

Growth and Developmental Aspects of Credit Allocation

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Growth and Developmental Aspects of Credit Allocation: An inquiry for Leading Countries and the Indian States

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To my parents

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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

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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 repute 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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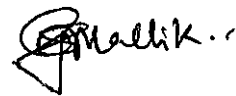
Foreword

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 been 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

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Chapter 1

Historical Perspectives of the Countries

Abstract

The world's so-called developed countries of the West have long economic and political history compared to those of the East. The developed countries are far away from today's developing countries in terms of aggregate income, aggregate capital formation, total number of human capital, etc. Though some countries from the East have outpaced some of the Western countries in terms of gross domestic product (GDP), aggregate bank credit and capital formation, in the twenty-first century, such as China and India, they are far behind in terms of per capita income, per capita financial facilities and per capita capital stock. On the other hand, the countries from the East, except a few one, are also well lagging behind their Western counterparts in the level of human development. With the theme of the book on the growth and developmental aspects of credit allocations, the present chapter makes an introduction to the subject area by means of credit histories in the selected 10 countries and their phase-wise levels of GDP, credit and Human Development Index (HDI). The figures for GDP, credit and HDI reflect the rising trends in GDP and credit for all in the entire phase but there are some downfalls in the GDP and credit during the phase of the global financial crisis. Besides, it observes rising trends of HDI in all the countries but the rates of rise are more in the case of the developing countries. There are thus the possibilities of getting correlations among the different pairs of the variables across the countries.

Keywords: Historical perspectives; gross domestic product; credit; Human Development Index; developed countries; developing countries

Introduction

The long-run and sustainable economic operation primarily require all the economic variables to move in a collective way. Out of the list of so many economic sectors, the financial sector is an important component of the economy to produce

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sustainable growth and development of an economy. But, the question of whether the financial sector and the actual sector of an economy are interconnected is one that has been the subject of extensive debate among various schools of economics. According to Adam Smith, the financial sectors have little bearing on the activities of production and, consequently, the development of a country. Smith noted that farmers, producers and businesspeople are key drivers of economic expansion in his well-known book 'Wealth of Nations'. Farmers, producers and businesspeople would extend the size of the market as a result of free trade, competition and private venture, which in turn caused the interdependence of economic development. On the other hand, [Schumpeter \(1911\)](#) proposed the opposing theory. He contends that civilization advances through the commerce cycle in a fluid and irregular manner. The inventive entrepreneur's business operations will be financed by an increase in bank credit in order to break the cycle. According to Schumpeter, this process of innovation and invention replacing traditional manufacturing techniques with the aid of financial intermediaries is known as 'creative destruction'. Therefore, the performance of the real sector of the economy should be somewhat impacted by bank loans. [Patrick \(1966\)](#) is likely the first to explicitly explain the connections between a bank loan and output development, particularly for underdeveloped nations. He asserts that there are two approaches to account for the connections between bank credit and domestic output. One of the ways, as he pointed out, is the supply leading approach (SLA) and the other is the demand following approach (DFA). In the SLA, bank credit to the economic sectors works as one of their important inputs, and in the DFA, economic expansion becomes the pooling factor of credit to instigate the financial sector.

The existing literature on the fields of credit allocation and economic growth and development has mixed arguments. Although there is disagreement on the impact of financial structure on economic growth in both theoretical and empirical evidence, despite the fact that the majority of empirical evidence shows that financial development has a positive long-run impact on economic growth. Some theoretical models highlight the advantages of a financial system based on banks, while others highlight the benefits of a financial system that relies more heavily on securities markets. [Levine \(2002\)](#) asserts that the financial system as a whole performs five tasks to lessen the issues brought on by market frictions. These tasks include allocating resources, monitoring corporate governance, reducing risk, mobilizing savings and facilitating transactions. Based on how banks and securities markets perform these financial responsibilities, the four rival theories of financial structure – bank-based, market-based, financial services and law and finance – are built.

The bank-based perspective bemoans the shortcomings of the securities market and emphasizes how banks may lessen these shortcomings. The incentives for individual investors to gather and analyze information are diminished by a well-developed securities market, which promptly discloses information. As a result, finding innovative ventures that support economic growth may be made more difficult by a well-established securities market ([Stiglitz, 1985](#)). Due to asymmetric knowledge, the free-rider dilemma and an uncoordinated market, managers may not be effectively monitored ([Jensen, 1993](#); [Stiglitz, 1985](#)).

On the other hand, the supporters of the market-based view denigrate the role of banks in providing financial functions on the ground that a banking system with a massive influence over the firms and prejudice towards prudence can hamper the firms from undertaking innovative and profitable projects (Hellwig, 1991; Rajan, 1992). Besides, a bank-based system may be good in providing low-cost, standardizing basic risk management and leaves the cutting-edge services for elastic and difficult demand for the stock-based system (Levine, 2002).

