Impact of Bank Lending on Economic Growth – An Empirical Study in the Indian Context

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Abstract: *Background*: In any country's growing economy, its banking system would play a crucial role in boosting GDP. The present study analyzed the effect of Indian banking borrowing on Indian economic growth.

Purpose: The present study analyzed the effect of Indian banking borrowing on Indian economic growth. The study framed the exploratory research with secondary data from 2005 to 2020. The growth of any country's economy will depend on its banking system. The banking growth will depend on the lending system; the more robust the lending, the higher the country's economic growth.

Research Design and Methodology: The study framed the exploratory research with secondary data from 2005 to 2020. The study classified it into two segments; food and non-food credits of the Indian banking lending. In the study, food and non-food credit are bank loans. The vector error correction model calculates the analysis of the relationship of banking borrowing to economic growth. The result showed that food credit and non-food credit had a short-term relationship with Indian GDP. The ordinary least square method was applied, and the result showed that food credit had a negative impact, but non-food credit had a negative impact.

Findings: The result showed that food credit and non-food credit had a short-term relationship with Indian GDP. The ordinary least square method was applied, and the result showed that food credit had a negative impact, but non-food credit had a negative impact. This study is helpful for bankers, regulators, and various government stakeholders.

Keywords: Bank lending, food credit, economic growth, GDP, non-food credit.

1. INTRODUCTION

Banks' primary business is to gather deposits and make loans for development. The Reserve Bank of India regulates fund deployment through its directives. The legal liquidity ratio and investments determine the available cash for borrowing Gambacorta (2005). The credit-deposit ratio is determined by these lendable funds and by requirements for the conduct of the necessary lending policies and systems. The loan should be so that the lender can satisfy unforeseen requirements. Generally, trade and industry, particularly borrowing money, play the most crucial role in economic growth and trade development. Loans are not risk-free. When borrowing, the banker must be prudent because she is mainly concerned with the funds of others. The funds must reimburse on demand. For a scouted cash loan, there are some concepts or criteria. Further, the capital adequacy ratio is a measure of a bank's capital maintained to absorb its outlying risks Dibra ,& Bezo(2021).

Over the years, the definition of loans has evolved. Banks have historically been regarded as short-term lending sources of business and trade operations Ivashina, & Scharfstein, (2010). As economies grow and develop and a new business class arises, analysis of the borrowing of capital has made it possible for lending to be based on the actual needs of businesses and on the intent and ultimate use of funds made available. Every business could now demand bank funds only because the resources are free. The advent of retail and small business hanks in agriculture and their dedication to supporting the poorer sections of society has forced them to look at their conventional lending model for a second time and focus more on the profitability of schemes and the capacity of borrowers to produce surpluses for loan repayment.

The modern economy is an economy of credit. The business sector needs loans for different purposes, one of which promotes economic activities. Credit drives economic activities through the willingness of firms to spend beyond their wealth, allowing householders to purchase homes in advance without decreasing the total value, increasing the cyclical trend of tax revenues, and investing in consumer reduction in infrastructure projects. Economic literature in recent decades has widely discussed the effect of credit on economic growth. Therefore, it is necessary to take more extraordinary accounts of uncertainty and risk. In addition, the bigger you grow, the stronger you get. This idea was adopted by the earliest Italian banks: The Medici Bank, which had many relevant partnerships from financial achievement to hereditary status and power. Medici Bank has achieved this by

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adjusting the diversification of risk and the involvement of both currency and lending. Consequently, the vulnerability to defaults was reduced (Sehrawat & Giri, 2015)

