

## Book Review

### Editor's Note

Our policy is to review all books which are either sent to us or in our opinion are useful to our readers.

**Raghavan, T.C.A. Srinivasa; *Dialogue of the Deaf: The Government and the RBI*; 2017, Westland Publications Ltd, Delhi, India, pp. 290, Price ₹ 599**

Raghavan's book is meant for the layperson wanting to get a sense of India's monetary history, policy, politics personalities and the larger institutions that influence them all. This book mostly depends on the three volumes of the RBI's official history from 1935 to 1981. The portions pertained to the period 1982 to 2008 depended on speeches of the governors, deputy governors and other related materials. Generally, it is believed that the idea of Central Bank came from British but the truth is that idea of the Central Bank began in Sweden as paper currency being invented in China. Mid-17<sup>th</sup> century, Swedish economy was large. It needed money to circulate and finance its trade in mining and timber. The king needed a place to store its currency, the "daler", was made of copper-weighing several kilograms. Johan Palmstruch convinced the king that he would do it. The deal was that Palmstruch would set up the bank under a royal decree-and in return would give the king half the profit. Palmstruch invented paper currency to represent the heavy copper. When king died and the council-that ran the kingdom till the young prince came of age- devalued the "daler" by reducing the copper in it. It was more or less nationalized bank. The world's first Central Bank had been born but no one knew it then. Its job was to provide currency and store it, and look after the monetary health of the economy. Palmstruch bank is called the Soveriges Riksbank today, the institution that awards Nobel Prize in economics every year. Second important contribution of Palmstruch was that he changed the very concept of money. A piece of paper that nationally represented the value of the metal that backed it.

The Bank of England came to be seen as government institution eventhough it was owned by private individuals. As capitalism spread during 19<sup>th</sup> and early 20<sup>th</sup> centuries, country after country-there weren't as many them as now-set up central banks. All issued money backed by gold, December 1913, USA got its own central bank, called the Federal Reserve

Board or Fed. The men behind it were all arch capitalists of that day, led by J.P Morgan. The Federal Reserve was almost an exact copy of bank of England. New system started operation in 1915. The Fed's main job was to control interest rates via the sale and purchase of government bonds, later known as open market operations.

The second half of the 20<sup>th</sup> century saw the end of colonialism and the emergence of new countries. As of now UN has 193 members. Most of these 193 countries have a central bank whose job is to issue notes, control inflation and act as a lender of last resort. For almost two hundred years India funded almost half of British imperial expenses. In 1913, Austin chamberlain was asked to look into the monetary affairs of India to analyze the gold exchange standard which was used for maintaining the exchange rate of the rupee at one shilling and four pence. In January 1927 a bill was passed authorizing a central bank for India. Eight years later the Reserve Bank of India (RBI) came into being on April 1<sup>st</sup> 1935. In 1949, the new Indian government decided to nationalize the RBI. But the question of accountability was left unanswered. Would the RBI be answerable to the legislature or the executives?

Monetary policy is an intensely political aspect of economic governance. In India, in June 2008 when the RBI was ordered to raise interest rates because inflation was becoming a problem and the government was fearful that it would have to hold an early election in October or November of that year. In February 2016, Japan introduced negative interest rates, which means that those who buy and hold government securities will have to pay central bank for the pleasure. The RBI to do a lot of things, from financing the central and state government to ensuring that inflation remained low. Making sure that everyone got some bank credit to supervising the banks who were lending the money. Managing India's external finances to making sure that there was enough money to pay for necessary imports, which included arms. After independence, not only did rural credit become a political imperative with more than 90 percent of Indian population living in villages, it also became a strong economic need because 90% gross domestic product came from agriculture. In 1950, rural credit and irrigation, rather than technology and better practices, were seen as critical. There was broad agreement in the country that commercial banks would not, and that credit co-operatives would have to take up the task. The story of the 1966 crisis-what led to it how it was tackled-is a classic study in Indian Political economy. Throughout this period of crisis, the RBI was not really anywhere in the picture, except in the formal sense that its presence was sometimes needed. As TTK had described it, RBI had become "a subordinate office". The RBI retreated further into the background, content with monetary housekeeping and carrying out the wishes of government.

