economic growth.

Shahe and Subika (2008) delved into the intricate relationship between government borrowing and private credit dynamics, shedding light on their long-term implications. Their empirical estimation suggested that for every dollar borrowed by the government from banks, private credit would be crowded out by approximately 80 cents in the long run. Leveraging panel data from 25 developing countries spanning from 1984 to 2004, they employed the GMM (Generalized Method of Moments) and PMG (Panel Mean Group) methodologies to rigorously analyze this phenomenon. Ahmed and Qayyum (2008) contributed valuable insights into the factors influencing private investment dynamics within the Pakistani context. Their investigation underscored the adverse impact of government current expenditures and interest rates on private investment levels. Furthermore, they identified macroeconomic uncertainty and instability as additional deterrents to private investment growth. Employing fixed private investment in services as the dependent variable, they analyzed the influence of government consumption expenditures, interest rates, real GDP, and inflation uncertainty. Drawing from annual time series data spanning from 1972 to 2005, their study provided a comprehensive understanding of the multifaceted determinants shaping private investment behavior in Pakistan's economic landscape. In their comprehensive examination, Ardagna et al. (2007) shed light on the intricate relationship between government borrowing, interest rates, and private credit, spanning a diverse array of OECD countries over an extensive time horizon. By delving into panel data encompassing multiple decades, their study provided valuable insights into the nuanced dynamics at play within financial markets. Leveraging sophisticated econometric techniques, including VAR modeling, they unraveled the complex interdependencies between these key variables. Their findings underscored the profound impact of government debt levels on interest rate dynamics, elucidating how increased borrowing exerted upward pressure on interest rates over the long term. This, in turn, had repercussions for private credit availability, with higher interest rates serving as a deterrent to private sector borrowing and investment. Through their rigorous empirical analysis, Ardagna et al. offered valuable insights into the mechanisms through which government borrowing shapes financial market conditions and influences investment decisions, thereby contributing to a deeper understanding of macroeconomic dynamics in OECD countries.

Fielding (2007) and Sah and Stiglitz (1993) conducted extensive research to illuminate the consequences of government borrowing, particularly in contexts where fiscal constraints are stringent and revenue generation proves challenging. Their investigations focused on the intricate dynamics prevalent in developing countries, where governments often grapple with limited fiscal resources and face mounting pressure to meet expenditure obligations. In such scenarios, the recourse to borrowing emerges as a pivotal strategy for financing public expenditures, yet it also engenders significant challenges for private investors seeking access to credit from the banking sector. By delving into these issues, Fielding and Sah, along with Stiglitz, provided valuable insights into the complexities surrounding government borrowing in developing economies,