According to Estrada, et.al. (2010), "finance and economic growth are the primary factors driving local economic growth. This is associated with the continued growth of bank lending in the Eurozone. In 2017, household loans increased by 2.8% and non-financial creditors by 2.9%. Mathur stated that "a significant correlation between bank lending and economic growth has essential development strategies and political implications. "In general, despite the limited role of the banking sector in regulating the money supply and its economic impact on increasing economic development. Economic growth in a given period is a constant expansion of output opportunities calculated. Many theories are related to Economic growth, such as "the Conventional theory of the growth neoclassical and new the growth theory provides insight into economic growth. There is a route economics need to take before answering these questions explicitly. The growth theories have developed over time and are based on the previous theory and substituted it. Credit in India has risen. Capital markets like debt and equity have recently gained prominence, and policies like the Jan Dhan Yojana have expanded the scope of the banking system. Credit cards are widely used to fund consumer-based purchases. Therefore, the study of the relationship between banking credit and economic growth is of practical value in policymaking and not only of pedagogical interest.

2. REVIEW OF LITERATURE

A diversified study was conducted by Demirgüc-Kunt and Levine (1999) with a report compiled spanning 150 nations and stated that a particular proposal illustrates the finance system of wealthier countries, in which capital exchanges are more involved than banks. The states developed a comprehensive financial system index in several countries. They found a significant relationship between the factors that directly influenced the financial soundness and economic growth, rather than focusing on the country-wide questioning of relative bank production and the customer base structure. Poshakwale and Qain (2007) reveal the impact of financial reforms on the growth and assertiveness of banking sector performance. They also established the long-term association between Egypt's financial reforms and economic development between 1992 and 2007. The findings show that the changes had a substantial and vital effect on economic development. He also found that domestic or government banks operated better than commercial or international banks. Mishra et al. (2009) show that "In a developing country like India, especially following the global lending crisis, the issue of causal ties between credit market development and economic growth is crucial." Efficient allocation of funds for enhanced economic growth is a proven credit market. Therefore, this study explores the trajectory of the causality between the credit market & economic growth in India, recognizing the importance of "Credit Market Development." It shows that the economy's growth positively impacts credit market creation. Obamuyi et al. (2012) find that the scope of its function reduces to a loan given to the manufacturing sector by the Nigerian bank, and the effect of production is calculated on economic development. Since the link between bank lending and manufacturing output growth is high, the central bank's position in implementing monetary policy suggests restricting the upper limit and sustaining a competitive climate.

Krishnankutty (2011) examines the relation between North East India bank credit and economic development. Northeastern India reverses economic growth similar to other regions of India. The study found that banks' credit to North East India segments has a minimal economic growth effect based on panel results. It is primarily due to failures in payments and a lack of oversight by the authorities. Sehrawat and Giri (2015) focused on the "Impact of financial development on India's growth." The analysis points out a bidirectional link between per-capita credit and deposits and finds that these factors have significantly affected the development of the Indian economy. It concluded that it is necessary to isolate the shift in GDP due to systemic reasons. However, there has been much discussion on the specific years that characterize the systemic break in India's growth tale. Badar and Badar (2015) examined the "relationship of financial sector development with the economic growth," where variables genuinely demonstrate the development of financial sector effectiveness; that is, money availability, advanced scale, private sector Credit development, and economic growth equity that pronounce in this analysis by the Gross Domestic Product. The outcome indicates a long- and shortterm partnership between "financial sector development and Pakistan's economy."

Demetriades & Luintel (2015), using newly collected data from India's Reserve Bank, analyze the impact of various forms of banking restrictions on financial deepening. Such restrictions negatively impact financial growth, excluding the established influence of a real interest rate and credit rate limit. Homogeneity checks suggest mutual financial deepening commitment and economic development. Policies affecting growing finances may also impact economic development.

