GROWTH AND DEVELOPMENTAL ASPECTS OF CREDIT ALLOCATION

An Inquiry for Leading Countries and the Indian States

RAMESH CHANDRA DAS

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INVESTOR IN PEOPLE

To my parents

Contents

List of Figures and Tables

Figures

Tables

List of Abbreviations

ADF	Augmented Dickey-Fuller
AIC	Akaike Information Criterion
AP	Andhra Pradesh
APC	Average Product of Credit
ASEAN	Association of Southeast Asian Nations
ATM	Automated Teller Machine
BIS	Bank for International Settlements
BRICS	Brazil, Russia, India, China, South Africa
BTI	Banking Transaction Index
C-D	Credit–Deposit
CEE	Central and Eastern Europe
CMN	Conselho Monetário Nacional
CRAR	Capital to Risk Weighted Asset Ratio
CRR	Cash Reserve Ratio
CV	Coefficient of Variations
DFA	Demand Following Approach
DZ	Deutsche Zentral-Genossenschaftsbank
ECM	Error Correction Mechanism
EG	Engel and Granger
EU	European Union
FAS	Financial Access Survey
FDIC	Federal Deposit Insurance Corp.
FSR	Financial Sector Regulation
GCF	Gross Capital Formation
GDI	Gender Disparity Index
GDP	Gross Domestic Product
HDI	Human Development Index

HI	Herfindahl Hirschman Index
HPI	Human Poverty Index
IDP	India Development Report
IFI	Index of Financial Inclusion
IMF	International Monetary Fund
KfW	Kreditanstalt für Wiederaufbau
KPSS	Kwiatkowski–Phillips–Schmidt–Shin
MP	Madhya Pradesh
MPC	Marginal Product of Credit
MSMEs	Micro-, Small- and Medium-sized Enterprises
NBFc	Non-banking Financial Companies
NBP	National Bank of Poland
NPA	Non-performing Asset
NSDP	Net State Domestic Product
OCC	Office of the Comptroller of the Currency
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary Least Square
PBC	People Bank of China
PCGDP	Per Capita GDP
PPP	Purchasing Power Parity
RBI	Reserve Bank of India
RSS	Residual Sum Square
SA	South Africa
SARB	South African Reserve Bank
SARFAESI	Securitisation and Reconstruction of Financial Assets and Enforcement of Securities Interest
SCB	Scheduled Commercial Bank
SD	Standard Deviations
SDP	State Domestic Product
SEC	Securities and Exchange Commission
SIC	Schwarz Information Criterion
SLA	Supply Leading Approach
SLR	Statutory Liquidity Ratio
SMEs	Small and Medium Enterprises
TFP	Total Factor Productivity

TN	Tamil Nadu
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Program
UP	Uttar Pradesh
US	United States
USA	United States of America
USD	United States Dollar
UT	Union Territory
VAR	Vector Autoregression
VECM	Vector Error Correction Model
WB	West Bengal
WEF	World Economic Forum
WTO	World Trade Organization

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About the Author

Ramesh Chandra Das, PhD, is currently a Professor at the Department of Economics of Vidyasagar University in the state of West Bengal, India. He has obtained Masters, M.Phil and Ph.D degrees in Economics from the University of Calcutta. He has the teaching and research experience of about 25 years in his credit. His main areas of research lie in Theoretical and Applied Macroeconomics, Financial Economics, Environmental Economics and Political Economics. He has contributed several research papers to national and international journals of reputes along with more than a dozen of edited volumes in different areas of the subject. Besides, he has written textbooks on Microeconomics, Macroeconomics and Managerial Economics with the internationally reputed publishers for the different fields of readers and academicians and has been acting as the Editor-in-Chief in a couple of refereed journals.

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Foreword

In contradiction to Adam Smith like supply side economists, Schumpeter, a modern economist from the school having believes upon the demand side economics, postulated that the monetary and financial sector should have a strong influence upon the growth and development of the real sector of the economy. There must be a linkage between the two sectors which might help in the overall progress of the economies of different statures. Today, the world output has increased to an outstanding level and the economies who are now belonging to this top-performing group are the USA, Germany, UK, France, etc., from the developed group as a sample and China, India, Brazil and South Africa from the developing group as another sample.

Usually the mainstream economics does not focus more on the subject area of bank credit and deposit, as the component of financial sector, and their relations to the growth and development in a country. The present book specifically focuses on the credit and deposit aspects of bank credit in some developed and developing economies in the world to show whether these two financial components are linked to the income growth and development (as captured by the HDI values) for a long period of 1990–2019.

The book titled *Growth and Developmental Aspects of Credit Allocation: An inquiry for Leading Countries and the Indian States*, written by Dr Ramesh Chandra Das, Professor at the Department of Economics, Vidyasagar University, India, has covered the above issues. It has 10 chapters, six on the developed countries and four on the States of India, which discusses the trends of credit, deposit, credit–deposit ratio, non-performing assets, bank's investment upon governments' securities, and GDP and HDI of the countries, the interlink between credit and GDP/HDI in countries and states of India. The study in overall finds significant positive correlations between bank credit and GDP (and HDI) in most of the countries and states of India. There are also inverse relations between bank credit and security investment in some countries.

The contents of the book are of great relevance in the today's world so far as the interconnections between the financial and real sectors of the economies are concerned. I expect that the readers in the related fields may be benefitted.

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Girija obtained a B.Sc. (Honours in Statistics), M.Sc. (Statistics) and Ph.D. in Applied Econometrics from India and working in the Western Sydney University, Australia since 1994. He has published over *95 articles*, including 62 referred journal articles (including A* and A-level journals).

