**Patron**
Dr. N. V. Vasani
Director General, Nirma University

**Chief Editor**
C. Gopalkrishnan
Director, Institute of Management, Nirma University

**Editor**
M. Mallikarjun
Professor, Institute of Management, Nirma University

**Associate Editors**
Pawan K. Chugan  
Professor, Institute of Management, Nirma University  
Prabhat Kumar Yadav  
Associate Professor, Institute of Management, Nirma University

**Editorial Advisory Board**

<table>
<thead>
<tr>
<th>Name</th>
<th>Position and Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>R. Radhakrishna</td>
<td>Director, Indira Gandhi Institute of Development Research</td>
</tr>
<tr>
<td>Yoginder K. Alagh</td>
<td>Professor Emeritus, Sardar Patel Institute of Economic &amp;</td>
</tr>
<tr>
<td></td>
<td>Social Research, Ahmedabad</td>
</tr>
<tr>
<td>Murali Patibandla</td>
<td>Professor, Indian Institute of Management, Bangalore</td>
</tr>
<tr>
<td>Amap Singh</td>
<td>Professor, International Management Institute, New Delhi</td>
</tr>
<tr>
<td>Dinesh Awasthi</td>
<td>Director, Entrepreneurship Development Institute of India,</td>
</tr>
<tr>
<td></td>
<td>Ahmedabad</td>
</tr>
<tr>
<td>B.S. Sahay</td>
<td>Director, Institute of Management Technology, Ghaziabad</td>
</tr>
<tr>
<td>Subir Raha</td>
<td>Former Chairman &amp; Managing Director, ONGC Ltd.</td>
</tr>
<tr>
<td>Nagesh Kumar</td>
<td>Director-General, Research and Information System for</td>
</tr>
<tr>
<td></td>
<td>Developing Countries, New Delhi</td>
</tr>
<tr>
<td>P.K. Sinha</td>
<td>Professor, Indian Institute of Management, Ahmedabad</td>
</tr>
<tr>
<td>B.H. Jajoo</td>
<td>Professor, Indian Institute of Management, Ahmedabad</td>
</tr>
<tr>
<td>Pradip N. Khandwalla</td>
<td>Former Director, Indian Institute of Management, Ahmedabad</td>
</tr>
<tr>
<td>Madhu Mehta</td>
<td>Chief Architect, Nirma Labs, Ahmedabad</td>
</tr>
<tr>
<td>L.M. Bhole</td>
<td>Professor, Indian Institute of Technology, Mumbai</td>
</tr>
<tr>
<td>Kirit S. Parikh</td>
<td>Member, Planning Commission, New Delhi</td>
</tr>
<tr>
<td>Che-Jen Su</td>
<td>Associate Professor, Fu Jen Catholic University, Taiwan</td>
</tr>
<tr>
<td>Namjae Cho</td>
<td>Professor, Graduate School of Business Administration,</td>
</tr>
<tr>
<td></td>
<td>Hanyang University, Seoul</td>
</tr>
<tr>
<td>Iraj Mahdavi</td>
<td>Professor and Vice President of Graduate Studies &amp; Research,</td>
</tr>
<tr>
<td></td>
<td>Mazandaran University of Science and Technology, Iran</td>
</tr>
<tr>
<td>Satya Paul</td>
<td>Professor, School of Economics and Finance, University of</td>
</tr>
<tr>
<td></td>
<td>Western Sydney, Australia</td>
</tr>
<tr>
<td>Bradley Bowden</td>
<td>Associate Professor, Griffith University, Australia</td>
</tr>
<tr>
<td>Liu Chunhong</td>
<td>Dean, International Cultural Exchange School, Donghua</td>
</tr>
<tr>
<td></td>
<td>University, Shanghai</td>
</tr>
</tbody>
</table>

**Annual Subscription**

<table>
<thead>
<tr>
<th>Rates by Post</th>
<th>India</th>
<th>Overseas</th>
</tr>
</thead>
<tbody>
<tr>
<td>for Individuals</td>
<td>Rs. 500</td>
<td>US $ 15</td>
</tr>
<tr>
<td>for Institutions</td>
<td>Rs. 1000</td>
<td>US $ 25</td>
</tr>
</tbody>
</table>

For subscription related enquiries write to:
Nirma University Journal of Business And Management Studies, Institute of Management, Nirma University, S.G. Highway, Ahmedabad 382481, Gujarat, India.
Tel: +91 2717 241900-4
Fax: +91 2717 241916
Email: editor.nujbms@imnu.ac.in
Website: www.imnu.ac.in

Payment may be made by crossed demand draft drawn in favour of “Institute of Management, Nirma University”, payable at Ahmedabad.

Claims for missing issues should be made within three months of publication.

Copyright © 2010, Institute of Management, Nirma University. No part of this publication may be reproduced or copied in any form by any means without prior written permission.

The views expressed in the articles and other material published in Nirma University Journal of Business and Management Studies do not reflect the opinions of the Institute.

All efforts are made to ensure that the published information is correct. The Institute is not responsible for any errors caused due to oversight or otherwise.

Send your feedback to:
The Editor, Nirma University Journal of Business And Management Studies, Institute of Management, Nirma University, S.G. Highway, Ahmedabad 382481, Gujarat, India.
Tel: +91 2717 241900-4
Fax: +91 2717 241916
Email: editor.nujbms@imnu.ac.in
Website: www.imnu.ac.in

Printed and published by G. Ramachandran Nair on behalf of the Institute of Management, Nirma University, Sarkhej-Gandhinagar Highway, Ahmedabad 382481, Gujarat, and printed at Printquick, M/33 Madhupura Market, Shahbaug, Ahmedabad 380004 and published from Institute of Management, Nirma University, Sarkhej-Gandhinagar Highway, Ahmedabad 382481, Gujarat.
# Nirma University Journal of Business and Management Studies

## Vol. 5, Nos. 1 & 2, July - December 2010

## Contents

### Articles

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>03</td>
<td>Shift from Conventional to Tertiary Sector : Emerging Dimensions of Service Sector in India</td>
<td>Monika Jain</td>
</tr>
<tr>
<td>25</td>
<td>Microfinance Sector in India : Evolution and Current Challenges</td>
<td>Arpita Amarnani, Neeraj Amarnani, Sarla Achuthan</td>
</tr>
<tr>
<td>47</td>
<td>Emergence of E-Banking in India</td>
<td>Nityesh Bhatt, Zakiya Khan, Meera Mathur</td>
</tr>
<tr>
<td>61</td>
<td>Trade Openness and Economic Growth : An Econometric Study of India</td>
<td>Dharmendra Singh</td>
</tr>
</tbody>
</table>

### Case Study

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>71</td>
<td>Rectifiers &amp; Controls, Faridabad</td>
<td>Aashish Jindal, Pavan Narang, Richi Kotadia, Satish Nair, C. Gopalkrishnan</td>
</tr>
</tbody>
</table>

