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ACADEMIC PAPER

The Effects of Bank Regulatory Reforms on Banks' Performance: A Case Study of Pakistan

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ABSTRACT

The foremost goal of this research study is to examine the role of the banking sector in the economy of Pakistan during the periods of post and pre-reforms. The research also seeks to analyze the performance and linkage of Pakistan's commercial banks with the State Bank of Pakistan. The number of tests is applied to this, and trend line analysis is used for the results. From the empirical results, we concluded that the banking sector's role in economic growth is higher in the post-reforms period than in the pre-reforms period. The average Gross domestic product (GDP) of Pakistan is higher in the post reforms period and poverty in Pakistan is reduced in such period also the unemployment rate is reduced down during this period rather than pre reforms period. The performance indicator of the Commercial Bank of Pakistan is reducing as a result of the rising trend in non-performing assets (NPAs). Our findings also reveal that the monetary policy of Pakistan is relatively low in 2000 because of inflation and a fall in interest rates, therefore, it is highly recommended that the State Bank take measures to increase or enhance the performance of commercialized banks and focus on the efficacy of the monetary policy to attain macro-level targets.

KEYWORDS

Banking Sector, Non-performing Asset, Monetary Policy, Money Supply, GDP Growth, Unemployment.

INTRODUCTION

Over the last few decades, Pakistan's economy has faced and experienced radical changes in the different sectors of the economy. The banking sector performs the main part or is linked to impel the other sectors of the economy, promoting GDP, and changing the living standard of nations. In the past decades, the role of the commercialized banking sector in development was too little and limited, but after some time, the banking sector has played an important role in the development of the economy. From 1949 to 1974, the role of banks was increasing day by day, and they controlled big business and politicians. Pakistan is an agricultural country, and most of its GDP comes from the agriculture sector. In the early decades, the small industries and other sectors were totally neglected, but over time, the banking sector has been linked with all types of industries (Burki & Niazi, 2003; Rahman et al., 2020).

National banks are controlled by the State Bank of Pakistan, and over time, the number of commercialized banks has increased. The banking sector declined approximately 40% in 1991 and 20% by June 2004. For the National Bank of Pakistan, 23.2 percent shares were offered to the public through the Stock Market, with a focus on small



retail investors (State Bank of Pakistan, 2004, 2025). To come out of a crisis, the Pakistani government takes several actions to deal with these types of economic crises. On the focus on all sectors, they made several reforms related to industrial sector reforms, financial sector reforms, foreign investment, and foreign trade reforms (Farooq, 1995). The starting era of the banking sector saw many private banking systems, and then the public banking system emerged, but the public banking system faced some problems, including unsustainable, unprofitable, and poor financial conditions. Economic instability create pressure to changing in financial structure for keeping profit efficiency (Javed et al., 2024). So, that's why the Pakistani government takes action to deal with that type of problem. The State Bank of Pakistan has made several reforms (Rizvi & Khan, 2001; Ullah et al., 2020).

To promote the banking system in Pakistan, the government made some reforms under the committee on the financial system. In a different period of time, the committee of the financial system performs many actions in the improvement of current reforms and makes further reforms according to the conditions. Banks are basically needed by government organizations, because they are very important for trade financing, as a large number of large organizations deal with other countries, so for their transactions, the banking sector is very important. As we know, Pakistan is an agricultural country, so for the trading banking sector, it is important. Due to the banks, employment is generated in Pakistan. For the lending purpose, most of the financial systems suffer from political interference, the middle class also take attention through the banking sector because they are the backbone of the economy, and they take loan funds from the banks (Khalid, 2006; State Bank of Pakistan, 2002). Due to high profit of margin on different credit products and loan banks earn high rate of profits (Audi & Ali, 2023; Khalid et al., 2025; Khan, 2018; Yolifiandri et al., 2024). In current scenario of Pakistan economic condition, banks facing different challenges and high risk due to operational complications and financial flux (Ali et al., 2025; Audi et al., 2022; Ismail & Saeed, 2019).

The government fiscal deficit is too high, so leading banks used to get loans and then loaned to the government and other government corporations. It is safe lending with a good return, and banks make a profit on it. In this way, risk is reduced because the bank is an authentic source of funds providing. Furthermore, the government owned the majority of the banks. The employees working in the banks are government employees; they work in the office, but their performance is very low. The government banking system is far less authentic than the private banks; their customer service is lower, and these branches are unprofitable due to staffing. Admin cost is also very high. Thirdly, the banking industry faces a high assessment rate of 58 percent, whereas the rest of the corporate area paid just 35 percent. This elevated reformatory rate, alongside the weight of advances stuck and wastefulness of the staff, was given to the clients in the form of high interest rates and low interest rates. The financial business was unattractive for new participants who could promote competition to improve overall effectiveness. From the past and current information, it is totally clear that the operations of commercialized banks have failed to achieve either monetary or fiscal policy. Now the current studies are focused on the role of the Banking Sector, commercialized national banks in the development of the economy (domestic welfare), and try to achieve the goals of the SBP (State Bank of Pakistan). Although, it is essential to calculate the performance of the banking system and accomplish the goals of poverty reduction, inequality, and unemployment.