After bank nationalization (July 19, 1969) and the resulting dominance of the Finance Ministry over the banking system, the RBI lost control of what these days is called the transmission mechanism. The banks would now

take their orders from the government not the RBI whose wards they were supposed to be by law. All that the RBI would do for the next two decades was to exhort them and inspect them but without much power to penalize them. If the history of banking in India during 1875-1970 is compared with the period 1970-85, nationalization was a great success at least in one respect—the spread of banking. From 8000 branches, by the end of 1985, the number had grown to more than 51000. The bill to create RRBs existed but not of much use. From time to time accounts were opened with great fanfare with a deposit of just Rs. 5. But after few months, 99% of these accounts became dormant because their owners had no money to deposit. This old idea had been revived in an expanded form by Modi government via the JanDhan scheme. The control of banking in 80s passed into political hands, the central problem of such control came up: to whom to lend and how much? The votes were in rural areas and profit came from lending to industry. There was a third claimant for bank funds—the government itself. All that RBI could do was to collaborate while doing its best to minimize the damage. The Sanjay episode led the RBI to move towards a need based approach rather than security based approach to bank credit. As a result, between 1970-80, there was manifold increase in loans. Most of it was never repaid. Priority sectors loans became another means by which politicians could raid the banks. Credit policy was guided by first catering to its political component and only after that had been taken care of, providing credit to industry. And even the latter was viewed in terms of social rather than economic usefulness.

Between 1985 and 1988, the fiscal situation went from good to very bad and then to extremely bad by 1990. RBI's job was to accept political imperatives and conduct monetary policy accordingly, polite post 1988. The RBI government confrontation always low key, always petite but always intense and vicious during the Rajiv Gandhi era. The problem became acute as the current account deficit widened and short term debt to finance imports shot up. On top of it, there was the repayment to the IMF of the Extended Fund Facility (EFF) loan. When 1990 ended, foreign exchange reserves were down just \$ 11 bn. The two most important factors that led to India's bankruptcy and near-default in 1991 were political impatience and bureaucratic opportunism. At the peak of the forex crisis the Liberalized Exchange Rate Management System (LERMS) was recommended by an expert committee of the RBI (oral instruction from the Governor). LERMS was introduced on March 1<sup>st</sup>, 1992. It worked for a year and on March 1<sup>st</sup>, 1993 the Unified exchange rate system was introduced. It has been working since then. In August 1994, the rupee was made convertible on the current account (agreement of IMF). Of all the different things that the RBI had to do, is that it has to manage the government's borrowing which is copious, excessive, causes the most damage because it is put, ultimately, to wasteful use.

$$Y = C + I + X - M + G$$

where, Y GDP  
 C Consumption  
 I Investment  
 X Export  
 I Import  
 G Government Expenditure

The analysis was based on the central problem of the Great Depression, deficient aggregate demand (Keynes). By 2001, RBI became a regulator of the money market in the real sense.

In May 1992, Harshad Mehta and his co-conspirators successfully diverted around Rs. 5000 crores from the banking system. This was done by taking money out of the inter-bank market for government securities and using it in the stock market. The Parliament, the RBI and the CBI, investigated what had happened. The truth is that, all became possible because the internal control system in the RBI as well as the banks, most critically the SBI, were dysfunctional. Harshad Mehta died in 2001, but that was also a year when another stock market scam—the Ketan Parikh one came to light. Ketan Parikh did exactly what Mehta had done (Global Trust Bank). Between 2002 and 2004, GTB tried all kinds of manoeuvres and strategies. Finally RBI declared a moratorium on banks operations. GTB was merged with a public sector bank. But the question remained: what was RBI doing while the GTB was running up its bad debts? After GTB, the RBI started insisting on capital adequacy norms. In 2006, the RBI undertook an internal review of the financial sector in India. This was done by the committee on Financial Sector Assessment (FSA). It concluded, India's broadly compliant with most of the standards and codes. Despite the Global financial crisis (2008), the banking sector had not been significantly impacted. RBI vigorously enforced the 'fit and proper guidelines for owners of private banks'.

A combination of domestic political global and personal factors led to inflate the economy to such an extent that in 2010 its GDP growth reached at 10%. Between 2009 and 2012, the RBI becomes the most articulate advocate of fiscal expansion and monetary laxity. But nothing remains constant and money is not exception. The new worry of central banks is Bitcoins". The key feature of bitcoins is that they don't need an intermediary like a central bank. An important question is: Will it replace traditional currency and what will central bank do? Global economic contraction is witnessed today. Between 2008 and 2015, central banks lent prodigiously to their governments. This level of debt is no longer sustainable. The period 2008-12 was one where the Indian government mercilessly bullied the RBI. In other countries, the central banks stood firm but were beginning to yield ground. In some countries, there was tacit collusion with the governments. The credibility of central bank was coming under strain and they had to work very hard to convince the public that they are almost omniscient. Finally, the question is of monetary policy, the government and the RBI. The objectives are the same—price and financial stability.