shedding light on the trade-offs and implications for private sector investment and financial market dynamics. Their work underscored the importance of adopting prudent fiscal policies and exploring alternative revenue sources to mitigate the adverse effects of excessive government borrowing on private sector credit availability and investment prospects. Kumhof and Tanner (2005) challenged the conventional notion that government borrowing inevitably crowds out private credit, arguing instead that it can actually facilitate an increase in private credit under certain circumstances. Their research delved into the intricate interplay between government borrowing and private credit dynamics, highlighting the role of government assets held by banks as a crucial factor influencing credit availability. Contrary to the prevailing belief that government borrowing competes with private borrowers for limited financial resources, Kumhof and Tanner suggested that government assets can bolster the financial position of banks, enabling them to extend more credit to the private sector. This perspective offered a nuanced understanding of the relationship between government borrowing and private credit, emphasizing the importance of considering the broader financial landscape and banking sector dynamics in assessing the impact of government debt on credit markets. By exploring these dynamics, Kumhof and Tanner's work provided valuable insights into the complexities of credit allocation and the potential role of government borrowing in shaping financial intermediation processes. Narayan (2004) conducted a comprehensive analysis of the relationship between government expenditures and private investment in Fiji, spanning the years from 1950 to 2001. By dividing this period into two distinct phases—1950 to 1975 and 1976 to 2001—Narayan sought to uncover temporal variations in the impact of government spending on private investment dynamics. His findings revealed intriguing patterns: during the initial period, government expenditures appeared to stimulate private investment, fostering a phenomenon of crowding in. However, in the subsequent period, the influence of government expenditures on private investment weakened, indicating a diminished crowding-in effect. This nuanced understanding of the evolving relationship between government spending and private investment over time provided valuable insights into the complex dynamics shaping Fiji's economic landscape. Narayan's study underscored the importance of considering historical context and temporal variations in analyzing the impact of government policies on private sector investment behavior. Naqvi (2002) conducted a thorough examination of the interplay between government and private investment, highlighting their collective impact on economic growth. Employing a co-integration Vector Autoregressive (VAR) methodology, Naqvi constructed a model incorporating variables such as private fixed capital formation, Gross Domestic Product (GDP), and public fixed capital formation. By analyzing data from Pakistan spanning the years 1964 to 2000, Naqvi sought to elucidate the dynamic relationship between these key economic indicators. Notably, Naqvi employed intercept dummies to account for structural shifts, with values set to one after 1973 and zero otherwise. His findings shed light on the intricate linkages between government and private investment dynamics, underscoring their collective contribution to fostering economic growth and development. Sakr (1993) conducted an insightful investigation into the determinants of private investment in Pakistan, seeking to unravel the intricate factors influencing investment decisions. His analysis revealed a significant dependency of private investment on access to private credit, highlighting the pivotal role of financial intermediaries in facilitating investment activities. Moreover, Sakr's findings underscored the positive impact of public investment on private investment dynamics, particularly when directed towards infrastructure development. However, he cautioned that the efficacy of public investment hinges on its allocation towards productive infrastructure projects. Employing data spanning from 1974 to 1992, Sakr utilized a flexible accelerator model to elucidate the dynamic relationship between public and private investment in Pakistan, providing valuable insights into the country's investment landscape.

3. THEORETICAL MODEL

The relationship between government borrowing and private investment is crucial for understanding the dynamics of economic growth and development. Government borrowing to finance deficit budgets can have significant implications for private investment, as it reduces the amount of funds available for private sector borrowing. This phenomenon, known as crowding out, has been well-documented in the literature (Hussain et al., 2009). Moreover, increased government spending through borrowing can lead to higher interest rates, further deterring private investment (Ardagna et al., 2007). Studies focusing on Pakistan have highlighted the adverse effects of government current expenditures and interest rates on private investment, pointing to the importance of sound fiscal and monetary policies in promoting private sector growth (Ahmed and Qayyum, 2008). Overall, these findings underscore the importance of prudent fiscal management and monetary policy in fostering an environment conducive to private sector investment and economic development.

$$LFD = \beta_0 + \beta_1 LPDD_t + \beta_2 LT_t + \beta_3 LS_t + \beta_4 LINF_t + \varepsilon_t$$

Where,

LFD=Log of Financial development (Domestic credit to private sector (% of GDP))

LPDD=Log of Public Domestic debt (Rs. Billion)

LT=Log of Net taxes on products (constant LCU)

LS=Log of Gross domestic savings (% of GDP)

LINF=Log of Inflation, consumer prices (annual %)

ε_t = Error Term

4. RESULTS AND DISCUSSION

Table 1 displays the results of the Augmented Dickey-Fuller (ADF) Unit Root Test for different variables under two specifications: 1(0) and 1(1), indicating the presence of no lag (0) and one lag (1), respectively. For each variable, the test statistics are provided for both specifications with an intercept term included in the regression. In the 1(0) specification, which denotes no lag, the test statistics for all variables—L(FD), L(PDD), L(INF), Ln(S), and L(T)—are reported. Similarly, in the 1(1) specification, representing one lag, the corresponding test statistics are presented. The intercept term accounts for any deterministic trend in the series. The ADF test helps determine the stationarity of the variables, with a critical value comparison to assess whether the variables are integrated of order zero or one. Variables with statistically significant test statistics at a chosen significance level can be considered stationary, indicating they are integrated of order zero. Conversely, non-significant test statistics imply non-stationarity, indicating integration of order one.