LITERATURE REVIEW

Financial stability is a very important factor that we observed in the background. The collapse of the financial system not only damages the economic condition but also affects the financial stability. Pakistan's banking system plays a key role in regulating structure and allows diversification of banking market activities (Zheng et al., 2019). In Pakistan, commercial banks dominate the economy and financial sector. From 1970, to achieve national socio-economic objectives, banks have been performing poorly, which provides a base for the nationalization process (Khan & Hanif, 2019). Sarwar et al. (2018) explored, with the help of the E-views panel data approach, twenty-one commercial banks in Pakistan from the period between 2006 and 2015. They revealed that liquidity, capital adequacy, and asset management quality have a substantial impact on a bank's profitability. Ali and Puah (2018) analyze that a strong and productive banking sector is in a supportive position in financial crises. In 2008, the Global



Financial Crisis showed the effects of various macroeconomic actions on the banking industry's policy choices and the outcomes of those decisions (Ullah, 2020). The increasing trend in inflation and decreasing GDP highlights the poor performance of the banking sector. Internal and external environmental have had big influences in different ways on any company, especially in banks. Financial crises have an impact on countries around the world, and every nation is also affected directly or indirectly.

Banks profit oriented policy increases competition, but it negatively affects in terms of a decline in deposit rate, an increase in loans, and worse in financial services (Yao et al., 2018); instead, these TE inefficiencies provide the base to lower profit rate. Policymakers must establish a balance between banks' management capabilities and competition. Rahman et al. (2020) scrutinized the effect of internal and external indicators on banking productivity by covering the period from 2003 to 2017 with 20 commercial banks working in Pakistan. It is reported that size does not contribute to Pakistani banks' profitability, and it harms profitability, which could be due to diseconomies of scale. Furthermore, it is reported that the capital adequacy ratio plays a significant role in accelerating a bank's profitability, and it positively impacts profitability. Fatima and Iqbal (2003) studied five different Asian economies, such as Pakistan, Indonesia, Thailand, Malaysia, and India, fiscal and monetary policies for economic growth. The research study shows that India has only country that has unidirectional causality between economic growth & monetary policy.

The different political governments play an important role in the formation of reforms. The main role of the Musharraf Government is to make some policy decisions, not only focusing on the banking sector under government consideration, but also focusing on privatizing the banking sector, closing all unprofitable branches of banks, and focusing on the staff reduction policy, and only hiring staff according to the needs. Professional executives are hired by private banks. Also, the government of Nawaz Sharif in 1997 initiated some reforms by appointing executive boards of directors on a non-political basis for the first time. The main point that I want to discuss in this article is the policy of the government, the reforms, and their role in the development of the country. The government had also injected fresh equity to strengthen the capital base of the nationalized commercial banks.

Foremost Reforms in the Pakistani banking sector (1990-2021)

1. Liberalization, Prudential Regulation, and Entry of Private Sector in the 1990s

a) Amendments in Banking Law & Privatization Act 1974

- 1991- Revisions in the Banks (Nationalization) Act, 1974, and change the privatization and private ownership in banking
- First major privatization of Muslim Commercial Bank (MCB) in April 1991, beginning the privatization of state banks to enhance profitability, performance, and competition.

b) Entry of New Foreign and Private Banks

- 1992-1996, licenses were issued for new foreign and private banks to operate and diversify in Pakistan's banking system.
- To replace state control with market-based competitive credit pricing introduced, and Interest rate deregulation.

c) Monetary Policy, Supervision, and SBP Autonomy

- 1994-1995, new reforms were introduced, including auctions of government securities, market-based interest rates, open market operations, and monetary policy instruments.
- In the 1990s, the State Bank of Pakistan had robust supervision and regulation and a recovery process.
- 1994 & 1997, Amendments to the SBP Act increased autonomy, monetary policy, and supervision.

2. 2000s Strengthening Regulatory and Consolidation

a) Privatization and Reforms

- United Bank Limited (UBL) was privatized in 2002, and Habib Bank Limited (HBL) in 2004. They were



privatized to enhance private sector banking and strengthen financial intermediation and profitability in the Pakistani banking sector.

b) Regulatory Framework and banking courts

- Banking companies Ordinance and SBP Act enhance SBP's regulatory role and loan recovery mechanisms.
- Formation of Banking Courts to amendments in law to recover loans to support the reduction of NPLs

c) Risk Standards and Adoption of Basel I & II

- The banking sector of Pakistan adopted step-by-step Basel risk-based capital standards to enhance risk management structure.

d) Development in Pakistan Banking Services

- Banks have started offering consumer financing such as housing, SME financing, and auto loans. The change makes it easier to access a wide range of loaning options and diverse lending practices.

3. Islamic Banking Development and Adaptation of Digitalization in the 2010s Era

a) Development in Islamic Banking

- Islamic banking started in the early 2000s, but expansion and regulatory support were seen in the 2010s era under the direction of the SBP.

b) Branchless Banking and Digitalization

- Branchless banking and technology-driven financial services (mobile banking/e-wallets) began to expand, laying the groundwork for future digital reforms.

c) Basel II & III Implementation

- Focus and adoption of Basel II/III standards
- Improve capital adequacy, liquidity, and risk governance.

d) National Financial Inclusion Strategy (NFIS)

- Focus on SME finance, women's banking, and digital payments.

e) At the end of the 2010s era, Digital Banking Growth and an Increase in Banking Services

- Increase in digital wallets and banking agent models
- Banking services are increased in remote areas.

4. 2020-2021 Technological Advancement and Banking System

a) Roshan Digital Account

- For overseas Pakistani online account opening and cross-border investment, the Roshan Digital Account was introduced in 2020.

b) Raast - Instant Payments (2021)

- SBP introduced the Raast real-time payment system
- Improve the payment system and reduce transaction costs.