“Dialogue of the Deaf” is the history of the politics of monetary policy in India. The strange and distinct relationship between the RBI and government forms the core of the book. It is torn between the law that governs it and the politics of the governments that control it. Author has described some of the main elements of this complex relationship with facts, anecdotes and analysis stretching back to nearly 180 years in a manner easily accessible to the common man. This book is easy to read and to understand the working of money, monetary policy and the people who control it in India. This book is must for students of economics, finance and of political science. This book is must for bureaucrats to understand the complexities of the relationship between central bank and politicians. I must thank the publisher for bringing out this book in academic domain. Three RBI volumes along with this book, provide a beautiful picture of finance history of India since 1935.

Indian Institute of Finance  
Delhi & G-Noida

Manju Agarwal

**Ahsan, Ahmad; Manolo Abella, Andrew Beath, Yukon, Huang, Manjula Luthria, and Trang van Nguyen; *International Migration and Development in East Asia and the Pacific*; 2014, International Bank for Reconstruction and Development, The World Bank, Washington D.C., USA, pp. 221, Price US\$ 29.95**

International migration has more than tripled in size since 1960, rising from 77 million to almost 244 million in 2015 of which 48% were women. United States, Germany, Russian Federation, Saudi Arabia, United Kingdom are the top five destinations for international migration. The share migrant population ranges from 20% to 40% in all these destinations. It is estimated that 80% of the population United Arab Emirates is migrant population. Worldwide, remittance flows are projected to reach US\$ 596 billion in 2017. The East Asia and Pacific region has nearly 22 million international emigrants who remitted an estimated US\$ 112 billion in 2013 to their home countries. The region has seen an increase in intraregional migration to Hong Kong SA China, Malaysia, the Republic of Korea, Singapore and Thailand. Migrants from East Asia and Pacific region are believed to be unskilled and increasingly female. The objective of this report is to analyze how international migration should be managed in the region and how countries and organisations in the region can identify policies and institutions to manage migration that can support development goals while protecting the rights of migrants. The report is divided into four parts. Chapter I covers the presentation of stylized facts concerning overarching macroeconomic and demographic issues relating to international migration in East Asia and the Pacific. Chapter two discusses the economic impact of migration on labour sending countries. Chapter three discusses the economic

impact of migration on labour receiving countries. Chapter Four and % cover the analysis of migration industry in the labour receiving and sending countries respectively.

Liberalisation of migration flows is being attempted at the Association of Southeast Asian Nations (ASEAN) level. There is likely to be intraregional migration from low income countries to high income countries like Japan, Korea and Singapore where the economies are suffering from aging population and there is increase in demand for labour in labour intensive sectors like healthcare. It has been found that when migrants are females it can lead to decline in child labour but not so in case the migrant is a male.

Migration and Remittances have number of positive immediate impacts on labour sending economies. They contribute to increasing income and reducing poverty in the short term. Remittances play an important role in correcting trade deficits and enhancing official reserves for labour sending countries. The development impact of migration and remittances is found to be well below the potential. The macroeconomic effects of migration in labour receiving countries are positive in raising GDP which is short term. In labour markets, wages can fall for unskilled local workers but decline is small and insignificant. The benefits of migration is felt by labour receiving countries as firms employing migrant workers enjoy higher profits due to lower wages and better competitive terms. Migration though has minimal impacts on domestic wages and employment yet countries are becoming more and more protective about their labour markets as a political issue is not debated in this chapter or book. Not much evidence has been found to the fact that low skilled migration may forestall adoption of labour saving technology and associated productivity gains in the region.

International migration is large and growing industry in East Asian and Pacific region. The industry involves thousands of stakeholders which includes employers, recruitment agencies, governments, international organization and migrant workers. Migration industry needs to encourage formal migration to informal migration that protects workers' right and ensures security and safety of the worker and his contributions. Difference between high private returns of migrant workers and employees from migration, lower social returns of sending and receiving countries need to be managed more effectively by the government and agencies involved in the process. It is often not possible to assess the cost of migration for labour sending countries as markets do not account for the cost of publicly financed education received by migrant workers. In labour receiving countries, market do not account for cost of wages and job opportunities lost by domestic labour. Migrant worker also suffer due to change in policies by governments where they may lose job due to a sudden change in VISA policy. There is also no social protection for the migrant workers either from the countries sending them or from countries receiving them which is an area not addressed by this book. Unskilled and Skilled labour often complain of high exploitation in the hands of the firms employing them who do not even arrange for proper medical care in case the need be. There exists information

gaps at the migrant level, firm level and authorities level about the type of employment and payscales and benefits the migrants are likely to receive. Migrant Information Centers created by certain governments like in Philippines provide the need help and aid in improving transparency in migration process. Citizen of the country need to protected against any fraudulent activities or contracts for which government need to set performance standards and monitoring mechanism for contracts, penalties for non compliance and public dissemination of violations.