Table 1: Augmented Dickey-Fuller (ADF) Unit Root Test

Variables	1(0)	1(1)
	Intercept	Intercept
L(FD)	-1.112494	-5.236169*
L(PDD)	-0.637321	-4.793666**
L(INF)	-3.297743**	-7.127943*
Ln(S)	-2.004105	-7.094072*
L(T)	-1.932311	-8.531699*

Table 2 presents the VAR (Vector Autoregression) Lag Order Selection Criteria, aiding in determining the appropriate lag order for the model. The criteria include Log Likelihood (LogL), the Sequential Modified LR (Likelihood Ratio) Test Statistic (LR), Final Prediction Error (FPE), Akaike Information Criterion (AIC), Schwarz Information Criterion (SC), and Hannan-Quinn Information Criterion (HQ). For each lag order considered (0, 1, 2, and 3), the corresponding values of Log Likelihood, LR statistic, FPE, AIC, SC, and HQ are provided. Overall, the table facilitates the selection of an appropriate lag order for the VAR model based on different criteria, helping to balance model complexity and goodness of fit.

Table 2: VAR Lag Order Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-90.87796	NA	7.39e-05	4.676974	4.885946	4.753070
1	133.7310	383.4786	4.41e-09	-5.060047	-3.806213*	-4.603470
2	152.6367	27.66691	6.29e-09	-4.762765	-2.464070	-3.925707
3	199.8154	57.53500*	2.48e-09*	-5.844652*	-2.501097	-4.627114*

Table 3 displays the results of the ARDL Bounds Testing Approach, indicating the critical values for the F-Statistic at 10% and 5% significance levels. The bounds are presented for the lower bound (LB) when the variables are integrated at order 0 (I(0)) and the upper bound (UB) when the variables are integrated at order 1 (I(1)). For the 10% significance level, the lower bound ranges from 2.45 to 3.52 for variables integrated at order 0, and the upper bound ranges from 2.86 to 4.01 for variables integrated at order 1. These bounds are crucial for determining the significance of coefficients in the ARDL model, providing thresholds within which the coefficients must fall to be considered statistically significant at the specified significance levels.

Table 3: ARDL Bounds Testing Approach

F-Stati-	10% significance		5% significance	
	LB I(0)	UB I(1)	LB I(0)	UB I(1)
4.89	2.45	3.52	2.86	4.01

Table 4: Estimated Long Run Coefficients using the ARDL Approach

Regressor	Coefficient	Dependent variable is LFD		
		Standard Error	T-Ratio	Probability
Constant	-8.225104	3.840863	-2.141473*	[0.0411]
LPDD	-0.142168	0.031432	-4.523037*	[0.0001]
LINF	-0.227846	0.088733	-2.567778	[0.0159]
LS	-0.277764	0.157899	-1.759122**	[0.0895]
LT	0.518109	0.161783	3.202501*	[0.0034]

Table 4 presents the estimated long-run coefficients obtained using the ARDL approach, with the dependent variable being LFD. Each regressor's coefficient is accompanied by its standard error, T-ratio, and probability value. The table indicates that the constant term has a coefficient of -8.225104, with a standard error of 3.840863. The T-ratio for the constant is -2.141473,

and its associated probability is 0.0411, indicating statistical significance at the 5% level. For the other regressors, LPDD has a coefficient of -0.142168, with a T-ratio of -4.523037 and a probability of 0.0001, indicating strong statistical significance. LINF has a coefficient of -0.227846, with a T-ratio of -2.567778 and a probability of 0.0159, suggesting statistical significance at the 5% level. LS has a coefficient of -0.277764, with a T-ratio of -1.759122 and a probability of 0.0895, indicating marginal statistical significance. Finally, LT has a coefficient of 0.518109, with a T-ratio of 3.202501 and a probability of 0.0034, indicating statistical significance at the 1% level.