### Book Reviews

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>81</td>
<td>Freakonomics : A Rogue Economist Explores the Hidden Side of Everything</td>
<td>Shaili Raval</td>
</tr>
<tr>
<td>84</td>
<td>Repositioning : Marketing in an Era of Competition, Change, and Crisis</td>
<td>Soumi Chatterjee</td>
</tr>
</tbody>
</table>
Most of the developing economies, in the last decade, have undergone a significant structural shift. An underdeveloped economy is characterized by a predominant share of agriculture; with development, the share of industry increases and that of agriculture declines. Correspondingly, the share of manufacturing and service sectors increases with the share of the manufacturing sector growing at a faster pace than that of the service sector. After reaching a reasonably high level of development, the importance of the service sector increases, and it becomes a significant contributor of the economy. This pattern holds true across the different countries, which are at various levels of development (Papola, 2005). All countries, irrespective of the time embarked upon the modern economic growth, on average had a similar sequence of changes in their structure starting with a predominance of agriculture, shifting to industry, and then in favour of the service sector. India has been one exception where the shift has been directly from the primary to the tertiary sector.

**Nature of Services**

Services were traditionally thought as non-tradable and consequently the theories that developed for explaining goods did not pay explicit attention to services. However, in the past two decades, trade in services has grown rapidly...
and this has led to a vast literature and some of the fiercest debates on certain issues regarding trade in services.

The earliest attempt to define services was made by Hill (1977) who argued that “Goods and services belong in different logical categories.” He focused on the fact that producers cannot accumulate stock or inventory of services, stressing that services must be consumed as they are produced unlike goods that can be produced and then stored. This makes it essential for the user and the provider of the service to interact. But subsequent to this conceptualization there have been many studies that point out that Hill’s definition simply relates to contact services and that there exists a range of services which do permit a separation (in space as well as in time) of the location of production and consumption, so that service trade may take place either at the factor or at the product level. Bhagwati (1984) argues that services can be divided into two categories; first, those that necessarily require the physical proximity of the user and the provider; and second, those that do not essentially require this though it may be useful. Services that require essential physical proximity have been further categorized into three groups:

- mobile provider and immobile user, e.g. shifting labour to the construction site in other country
- mobile user and immobile provider, e.g. hospital services
- mobile user and mobile provider, e.g. lectures, haircuts, etc.

Bhagwati (1985) argues that services for which physical proximity is inessential, i.e. the long distance services, are on a rise owing to technical progress, e.g. banking and insurance. However, unlike in the case of goods where factor mobility and trade are distinct phenomena, in the case of services the distinction vanishes as factor mobility and trade in services are two integral aspects of service transaction. But, Stern and Hoekman (1988) point out that services can be: complementary to trade in goods; substitute for trade in goods; and unrelated to goods. All these characteristics have implications for how trade can occur.

For the purpose of classifying international transactions in services the most commonly used is provided by Sampson and Snape (1985) and modified by Sapir and Winter (1994). This classification, which is based on the constraints on physical location of producer and consumer in realizing the transaction, has been adopted by the World Trade Organization (WTO) under the General agreement on Trade in Services (GATS). The Agreement applies to four “modes of supply”:

- Mode 1: cross-border supply of service (i.e. not requiring the physical movement of supplier or customer)
- Mode 2: Provision implying movement of the consumer to the location of the supplier
- Mode 3: Services sold in the territory of a Member by (legal) entities that have established a presence there but originate in the territory of another Member
Mode 4: provision of services requiring the temporary movement of natural persons.

Many studies adopt a broader and simpler definition of services that help in distinguishing services from goods. One such broad definition of services is: services form a diverse group of economic activities not directly associated with the manufacture of goods, mining or agriculture.

Literature Review

The basic characteristics of services on which most of the classifications are based are: *non-transferability* and *non-storability*. Other associated characteristics are that services are heterogeneous and flexible in production and imperfect competition is highly relevant for services. While Hill points out the differences in goods and services, many studies argue that these differences do not necessarily apply to trade (Hindley and Smith, 1984). Accordingly, in the absence of a developed ‘theory’ of trade in services, theories put forward to explain trade in goods such as the comparative cost theory and the new trade theory are often applied to services. Sapir and Winter (1994) in their survey of literature on service trade also conclude that, under perfect competition, the theory of comparative advantage applies to international trade in services as well as to trade in merchandise. But, some of the studies argue that the introduction of services do require a different approach, which necessitates a reinterpretation of the law of comparative advantage.

According to Melvin (1987) application of the comparative advantage and the Heckscher-Ohlin theorem to services requires different interpretations. In particular, the paper puts forward a theoretical model, which shows that if a mobile service is used intensively in the production of the mobile commodity, then the country that is well endowed with the $k$-factor will nevertheless import the $k$-intensive commodity. One reflection of the model is that a service-exporting country will have a merchandise trade deficit; this indicates a comparative advantage in the service sector. Hindley and Smith (1984) argue that the non-transportability of services affects the basic economic concepts. For one, unlike in the case of goods, for services it is unlikely that the integrated world market will lead to uniform prices in different national markets since it is not possible to reproduce the price-quality combination of the services produced in country A as in country B, which is possible in the case of goods. Thus, though in general theory of trade in goods has been applied to trade in services, the unique characteristics of services (e.g. non-transportability and intangibility) emphasise the need for a new theory of trade in services that would help in explaining the cross-country pattern of specialization in services.

In the work of Kuznets (1966), based on the historical experience of nations, the tertiary sector is seen to expand in relative terms only when development matures and there is a considerable rise in per capita income following rapid industrialization. However, in the context of developing countries, the phenomenon of a relatively large tertiary sector has been widespread (Gemmel, 1986). It is easy to rationalize this pattern of growth in the context of developed countries because, following the rapid progress of industrialization, the demand for several services grows faster, which in turn reduces the
share of the secondary sector in the total product of the economy. But in the case of developing countries, the dominance of the tertiary sector before the secondary sector’s relative size could increase to a reasonably high level did invite concerns at least in the past. In reference to the rapid expansion of this sector in the first half of the nineteenth century, Rao (1954) argued that it could be an indication of economic progress in the case of countries that recorded a sharp rise in the per capita figures of national income at constant prices, but it was not equally a matter of satisfaction in the case of countries like India, which showed no change in per capita terms. Even in his later work, Rao (1986) expressed considerable concern over the growth of the tertiary sector in the post-independence era: “There is a great deal of quality difference in the share of the service sector in the economic growth that is taking place in the industrially developed countries and in the industrially developing countries.”

Bhattacharya and Mitra (1990) argue that a wide disparity arising between the growth of income from the services and commodity-producing sectors results in inflation and/or higher imports, leading to an adverse balance of trade. After three decades of sluggish growth rates since the mid-1980s, India has been experiencing reasonably high growth rates. Several studies suggest that the main contribution to this change has come from the tertiary sector in the absence of a sustained and persistent phase of industrial growth (Bhattacharya and Sakthivel, 2004; Kapila, 2004; Reserve Bank of India [RBI], 2006).