Girija has published articles in the areas of Education, Medicine, Applied Econometrics, Economics, Finance and currently working in the areas of Accounting and Social Science. His papers have been cited over *1,934 times* in google scholar with *17 h-index and 28 i10-index.* Many reputed newspapers around the world including *Business Review Weekly*, *Sydney Morning Herald*, *The Australian*, etc., showed interest in his research and published the summary of his articles.

Preface

There has a long debate on a topic concerning the role of financial sectors upon the commodity-producing sectors of an economy. The classical version helmed by Adam Smith does not put any importance upon the financial sector in deciding the progress of the real sector as it puts over stress upon the economy. The real sector can simply work in its own without the linkage with the financial sector which they term as a veil. On the other hand, the Schumpeterian version, mainly with the clubbing of the modern economists, thinks in other ways; the real sector and the financial sector should maintain stable relationships among them in order to support the economies in terms of their growth and development. According to Hugh T. Patrick, there are two ways of explaining the interlinkages between the financial sector and growth of the domestic output. One of the ways, as he pointed out, is the Supply Leading Approach and the other is the Demand Following Approach. Under the Supply Leading Approach, financial sector's development works as the input of the real sector's development. On the other hand, under the Demand Following Approach, economies' expansion in terms of its income becomes a pulling factor of financial sector's development. According to him, the supply leading approach works for the developing or less developed economies and the demand following approach works for the developed economies. Later, there are a series of research works that deal with the impact of financial sector in general and the banking sector in particular on the economic growth of a country. Some studies have shown that growth of the financial sector has a positive influence on the economic growth of a country.

Under this milieu, the present authored book titled *Growth and Developmental Aspects of Credit Allocation: An inquiry for Leading Countries and the Indian States* deals with the financial sector and real sectors' growth and developmental aspects in some countries of the world. Usually, the mainstream economics does not focus more on the subject area of bank credit and deposit, as the component of financial sector, and their relations to the growth and development in a country. The present book specifically focuses on the credit and deposit aspects of bank credit in some highly developed (USA, UK, Germany, France and Poland) and developing economies (China, India, Brazil, South Africa and Indonesia) in the world to show whether these two financial components are linked to the income growth and development (as captured by the HDI values) for a long period of 1990–2019. Furthermore, it undertakes the microlevel study in the said indicators across different states in India as a special attempt for the period 1972–2019 in a pre- and post-reform break up.

The book has 11 chapters out of which six cover the studies related to different countries including India, and the next four chapters capture the growth and developmental aspects of commercial banks' credit in the Indian states. Chapter 11 presents concluding observations. Chapter 1 gives an introduction to the country notes in terms of their financial histories, trends of the three lead variables, credit to the private sectors, GDP and HDI to get primary ideas about them and their progress over time. Chapter 2 goes for descriptive statistical analysis on the selected variables across the countries. Besides, it goes for computing the degrees of associations among the pairs of the variables involving bank credit. Chapter 3 addresses the issues related to two key banking and financial sector indicators, the NPA and banks' investment upon government securities, in relation to their associations with GDP and HDI of the selected countries. Chapter 4 investigates whether credit to the private sectors have any long-run relationships with the income and development levels of the countries for the selected period using time series econometrics. Chapter 5 focuses on the measurements of credit elasticity with respect to GDP and HDI to know the impact of credit to the private sectors upon the income and human development of the countries, incorporating the issues of NPA and security investments into the analysis of interrelationships. Chapter 6 examines the convergence or divergence in credit, GDP and HDI across the 10 selected countries using the neoclassical growth and time series approaches.

Chapter 7, the first chapter for the Indian states, analyses the trends of bank branches, deposit, credit and credit–deposit ratio and banking transaction levels during the pre- and post-reform periods. Furthermore, it goes with computation of the states' concentration in credit allocations using different methods. Chapter 8 goes through the trends of the credit–deposit ratios in relations to the NPA and security investments at the all-India level and the state levels. Chapter 9 examines whether the selected major states in India are converging or diverging in the allocation of bank credit, and if so, what are the magnitudes of the level of disparities and inequalities in credit allocation. Chapter 10 deals with the investigations on the interrelationships between bank credit and state output, and bank credit and human development during the pre-reform and post-reform periods separately.

Chapter 11 concludes the covered chapters. The amounts of credit to the private sectors have increased in all the countries making a probable interrelationship with their GDP and HDI levels. This justifies the interdependences of the financial sector with the growth and development of the countries. Further, with respect to the state level studies in India, the chapters find rising trends in branch expansion, amounts of deposits and credit but the credit to deposit ratios have not increased significantly during the post-reform period (1993–2019). The study also finds that banks' investment upon the state and central governments' securities have been the key to the insignificant increase in the credit to deposit ratio of the states. Finally, the study finds divergence in credit allocations in the post-reform phase leading to rising credit inequality. The study also finds interrelationships of bank credits with the states' output but it detects very low number of states having such relationships with their levels of human developments.

In completing the book project, the collaborations and supports of several organizations and academicians are required to be recognized. I first acknowledge the unstoppable support and cooperation of Emerald, UK, the publisher, for their continuous efforts from processing of the project to its final acceptance. Second, I am highly grateful to Dr Girijasankar Mallik, Associate Professor at the Western Sydney University, Australia, for writing the valuable foreword for this piece of work. Finally, I am obligated to my family members for bearing stress with me and sacrificing the households' time for consociate. Of course, no one other than me, as the author, disclose to remain utterly accountable for any errors still persist in the book.

Ramesh Chandra Das