Labour receiving countries demand labour for economic reasons. There needs to be equal treatment of migrant workers and native workers in these countries and policy should be drafted to ensure the same. Fair wages and safe working condition should be ensured for migrant workers by the governments of the labour receiving countries. The book proposes bilateral treaties that can support the win win option for both labour receiving and sending countries.

Indian Institute of Finance in its study published in Finance India in Vol. 31, No. 3, September 2017 has proposed setting up a National Labour Exchange (NLX) which would remove information asymmetries at the national level, the scope of the exchange can be extended to the international level where countries can cooperate to share information on passport numbers, visa and employing firm information for the benefit of the migrant population and employing firms. This would also curtail illegal immigration and any threat to national securities.

The book is good read for understanding various facets of international migration in East Asia and Pacific region with special focus on Indonesia, Philippines and Vietnam. The book is goodfor students studying international migration with special focus on East Asia and Pacific. The book will also aid the policymakers in guiding policies that create a better and healthy work environment for domestic and migrant workers.

Indian Institute of Finance  
Delhi & G-Noida

Yamini Agarwal

**Hilton, Ronald W.; and David E. Platt; *Managerial Accounting: Creating Value in a Dynamic Business Environment*; 2017, McGraw-Hill, Global Education Holding, New York, USA, pp. 809, Price US\$ 13.60**

This is an extremely comprehensive and easy to read managerial accounting text book. The students can learn the concepts at a far greater speed. The contents are well balanced, organized and up to date. The questions like “why” and “how”, for the service industries and manufacturing companies have been answered. The end of chapter, problem provides an excellent overview of the chapter. The technology supplements and instructor resources are brilliant and facilitate simplified learning. On

a whole, it is a student friendly book. Eminent authors from Cornell University and University of Texas have created a fine literature on Managerial accounting.

In today's world there is a rapid flow of information and tools learnt in this book, can enable a reader to interpret the information and undertake right decisions. With the support of Mc Graw Hill Connect®Accounting, a lecturer can organize online assignment and assessment solution. The Intelligent Response Technology facilitates end of chapter assessment. The tables facilitate online calculations. The Connect®Accounting Student Library gives student access to recorded lectures, online practice materials and eBook. Exclusive access to solutions manual, test bank, instructor power point slides, Instructor's Manual, Excel spreadsheet solutions, supplementary chapter solutions and Media rich eBook, facilitate the work of lecturers. Student supplements like Connect Plus Accounting, Course Smart, Online Learning Center, excel templates and supplementary chapters help a student undertake self-assessment using online quizzes, read student PPTs, work on excel templates etc, in a very simplified and a modern education system. Most of the topics are similar to any standard book on Managerial accounting.

One can read topics like the Changing Role of Managerial Accounting in a Dynamic Business Environment, Basic Cost Management Concepts, Product Costing and Cost Accumulation in a Batch Production Environment, Process Costing and Hybrid Product-Costing Systems, Activity-Based Costing and Management, Activity Analysis, Cost Behavior and Cost Estimation, Cost-Volume-Profit Analysis, Variable Costing and the Costs of Quality and Sustainability, Financial Planning and Analysis: The Master Budget, Standard Costing and Analysis of Direct Costs, Flexible Budgeting and Analysis of Overhead Costs, Responsibility Accounting, Operational Performance Measures, and the Balanced Scorecard, Investment Centres and Transfer Pricing, Decision Making: Relevant Costs and Benefits, Target Costing and Cost Analysis for Pricing Decisions, Capital Expenditure Decisions and Allocation of Support Activity Costs and Joint Costs in this book. Some new areas highlighted include Hybrid Product Costing Systems, Balanced Scorecard and Transfer Pricing. A lot of graphics have been used to make the content interesting. Short caselets are interesting and can be easily used for classroom teaching. The analysis using a focus company and contrast company is innovative and unique to this book.