Mitra (1992) observed that the rapid growth of income from the tertiary sector did not necessarily reduce poverty, as it did not create new employment opportunities. In other words, the rise in income from the tertiary sector was seen to have resulted from a rise in income of those who were already engaged in the high-productivity segment rather than from the addition of income of new entrants to the job market. In sharp contrast to this view, factors like the increasing role of the government in implementing the objectives of growth, employment generation and poverty reduction, expansion of defence and public administration, the historical role of the urban middle class in wholesale trade and distribution, and demonstration effects in developing countries creating demand patterns similar to those of high-income countries have been highlighted to offer a rationale for the expansion of the tertiary sector (Panchamukhi, Nambiar, and Mehta, 1986). As the elasticities of service consumption with respect to total consumption are higher than unity even in countries with very low per capita consumption (Sabolo, 1975), the rapid growth of the tertiary sector has been further rationalized in terms of a strong demand base in the economy. Sub-sectors like transport, communication, and banking do contribute significantly to overall economic growth. Especially, the role of information technology (IT) and business process outsourcing services (BPOs) in enhancing economic growth has been noticed widely in the post-reform period in India (Gemmel, 1986; World Bank, 2004).

Datt (2002) points out that the tertiary sector’s contribution to GDP has increased steadily over time, and it has established itself as the largest sector of the Indian economy. While he notes the importance of some of the sub-sectors like transport in the context of growth–and includes it in the secondary sector–he also shares the view that the growth of other sub-sectors like public administration and
defence are neither necessarily related to the demands of the development process, nor are they related
to the need for improvement in the overall efficiency in a developing economy. However, after
making price adjustments, his recalculations of the series did not really show that the tertiary sector
expanded much faster than the GDP growth at constant prices. The rise in the share of this sub-sector
in GDP is a reflection of the rise of the cost of services, and hence it would be erroneous to suggest
that this sub-sector is expanding very fast. Equally important as the effects of the sector on growth are
the effects on the well-being of the population, especially the poor. Ravallion and Datt (1996) noted
that the changing composition of growth in favour of the tertiary sector has been important for poverty
reduction in India, as it has generated employment and simultaneously enhanced real income. The
effects of the sectoral growth on poverty are strongly linked to human development. The skill
requirement to participate in the new activities varies across different sub-sectors. Ravallion and Datt
(2002) show that the elasticities of poverty to non-agricultural growth depend on the initial conditions.
Similarly, Thorbecke and Hong-Sang (1996) show in the case of Indonesia that the low skills needed
for agriculture and some services make these sectors more pro-poor than the usually skill-intensive
manufacturing. Rao (1954) discounted it as an indicator of development in the context of a developing
country. However, Bhattacharya and Mitra (1990) felt that the service-led growth could have serious
implications for inflation, income distribution, and balance of payments since income (employment)
might have grown faster than employment (income) in organized (un-organized) services. Besides,
income from the service sector is growing much in excess of the demand generated for services by the
commodity sector. Further the above study adds that a shift in value added mix towards industry and
tertiary activities has caused a larger decline in the incidence of poverty in the 90s compared to that in
the 80s. Ravallion and Datt (1996) also observed a significant role of sectoral composition of
economic growth in reducing poverty in both urban and rural areas. While stressing on the tertiary
sector growth in delivering gains to India’s poor, they emphasize promoting growth in agriculture
developing the context of a developing country. However, Datta (1989) has refuted the overgrowth of the
service sector. Papola (2005) argued that, for the Indian population, income elasticity for industrial
goods is also high besides income elasticity for service goods. As a result, the demand for industrial
goods is bound to rise along the demand for services which can create macroeconomic imbalances
leading to inflationary demand. The consumption basket of the Indian population still consists
predominantly of commodities and only a small part of services.

Growth in Services

Whereas the East Asian economies’ success has largely been built on the development of export-
oriented manufacturing, India’s recent growth has been led by the dynamism of its service sector –
particularly high-end, knowledge-intensive services exports. Following the trade liberalization in
1991, the Indian economy embarked on a path of rapid growth of aggregate output. In particular, it
witnessed a high growth rate of service sector output while that of industry was relatively muted. The
service sector dominates the Indian economy today, contributing more than half of its national income.
The sector has maintained a steady growth pattern since 1996-97. Trade, hotels, transport, and
communication witnessed the highest growth of level 10.8 per cent in 2004, followed by financial services (with the overall growth rate of 6.4 per cent) and social and personal services (5.9 per cent). The share of services in total GDP has grown phenomenally and the sector has been the highest contributor to the total GDP growth rate. Service providing industries such as IT services, IT enabled services, healthcare, tourism and hotels, communication, media and entertainment, trade and retail, banking financial services, and transportation and logistics form the mainstay of the Indian economy today. They now contribute to some 60 per cent of India’s GDP, based on the WTO definition of services which includes construction. Manufacturing, by contrast, has maintained a stubbornly static share at around 20 per cent, while the share of agriculture – still by far the largest employer – has dwindled. Productivity growth in India, unlike virtually all other regions of the world, has been strongest in services (IMF, 2006).

Figure 1: Services as a proportion of GDP (five year averages) and 2004 per capita GDP in selected Asian economies

The service sector in the last decade has grown on average by 7.9 per cent yearly, ahead of agriculture with growth of 3 per cent yearly and the manufacturing sector with annual growth of 5.2 per cent. In contrast, we find that in countries like Thailand, Indonesia, and China, the agriculture sector has grown at an average rate of 1.5 per cent, 1.9 per cent and 3.8 per cent while the manufacturing sector has grown at the rate of 7.2 per cent, 6.6 per cent and 12.2 per cent respectively. Corresponding
growth rates in the service sector has been 3.9 per cent, 4.5 per cent, and 8.9 per cent. Most of the developing countries have witnessed a lower growth rate in the service sector compared to the manufacturing sector. Higher growth rate in the service sector in India is, therefore, a unique feature.

A striking feature of India’s growth performance is that, in the four decades, 1950 to 1990, agriculture’s share in GDP has declined by about 25 percentage points, while industry and services have gained equally. The share of industry has stabilized since 1990 and consequently the entire subsequent decline in agriculture has been picked up by the service sector. During the 1990s, the contribution of the service sector to the growth rate of GDP was nearly 60 per cent in contrast to 54 per cent in middle income countries, 43 per cent in least developed countries, and 34 per cent in China. In other developing countries, decline in the agricultural sector’s share has been followed by growth in the manufacturing sector’s share and the shift towards the service sector has occurred only in the final stages of growth.