Joshi (2016) describes the growth, success, and efficiency of the Indian financial system, using various proxy variables for financial progress; it also explores the connection between Indian financial growth and advancement. The study also reveals how India's markets have deepened in other "Asia-Pacific economies." The study shows that the "Indian capital industry has undergone significant changes over three and a half decades." Neelam Timsina, Radhe Shyam Pradhan (2016) focused on the impact of commercial bank borrowing on economic development. Bank borrowing positively impacts the development of the economy. It argues that "policymakers need to focus further on developing the formal financial sector, modern banking, effective capital and infrastructure markets, and the construction of a sensitive investment environment to improve bank lending, a key factor in Nepal's economic growth." Singh et al. (2016) discussed the interdependence of credit creation and economic development. India's move to broaden its banking portfolio and recent changes in the way transactions take place raises the question of whether these developments directly influence the development direction. India has examined and understood the relationship between credit and development in recent years. The relationship assesses at the global and sectoral levels utilizing separate credit and growth processes. The findings indicate that the two variables are strongly related.

Jagdeep (2017) found that the nation has more significant financial and economic standards than any other country. Latest events have seen innovative financial models such as transfers and tiny banks in the Indian banking market. Theoretically, the central bank authorized 11 banks and ten small funding banks in the 2015-16 fiscal year. New RBI initiatives will go a long way to support the domestic banking sector and restructure it. This research paper is concerned with analyzing the position of banks in the economic growth of the world. The Indian banking sector has no longer confined itself exclusively to metropolitans but has also hit back corners.

Abusharbeh (2017) analyses the influence of some interventions in the banking sector (credit facilities, depositor funds, number of branches, and interest rates) on the gross national product using quarterly statistics from 2000 to 2015, indicating that the bank lending is suitable for economic development. It indicates that banking sector development continues to enhance Pa's productive potential.

Ibrahim & Karaki (2020) found that researchers reveal that Islamic banking is a crucial field in the Palestinian economy. Other loans issued by banks would positively influence economic development to know the effects of bank lending on economic growth in Palestine. It found that the sources of bank loans differ from GDP. Because of the significant threat to banks, this small contribution from bank lending to GDP is not mainly involved in lending to the manufacturing sector. However, the prime empiric proof indicates that bank credit is not the source of economic growth. In an interesting study, Zhang et al. (2019) investigate whether the level of financial leasing influences the duo ban lending and economic growth in the global context. They studied 40 countries worldwide from 2006 to 2016.

Vo (2018) examined a single nation Vietnam and found that there is no impact on bank market structure by lending. He further elaborates on those other macroeconomic factors that influence the bank's structure and the economy of a particular country. Lay's (2020) study considers 17 advanced economies and finds there is no long-term relationship between bank lending to businesses and the economic growth of those countries. He demonstrates the short-term influence of lending on economic growth.

3. OBJECTIVES OF THE STUDY

3.1. To study the relationship between bank lending with India's economic growth.

3.2. To examine the impact of bank lending on Indian economic growth.

4. HYPOTHESES OF THE STUDY

4.1. **H0**₁: There is no relationship exists between bank lending and Economic Growth Indicators.

4.2. **H0**₂: Bank Lending has no impact on Economic Growth Indicators.

5. SCOPE OF THE STUDY

The present study has emphasized the impact of bank credit on Indian economic growth. The study has considered the secondary data from 2004-05 to 2020-20. The study has considered food credit and non-food credit as bank credit.

6. RESEARCH METHODOLOGY

The present study is exploratory and considered all the commercial banks in India from the RBI handbook. The banking lending system has been classified into two segments. Food credit and Non-food credit segments.

The study framed the following regression equation to examine the relation and impact of Independent and dependent variables. The study has considered the GDP and a dependent and Food and Non-Food credit parameters as independent variables.

$Y_i = f(X_{i,\beta}) + e_i$

The study has considered the secondary data and applied various statistical tools to examine framed objectives. The following are the tools used. The current study eexplains several research methods, which includes an explanation of the data and variables used, specifications of the econometric model, testing data, panel vector error correction model (VECM), and fully modified ordinary least squares (FM-OLS) analysis. Leiwakabessy and Payapo(2022)

Vector Error Correction Model (VECM): The study applied the "VECM to identify the relationship between the bank credit and economic growth indicator – GDP. The study used the time series data. The Vector Error Correction Model (VECM) is the most relevant tool for estimating the impacts Lotfi, I., & Lotfi, B. (2020). The e-views statistical software has been used to compile the VECM for the long-run or short-run relationship between the bank credit and GDP" Thierry et.al (2016). The VECM has been applied to determine the direction of causality and the results for both long run and short run causality the presence of a long run relationship between the variables indicates that there is an existence of a causal relationship among the variables Khobai and Sithole (2022).