The book is highly recommended for practicing management accountants, professors and students of MBA (finance and accounting)

Indian Institute of Finance  
Delhi & G-Noida

Saurabh Agarwal



**Cherif, Rede; Fuad Hasanov and Min Zhu; *Breaking the Oil Spell: The Gulf Falcon's Path to Diversification*; 2016, IMF Publication Service, Washington D.C., USA, pp. 299, Price US\$ 40**

Natural resources have both benefits and drawbacks. The benefits are in the form of resources that can be generated from judicious use of those natural resources. Drawbacks arise from excessive reliance on these resources. It often results in discouraging risk taking behavior and promotes "rent seeking" behavior. That is often also referred to as "Dutch disease". This behavior results in ignoring high technology, manufacturing and services. This scenario can be observed in high - income - oil and gas rich Gulf countries. These countries suffer from "resource rich high-income trap". Many authors have come together to write on how to overcome this situation through suitable policy instruments. Gulf countries are excessively dependent upon oil more in a cyclical dimension. The oil price shocks in 1986 and then again in 2013 requires these countries to develop counter cycled policies. Diversification can help reduce reliance on oil. Many Gulf countries have created large sovereign wealth funds and accumulated massive foreign exchange reserves to manage commodity booms.

High standards of living and sustainable and equitable growth are the main goals of a progressive economic policy. Oil exporting countries need to increase their production base to include tradables which are currently imported. The fall of oil prices during 2014 and 2015 reinforce the need for diversification. The fall in oil prices resulted in unemployment, falling living standards and heavy indebtedness. Many GCC countries have experienced a fall in the per capita due to fall in oil prices. These countries have developed quality infrastructure, free mobility of capital and labor and low tariffs and Taxes. Market failure is the main reason preventing growth of a dynamic & diversified export sector.

Interdisciplinary and interregional study can provide the direction for achieving sustainable growth. Priority should be given to diversification of tradables. Incentives need to be provided to achieve virtual diversification and horizontal diversification. Countries like Algeria and Saudi Arabia, pushed industrialization in 1970s. It was found that high human capital stock is not required before industrialization. Hence, human capital can develop along with industrialization. Many lessons can also be learnt from Singapore which was poor port city in mid 1960s to becoming one of the richest countries in the world. Singapore was labor intensive in the 1960s, skill intensive in the 1970s, capital intensive in the 1980s, technology intensive in the 1990s, and finally a knowledge and innovation economy since 2000. Suitable policies helped in the transition along with a positive role played by multinational corporations. Focus for exports were on electronics, precision engineering, chemicals and biotechnology.

Malaysia on the other hand is a resource-rich developing economy that has developed suitable and sophisticated manufacturing export base. The

path to develop industrial and scientific capabilities has also been discussed. Discussion on Korea focuses on actual constraints, relations with the private sector and the real objective behind its industrialization strategy. Latin America did well in the past but now has stagnated. The discussion focuses on the role of Science, Technology and innovation in Latin American countries. Diversification is necessary step to overcome the constraint of middle income trap. New strategies that should be followed by middle income countries have also been discussed. Diversification can help overcome barriers to poverty alleviation, technological innovation, capital flows, women's empowerment and entrepreneurship. Development banks also play an important role in the development of industrialization in a country. For example the role played by Brazilian Development Bank in Brazil's growth. Movements like Samuel Undong in Korea can be a model to facilitate grassroots participation that was supported by the government and social structure.

This is an excellent publication by IMF focusing on the need of Gulf countries to rethink and diversify and not remain dependent on Oil exports. The book is suitable for Policy Makers, Professors and students of Economics who wish to know the lessons for today and the way forward towards diversification and sustainable development.

Indian Institute of Finance  
Delhi & G-Noida

Saurabh Agarwal

**Lam, W. Raphael, Markus Rodlauer and Alfred Schipke, *Modernizing China : Investing in Soft Infrastructure*; 2017, International Monetary Fund, Publication Service, Washington, D.C., U.S.A., pp. 372, Price US\$ 38**

China's economic growth over the past 35 years has sharply reduced poverty, created a large and rapidly growing middle class and made its physical infrastructure a benchmark for countries around the world. Now the economy, has embarked on its next transformation toward higher-income and advanced economy status.

China has launched comprehensive reforms to promote growth that is sustainable, inclusive and environment friendly. This requires a more market driven economy based more on services and consumption than on industry and physical investment. It also requires investing more in "soft infrastructure" including frameworks for well functioning markets and effective macroeconomic management.

Drawing on international experiences, the book provides guidance for a strengthening of fiscal, monetary and financial sector frameworks. It aims to encourages further reforms of state owned enterprises, calls for policy actions to address financial risks of local governments funding practices and highlights the need for better and more frequent macroeconomic

statistics. The recent inclusion of the Chinese Renminbi in the IMF's Special Drawing Rights basket has recognized the significant reform progress achieved in many areas. By expanding and deepening reforms, China will be able to support durable growth and stability as home and abroad.