**Figure 2 : Average Sectoral Contribution to GDP**

![Average Sectoral Contribution to GDP](image)

Source: National Accounts Statistics

**Drivers of Services Sector**

Strong growth in foreign demand; deregulation, liberalization of foreign investment and greater private sector participation since 1991; increased industry outsourcing; and high income elasticity of demand for services have been among the key factors driving high growth in India’s service sector (Gordon and Gupta, 2004). Access to external markets and domestic reforms have played an important role in creating a dynamic service sector in India. This is directly owing to the development of sophistication in information technology. Technological developments have been the key enabler of the explosion in commercial services trade. Specifically, investment and rapid technological advancements in telecommunications and information technology are driving reductions in the cost of digitizing, transmitting, and processing information, thereby enabling an ever-increasing number of services to be undertaken remotely by specialist providers. India, with its large cohort of engineering graduates and widespread services, is less dependent on large scale investments, and so less subject to investment related regulatory hurdles. Compared to the manufacturing sector, gross product in the services sector (outside of community, social, and personal services) is more concentrated in the largely unregulated ‘unorganized’ sector. Transport infrastructure shortcomings also tend to have a
lesser bearing on most service sectors. The IT–ITES sector in particular has benefited from a supportive policy approach. A large, relatively low cost, and well-educated workforce, which contains more English-speakers than the United States and Great Britain combined, has enabled India to capitalize on burgeoning export opportunities in high end services.

Foreign investment and liberalization of foreign direct investment (FDI) regimes worldwide have enabled service providers to establish a commercial presence in host countries, which can be critical for the delivery of services (UNCTAD, 2004). Reflecting the strong international demand for services in which India enjoys a comparative advantage, FDI in India’s services has grown strongly. The stock of FDI in India’s service sector grew at a compound annual rate of 36 per cent between 1992–93 and 2001–2, compared with 20 per cent in other sectors (World Bank, 2004). Close to one-half of total FDI inflows between 2002–3 and 2005–6 were directed to services (RBI, 2006). Business and computer services and finance and insurance sectors have been the main targets. Not surprisingly these are sectors that either have not been subject to significant amounts of regulation or have been deregulated and opened to competition since 1991.

Figure 3: Industry breakdown of FDI inflows in Indian services, 2002-03 to 2005-06

One of the major drivers of service sector growth in the post-globalization era in India has been the IT and ITES sector. Its success has come largely through rapid expansion of exports tapping into burgeoning world-wide demand, as investment and rapid advancements in telecommunications infrastructure and information technology has enabled an increasing array of activities to be performed remotely. Faced with relatively low levels of regulation, IT–ITES and other fast-growing high-end services such as telecommunications have now reached a size where they are significant
contributors to GDP growth. That is why NASSCOM (2005) reports that, “The IT and BPO industries can become major growth engines for India, as oil is for Saudi Arabia and electronics and engineering are for Taiwan. Saudi Arabia’s oil exports accounted for 46 per cent of GDP in 2004; Taiwan’s electronics and engineering exports accounted for 17 per cent of GDP in the same year. …. India’s IT and BPO industries could account for 10-12 per cent of India’s GDP by 2015.” In addition, there is a huge potential for growth in the service sector because of increase in disposable income, increasing urbanization, growing middle class, a population bulge in the working age groups providing ‘demographic window of opportunity,’ and emergence of a wide array of unconventional /new services like IT, ITES, new financial services (ATMs, credit cards), tourism services (eco-tourism, health tourism), etc.

Though most of the growth in services has been in information technology, business process outsourcing (BPO) services, and knowledge-based activities, other sectors like telecommunications, financial services, community services, and hotels and restaurants have also grown considerably. Growth and improved efficiencies in other key areas such as financial services, transportation, and transport infrastructure are vital to facilitating expansion of other sectors of the economy. This could in turn help ensure that development is more broadly based across both regions and socio-economic groups – and therefore sustainable. Deregulation and foreign investment in such facilitating services drive improved performance within those sectors and bring significant competitiveness to the wider economy given their importance as inputs to other sectors. While reform is proceeding in these areas, much remains to be done. And other sectors which potentially have a critical role to play in improving overall productivity have lagged far behind the growth in the economy as a whole.

**Pattern of Growth in India’s Service Sector**

The growth pattern in the service sector has not been uniform across all services in India. Some services have grown fast in terms of their share in GDP and also in terms of their share in trade and FDI (e.g. software and telecommunications services). But there are some services which have grown fast but have not been able to improve their share in international transactions (e.g. health and education) while there are some services that have in fact witnessed a negative growth and also have a low share international transactions (e.g. legal services).

Within the service sector, the share of trade, hotels, and restaurants increased from 12.52 per cent in 1990-91 to 15.68 per cent in 1998-99. The share of transport, storage, and communications has grown from 5.26 per cent to 7.61 per cent in the same period. The share of construction has remained nearly same while that of financing, insurance, real estate, and business services has risen from 10.22 per cent to 11.44 per cent.
A closer scrutiny of India’s service sector reveals that, amongst services, business services have been one of the fastest growing services in the 1980s closely followed by banking and insurance. In the 1990s, we find that a similar trend continues for business services, which grew by almost 20 per cent. While growth in banking has increased, growth in the insurance sector has slowed down in the 1990s. The prime drivers of growth in services, apart from business services in the 1990s, are found to be communication services (with average growth of around 13.6 per cent) and hotels and restaurants (with average growth of around 9 per cent). However, there is a fall in the growth rates of railways, dwellings and real estate, legal services, and public administration and defense in the 1990s.
Table 1: Average Annual Growth Rates in Services

<table>
<thead>
<tr>
<th>Service</th>
<th>1980s</th>
<th>1990s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade (wholesale and retail trade)</td>
<td>5.9</td>
<td>7.3</td>
</tr>
<tr>
<td>Hotels and Restaurants</td>
<td>6.5</td>
<td>9.3</td>
</tr>
<tr>
<td>Railways</td>
<td>4.5</td>
<td>3.6</td>
</tr>
<tr>
<td>Transport</td>
<td>6.3</td>
<td>6.9</td>
</tr>
<tr>
<td>Storage</td>
<td>2.7</td>
<td>2</td>
</tr>
<tr>
<td>Communications</td>
<td>6.1</td>
<td>13.6</td>
</tr>
<tr>
<td>Banking</td>
<td>11.9</td>
<td>12.7</td>
</tr>
<tr>
<td>Insurance</td>
<td>10.9</td>
<td>6.7</td>
</tr>
<tr>
<td>Dwellings, Real Estate</td>
<td>7.7</td>
<td>5</td>
</tr>
<tr>
<td>Business Services</td>
<td>13.5</td>
<td>19.8</td>
</tr>
<tr>
<td>Legal Services</td>
<td>8.6</td>
<td>5.8</td>
</tr>
<tr>
<td>Public Administration, Defence</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Personal Services</td>
<td>2.4</td>
<td>5</td>
</tr>
<tr>
<td>Community Services</td>
<td>6.5</td>
<td>8.4</td>
</tr>
<tr>
<td>Other Services</td>
<td>5.3</td>
<td>7.1</td>
</tr>
</tbody>
</table>