Ordinary Least Square (OLS): The study applied the ordinary least square method to know the impact of bank credit on the GDP of the Indian economic growth indicator, Olowofeso et .al (2015).

7. TABULATION OF DATA ANALYSIS

Objective -1: "To study bank lending relationship with India's economic growth."

This objective focused on the relationship between Bank lending with India's Economic growth. Here, the study considered the dependent parameter as India's Gross Domestic Product, and the independent variable has food credit and non-food credit. It also identifies the long-run or short-run relationship between the Bank credit (i.e., Food credit + Non-food credit). Vector Error Correction Model has been applied, and the result is as follows.

The analysis primarily examined the VAR lag order selection criteria by considering the dependent variable and inde-

Table 1. "VAR Lag Order Selection Criteria".

			VAR Lag Order Sel	ection Criteria					
	1	Endogenous variables:	GDP FOOD_CREDIT	NON_FOOD_CREDIT E	ANK_CREDIT				
			Exogenous van	riables: C					
			Sample: 2005Q	2 2020Q1					
			Included observ	vations: 51					
Lag	Lag LogL "LR FPE AIC SC HQ								
0 -368.1029 NA 25.55373 14.59227 14.74379 14.65017									
1	-326.4805	75.08364*	9.379145*	13.58747*	14.34505*	13.87696*			
2	2 -312.7262 22.65401 10.37051 13.67554 15.03918 14.19663								
3	3 -305.0851 11.38679 14.84706 14.00334 15.97304 14.75602								
4	-291.8159	17.69230	17.54626	14.11043	16.68619	15.09470			
5	-275.7102	18.94791	19.34686	14.10628	17.28811	15.32215			
* indicates lag	order selected by the	criterion							
LR: sequential modified LR test statistic (each test at 5% level)									
FPE: Final pre	diction error								
AIC: Akaike ii	nformation criterion								
SC: Schwarz i	nformation criterion								
HQ: Hannan-Q	uinn information crit	erion							

Source: Secondary Data.

pendent variable, followed by VECM and Wald test is applied individually to evaluate each relationship with GDP and Bank credit with GDP.

"Lag order selection criteria indicates that" tests like LR test and Final Prediction error are used to fit at lag 1. Criterion such as Akaike Information Criterion "(AIC)," (Schwarz Information Criterion "(SC)," and Hannan Quinn Information Criterion "(HQ)" are observed to be fit at lag 1. Hence it is concluded that lag1 is the optimist model to run the VECM model.

Table -2. Vector Error Correction Estimates.

Vector Error Correction Estimates							
	Sample (adjusted): 20	05Q4 2020Q1					
	Included observations: 54	after adjustments					
	Standard errors in () & t-statistics in []						
CointegratingEq:	CointEq1						
GDP (-1)	1.000000						
FOOD_CREDIT (-1)	-0.604361						
	(0.16321)						
	[-3.70301]						
NON_FOOD_CREDIT (-1)	1.699944						
	(0.34057)						