Lam, Rodlauer and Schipke, in Chapter one on China's Economic Success and Reforms : Investing in Soft Infrastructure discusses the country's development and its global footprint, followed by a review of reform progress and shortcomings. As in any other country, designing and implementing bold, far reaching reforms faces opposition from the status quo; are highlighted in the chapter. The chapter summarises the insights to be had from the chapters that follow.

Mooij, Lam and Wingender in chapter two reviews the tax system and compares it with that of other countries. It elaborates on challenges in direct and indirect taxation, with the aim of identifying options that can help improve the efficiency and equity of taxation and contribute to a successful transition towards a model of sustainable and inclusive growth.

Brondolo and Zhiyong in chapter three talk about on "Strengthening Tax Administration" examines the results and impacts of previous tax administration reforms and identifies areas where further reforms are needed to sustain revenue collection and reduce compliance costs over the next five years.

Eden, Gentry and Gupta, in chapter four discusses a Medium Term Expenditure Framework (MTEF) for more effective fiscal policy. The chapter begins with a discussion of the international experience with MTEFs and the main issues to consider in their development. The major improvements achieved in China's budget planning process in the recent years are discussed, as well as limitations of the current annual budget process. A number of important design choices that G20 countries have chosen to incorporate in their MTEFs are reviewed. The authors lay down a number of recommendations towards the conclusion of the chapter.

Soto and Gupta reviews pension system followed by an examination of its demographic context and challenges in China in Chapter five of the book. Authors consider ways to contain potentially higher pension costs, followed by detailed conclusions. Lam, Wei and van Eden discusses the structural features of the local government finances, noting the mis-alignment of revenue that is falling short of spending obligations at local levels. An outline of the current reform measures, including the revision to the budget law, to strengthen the local government finances follow. Policy options to strengthen local government finances given existing reforms initiatives are also covered in simple and lucid language in the chapter.

Chapter seven summarizes the research findings on China's monetary policy transmission mechanism based on Ma and Ji (2016) drawing a major theoretical and empirical studies to summarize the need for a new

intermediate target for monetary policy. The chapter also covers empirical results on the effectiveness of interest rate transmission in China relative to other countries and soft budget constraints for local government financing vehicles and state owned enterprises and their impact on interest rate transmission demonstrating the need for an interest rate corridor to reduce volatility in rates, which will help monetary transmission, looks at other factors that inhibit interest rate transmission, and provides specific policy recommendations

Habermeier, Ivanics, Darbar, Baba, Ling and Zotova, in chapter eight argues that China has made an significant progress in removing capital controls, but that capital movements are still much more tightly controlled than in most advanced economies. The effectiveness of controls differs significantly across types of transactions, however, and there is evidence of growing circumvention. According to authors, China needs to adjust its approach to managing capital flows and increasingly large cross border financial flows.

Chapter nine by Nabar and Tovar examines RMB internationalization. Authors briefly discusses what drives currency internationalization, looking at the existing literature, reviews key developments in offshore RMB use and trading, summarizes underlying policy that have promoted RMB internationalization and discusses the implications of RMB internationalization for the international monetary system.

Griffin and Walsh in chapter ten on reviews the financial system overall, scrutinizes the banking sector, and looks at the rapidly growing nonbank sector and products. Author also discusses the equity, bond and the insurance sector in China before summarizing the chapter with policy recommendations. Lam and Schipke in the last chapter elucidates current proposals and identifies key elements of State Owned Enterprise (SOE) reforms that can improve resource allocation and facilitate china's transition towards sustainable growth, Authors provide an illustrations of the role and recent performance of SOEs, analyses vulnerabilities emanating from high and rising leverage and estimates the implicit support to SOEs that has contributed to resource misallocation. The chapter summarizes the government's SOE reform initiatives and current progress and present policy recommendations and assesses potential growth benefits from SOE reforms based on international good practices. The books ends with a detailed subject index.

The books aims to contribute to the broader discussion about how to achieve a successful transformation. The books would be a useful guide for policy makers and every one who is interested to understand the Chinese Economy. The students of International finance and economics would also find the book interesting and useful collection on Modernising China.

Indian Institute of Finance  
Delhi & G-Noida

Deepak Bansal

**Sharma, Pranjal; *Kranti Nation : India and the Fourth Industrial Revolution*; 2017, Macmillan Publishers, Delhi, India, pp. 263, Price ₹ 599**

Revolutions are not new to India as we have had many over the centuries. From social revolution to green and white revolution, we have revolutions at all levels-local, regional and national. In Hindi, the word for revolution is *kranti* and it has been mainly associated with India's fight against British rule and their discriminatory policies to keep India dependent on imports and ensure that its basic industries suffer. In the seventy years of its independence, India has jumped to become a high-growth economy fueled by advanced business and consumer technologies.