The main aim that we concluded from this literature is basically to make reforms to solve the problems related to the banking sector. Government securities are basically less risky, so a large number of the private sector invest in government securities. This also created liquidity in the banking system. Fiscal arrangement is progressively centered on development, and intervention security assists with accomplishing fiscal destinations, including value stability, and GDP growth will prompt ease poverty by implication. Money-related and budgetary part strategies in Pakistan ought to be concentrating progressively on both expansion and GDP development. Monetary policy is the mainstream change in the economic environment worldwide. Improvement in monetary policy is essential for

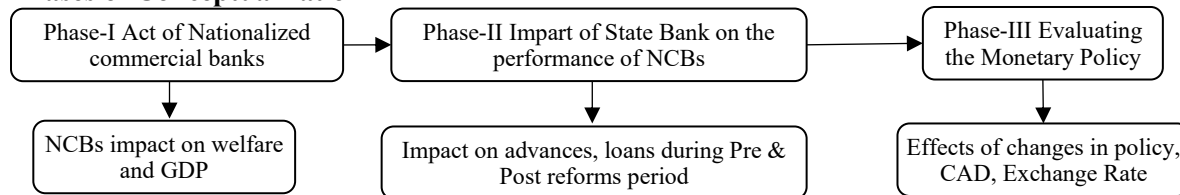


development. Finally, study the offer of loans to their customers, the main aim is national welfare, so in the previous studies, the number of reforms were made for national welfare, and the core target of research is to differentiate the impact and results of monetary policy before and after the reform period. The main aim that we found from the studies is how the nationalized commercial banks liberalized before and after the reform period, and how they contributed to monetary policy.

CONCEPTUAL FRAMEWORK

This study focuses on the three grounds in their framework. First, the study will focus on the analysis of the commercial banks' impacts on the economic development and living standard of people during the pre & post reform period. Pre-reforms are basically the period in which all nationalized banks are under the control of the Central bank (STATE BANK), and post-reforms periods are those periods in which the flexibility is provided by the nationalized commercial banks to the banking sector in the form of reforms for efficiency. Secondly, in this, we study the performance of nationalized commercial banks, profitability, loans, and advances to the public. Thirdly, in this, we focus on the effectiveness of the State Bank polices in achieving the goals like CAD, exchange rate stability, and money or price stability.

Phases of Conceptualization



Pre-Nationalization of Commercial Banks

Before the nationalization, most commercial banks were organized by large corporations. It ignores all the objectives of the State Bank, like reducing unemployment, poverty eradication, and improving living standards. So, for this purpose, the government of Pakistan decided to nationalize commercial banks by the 1974 Act. The main objective of all the banks during this period is profit-seeking. They enjoy flexibility without considering domestic welfare.

Nationalization of Commercial Banks in the Pre-Reforms Period

Enhance the influence of the commercial banking sector in domestic welfare according to the 1974 Act. Under the 1974 Act, the 16 banks were nationalized, and then in 1998, more than 10 banks were nationalized. All the banks are under the control of the planned policy. All the nationalized commercial banks were under the control of the State Bank of Pakistan (SBP).

Committee on Banking Sector Reforms in 1991

During this time span, all nationalized banks were working under the State Bank of Pakistan and the Finance Ministry. When the commercial banks were nationalized, profitability was reduced in the 80s. To revive their performance effectively and earn profit again, the Government of Pakistan made a committee under the supervision of the State Bank of Pakistan. They impose some recommendations about the reduction in CRR and SLR. Many of the recommendations were accepted by the government of Pakistan during the reform period (1991).

1998 Financial System Committee

Ensuring the recommendation implementation, the Government of Pakistan made the committee under the leadership of the State Bank governor for the checks and balances and more progress. The committee submitted the report and recommended that further emphasis on capital adequacy and merging large banks be made to meet international standards. The committee also endorses that further foreign banks and private banks be given added flexibility and liberty for the effectiveness of monetary policy.



Nationalized Commercial Banks and Economic Growth

Everyone knows that commercial banks are vital for economic growth and development. Economic growth is related to GDP, and development is related to welfare. The entire banking sector is correlated with the loans & advances with GDP, not a good indication of economic welfare. In the literature review, we found that there is a positive correlation between loans and living standards, because it is controlled by the State Bank of Pakistan.

NPAs and Profitability of Nationalized Commercial Banks

Many of the directors of nationalized commercial banks show their unhappy behavior towards the nationalized policy. They show that nationalization policy is only related to the welfare of the nation, not related to the profitability motives, so this policy has negatively affected the profitability of the banking sector. According to the statistics, the percentage of non-performing assets (NPAs) has increased dramatically, while profitability has decreased since the policy was implemented. So, in the 1980s, the commercial banks wanted to revive their profitability by demanding more autonomy. Then the government of Pakistan recommended some implications to deal with these types of issues.

DATA DRIVEN MODEL AND METHOD

Two methods are approaching, qualitative and quantitative research is used to find the performance of NPAs, profitability, and loans, and also the impact of NCBs on economic growth and development. Secondly, we study the effectiveness of monetary policy. So, an ADF test is used to check whether the data is stationary or not. Then we used the Granger Causality test for relationships. Then we apply trend analysis to compare the bank in the economy.

ADF Test

In this study, both qualitative and quantitative research are used to find the impact of NCBs on economic growth and development, as well as their performance in NPA loans & profitability. Secondly, we study the effectiveness of monetary policy. SO, the ADF test is used to check whether the data is stationary or not. Then we used granger causality test for relationships. Then we apply trend analysis to compare the bank in the economy.

$$\Delta X_t = \alpha + \beta X_{t-1} + \varphi \Delta X_{t-1} + \lambda t + u_t \quad (1)$$

If $\beta=0$ means that the date is non-stationary, then it becomes very obligatory to include in the equation because the ADF test is applicable only when the trend is stationary. The Granger Causality test talks about directional relationships between different variables. It is basically a measure to assess the relationship between policy effectiveness and interest rates.