	[4.99140]			
BANK_CREDIT (-1)	-0.402420			
	(0.18447)			
	[-2.18152]			
С	-3.431845			
		I		
Error Correction:	D(GDP)	D(FOOD_CREDIT)	D(NON_FOOD_CREDIT)	D(BANK_CREDIT)
CointEq1	-0.274734	0.257665	-0.436472	0.156155
	(0.13143)	(0.10974)	(0.10794)	(0.09182)
	[-2.09038]	[2.34793]	[-4.04363]	[1.70071]
D (GDP (-1))	-0.473433	-0.157088	0.181358	0.335703
	(0.12768)	(0.10661)	(0.10486)	(0.08920)
	[-3.70803]	[-1.47349]	[1.72952]	[-0.40027]
D (FOOD_CREDIT (-1))	-0.215065	-0.232708	-0.176033	-0.141401
	(0.16382)	(0.13679)	(0.13454)	(0.11445)
	[-1.31281]	[-1.70122]	[-1.30836]	[-1.23552]
D (NON_FOOD_CREDIT (-1))	0.283393	-0.049836	-0.208882	-0.306132
	(0.17963)	(0.14999)	(0.14753)	(0.12549)
	[1.57762]	[-0.33226]	[-1.41586]	[-2.43942]
D (BANK_CREDIT (-1))	-0.310297	0.191040	0.010741	-0.334397
	(0.17932)	(0.14973)	(0.14727)	(0.12527)
	[-1.73043]	[1.27590]	[0.07294]	[-2.66932]
С	0.075975	0.077362	-0.056710	-0.062672
	(0.20681)	(0.17269)	(0.16985)	(0.14448)
	[0.36736]	[0.44799]	[-0.33388]	[-0.43377]
R-squared	0.477092	0.258438	0.468407	0.285143
Adj. R-squared	0.422622	0.181192	0.413032	0.210678
Sum sq. resids	110.2472	76.86571	74.36336	53.80713
S.E. equation	1.515525	1.265452	1.244683	1.058764
F-statistic	8.758859	3.345654	8.458921	3.829254
Log likelihood	-95.89368	-86.15573	-85.26212	-76.52608
AkaikeAIC	3.773840	3.413175	3.380079	3.056521

SchwarzSC	3.994838	3.634173	3.601077	3.277520
Mean	0.058076	0.046975	-0.056977	-0.056660
S.D.dependent	1.994495	1.398475	1.624620	1.191715

Source: Secondary Data.

The VECM model illustrates that GDP with Food Credit is negatively related, whereas the non-food credit seems to be positively related to GDP. When both credits were included (i.e., bank credit), observed positive relation had found with GDP. Hence, it is concluded that bank credit has a significant relationship with GDP. System equation has been used to determine the Wald test used to identify the long-and short-run relationship with GDP.

H0: Long-Run Relationship does not exist between Food credit with GDP.

Table 3. Wald Test.

	Wald Test:						
	System: %s	ystem					
Test Statistic Value df Probability							
Chi-square"	5.111522	2	0.0776				
	Null Hypothesis: C(1)=C(3)=0						
	Null Hypothesis	Summary:					
Normalized R	Normalized Restriction (= 0) Value Std. Err.						
С	C(1) -0.274734 0.131428						
С	C(3) -0.215065 0.163821						
I	Restrictions are linear in coefficients.						

Source: Secondary Data.

Wald test indicates that the calculated value of the chi-square seems to be lesser than the critical value, which indicates the Accept H0 and Reject H1; that is, no long-run relationship exists between food credit and GDP.

H0: Long-Run Relationship does not exist between Non-Food Credits with GDP.

Table 4. Wald Test.

Wald Test:						
System: % system						
Test Statistic	Probability					
Chi-square	0.1045					
Null I						

Null Hypothesis Summ					
Normalized Restriction (= 0)	Std. Err.				
C(1)	0.131428				
C(4)	0.179633				
Restrictions are linear in coefficients.					

Source: Secondary Data.

The table shows that the calculated value of the chi-square seems to be lesser than the critical value, which indicates the Accept H0 and Reject H1; that is, no long-run relationship exists between Non-Food Credits and GDP.

H0: "Long-Run Relationship does not exist between Bank Credit with GDP."

Wald Test:					
S	ystem: %system				
Test Statistic	Probability				
Chi-square	2	0.0330			
Null Hy					
Null H					
Normalized Re	Std. Err.				
C(1	0.131428				
C(5	0.179318				
Restrictions are linear in coefficients.					