Source: CSO

Lack of Employment Growth in the Service Sector

Growth in the share of the service sector in GDP is often followed by a corresponding growth in the share of the service sector in total employment in the economy. However, in India, we find that though there has been a phenomenal growth in the service sector, this growth has not been followed by a corresponding high growth in employment in the 1990s. This rise in the share of services in employment has been much slower than the decline in the share of agriculture and manufacturing in total employment. This shows that while output generation has shifted to services, employment generation in services has lagged far behind. In 1999 services contributed around 28.5 per cent of total employment in contrast to 30 per cent in middle income countries, 70 per cent in Singapore, and around 39 per cent in Indonesia. While the share of the service sector in total employment was around 28.5 per cent in 1999-2000, the share of employment differed for different services. In 1999-2000, the
share of different services in total employment in the service sector was as follows: share of trade, hotels and restaurant was 34 per cent, community, social, and personal services, around 31 per cent, construction, 16 per cent, and transport, storage, and communication services, 13 per cent.

This is a unique feature of the service-led growth of India. One explanation for the slow growth of employment in the service sector is that sectors that have large potential for generating employment are growing slowly. The fast growing service sectors also have recorded high labour productivity growth and employment potential is low in these sectors. Trade is positively affecting the growth in those services that do not have large potential for generating employment.

**Figure 5 : Sectoral Growth of Employment in Organised Sector**

1. Electricity, gas, and water supply
2. Construction
3. Trade, hotels, and restaurants
4. Transport, storage, and communication
5. Financial services
6. Community, social, and personal

Source: Planning Commission

The overall employment elasticity in the economy declined sharply from 0.41 in the 1980s to 0.15 in the 1990s. But it increased substantially in transport, storage, and communication sectors. However, there has been a fall in employment elasticity in sectors that are faster growing amongst services and have relatively higher contribution to GDP, e.g. community, social, and personal services and financial services. Trade, which provided maximum employment in the service sector, also witnessed a fall in its employment elasticity.
A report by Mckinsey & Co. (2001) estimates labour productivity in six segments of India’s service sector—telecommunication, software, retail banking, housing construction, energy distribution (electricity), and retail distribution—and finds that India’s software services have the highest productivity level amongst all segments, followed by telecommunication, banking, and construction. These are also services that are growing fast and have high shares in GDP and employment. There is a possibility that higher labour productivity in these segments may have led to slower growth in employment in the service sector. Gordon and Gupta (2004) attribute the slow rise in employment in services to the fact that growth in services is concentrated in those services where labour productivity has risen or which are skilled labour intensive. Technological improvements and efficiency gains have further reinforced this trend.

The boom in the service sector has been relatively “jobless”. The rise in services’ share in GDP is not accompanied by a proportionate increase in the sector’s share of national employment. This jobless growth of India’s service sector, with no corresponding growth in the share of the manufacturing sector, has raised doubts about its sustainability in the long run.

Contribution of the Tertiary Sector to the State Income

The relative size of the tertiary sector grew considerably across states over the period 1980–1981 through 1997–1998. By the turn of the last century (1997–1998), it accounted for nearly half of GDP in the states of Andhra Pradesh, Assam, Karnataka, Kerala, Maharashtra, Tamil Nadu, and West Bengal. However, inter-state variations in the share of the tertiary sector remained more or less same over the 1980s and 1990s, suggesting the possibility that this sector grew across all states. The share of the banking sector in total tertiary sector value added increased in most of the states during this period. In some of the states like Bihar, it accounted for a considerably small share in 1980–81 (around 5 per cent or so), which then more than doubled by 1997–98. In some of the industrialized states like Maharashtra and Gujarat, the relative size became as high as 34 per cent and 28 per cent respectively in 1997–98.

Table 2 : Trends in Employment Elasticity

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>0.50</td>
<td>0.00</td>
</tr>
<tr>
<td>Mining and Quarrying</td>
<td>0.69</td>
<td>0.00</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>0.33</td>
<td>0.26</td>
</tr>
<tr>
<td>Electricity, Gas and Water supply</td>
<td>0.33</td>
<td>0.26</td>
</tr>
<tr>
<td>Construction</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Trade</td>
<td>0.63</td>
<td>0.55</td>
</tr>
<tr>
<td>Transport, storage and communication</td>
<td>0.49</td>
<td>0.69</td>
</tr>
<tr>
<td>Financial services</td>
<td>0.92</td>
<td>0.73</td>
</tr>
<tr>
<td>Community, social and personal services</td>
<td>0.50</td>
<td>0.07</td>
</tr>
<tr>
<td>Total</td>
<td>0.41</td>
<td>0.15</td>
</tr>
</tbody>
</table>

Source: Planning Commission
There have been variations in the pace and pattern of economic growth in different states. These differences are also evident in the case of the tertiary sector. The share of the service sector in net state domestic product was the highest in Tamil Nadu (40.5 per cent) followed by Jammu and Kashmir (40.1 per cent), Assam (39.9 per cent), West Bengal (39.8 per cent), and Maharashtra (38.5 per cent) in the early 1980s. The share of the service sector was the lowest in Madhya Pradesh (26.7 per cent), Haryana (28.5 per cent), Bihar (28.8 per cent), and Rajasthan (29.4 per cent). Punjab’s share was 30.9 per cent for the same period. The mean share of the service sector in 17 major states was 33.9 per cent. The ranking of the states changed in the early 1990s with Jammu and Kashmir (45 per cent) followed by Assam (44.6 per cent), Maharashtra (45 per cent), and Tamil Nadu (44.6 per cent). The share of the service sector was the lowest in Punjab (28.5 per cent), Haryana (31.9 per cent), Madhya Pradesh (32.5 per cent), and Bihar (32.3 per cent). The service sector had emerged as the largest sector in terms of its contribution to NSDP in Gujarat, Maharashtra, Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, West Bengal, Assam, and Jammu and Kashmir (Shergil, 2003).

**Can India’s Service Sector Sustain its Growth?**

India holds a reputation of cultivating a large and dynamic service sector centered mostly on information and communications technology. For the reformist approach that has led to India’s recent growth to be sustainable in the medium to long term, it must demonstrate benefits to all strata of society.

One of the critical issues that have been discussed is the role played by services in the growth process. Though, a forceful case is put forward that services can become the major driving force of economic growth, in the case of India the sustainability of a service-led growth has been questioned by many (Mitra 1988; Bhattacharya and Mitra, 1990; Arunachalam and Kumar, 2002).