Pakistan's MS and GDP

$$GDP_t = \beta_0 + \sum_{i=1}^n \beta_{1i} GDP_{t-1} + \sum_{i=1}^n \beta_{2i} MS_{t-1} + u_{1t}$$

$$MS_t = \beta_3 + \sum_{i=1}^n \beta_{4i} MS_{t-1} + \sum_{i=1}^n \beta_{5i} GDP + u_{2t} \quad (2)$$

(i). Money Supply and CPI (Inflation) in Pakistan

$$MS_t = \beta_0 + \sum_{i=1}^n \beta_{1i} MS_{t-1} + \sum_{i=1}^n \beta_{2i} CPI + u_{1t}$$

$$CPI_t = \beta_3 + \sum_{i=1}^n \beta_{4i} CPI_{t-1} + \sum_{i=1}^n \beta_{5i} MS_{t-1} + u_{2t} \quad (3)$$

(ii) Exchange Rate and Current Account Deficit in Pakistan

$$ER_t = \beta_0 + \sum_{i=1}^n \beta_{1i} ER_{t-1} + \sum_{i=1}^n \beta_{2i} CAD_{t-1} + u_{1t}$$

$$CAD_t = \beta_3 + \sum_{i=1}^n \beta_{4i} CAD + \sum_{i=1}^n \beta_{5i} ER_{t-1} + u_{2t} \quad (4)$$

(iii) Money Supply and Current Account Deficit in Pakistan

$$MS_t = \beta_0 + \sum_{i=1}^n \beta_{1i} MS_{t-i} + \sum_{i=1}^n \beta_{2i} CAD_{t-i} + u_{1t}$$

$$CAD_t = \beta_3 + \sum_{i=1}^n \beta_{4i} CAD + \sum_{i=1}^n \beta_{5i} MS_{t-1} + u_{2t} \quad (5)$$



(iv) GDP and Current Account Deficit in Pakistan

$$GDP_t = \beta_0 + \sum_{i=1}^n \beta_{1i} GDP_{t-i} + \sum_{i=1}^n \beta_{2i} CAD_{t-i} + u_{1t}$$

$$CAD_t = \beta_3 + \sum_{i=1}^n \beta_{4i} CAD + \sum_{i=1}^n \beta_{5i} GDP_{t-1} + u_{2t} \quad (6)$$

(v). State Bank Lending Rate and Commercial Bank Lending Rate in Pakistan

$$SBLR_t = \beta_0 + \sum_{i=1}^n \beta_{1i} SBLR_{t-1} + \sum_{i=1}^n \beta_{2i} CBLR_{t-1} + u_{1t}$$

$$CBLR_t = \beta_3 + \sum_{i=1}^n \beta_{4i} CBLR + \sum_{i=1}^n \beta_{5i} SBLR_{t-1} + u_{2t} \quad (7)$$

(vi) Pakistan's CBLR and MS

$$CBLR_t = \beta_0 + \sum_{i=1}^n \beta_{4i} CBLR + \sum_{i=1}^n \beta_{2i} CBLR_{t-1} + u_{2t}$$

$$MS_t = \beta_3 + \sum_{i=1}^n \beta_{4i} MS + \sum_{i=1}^n \beta_{5i} CBLR_{t-1} + u_{2t} \quad (8)$$

(vii). GDP and Non-Performing Assets in Pakistan

$$GDP_t = \beta_0 + \sum_{i=1}^n \beta_{1i} GDP_{t-1} + \sum_{i=1}^n \beta_{2i} NPA_{t-1} + u_{1t}$$

$$NPA_t = \beta_3 + \sum_{i=1}^n \beta_{4i} NPA + \sum_{i=1}^n \beta_{5i} GDP_{t-1} + u_{2t} \quad (9)$$

(viii) Pakistan's Commercial Bank Profit and NPA

$$PROFIT_{CB_t} = \beta_0 + \sum_{i=1}^n \beta_{1i} PROFIT_{CB_{t-1}} + \sum_{i=1}^n \beta_{2i} NPA_{t-1} + u_{1t},$$

$$NPA_t = \beta_3 + \sum_{i=1}^n \beta_{4i} NPA + \sum_{i=1}^n \beta_{5i} PROFIT_{CB_{t-1}} + u_{2t} \quad (10)$$

The terms, MS for Money Supply, NPA for Non-Performing Asset, SBLR for State Bank Lending Rate, ER for Exchange Rate, CB for Profit of Commercial Banks, CAD for Current Account Deficit, CPI for Consumer Price Index, and CBLR for Commercial Bank Lending Rate. The research employs trend line analysis to assess the performance and functions of Nationalized Commercial Banks pre/post Pakistan's banking and financial system reforms. Trend line analysis shows a better overview and true scenario between two time periods in comparative analysis. In current studies, the answer to research questions and their purposes is obtained by quantitative and qualitative research methods, with most of the data required from secondary sources, such as reports and books, state bank etc.

EMPIRICAL RESULTS

The study is based on two important concepts: one is the role of the banking sector in welfare before and after reform periods. The second concept is the function of monetary policy in Pakistan before/after reform periods, and how effective it is. So, for this, we used the Granger Causality test, the ADF-PP test, and the Trendline analysis test.

Unit Root Test

Table 1: Unit Root Test Results at First Difference.

Variables	Augmented Dickey-Fuller Test (Trend & Intercept at first difference)		Phillips-Perron Test (Trend & Intercept at first difference)	
	T. Statistic	Prob.	T. Statistic	Prob.
GDP (Industrial)	-5.95701	0.0005	-5.924819	0.0004
Medium and Large-Scale loan	-5.370916	0.0021	-5.982151	0.0061
Loans to SSI	-6.195244	0.0005	-6.854275	0.0003
Agri GDP	-5.01214	0.0029	-7.251123	0.0001
Agri Loans	-2.812962	0.4154	-5.857271	0.0003
GDP (Service Sector)	-5.951821	0.0029	-5.972869	0.0021
GDP (Total)	-5.392819	0.0025	-5.927184	0.0019



Computer Results

Table 2: Unit Root Test Results at First Difference.