Table 5 presents the error correction representation for the selected ARDL model, where the dependent variable is LFD (Labor Force Dynamics). Each regressor's coefficient is accompanied by its standard error, T-values, and probability value. The error correction term (ecm(-1)) has a coefficient of -0.309317, with a standard error of 0.088122. The T-value for the error correction term is -3.510094, indicating strong statistical significance at the 1% level with a probability of 0.0015. This suggests that there is a significant long-term relationship between the variables, and adjustments to deviations from this relationship occur over time. For the other regressors, the coefficient of dC (change in constant) is -2.544165, with a T-value of -2.013638 and a probability of 0.0537, suggesting marginal statistical significance at the 10% level. The coefficients for dL(PDD), dL(INF), dL(S), and dL(T) do not appear to be statistically significant, as their probabilities are above conventional significance levels. The overall goodness of fit of the model is indicated by an R-squared value of 0.923163 and an adjusted R-squared of 0.890233, suggesting that approximately 92.3% of the variance in the dependent variable is explained by the model. Additionally, the F-statistic of 28.03399 is highly significant (Prob(F-stat) = 0.000), indicating that the overall model is statistically significant.

Table 5: Error Correction Representation for the Selected ARDL Model

Dependent variable is LFD				
Regressor	Coefficient	Stand. Error	T-Values	Probability
dC	-2.544165	1.263467	-2.013638	[0.0537]
dL(PDD)	-0.062222	0.166617	-0.373443	[0.7116]
dL(INF)	-0.011431	0.026834	-0.425969	[0.6734]
dL(S)	-0.085917	0.046159	-1.861335	[0.0732]
dL(T)	-0.041138	0.061513	-0.668764	[0.5091]
ecm(-1)	-0.309317	0.088122	-3.510094	[0.0015]

5. CONCLUSIONS

The study's primary conclusions suggest a nuanced relationship between economic variables and financial development. In the long run, public domestic debt is found to exert a significant negative influence on financial development. This indicates that high levels of domestic debt may hinder the growth and efficacy of financial markets, potentially limiting access to capital and stifling economic growth. Additionally, the study reveals that both savings and inflation have adverse effects on financial development. Higher inflation rates and lower savings rates are associated with decreased financial system growth and stability, suggesting the importance of controlling inflation and promoting saving behavior to foster robust financial markets. Conversely, taxes are identified as having a positive impact on financial development. This implies that well-designed tax policies can contribute positively to the expansion and efficiency of financial markets and institutions, potentially promoting investment and economic activity. These findings underscore the complexity of factors influencing financial development and highlight the need for balanced economic policies that consider the interplay between public debt, savings, inflation, and taxation in shaping the financial landscape. Efforts should be directed towards reducing public domestic debt in order to facilitate increased credit availability to the private sector. The study underscores the negative impact of high levels of public debt on financial development. By reducing this debt burden, policymakers can create conditions conducive to greater private sector access to credit, thereby fostering development within the financial sector. Moreover, it may be beneficial for policymakers to reevaluate savings policies in the long run. While savings are crucial for economic stability, the study suggests that excessive savings could potentially impede financial development. In the pursuit of sustained economic growth, policymakers might consider strategies aimed at striking a balance between savings and consumption. Encouraging moderate levels of consumption can stimulate demand for credit from the private sector, thus supporting economic expansion and development. These recommendations emphasize the importance of prudent fiscal management and balanced economic policies in promoting financial development and sustainable economic growth. By addressing issues related to public debt and savings, policymakers can cultivate an environment conducive to robust financial markets and increased private sector investment. Firstly, it is essential to prioritize maintaining stable inflation rates in the long run. The study suggests that inflation negatively impacts financial development. Therefore, efforts should be directed towards implementing monetary policies that promote price stability. Stable inflation rates can foster a conducive environment for investment, savings, and overall economic growth. Secondly, policymakers should recognize the positive role of taxes in financial development. By increasing government revenue through taxation, the need for borrowing from financial sectors can be reduced. This, in turn, can increase the availability of credit for the private sector, stimulating investment and economic activity. Thus, implementing effective tax policies is crucial for enhancing financial stability and facilitating private sector growth. Policymakers should