Source: Secondary Data.

Wald test indicates that the calculated value of the chi-square seems to be greater than the critical value, which indicates the Reject H0 and Accepts H1; that is, a long-run relationship exists between bank credit with GDP.

Hence it is concluded above the wald test table that individual credit does not have a long-run relationship but shows a significant relationship with the economic growth parameter and stated that Bank credit had a long-run relationship with Economic growth (GDP), meaning that Bank lending had a significant relationship with the economic growth (GDP).

Objective - 2: "To examine the Impact of Bank Lending on Indian Economic growth"

The study's main aim is to examine the effect of bank lending on India's economic growth. The study evaluated impact levels in two-part. The first part deals with individual bank lending parameters on the GDP, and the other deals with Bank credit impact on GDP.

Table 6. Impact of Food Credit on GDP.

Dependent Variable: GDP							
	Method: Le	east Squares					
	Sample: 200	5Q2 2020Q1					
	Included obs	ervations: 56					
Variable	Variable Coefficient Std. Error t-Statistic Prob.						
С	1.032824 0.238812 4.324841 0.00						
FOOD_CREDIT -0.250649 0.107731 -2.326628 0.0							
R-squared 0.791111 Mean dependent var 1.3372							
Adjusted R-squared 0.774280 S.D. dependent var 1.5538							
S.E. of regression	1.494997	7 Akaike info criterion 3.677186					
Sum squared resid 120.6908 Schwarz criterion 3.7495							
Log likelihood	d -100.9612 Hannan-Quinn criter. 3.705230						
F-statistic 5.413196 Durbin-Watson stat 1.812							
Prob(F-statistic) 0.023767							

Source: Secondary Data.

The table presents the influence of Food credit on Economic Growth (GDP). The result shows that Food credit (-0.2506) had a significant adverse effect on the GDP, which means units raised in food credit will decrease the growth rate of the Indian economy. Further, the *R*-square is 0.7911, and the model's probability was statistically significant. Therefore, it is concluded that Reject H0 and Accept H1, that is, food credit significantly influences Indian economic growth.

Table 7. Impact of Non-Food Credit on GDP.

Dependent Variable: GDP								
	Method: Least Squares							
	Sample: 2005	Q2 2020Q1						
	Included observations: 56							
Variable Coefficient Std. Error t-Statistic Prob.								
C 1.543271 0.380295 2.03				0.0002				
NON_FOOD_CREDIT	0.109716	0.169289	0.648098	0.0000				
R-squared	Mean dep	1.337250						
Adjusted R-squared	0.010657	S.D. dependent var 1.5		1.553819				
S.E. of regression	1.562076	Akaike info criterion 3.7		3.764970				
Sum squared resid	0.722645	Schwarz criterion 3.		3.837304				
Log likelihood	0.348192	Hannan-Quinn criter. 3.79		3.793014				
F-statistic 0.420031 Durbin-Watson stat		atson stat	1.609165					
Prob(F-statistic)	0.000168							

Source: Secondary Data.

The table shows the influence of Non-Food-Credit on the Indian Economic growth. The result shows that the coeffi-

cient value of Non-food credit is negative (-0.109). With the rise of Non-food credit, Indian economic growth declined subsequently. Further, the *R*-square is 0.7911, and the model's probability was statistically significant. Therefore, it is concluded that Reject H0 and Accept H1, that is, Non-Food credit, significantly influence Indian economic growth.