Variables	Augmented Dickey-Fuller Test (Trend & Intercept at 1 st diff.)		Phillips-Perron Test (Trend & Intercept at 1 st diff.)	
	T Statistic	Prob.	T Statistic	Prob.
CPI	-9.138728	0.0000	-21.75134	0.0000
Poverty	-4.549261	0.0527	-11.32574	0.0000
Exchange Rate	-4.681429	0.0064	-4.518621	0.0076
Money Supply	-6.952461	0.0000	-6.193282	0.0000
Current Account Deficit	-5.195274	0.0002	-15.927539	0.0000
NPA (since 1991)	-4.3481	0.3521	-2.458738	0.3649
Money Supply	-6.952461	0.0000	-6.193282	0.0000
Money Supply	-6.952461	0.0000	-6.193282	0.0000
Unemployment	-4.128469	0.0019	-4.276419	0.0018
Commercial Bank Lending Rate (1991)	-5.8512	0.0015	-5.9374	0.0015
State Bank Lending Rate (1991)	-5.6941	0.0019	-7.8249	0.0000
Profit of nationalized commercial banks (1991)	-4.847259	0.0198	-3.738516	0.0821

Computer Results

From the test, ADF (Augmented Dickey-Fuller Test) and PP (Phillips-Perron Test) unit root test results are shown in the above table, and the result shows that the selected variable is not stationary at one level, and macroeconomic variables are stationary, and the value that we found from the test is 0.05 and less than this, except for a few variables. But the same variable in the test statistics has a 1 percent critical value for rejecting the null hypothesis. The PP test shows that the probability value is (< 0.05) for all excluding NPA. Limited availability of data on NPA, the maximum observation is (< 54), causes higher probability numbers. After this, Granger causality is applied to find the directional relationship between variables.

Performance of Nationalized Commercial Banks in Pakistan

According to the complete survey of literature review, we observed that the banking sector of commercial banks has contributed less to economic development since 90s. After the reform period, before and after national sector reforms, entirely commercial banking system was organized under the State Bank of Pakistan. The Government of Pakistan introduced banking sector reforms in 1998 and offered sovereignty and freedom to commercial banking. Neither banks nor emphasize their prime objective of nationalization, nor do they focus on lending. Also, it is not focused on the interest rate and effectiveness of monetary policy; it is very necessary to find a solution. For this, we propose the Granger Causality Test and the ADF-PP TEST.

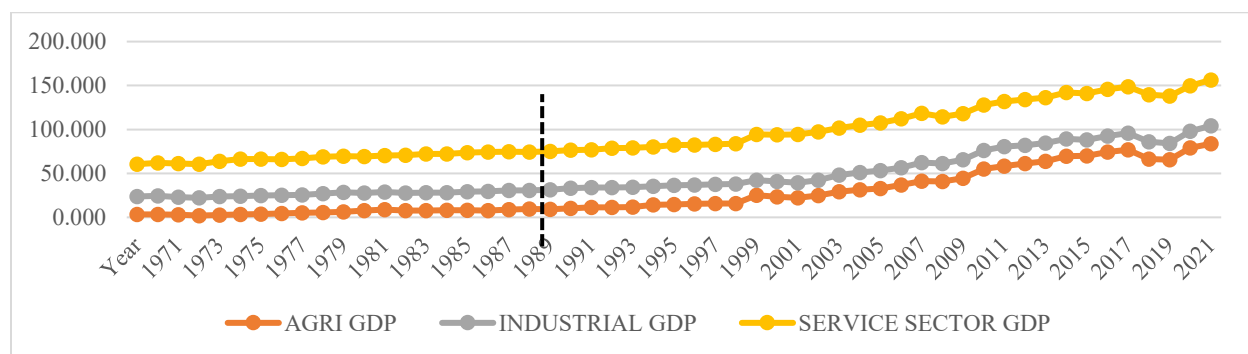


Figure 1: Pakistan’s Pre-financial Sector Reforms, GDP, Money Supply, and Priority Lending.

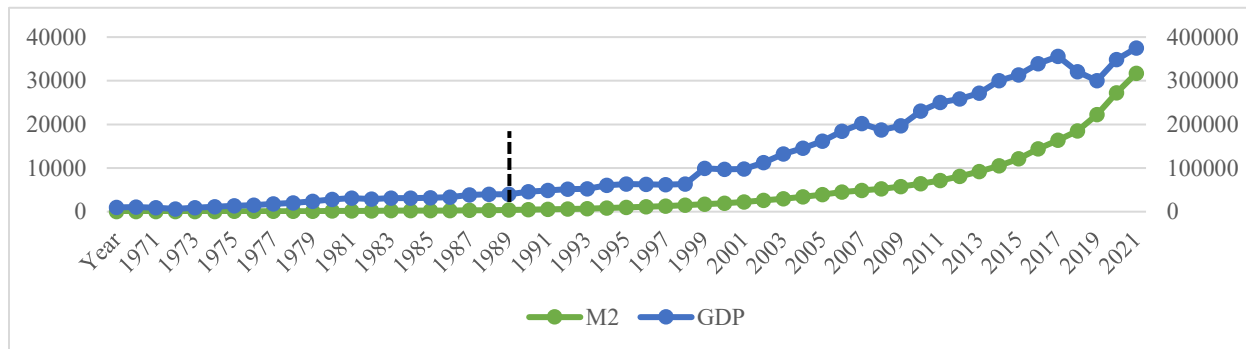


Figure 2: Pakistan’s Post-financial Sector Reforms, GDP, Money Supply, and Priority Lending.