It has been argued that income from the service sector is growing much in excess of the demand generated for services by the commodity sector and since income might grow faster than employment in organized services; therefore, service-led growth can have serious implications for inflation, income distribution, balance of payments, lack of social infrastructure, physical infrastructure, etc. (Joshi, 2008a). Besides, challenges in IT and ITES such as rising labour costs, rapid growth in demand for talented manpower/quality staff, high attrition rate, outsourcing backlash, etc. are other limiting factors (Joshi, 2008a). The growth of IT and ITES has social, economic, health, ethical, and environmental implications as well (Joshi, 2008a). The rapid growth of service sector employment simply reflects the outsourcing to service sector providers of activities previously conducted in-house by manufacturing firms; in other words, it is little more than a relabelling of existing employment than new jobs. Sustainability becomes a question as economic theories suggest that a decline in the share of agriculture and manufacturing sectors is a phenomenon that is generally associated with the growth process of a high-income economy and not of a developing country.

To test the issue of sustainability of service-led growth in India, Gordon and Gupta (2004) attempt to find out whether India is an outlier in this case by using cross-country data on sectoral shares in GDP.
and fitting a trend line. They found that the share of the service sector in GDP was associated positively with per capita income, i.e. countries with higher per capita income also have a larger share of services in GDP. In the case of India, they found that, in 1990, the share of India’s service sector in GDP was very close to the average share predicted by the linear relationship. However, as a result of rapid growth of services in the 1990s, India’s share of services moved above the average share by as much as 5 percentage points. But in spite of this, they do not find India to be an outlier at present. However, they argue that if different sectors in India grow at the average growth rates experienced in 1996-2000, then by 2010 the share of services would increase to 58 per cent. This would bring the size of India’s service sector, relative to GDP, closer to that of an upper middle income country, even though India would still belong to the low income group.

Services are becoming more and more crucial to the growth process of an economy. They can not only sustain their own growth process but can also improve the growth rate of the manufacturing sector by improving the efficiency of production. The extent to which India’s growth path can be sustained - whether growth generated in what remains one relatively small sector of the economy will translate into reform and growth in other sectors; and in particular whether it can adequately address India's need to provide jobs for huge numbers of its unemployed and underemployed rural citizens - will have important implications not just for India itself but also for the world economy. The key imperative for Indian policy makers is to improve the situation of a huge and growing, but relatively low skilled, rural working class. This means creating vast numbers of appropriate jobs. But the main driver of growth in the economy since 1991 has been a knowledge-intensive sector, which is never likely to become a mass employer of low-skilled labour.

### External and Domestic Constraints to India’s Trade in Different Services

Trade in services can be restricted by external constraints as well as domestic constraints. External trade barriers are mainly in the form of limits on foreign equity participation, recognition and licensing of provisions, immigration and labour market regulations and discriminatory treatment with respect to taxes, subsidies, and other policies. Domestic constraints may result from infrastructure inadequacies, poor quality and standards, lack of clear-cut responsibilities between the centre and state governments, and other policy-related disincentives. Hoekman and Braga (1997) discuss some of the important barriers to trade in services. In the case of some services, trade is prohibited while in others restrictions are imposed. Prohibitions to trade occur in cases where foreign access to service markets is completely forbidden, e.g. in the case of transportation of goods within a country and basic telecommunication service providers. But restrictions to trade takes the following forms: quantity-based barriers; price-based barriers; barriers that impose physical or corporate presence in a domestic market; procedures of government procurement and subsidization; and barriers related to standards, certifications, and industry-specific regulations. Quantitative restrictions (QRs) are often used to restrict international trade in services, but unlike in the case of goods they are applied to providers of services rather than services per se. Along with QRs, price controls are also used to ensure that prices
are not set at either market clearing levels or at the monopoly level. Some of the services subject to price controls in many countries are financial services, telecommunications, and air transportation. Alternatively, tariffs are imposed to restrict trade in services that occurs via the cross-border movement of natural persons: visa fees, entry-exit taxes, port taxes, etc. But tariffs form a potential trade barrier for those services that are either embodied in goods (films, television programmes, etc.) or for goods that are necessary inputs into the production of services (computers, telecommunication equipment). Along with tariffs, service industries are also sometimes supported through explicit or implicit subsidies, especially in construction, communication, and transport, which make it difficult for trade to occur. Other important barriers to trade are standards, provision of licensing, and procurement. In the service context, standard-type restrictions include non-recognition of imported services or services procured abroad (e.g. diplomas or degrees obtained from a foreign country). Environmental standards may influence services related to transportation and tourism. Certification or licensing may be required in the case of professional and certain business services. These licences are generally given by the government or professional business bodies and may limit entry into the industry. Government procurement policy may be designed to discriminate in favour of domestic service providers. Examples of such services are education, data processing, and non-medical professional services. Along with these barriers, regulations regarding marketing and distribution can also pose as an important trade barrier. For example, in insurance, regulations on advertisements limit the ability of foreign firms to compete. Also, in the case of branded products, distribution arrangements (e.g. establishment of a dealer network) may act as an important indirect barrier to market access. In order to examine the extent of external and domestic constraints to trade in India’s service sector we classify services in terms of their external trade barriers, i.e. extent of liberalization, growth rates, and share in exports of services. The period considered for the extent of liberalization is post–1997 (see Table 3).

Table 3: Extent of Trade Liberalization and Growth

<table>
<thead>
<tr>
<th>High growth (10% and above)</th>
<th>Substantially Liberalised</th>
<th>Moderately Liberalised</th>
<th>Less than Moderately/ Restricted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software services</td>
<td>Telecommunication</td>
<td>Banking</td>
<td>Insurance</td>
</tr>
<tr>
<td>Moderate Growth (5-9%)</td>
<td>Transport (road)</td>
<td>Construction</td>
<td>Air Transport</td>
</tr>
<tr>
<td>Low growth (0-5%)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Services that have witnessed substantial to moderate liberalization do not necessarily experience high growth rates. Software services, telecommunication services, and road transport have low external trade barriers but though software and telecommunications have experienced high growth rates, road transport has a low growth rate. Moderate liberalization has been experienced by services like banking, insurance, travel, health, education, construction, and air transport services. Though many of them experienced high growth rates, construction and air transport services experienced low growth rates. Some of the services subject to price controls in many countries are financial services, telecommunications, and air transportation.
rates. However, services that face high trade barriers have mostly experienced low growth rates, especially professional services and rail transport that are still restricted services.

We also classify services according to their share in total exports of services. The arrows indicate the share of services in total exports of services. An interesting picture emerges from this classification. We find that not all services that have low external trade barriers and high growth rates have high share in exports. In particular, we find that health and education services have low external trade barriers and experience high growth rates but have low share in exports. This reflects high domestic constraints in these services. There exists high potential to trade in these services but domestic policies or infrastructure restricts trade. Further, we find that there are services that are less than moderately liberalized or are restricted with high external trade barriers and low growth, e.g. professional services like legal, accountancy, and rail transport. These services also have a low share in exports, which reflect both domestic and external constraints to their trade. Construction services are also found to have low growth and low share in exports though external trade barriers have been somewhat lowered for them. On the whole it can be said that infrastructure services in India (transport services and construction) are slow growing services and have low share in trade in spite of the efforts to lower external trade barriers in these services. This indicates that these services have high domestic constraints that impede their growth and trade. However, the financial infrastructure appears to be stronger and services like software, banking, insurance, and telecommunications show low external trade barriers and high growth rates with high to moderate share in total exports. But health and education services, though having high potential for trade, suffer from considerable domestic constraints that do not allow higher trade in these services. Professional services are restricted and have low growth and low share in trade.