	Table 8.	Impact	of Bank	Credit o	n GDP.
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Dependent Variable: GDP				
Method: Least Squares				
Sample: 2005Q2 2020Q1				
Included observations: 56				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	1.375238	0.247025	5.567206	0.0000
BANK_CREDIT	0.034586	0.119325	0.289844	0.0030
R-squared	0.651553	Mean dependent var		1.337250
Adjusted R-squared	0.616936	S.D. dependent var		1.553819
S.E. of regression	1.566921	Akaike info criterion		3.771164
Sum squared resid	132.5831	Schwarz criterion		3.843498
Log likelihood	-103.5926	Hannan-Quinn criter.		3.799207
F-statistic	0.084010	Durbin-Watson stat		1.589788
Prob(F-statistic)	0.000046			

Source: Secondary Data.

The table shows the Effect of Bank lending on the Indian Economic growth rate. The result indicates that the coefficient value of Bank credit is positive (0.034). With the rise of bank credit, Indian economic growth increases subsequently. Further, the R-square is 0.6515, and the model's probability is statistically significant. Therefore, it is concluded that Reject H0 and Accept H1, that is, Bank lending, had a significant effect on the Indian economic growth.

8. FINDINGS OF THE STUDY

- The study examined the relationship of bank credit with Indian economic growth. GDP was considered a proxy for economic growth in the study and applied the VECM, Obamuyi et al. (2012). The study results stated that the Food Credit has a short-run relation with the economic growth, and non-food credit of the banking is also found to be similar; that is, no long-run relation exists with the Indian economic growth.
- The study measured the relationship of Indian banking lending (food and non-food) with the Indian economic growth. The "Vector Error Correction Model" result stated that the long run exists between them Alam et.al (2021)
- The result showed that the coefficient of food credit (-0.250649) harms GDP, indicating that the food credit growth will push down the Indian economic growth.

- The result showed that the coefficient of non-food credit (0.109716) positively impacts GDP, indicating that the food credit growth will increase the Indian economic growth.
- The study examined food and non-food credit (bank lending) and economic development in one place. The study stated that Indian bank lending (0.034586) significantly positively impacts Indian economic growth.

9. CONCLUSION

The research explored the correlation between Indian bank lending and the expansion of the Indian economy. The current study used secondary data from 2004-5 to 2020-21 in making its conclusions. The study used the gross domestic product (GDP) as a proxy for the indicator of economic growth. Various statistical approaches were used to meet the study objectives. In this study, the vector error correction model was used. The results revealed that banks' lending (both food and non-food credit) has a long-term association with Indian economic development. Following the OLS approach, it was discovered that food credit adversely influences GDP growth, whereas non-food credit positively impacts Indian GDP. Moreover, the study aimed to assess the combined effect of banking loans (both food and non-food). The findings revealed that the expansion of Indian banking had significantly influenced the country's gross domestic product (GDP). Further study in this field is thus required to determine if investment in health and education has positively impacted India's post-liberal economic development, which should be considered.

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REFERENCES

- Abusharbeh, M. T. (2017). The impact of banking sector development on economic growth: Empirical analysis from Palestinian economy. Journal of Emerging Issues in Economics, Finance and Banking, 6(2), 2306-2316.
- Alam, M. M., Sadekin, M. N., Islam, R., & Moudud-Ul-Huq, S. (2021). Effect of Deficit Financing on Economic Growth in Bangladesh: Cointegration and VECM Approach. *FIIB Business Review*, 23197145211057339.
- Awad, I. M., & Al Karaki, M. S. (2019). The impact of bank lending on Palestine economic growth: An econometric analysis of time series data. Financial Innovation, 5 (14), 1-21.
- Badar, N., & Badar, M. (2015). Impact of banking institutions on national economy an empirical study of time series analysis in Pakistan. Journal of Governance and Regulation (print) Pakistan Agricultural.
- Lotfi, I., & Lotfi, B. (2020). Global value chains and economic development: what impact on the Moroccan economy?.
- Demetriades, P. O., & Luintel, K. B. (1996). Financial development, economic growth and banking sector controls: evidence from India. *The Economic Journal*, 106(435), 359-374.