focus on maintaining stable inflation rates and implementing effective tax policies to support financial development. These measures can contribute to fostering a healthy economic environment conducive to sustainable growth and increased private sector participation. The study's short-term results demonstrate significance, indicating that the observed relationships between variables are meaningful within a shorter timeframe. Additionally, the speed of adjustment, which reflects how quickly the system returns to equilibrium after a shock, is deemed reasonable. However, the diagnostic tests employed in the study do not provide a favorable assessment. This suggests that there may be underlying issues or limitations in the methodology or data used in the analysis. Therefore, there is a need for further investigation and scrutiny of these diagnostic tests to ensure the robustness and reliability of the study's findings. In conclusion, while the short-term results and speed of adjustment are promising, the study's diagnostic tests indicate the necessity for a reassessment and potentially a refinement of the methodology. This process will help enhance the validity and accuracy of the study's conclusions.

REFERENCES

- Ahmad, I., and Qayyum, A. (2008). Effect of government spending and macro-economic uncertainty on private investment in services sector: Evidence from Pakistan.
- Ardagna, D., and Pernici, B. (2007). Adaptive service composition in flexible processes. *IEEE Transactions on software engineering*, 33(6), 369-384.
- Ardagna, S., Caselli, F., and Lane, T. (2007). Fiscal discipline and the cost of public debt service: some estimates for OECD countries. *The BE Journal of Macroeconomics*, 7(1).
- Berkes, M. E., Panizza, U., and Arcand, M. J. L. (2012). *Too Much Finance?* (No. 12-161). International Monetary Fund.
- Dabla-Norris, M. E., and Srivisal, M. N. (2013). *Revisiting the link between finance and macroeconomic volatility* (No. 13-29). International Monetary Fund.
- Demetriades, P. O., and Rousseau, P. L. (2010). Government, Trade Openness and Financial Development. *NBER working paper*.
- Dickey, D. A. and W. A. Fuller (1981), *Likelihood ratio statistics for autoregressive time series with a unit root*. *Econometrica*, Volume 49(4), pp. 1057-1072.
- Fielding, A. (2007). *Cluster and classification techniques for the biosciences* (No. 570.15195 F5). Cambridge: Cambridge University Press.
- Hussain, Adnan, et al. "Effectiveness of government expenditure crowding-in or crowding-out: empirical evidence in case of Pakistan." *European Journal of Economics, Finance and Administrative Sciences* 16 (2009).
- Kumhof, M. M., and Tanner, M. E. (2005). *Government debt: A key role in financial intermediation* (No. 5-57). International Monetary Fund.
- Naqvi, N. H. (2002). Crowding-in or Crowding-out? Modelling the relationship between public and private fixed capital formation using co-integration analysis: the case of Pakistan 1964-2000. *The Pakistan Development Review*, 255-275.
- Narayan, P. K. (2004). Do public investments crowd out private investments? Fresh evidence from Fiji. *Journal of Policy modeling*, 26(6), 747-753.
- Pesaran, M. H., and Pesaran, B. (1997). Working with Microfit 4.0: Interactive econometric analysis: *Oxford University Press*.
- Pesaran, M. H., Shin, Y., and Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of applied econometrics*, 16(3):289-326.
- Pesaran, M. H., Shin, Y., and Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of applied econometrics*, 16(3):289-326.
- Rajan, R. G., and Zingales, L. (1998). Which capitalism? Lessons form the east Asian crisis. *Journal of Applied Corporate Finance*, 11(3), 40-48.
- Rehman, H. U., Khan, S., and Khan, M. A. (2009). What determines private investment? The case of Pakistan. *South Asian Studies A Research Journal of South Asian Studies*, 24(1), 52-68.
- Sakr, M. K. (1993). *Determinants of private investment in Pakistan*. International Monetary Fund.
- Shahe Emran, M., and Farazi, S. (2009). Lazy banks? government borrowing and private credit in developing countries. *Government Borrowing and Private Credit in Developing Countries (June 11, 2009)*
- Stiglitz, J. (1993). Post Walrasian and post Marxian economics. *The Journal of Economic Perspectives*, 7(1), 109-114.