Figure 3. Poverty & Unemployment in PAKISTAN during Pre and Post Financial Sector Reforms

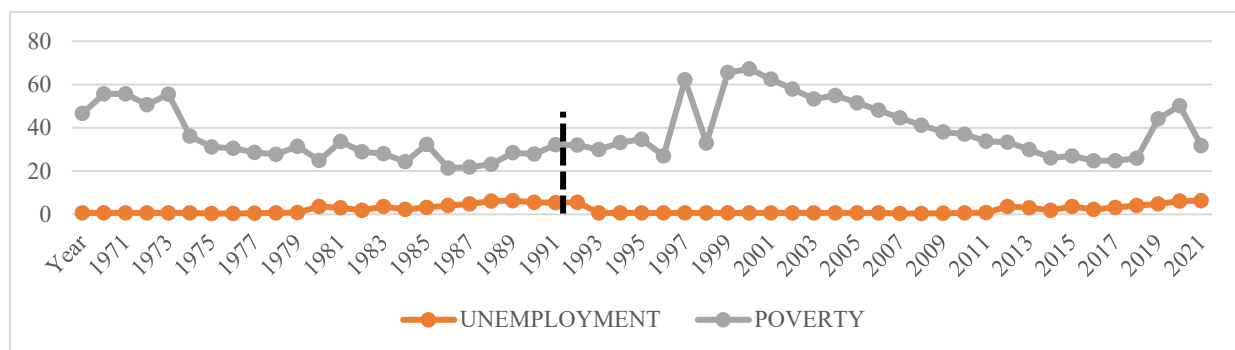


Figure 3: Unemployment and Poverty in Pakistan in Pre and Post Financial Sector Reforms.

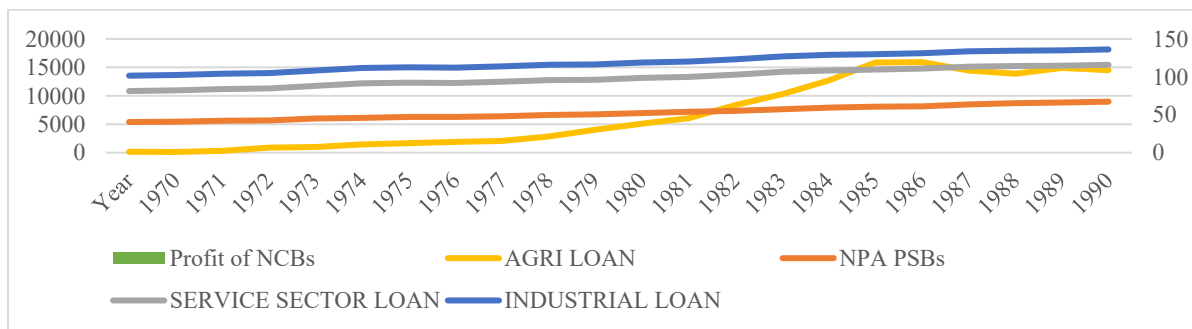


Figure 4: Loans in Pre-reform Periods.

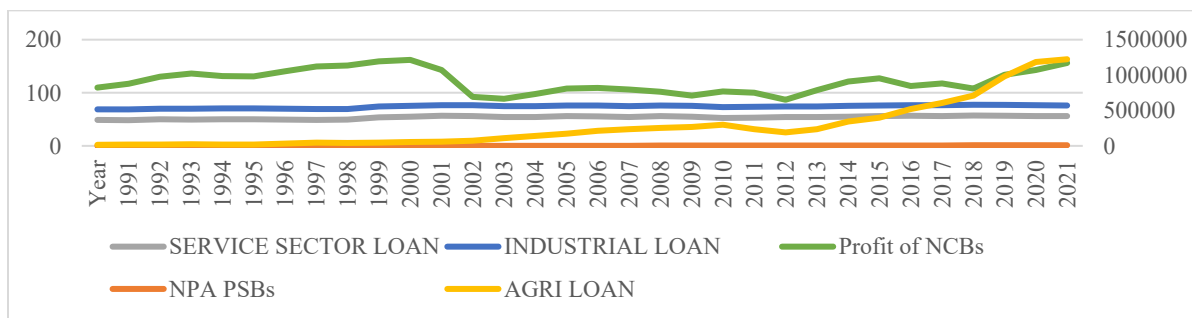


Figure 5: Loans in Post-reform Periods.



By using the line analysis figure 1, this research shows there is a positive relation between GDP and economic development, through the reform period (pre as well as post). Over these periods, GDP is constantly higher while lower in poverty and unemployment; both are inversely related to each other. By comparing the results, we find some interesting results. The overall result that we find from the test is that the GDP is higher in the post-reform period than in the pre-reform period. Before the reform period average GDP of agriculture, while the Industrial GDP was very low in the post-reform period. It is almost 25 times increase compared to the pre-reform period (1, 2, and 3) figures.