According to the financial services perspective, it is the entire evolution of the financial system that is the source of the problems. When it comes to providing the economy with financial services that promote growth, banks and markets may complement each other rather than substitute for each other (Levine & Zervos, 1998).

In view of law and finance, there is again a complementary relationship between the two. Whenever any legal opinion is required regarding any procedural lapse or operational flaw in the banks, the management turns to law officers to provide the same (Chu, 2020). For instance, the SARFAESI Act 2002 is in operation in India. The Securitisation and Reconstruction of Financial Assets and Enforcement of Securities Interest (SARFAESI) is an Indian law. It allows banks and other financial institutions to auction residential or commercial properties of defaulters to recover loans.

The banking sector is the most important part of the financial system in any country. It consists of the apex bank (the central bank in popular terms), the supreme authority in any financial system, public and private commercial banks at home and abroad, etc. in any country. There are so many banking indicators that have important implications for the growth and development of a country. Banks usually collect deposit (a liability item of the banks) from households and firms which are part of their savings behaviour and lent them out (which is called credit, an asset item of the banks) to the households and firms and governments. Credit to the private sectors help in increasing their amount of productive capital to expand their economic operations such as an increase in the quantity of productions of goods and services, purchasing apartments, vehicles, etc. Bank credit also fosters education and health facilities to promote human capital formation as well as social sector's developments. An increase in the human capital base in terms of education and health coupled with an increase in income enables the pace of human development. On the other hand, credit or loan taken by the public sector or the government sector is processed through the sale of government bonds and securities to the commercial and central banks of the country. The government takes these loans in the head of the public debt program and these funds are spent in two heads-capital expenditure and revenue expenditure. The head of capital expenditure is asset-creating and liability-reducing. It generates long-term capitals such as infrastructure development which has long-term growth and development linkages. On the other hand, the head of revenue expenditure is liability increasing and asset reducing. It consists of spending on day-to-day activities of the government sector, different social sector packages, etc. Therefore, both two heads are associated with economic growth and developmental changes in a country.

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There are several forms of banking indicators used in the overall monetary system of any country. Mostly used indicators are the amount of credit or loan offered to the economy's productive sectors such as industry, agriculture and service, credit to deposit ratio which signifies the intensity of deposit use, credit to gross domestic product (GDP) ratio which signifies the effective participation of the banks in the overall economic operation, the ratio of security investment and GDP, the share of loan locked under the head of unpaid or non-performing head (popularly known as NPA), etc. The present study uses total credit to the private sector as the main indicator of the banking sector in the particular and financial sector in general to investigate its implications for the growth and development of a country. Besides, it focuses on the role of NPA and securities investment by the banks in the government sector with regard to growth and development. Growth of the economy is proxied by the amount of GDP and development is proxied by the level of human development. The study considers 10 countries from the world map out of which five are developed and the rest five are developing. The countries are the USA, UK, Germany, France, Poland, China, India, Brazil, South Africa and Indonesia.

The present chapter first highlights histories of credit in the selected countries, then presents the phase-wise data on credit, GDP and human development indices of the countries to have primary ideas of the variables and their progress over time.

Credit Histories of the Countries

Before stepping out to the main part of the book on the discussion of the aspects of credit in relation to the growth and development of the countries in the list the study sheds light on the historical evidence of credit delivery in different countries' banking systems. In the following section, the study covers up these historical facts on bank credit.

United States of America

The USA with its miraculous growth and development history in the twentieth century has been enjoying massive economic and political powers at the global level. It has a strong financial system that surrounds the entire economic activity. In the banking system of the country, the earliest and most common form of credit was loaned from local shopkeepers. That was right, hardworking Americans ran tabs to buy groceries, furniture, farm equipment and the like when times were tight. It is also a common myth that borrowing was unheard of during those days.

On the evening of 20 June 1790, James Madison, a political philosopher and architect of the United States Constitution, and Alexander Hamilton, a forceful advocate for centralized political and economic power, met at Thomas Jefferson's home on Maiden Lane, in New York. Over a long dinner, the three struck a historic deal that laid the financial groundwork for the fledgling nation. In 1791, the Bank of the United States was one of the three major financial innovations proposed and supported by A. Hamilton, the first Secretary of the Treasury. The

Bank of the United States, now commonly referred to as the first Bank of the United States, opened for business in Philadelphia on 12 December 1791, with a 20-year charter. In the next step, The Federal Reserve was created in 1913 by the Federal Reserve Act to serve as the nation's central bank. The Board of Governors in Washington, DC, is directly accountable to the US Congress.