- Demirgüç-Kunt, A., & Levine, R. (1999). Bank-based and market-based financial systems: Cross-country comparisons.
- Estrada, G. B., Park, D., & Ramayandi, A. (2010). Financial development and economic growth in developing Asia. *Asian Development Bank Economics Working Paper*, (233).
- Gambacorta, L. (2005). Inside the bank lending channel. *European Economic Review*, 49(7), 1737-1759.
- Ivashina, V., & Scharfstein, D. (2010). Bank lending during the financial crisis of 2008. Journal of Financial economics, 97(3), 319-338
- Jagdeep, K. (2017). Role of Banks in the Development of Indian Economy, Imperial Journal of Interdisciplinary Research (IJIR), 3(1).
- Joshi, S. (2016). Financial sector development and economic growth in India: Some reflections.
- Krishnankutty, R. (2011). Role of banks credit in economic growth: A study with special reference to North East India. *The Economic Research Guardian*, 1(2), 60-71.
- Khobai and Sithole: The Relationship between Economic Growth and Carbon Emissions in South Africa. International Journal of Energy Economics and Policy Vol 12 Issue 2 2022: https://doi.org/10.32479/ijeep.11194
- Lay, S. H. (2020). Bank credit and economic growth: Short-run evidence from a dynamic threshold panel model. *Economics Letters*, 192, 109231.
- Mishra, P. K., Das, K. B., & Pradhan, B. B. (2009). Credit market development and economic growth in India. *Middle eastern finance and economics*, 5(3), 92-106.
- Timsina, N., & Pradhan, R. S. (2016). Effects of Bank lending on economic growth in Nepal. Journal of Advanced Academic Research, 3(3), 53-75.
- Thierry, B., Jun, Z., Eric, D. D., Yannick, G. Z. S., & Landry, K. Y. S. (2016). Causality relationship between bank credit and economic growth: Evidence from a time series analysis on a vector error correction model in Cameroon. *Procedia-Social and Behavioral Sciences*, 235, 664-671.
- Leiwakabessy and Payapo: The Dynamic Link of Energy Consumption, Economic Growth and Poverty in Eastern Indonesia: Panel VECM and FMOLS Approach International Journal of Energy Economics and Policy Vol 12 Issue 2 2022 DOI: https://doi.org/10.32479/ijeep.12626
- Obamuyi, T. M., Edun, A. T., & Kayode, O. F. (2012). Bank lending, economic growth and the performance of the manufacturing sector in Nigeria. European Scientific Journal, 8(3), 19-36.
- Omar, A. (2020). Foreign Direct Investment (Influx) from different nations and its impact on Economic Development in India: - A detailed study in Service sector and its contribution in overall economic development. *International Journal of Scientific and Research Publications*, 8, https://doi.org/10.29322/IJSRP.8.5.2020.p7710
- Olowofeso, E. O., Adeleke, A. O., & Udoji, A. O. (2015). Impact of private sector credit on economic growth in Nigeria. CBN Journal of Applied Statistics, 6(2), 81-101.
- Poshakwale, S. S., & Qian, B. (2011). Competitiveness and efficiency of the banking sector and economic growth in Egypt. *African development review*, 23(1), 99-120.
- Rezart Dibra and Ylber Bezo. Corporate Governance and Credit Risk in the Banking Sector. [ref]: vol.19.2021. available at: https://refpress.org/ref-vol19-a35/
- Sehrawat, M., & Giri, A. K. (2015). The role of financial development in economic growth: empirical evidence from Indian states. International Journal of Emerging Markets.
- Singh, C., Pemmaraju, S., & Das, R. (2016). Economic growth and banking credit in India. *IIM Bangalore Research Paper*, (531).
- Vo, X. V. (2018). Bank lending behavior in emerging markets. *Finance Research Letters*, 27, 129-134.
- Zhang, Y., Zhai, L., & Sun, H. (2019). Does the level of financial leasing matter in the impact of bank lending on economic growth: Evidence from the global market (2006–2016). *Finance Research Letters*, 30, 352-359.

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