**Conclusion**

This paper studies the growth of the service sector in India. It shows that, in common with the experience of many other countries, the service sector in India has grown faster than agriculture and industry. As a result, the share of services in GDP has increased over time. In the 1990s, services growth was particularly strong, and this has led to the services’ share in output being relatively large in India compared with other countries at similar levels of development. What is also striking about India’s growth experience is that the service sector does not appear to have created many jobs. Admittedly, the employment data suffer from limitations. Nonetheless, unlike the experience of many countries where productivity growth in the service sector has tended to lag behind that of other sectors, it appears that the Indian service sector has been characterized as experiencing increasing labour productivity.

The acceleration in growth of the service sector in India in the 1990s was owing to fast growth in communications, banking services, business services (IT), and community services (education and health). The remaining sectors grew at a constant or trend growth rate. It is shown that factors such as high income elasticity of demand and increased input usage of services by other sectors have played
an important part in elevating services’ growth. Also important, at least in the 1990s, have been factors such as economic reforms and the growth in foreign demand for service exports. Significant productivity gains appear to have occurred in the faster growing sectors, leading to a decline in their relative prices. So there is considerable scope for further rapid growth in India’s service economy. That Indian service exports have strong future growth prospects is well known, but we also find that there is considerable scope for further rapid growth in other segments provided that deregulation of the service sector continues. Nevertheless, it is imperative that industry and agriculture also grow rapidly. The relatively jobless nature of growth in India’s service sector further underscores this need.

A large tertiary sector, which has emerged in the Indian context much before the share of industry could dominate the value added composition, is not all that superfluous as it was often thought to be. It has the capacity to enhance economic growth, which contributes to poverty reduction. In other words, the tertiarization of economic growth seems to be pro-poor, though in India there has been relatively slow growth of jobs in the service sector. This is primarily because the rise in labour productivity in sectors such as information technology that is dependent on skilled labour. Growth of services such as hotels holds a large potential for employment generation. IT enabled services such as business process outsourcing have been growing rapidly in the recent past and will continue to rise. India is on the fast track of becoming an important economic force. As a result, the share of services in GDP has come to resemble that of a high income country while its per capita income still remains that of a low income country. No doubt, the dynamics of the service sector infuses new growth impulses stimulating investment, income, consumption, and employment.

It is heartening to note that India is called the service hub of the world. The traditional perception of India stands changed today from a land of beggars, snake charmers, and cyber –coolies of yesteryears to a land of knowledge workers - thanks to IT and ITES (Joshi, 2008b). The question for CEOs the world over is no longer “Should my company go to India?” but rather “Can my company afford not to be in India?” On the tourism front, it is Incredible India, but on the economic front, it is clearly Opportunity India.

References


—(2008b) “Who will be the ‘Services Hub’ of the World: India or China?” paper presented at the 9th Annual Sir Arthur Lewis Conference, University of West Indies, Kingston (West Indies), March 26-28.


Microfinance Sector in India: Evolution and Current Challenges

Arpita Amarnani *
Neeraj Amarnani **
Dr. Sarla Achuthan ***

“We got rid of colonialism, we got rid of slavery, and we got rid of apartheid – everyone thought each one of them was impossible. Let’s take the next impossible, do it with joy and get it finished with and create a world free from poverty. Let us create the world of our choice.”

Mohammad Yunus†

Microfinance refers to small-scale financial services – primarily credit and savings – provided to people who farm or fish or herd; who operate small enterprises or micro enterprises where goods are produced, recycled, repaired, or sold; who provide services; who work for wages or commissions; who gain income from renting out small amounts of land, vehicles, draft animals, or machinery and tools; and to other individuals and groups at local levels of the developing countries, both rural and urban (Robinson, 2001). Microfinance services can, overall, help low-income people reduce risk, improve management, raise productivity, obtain higher returns on investments, increase their incomes and improve the quality of their lives and of those dependent on them. It plays an important role in


* Faculty, Institute of Management, Nirma University, Ahmedabad
** Faculty, Institute of Management, Nirma University, Ahmedabad
*** Director, B.K. School of Management, Gujarat University, Ahmedabad
bringing these poor people into the main stream of the economy and thereby participating in the process of nation building.

**Indian Microfinance Sector**

The Indian microfinance presents a story of strong growth. Its growth performance was impressively sustained through the recent global liquidity crunch and continued at an increased rate in the second half of 2009. With one of the highest growth rates globally since 2002, the Indian microfinance sector has emerged as the most socially conscious, commercially viable, and financially sustainable worldwide. According to a MIX market study, India has one of the lowest average loan sizes of around $150 as well as the lowest yield on portfolio of 21.2 per cent.\(^2\) The small loan size combined with low interest rates testify to the social inclination of Indian MFIs, which seek to genuinely foster financial inclusion among the poor and alleviate poverty. However, the year-on-year growth rate has been declining, illustrating the increasing maturity of the sector. Though decreasing, the growth rate is still high and is reflective of the industry approaching a more sustainable rate of expansion rather than a reversal of the trend observed thus far. As the industry matures, it is also nearing an inflexion point and is considering more sophisticated growth strategies through diversifying product offerings, client targeting, and creative financial and non-financial solutions which will allow the sector to grow at a continuous pace while preserving its solid performance and abiding by its social mission.

**Evolution of Microfinance in India**

The microfinance sector has covered a long journey from micro savings to micro credit and then to micro enterprises and now micro insurance, micro remittance, micro pension, and micro livelihood. This gradual and evolutionary growth process has given a boost to the rural poor in India to reach reasonable economic, social, and cultural empowerment, leading to better life of participating households.

The development of the microfinance sector in India can be divided into three phases. The first phase started in the pre-independence days. The role prescribed for the financial sector to achieve developmental goals has its origins during that period. The agriculture credit department was set up in 1935 by the Reserve Bank of India to promote rural credit. In its early days, the government sought to promote rural credit by strengthening the cooperative institutions. According to Sa-Dhan (2004), the need to replace costly informal credit with institutional credit was strongly felt as the All India Rural Credit Survey report of 1954 found that informal sources accounted for 70 per cent of rural credit usage, followed by cooperatives (6.4 per cent) and commercial banks (0.9 per cent).