In these days, banks had to perform specific functions. Banks had two important economic functions. First, they operated a payments system, and a modern economy could not function well without an efficient payment system. Most of the money stock of the country is in fact bank money; the rest of the currency was 'legal tender' issued by the government, namely Federal Reserve Notes and coins. Banks were obligated to hold reserves of legal tender to make these exchanges when we request them.

The second key function of banks was financial intermediation; lending or investing the money deposited with them or credit themselves created to business enterprises, households and governments. This is the business side of banking. Most banks were profit-seeking corporations. Banks used to make their profits and cover their expenses by charging borrowers more for loans than they pay depositors for keeping money in the bank.

The banks and financial systems in the USA were also subject to the regulations. Commercial banks in the United States are subject to a variety of regulatory bodies, including the Federal Reserve, the Office of the Comptroller of the Currency (OCC) and the Federal Deposit Insurance Corp., depending on their kind of charter (FDIC). State-chartered banks are subject to state regulation as well. The US Securities and Exchange Commission (SEC) oversees investment banks to a great extent.

The expansion of credit led to an increase in people's ability to buy more goods and services and as a result, the US economy grew at a vigorous pace. According to [Ryan, Trumbull, and Tufano \(2011\)](#), the post-war history of consumer finance in the United States has been a story of growth – in variety, in access, and in freedom of choice. Post-war consumerism followed increases in household income and wealth. These trends drove demand for many products and services, including financial products and services. Firms responded with innovations that offered consumers more choices, including electronic banking (i.e. direct deposit of pay checks and automated-teller-machine [ATM] transactions), credit and debit cards, thousands of mutual funds and complex mortgages. The increasing variety of products is accompanied by broadening access. More people could get mortgages and purchase homes; more people could invest in low-cost portfolios through mutual funds and exchange-traded funds. This broadening partially reflected increasing income and wealth, but it also resulted from political and social movements in which previously excluded social groups fought for access to financial products. These expansions in the number and type of products, and the share of the population with access to them, gave American consumers unprecedented financial flexibility. There have been a critical role of the countries' banks in fostering growth in the US economy. There's been this enormous increase in the relative size of the financial sector to the GDP, and there is a systematic relationship between the degree of financialization and inequality.

United Kingdom

From the historical perspective, Great Britain and England or the UK in particular became one of the most prosperous economic regions in Europe between the sixteenth and seventeenth centuries because of its history of industrialization. Industrialization in the UK from the mid-eighteenth century resulted in economic developments described by many historians as the British industrial revolution. These developments resulted in Britain becoming one of the premier economies in Europe during the first half of the nineteenth century. It became the holder of the most prominent industrial power and a major political power at the global level. Its major innovations were in machineries such as steam engines, textile equipment and tool-making. It also founded the railway system and manufactured most of the equipment other nations used. Its businessmen were leaders in international banking, trade and shipping. Besides, the UK had a strong monetary system to complement the rest of the economy.

Sissoko (1906) argues in his working paper that Britain's monetary system at the start of the Napoleonic Wars was substantially different from its monetary system at their end and that the Restriction and the Bank of England's discount policy during the Restriction played a determining role in the transformation of the monetary system. Precisely, he argues that Britain's monetary system through the second half of the eighteenth century was built on transaction-based credit and that by the end of the war this monetary system had been transformed into one based on personal credit.

Until the year 1946, the bank in the country was privately owned, and after that, it was nationalized. It funds public borrowing, issues bank notes and manages the country's gold and foreign exchange reserves. It is an important adviser to the government on monetary policy and is largely responsible for implementing the chosen policy by its dealings in the money, bond and foreign exchange markets. The Bank of England is a member of the European Central Bank and part of its General Council. Now, it is the central bank of the country. The primary functions of the Bank of England are to maintain monetary stability and oversee the financial stability of the UK financial system. The bank also acts as the lender of last resort and as the custodian of the official gold reserves in the UK. Financial services in the UK contributed a gross value of £86 billion to the UK economy in 2004. It creates significant benefits for the UK, European and global economies. In 2020, the financial services sector contributed £164.8 billion to the UK economy, 8.6 per cent of total economic output. The sector was largest in London, where half of the sector's output was generated. The UK financial services sector was the third largest in the OECD in 2020 by its proportion of national economic output.