The First Industrial revolution was started with the invention of steam engine followed by railroads and mechanical production of tools and machines. The second industrial revolution started around nineteenth century with mass production and electricity. The third Industrial revolution was the digital revolution led by use of computers. Finally, it was the internet which set the stage for the Fourth Industrial Revolution.

The Fourth Industrial Revolution which is the subject matter of this book is an umbrella concept that includes several emerging technologies such as big data, robotics, artificial intelligence, cloud, 3D printing, sensor technology, neuroscience and Internet of Things (IoT) to name a few. Many of these technologies have existed from long but the differentiating aspects about the Fourth Industrial revolution is the confluence of all these technologies, at a time when connectivity through high-capacity bandwidth and processing power are at a very high level and becoming faster and more powerful with the passage of time.

Since smartphones and cloud computing became popular five years ago, the Fourth Industrial Revolution has been creeping into almost all sectors of the Indian Economy and these technologies are transforming businesses faster than we realize.

Today we stand on the brink of a technological revolution that is changing how we work, live, learn love, and relate to one another and even what it means to be human. The pace, scale and complexity of the revolution will not just have profound impact on every country across the world, but will challenge existing business models, institutions and assumptions about the way the world works. Accordingly, it is critical that all stakeholders take the time to reflect on the future that is unfolding-not just to understand and adapt to Fourth Industrial Revolution, but also to take every opportunity to make sure that it is a future that benefits us all.

*Kranti Nation: India and the Fourth Industrial Revolution* this is the first book to account, through more than fifty examples, how visionary leadership in Indian industry is deploying these technologies. From water pumps to railway coaches, chai shops to burger chains, and telecom towers to warehouses, the author profiles organizations that have transformed

processes, products and services while delivering the best to consumers. The book is a rich and comprehensive account of how the Fourth Industrial Revolution is unfolding and impacting Indian industries, businesses and citizens.

This book is divided into eleven chapters, starting with the introduction of the Fourth Industrial Revolution and its role in Indian economy and goes on to cover multiple sectors like Manufacturing, Logistics and Services, Consumer and Retail, Transportation and Mobility, Healthcare and Diagnostics, Hospitality and Travel, Banking and Finance, Agricultural and Food, Education and Training and Energy in the subsequent chapters.

The second chapter talks about how the world of manufacturing in many traditional companies is changing with the cost effective technological solutions. This chapter makes a mention of examples like Matrix Tools and Solutions choosing Siemens NX Software suite to replace the traditional 2D CAD Software with the 3D CAD solution, Kirloskar Brother's first to adopt additive manufacturing (AM) or 3D printing in their pump factories in India. Even IoT plays a role in KBL where water facilities at a plant are run by remote management system. A mention is also made of Raymonds which is one of the oldest textile manufacturing company and how it has adopted robotics, big data and material science for its product development, of how Marico, the US\$ 900 million personal care product company is piloting sensor based systems along with SCADA systems in its plants to capture manufacturing information on real-time basis and how GE India has included elements of artificial intelligence and 3D printing in many projects. The Jamnagar plant of Reliance Industries is one of the best examples of using a connected technology offered by Honeywell.

The third chapter talks about how Logistics is not far behind in adopting the Fourth Industrial Revolution. GreyOrange, the Indian robotics manufacturing firm has contributed much towards bringing automation in warehousing for the Indian logistics sector and is working with leading firms like Jabong, Flipkart, Mahindra group and Aramex, an international mail delivery and logistics services company based in UAE. In fact, logistics is one of most critical factors for the success of any e-commerce firm and partnering with GreyOrange has helped Aramex to leverage next generation warehousing technology solution to resolve multiple challenges it was facing in profiling, sorting and routing. This chapter also covers examples of many other logistic firms like DHL and its Indian subsidiary, Blue Dart Express harnessing the advantage of these technologies to process higher volumes of inbound and outbound shipments in a shorter span of time. The book also makes a mention of other popular technologies being applied in logistics like NLP bots. Over the past few years telecom providers have also applied several unique solutions in India like M2M/IoT towards smart metering, traffic management and asset tracking.