Now, research tries to compare the GDP and loans by nationalized banks during periods of reforms, pre- and post. The sector lending rate in the post-reform era is greater than in the pre-reform era. Although loan of agriculture sector has increased more compared to the service sector, because Pakistan is an agricultural country. Large-scale sector loans increased in 60 as in Figure 4 and 5. We concluded that there is a positive relation between GDP & lending rate for the duration of the reform period before and after. But are opposites related to poverty and unemployment, as in Figure 3? So, it is positively related to the GDP, development, and poverty. In the pre-reform period, the poverty rate fell compared to the post-reform era. So, growth in GDP in the post-reform era; therefore, the unemployment rate remains constant. Therefore, lending by NCBs is high for the medium and large sectors compared to agricultural lending and the small-scale sector. Figure 4 and 5)

In this research, we observed the performance of NCBs, and we found that from 1991 to 2021, the NPAs of nationalized commercial banks were under control considerable profit. After the implication of reforms and policies, the growth and profit of NPA have increased faster. This is clearly mentioned in the trend analysis figure 5 and the causality test on the second table. The Granger test tells the unidirectional causality between profit and its NPA. In the first part, the study gives mixed results. In the post-reform era, the growth due to NCBs is good, and GDP and development were lower in the post-reform era due to a large quantity of loans being offered to the large sector, rather than the agricultural & small-scale sector. This shows negativity on employment generation and also on poverty. Secondly, the study shows the effectiveness of monetary policy in the reform era of 1991. The main purpose is to check the role of the State Bank in the effectiveness of monetary policy in different sectors after providing complete autonomy to the NCBs through banking reforms. So, the number of changes is implemented and periodically changes in the supply of money, and then check the effects on inflation, GDP, CAD, and the rate of lending in the State Bank and commercial banks. When the money supply and demand also increase, the price also increases. So it is unidirectional, not related to others. But some variables were associated with others. Increasing the price also affects the circulation of money.

Two methods were used to test monetary policy effectiveness. One deals with the internal sector and the other one deals with the external sector. In the internal sector, changes in money supply, employment, and gross domestic products occur without affecting inflation. Second external factor changes in the money supply on CAD, and balance of payments. Then the study used the relationship between variables by the Granger causality test to verify in Table 2 the monetary policy effectiveness. Table 2 clearly shows that there is unidirectional causality in GDP and money supply in Pakistan. The test validates the rise in money supply that led to an escalation in GDP (Figure 6), showing the positive relation between money supply and GDP in Pakistan. Without creating an inflation rate, the demand and GDP also increase and show a direct relationship with each other. The Granger causality test shows that gross domestic products have no impact on money supply.

Now we move on to the second part, and we find that there is no causal relation between CAD and money supply. So from Table 3 and Figure 6, it is clearly shown that money supply changes do not influence CAD, CPI, and the exchange rate. Trade accounts of merchandise were not directly related to the money supply in Pakistan. Therefore, there is no causality between money supply and CAD. That's why the balance of payment restoration process is not feasible for Pakistan. So monetary policy is effective in the external sector. This study focused on the interest rate pass-through in Pakistan through banking sector reforms. That's why research focuses on the Granger Causality Test, as observed from Table 3 and Figure 7.



Table 3: Granger Causality Tests (Pairwise).

Null Hypothesis	Obs.	F-Stat	Prob.	Result
Gross Domestic Product does not Granger-cause Money Supply		0.51278	0.8492	
Money Supply does not Granger-cause Gross Domestic Product.	54	5.82671	0.0081	Unidirectional Causality
Money Supply does not Granger-cause Consumer Price Index		0.82612	0.7251	
Consumer Price Index does not Granger-cause Money Supply.	54	2.43982	0.4152	No Causality
Exchange Rate does not Granger-cause Current Account Deficit		0.49521	0.7594	
Current Account Deficit does not Granger-cause Exchange Rate.	54	2.13658	0.1210	No Causality
Money Supply does not Granger-cause Current Account Deficit		1.41802	0.2915	
Current Account Deficit does not Granger-cause Money Supply.	54	2.48219	0.0925	No Causality
Gross Domestic Product does not Granger-cause Current Account Deficit		5.28732	0.0083	
Current Account Deficit does not Granger-cause Gross Domestic Product.	54	1.86217	0.4285	Unidirectional Causality
State Bank Lending Rate does not Granger-cause Commercial Bank Lending Rate		5.41836	0.0193	
Commercial Bank Lending Rate does not Granger-cause State Bank Lending Rate.	37	0.97451	0.1921	Unidirectional Causality
Commercial Bank Lending Rate does not Granger-cause Money Supply		0.87531	0.8241	
Money Supply does not Granger-cause Commercial Bank Lending Rate.	37	2.91257	0.0742	No Causality
Gross Domestic Product does not Granger-cause Non-Performing Asset		4.37915	0.0057	
Non-Performing Asset does not Granger-cause Gross Domestic Product.	37	0.92491	0.5873	Unidirectional Causality.
PROFIT- Commercial Bank does not Granger Cause Non-Performing Asset		22.8153	0.0009	
Non-Performing Asset does not Granger-cause PROFIT-Commercial Bank.	37	2.72681	0.1889	Unidirectional Causality

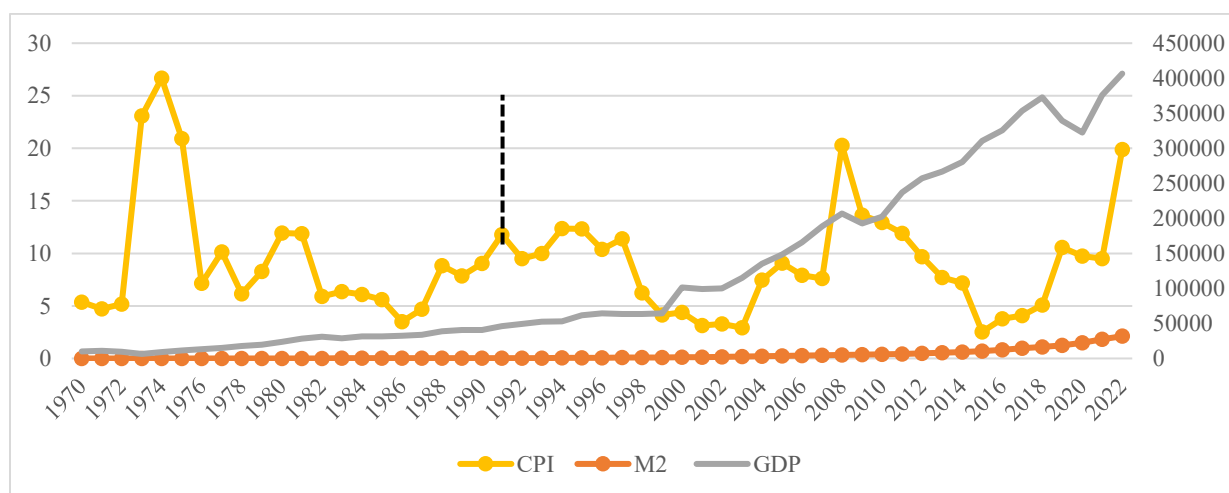


Figure 6: Growth Rate and Money Supply.