Germany

The German economy was also a strong economy in the European region. After the phase of the great depression, it started growing by leaps and bounds. According to Tooze (2008), the economy developed a hothouse prosperity

during the Hitler era (1933–1945), supported by high government subsidies to those sectors that tended to give Germany military power and economic autarky, that is, economic independence from the global economy. As a complementary sector, the German banking system is often considered a key factor in Germany's industrialization. According to the seminal work of [Gerschenkron \(1962\)](#), Germany's experience can serve as a role model for other moderately backward economies: governments could trigger economic development, for example, by supporting the establishment of modern financial institutions such as universal banks, which were typical for the German banking system. Banks and other financial intermediaries can mobilize savings, reduce risks for investors and improve the allocation of resources. As a result, these activities ease the trading of goods and services and foster technological innovation. The first German *savings banks* were initiated in the late-eighteenth century in the northern parts of the country.

In its history of development, Germany's economy faced a major crisis during the phase of the Great Depression. In 1929 as the Wall Street Crash led to a worldwide depression. Germany suffered more than any other nation as a result of the recall of US loans, which caused its economy to collapse. Unemployment rocketed, poverty soared, and Germans became desperate. This led to a chain of events that ended in the destruction of German democracy. After that, the financial crisis of 2007/2008 affected the German banking system and threatened the existence of some large banks from the private sector as well as among the banks with government involvement ([Behr & Schmidt, 2015](#)).

According to [Detzer, Dodig, and Evans \(2017\)](#), the development of the German financial system has been characterized by two key features, both of which have their origin in the country's pattern of industrialization in the second half of the nineteenth century. The first is that Germany is a prime example of a bank-based financial system. Germany required large amounts of capital to industrialize, and this was mobilized primarily by banks. A major role was played by large joint-stock banks which were established in the early 1850s and the early 1870s. The second key feature is that, in addition to profit-oriented commercial banks, the German financial system has also included two other sectors that are not primarily motivated by making a profit, namely the publicly owned savings banks, and the cooperative banks. By 1913, the German banking system consisted of a private sector, dominated by eight big banks, a large public savings bank sector, and a somewhat smaller cooperative sector. In the 1920s, the big private banks faced major challenges from inflation and competition from foreign banks, and three big banks emerged because of mergers and failures. At the end of the Second World War, the three big private banks were broken up because of their complicity in German war crimes but, following successful lobbying, could re-establish themselves as unified institutions in the 1950s. The big banks played a major role in financing larger firms during Germany's post-war reconstruction, while savings banks and cooperative banks contributed significantly to the growth of Germany's very successful small- and medium-sized enterprises.

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Germany's banking system comprises three pillars – private commercial banks, public sector banks and cooperative banks – distinguished by the legal form and ownership structure. The private-owned commercial banks represent the largest segment by assets, accounting for 40 per cent of total assets in the banking system. Deutsche Bank is the leading bank in Germany based on total assets at 1.3 billion euros as of 2020. Other leading banks included DZ (Deutsche Zentral-Genossenschaftsbank) Bank, KfW (Kreditanstalt für Wiederaufbau) and Commerzbank. As the European Union's (EU) most powerful national central bank, Deutsche Bank played a pivotal role in the planning of and preparation for the euro. One of its primary roles now is to implement the monetary policies of the European System of Central Banks to help maintain the euro's stability.

France

Widely known as the most cultured country in Europe, the economic history is also full of glory. Since its late-eighteenth century Revolution, the economy of France was tied to three major events and trends: the Napoleonic Era, the era of competition with Britain and its other neighbours with respect to 'industrialization' and the 'total wars' of the late nineteenth and early twentieth centuries. Estimation of quantitative analysis of output shows that the French per capita growth rates were slightly smaller than Britain. However, the British population tripled in size, while France grew by only a third – so the overall British economy grew much faster in real per capita terms. According to [Cameron \(1961\)](#), perhaps the only successful and innovative economic sector was banking. Paris emerged as an international centre of finance in the mid-nineteenth century second only to London. It had a strong national bank and numerous aggressive private banks that financed projects all across Europe and the expanding French Empire. Napoleon III had the goal of overtaking London to make Paris the premier financial centre of the world, but the war in 1870 reduced the range of Parisian financial influence ([Cassis & Bussière, 2005](#)).

Napoleon's impact on the French economy was of modest importance in the long run. He mentored in sweeping away the old guilds and monopolies and trade restrictions. Most important he opened up French finance by the creation of the indispensable Bank of France. Napoleon Bonaparte created the Banque de France to foster economic recovery after the strong recession of the revolutionary period. This new institution was charged with issuing notes payable to the bearer on sight, in return for discounting of trade bills. Founded in 1800, it began as a private institution for managing state debts and issuing notes. It is responsible for the accounts of the French government, managing the accounts and the facilitation of payments for the Treasury and some public companies. After almost stagnating in 2008, the French economy agonised over its biggest post-war recession in 2009. The volume of economic activity fell by 2.6 per cent on average over the year, a far bigger drop than that which came after the first oil shock (by 1 per cent in 1975) or the one in 1993 (by 0.9 per cent).