The fourth chapter on Consumer and Retail sector talks about several consumer product and services companies like Phillip Lighting that are deploying technologies for solutions that were unthinkable before. Consumer goods e-commerce company Myntra has created Moda Rapido, a line of fashion garments where the chief designer is an artificial intelligence robot called Artie. Even airline companies like Spicejet are deploying near-field communications technology for passenger check-ins. This facility will save time of passengers from standing in long queues and thereby enhancing their travel experience. Another company Autumn Worldwide has created a revolution with its social listening tools to fetch conversations and capture real-time sentiments, opinions and viewpoints and help clients like Pepsico, Burger King to use the feedback to revolutionize customer experience.

The fifth chapter covers up technological revolution in transportation sector citing examples of Renault India's 'Frugal Innovation' or 'Value Engineering' to reduce the unnecessary weight and cost burden of its vehicles, Digital drives by Mahindra Group using digital technologies like Blockchain, Big data analytics, IoT and even augmented reality (AR) to boost growth and finally Uber and Ola's New Road to fulfill the diverse needs of Indian customers. Even the behemoth of Indian transport industry, the Indian Railways is now embracing technology for more than just ticket management to order food enroute, request the cabins and restrooms to be cleaned and make bookings on the fly.

The sixth chapter throws light on Healthcare and Diagnostic sector's adoption of technologies like Artificial Intelligence and Machine Learning in diabetic eye disease detection, Fortis's Connected Care, Robotics Surgery, Max Healthcare's- ICU at Home and Bugworks' use of AI to hasten antibiotic discovery.

The seventh chapter gives information on Hospitality and Travel sector's use of the Fourth Industrial Revolution for enhancing Quality at (On your Own) OYO's through offering millions of rooms of a un-branded hotels on a technology platform, Lalit and Taj Hotels' hospitable technology where integration of inventory management with IT has helped operations and day to day functioning, corporate buying for hotels and to automate repetitive tasks. Further, MakeMyTrip's Online Journey is another example of launching many customer-centric features riding on technology in the travel sector.

The eighth chapter on Banking and Finance is all about how bank like HDFC, financial services firms like Bajaj Finserv have adopted Artificial Intelligence, Blockchain technologies and P2P lending on Cloud to transform the entire operational experience in this sector. Fintech has created the biggest kranti in India. It has disrupted the banking and the telecom sectors through mobile wallets, mobile banking and IT enabled services.

The Agriculture and Food sector which is the top priority of the Government, has also been covered up in the ninth chapter and talks about

how even this important sector has adopted these technologies through companies like Cargill Harvests Mobile Trading and NCDEX's Electronic exchange. Here, an effort is made to marry technology with financial market infrastructure and the value chain ecosystem to create and enhance agri-commodity networks and platforms for bringing customers the benefit of scale, transparency and ease of doing business. Further, this chapter also discusses Dematting Commodities, Electronic Accounting, UMP (Unified Market Platform)-Creation of a modern Mandi Platform, e-auction Platform, Book my warehouse App, Tracking of Goods and Enhanced Security through RFID (radio Frequency Identification), Next generation Trading and Surveillance, Internet farms by Aibono to name a few.

The tenth Chapter is devoted to Education and Training with examples of Educomp's Tech Romp, BoTs Train at Skill Alpha, Jobs by Algorithm by Naukri and use of Data Analytics by NIIT. Technology in the sphere of education has been used in two ways- horizontally to address the problem of reach and vertically to enhance the learning experience to those already reached. Massive Open Online Courses-or MOOCs have also become extremely popular for larger audience. Education has adapted to technology rapidly but the real challenge will be to build sustainable business models that can generate revenue to deploy technology that may lead to rapid scale-up.

The last and the final chapter is on Energy sector discussing examples of Havell's robotics, IoT and artificial intelligence based technologies to produce energy saving products, Tata Powers' AdoRE for the Tata Power assets in its generating stations, Predictive Maintenance at First Solar using data analytics, and Avaada's analytics of Renewable energies. The scope of new technology in the energy sector is higher in renewables. The traditional energy generation and distribution companies have to overcome the investment in existing technologies before they adopt new ones.

The book towards the end offers notes giving a detailed account of all the references used including industry and company reports, web-links, and articles for each chapter.

The compilation of the application of the Fourth generation technologies in different companies and in different sectors in this book is an extremely praiseworthy effort by the author, Pranjal Sharma. Each of these chapters has the potential to be converted into full-fledged books in themselves offering scope of further research. I would like to compliment the author for his in-depth research and efforts to summarize so many technological innovations in one single book.

This book will be an inspiration for readers, researchers, leaders and entrepreneurs in many emerging economies to deliberate and invest in society with an objective to harness the Fourth Industrial Revolution benefits and create a prosperous and inclusive future for increased number of people.

Amity University  
Noida

Namita Sahay