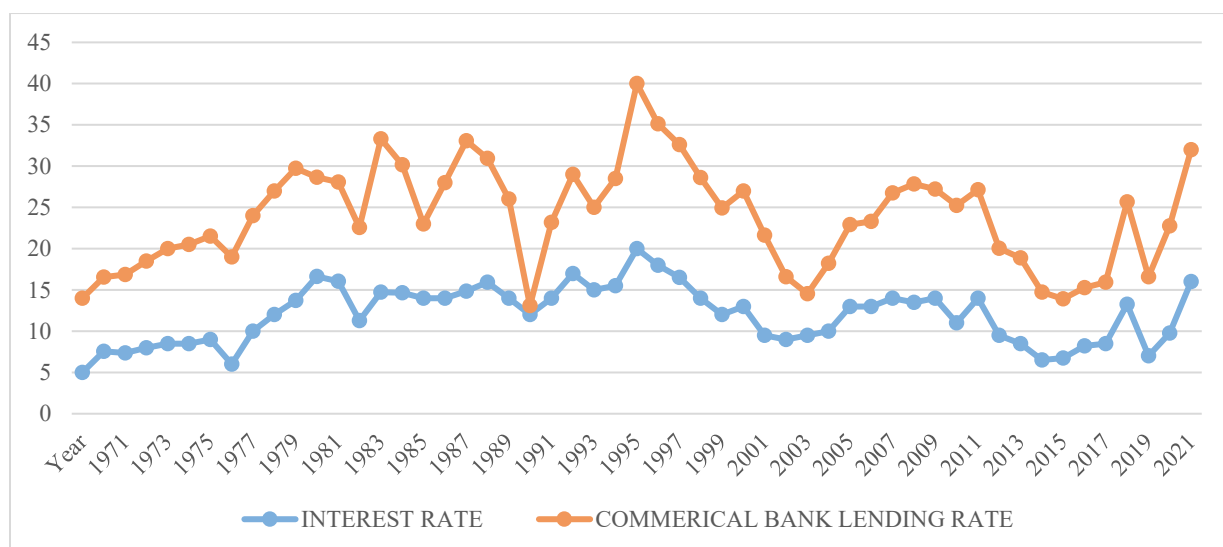


Figure 7: Correlation between the State Bank and the Commercial Bank Lending Rate.

From this study, the relationship between money supply and commercial bank lending rates is determined. Money supply depends upon the central bank of the country, not the commercial bank lending rate. So, from the figure of the Granger Causality test, the result concluded that money supply is governed by the State Bank, not on commercial bank lending rate. There is only 10% level of significance, which shows that the commercial bank lending rate does not depend upon the State Bank lending rate, or the money supply, with 10% significance level. Then the other Granger test shows the unidirectional causality among the State Bank lending rate, and also in the commercial bank lending rate. This indicates that State Bank will be a great reason for change in CBLR from 1991 to 2021; the gap between those years is very high.

CONCLUSION

The main purpose of studying the government of Pakistan is to nationalize the commercial bank to increase the welfare through priority lending. In the 1970s, all national banks were controlled by the State Bank to achieve the planned objectives. So, this is the reason most of the banks faced the problem of bankruptcy in late 80s era. So this issue, there is an essential need to make reforms and strengthen banking system. The committee of State Bank provided some recommendations in 1991 for its report, which implemented some reforms. In 1997, review the old policy and make another policy for further improvement. The committee provides a report to the government of Pakistan on the banking sector reforms. Before the implementation of reforms, autonomy was given to the banking sector; as a result of this, the banking sector moved away from its objectives and became profit driven. The basic aim of sovereignty is to increase the performance of the banking sector. But complete statistics show that the NPA does not perform well by giving such autonomy. The core purpose of research is finding the function of the nationalized commercial banks in the progression of the country in both the pre-reforms period and the post-reforms period. Also, this study focuses on the monetary policy effectiveness in Pakistan by giving the autonomy of the banking sector. Nationalized commercial banks played a significant role in the development and growth of the country in the post-reform period. And poverty will be reduced through the nationalized commercial banks in the post-reform period. And employment is also generated by priority lending; the role of reducing poverty more in pre-reforms era than in the post-reforms era. The main aim of autonomy is to increase profits from the banking sector. But the nationalized commercial banks and nonprofit loans have been high in post-reform era since 2000. Secondly, the study focuses on the effectiveness of monetary policy in Pakistan. Monetary policy influences GDP, and they are positively related to each other, as we discussed earlier in the results and discussion. In the above research, monetary policy is an effective tool to attain equilibrium; another monetary policy within the external sector, such as CAD, the exchange rate, etc. Thirdly, the study shows the relationship between the variables as



unidirectional or multidirectional by the Granger causality test. It is concluded that the unidirectional relationship between SBLR and CBLR and the commercial bank lending rate is correlated with the State Bank lending rate. Finally, the study concluded that the nationalized commercial bank in Pakistan enhanced the welfare and economic development in the reform period and played a role in GDP.

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