The second phase started in the late 60s. The Lead Bank Scheme was introduced by the Reserve Bank of India in 1969, thereby starting a process of district credit plans and coordination among different financial intermediaries. It was during the same period that the nationalization of fourteen commercial

---


26 Microfinance Sector in India: Evolution and Current Challenges
banks took place. According to Sa-Dhan (2004), these initiatives resulted in the share of the formal financial sector in total rural credit usage rising to 30 per cent in 1971. The Regional Rural Banks (RRBs) were conceptualized in 1975 to augment the delivery of financial services in rural areas. This resulted in the creation of a network of banks which is one of the largest in the world even today. The All India Survey Debt and Investment Survey of 1981 found that the share of the formal financial sector in total credit had risen to over 60 per cent.

The government initiated the Integrated Rural Development Programme (IRDP) in 1980-81. The objective was to direct subsidized loans to poor self-employed people through the banking sector. The National Bank for Agriculture and Rural Development (NABARD) was established in 1982. In the same year the government initiated the Development of Women and Children in Rural Areas scheme as a part of IRDP. It was around this time that the first Self Help Groups (SHGs) started emerging in the country mostly as a result of non-government organizations’ (NGO) activities. The Mysore Resettlement and Development Authority (MYRADA) was one of the pioneers of the concept of SHGs in India. It was in 1984-85 when MYRADA started linking SHGs to banks. SHGs in turn were also very responsive and flexible to the needs of their members. While MYRADA did not directly intervene in the credit market for the poor, it facilitated banking with micro institutions established and controlled by the poor. SHGs were a step in that direction. This was the beginning of the current microfinance movement.

IRDP is estimated to have reached over 55 million poor families until 1999. IRDP, in spite of its immense outreach, experienced very low repayment rates and created 40 million defaulters which, coupled with the subsidy component, ruled out long-term sustainability of the programme. Therefore, the government merged several programmes into a new programme - Swarnajayanti Gram Swarojgar Yojna (SGSY). The mandate of SGSY is to continue to provide subsidized credit to the poor through the banking sector to generate self-employment through a self-help group approach. SGSY has been growing at a fast rate. The total number of swarojgaris assisted during the year 2009-10 were 13,28,868 out of which approximately 67 per cent were women. The formal financial sector has been criticized to be supply driven during this phase (Fisher and Sriram, 2002).

Financial services were viewed as a social obligation. Given the high rates of default, a formal loan waiver was announced by the government in 1989. This had a negative impact on credit discipline, and reinforced the view that lending to the poor was not a profitable business among the mainstream financial institutions.

The third phase marked the modern microfinance movement. The SHG–Bank Linkage Programme was formally launched by NABARD in 1992, with it circulating guidelines to banks for financing SHGs under a pilot project that aimed at financing 500 SHGs across the country through the banking system. While the banks had financed about 600 SHGs by March 1993, they continued to finance even more SHGs in the coming years. This encouraged the Reserve Bank of India (RBI) to include

---

financing SHGs as a mainstream activity of banks under their priority sector lending in 1996. The government bestowed national priority to the programme through its recognition of microfinance. The banking system comprising public and private sector commercial banks, regional rural banks, and cooperative banks has joined hands with several organizations in the formal and non-formal sectors to use this delivery mechanism for providing financial services to a large number of the poor.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of SHGs Financed</th>
<th>Cumulative No. of SHGs Financed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001-2</td>
<td>1.98</td>
<td>4.61</td>
</tr>
<tr>
<td>2002-3</td>
<td>2.56</td>
<td>7.17</td>
</tr>
<tr>
<td>2003-4</td>
<td>3.62</td>
<td>10.79</td>
</tr>
<tr>
<td>2004-5</td>
<td>5.39</td>
<td>16.18</td>
</tr>
<tr>
<td>2005-6</td>
<td>6.20</td>
<td>22.38</td>
</tr>
<tr>
<td>2006-7</td>
<td>6.87</td>
<td>29.25</td>
</tr>
<tr>
<td>2007-8</td>
<td>10.81</td>
<td>N.A.</td>
</tr>
<tr>
<td>2008-9</td>
<td>16.09</td>
<td>42.24</td>
</tr>
</tbody>
</table>

Source: NABARD Annual Reports, 2007-8 and 2009-10

Concurrently, in 1993, the Rashtriya Mahila Kosh (RMK) was formed to accelerate the flow of funds to self-employed women in the unorganized sector. It is worth mentioning that the SEWA Cooperative Bank has been operating in Gujarat with similar objectives since 1974. The bank has been viable right from its inception and is an ideal example of community-owned sustainable financial service delivery. Microfinance received greater recognition when the Small Industries Development Bank of India (SIDBI) set up a Foundation for Microcredit with an initial capital of Rs100 crore in 1998. The same year also saw the formation of Sa-Dhan as an apex level association of community development finance institutions. The passing of the Mutually Aided Cooperative Societies (MACS) Act by Andhra Pradesh in 1995 and followed by some other states has also acted as a stimulant as many new microfinance initiatives have come up under this legislation. In addition to the success of the NABARD-SHG bank linkage programme, alternative microfinance initiatives following the Grameen and/or SHG methodology or at times individual lending model were also successful.

The year 2004 also saw some very important development in the microfinance sector in India. The banking sector led by ICICI Bank showed interest in microfinance as a viable commercial opportunity. The total disbursement of the banking sector to microfinance was estimated at around Rs1000 crore for the year 2003-4. ICICI Bank took a lead in establishing innovative partnerships with microfinance institutions which allowed for risk sharing between the two.
**Current Scenario**

As already mentioned, the sector performed creditably in a year (2009) that experienced a widespread liquidity crunch. The SHG – bank linkage programme made remarkable progress during this year; NABARD data indicate that credit to more than 1.716 million SHGs was made available. The outstanding SHG loan accounts were 4.14 million representing an estimated membership of 54 million participants. MFIs too recorded an impressive increase of about 8.5 million clients during the year, registering a growth of 60 per cent over the previous year. The data collected from 230 MFIs by S-Dhan reveal that, despite liquidity constraints faced by some MFIs, expansion in client outreach and loan portfolio was vigorous. MFIs reported a total client base of 22.6 millions at the end of March 2009. The overall coverage of the sector as narrowly defined (outstanding accounts of members of SHGs and clients of MFIs) is estimated to have reached 76.6 million against 59 million last year. (Srinivasan, 2009b).

**Table 2: Client Outreach : Outstanding Accounts** (in million)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Banking System</td>
<td>38.02</td>
<td>47.1</td>
<td>54.0</td>
<td>6.9</td>
</tr>
<tr>
<td>MFI</td>
<td>10.04</td>
<td>14.1</td>
<td>22.6</td>
<td>8.5</td>
</tr>
<tr>
<td>Total</td>
<td>48.06</td>
<td>61.2</td>
<td>76.6</td>
<td>15.4</td>
</tr>
<tr>
<td>Total adjusted for overlap</td>
<td>44.97</td>
<td>56.0</td>
<td>70.0</td>
<td>14.0</td>
</tr>
</tbody>
</table>

Source: Srinivasan (2009b).

**Figure 1: Trend of Incremental Clients of SBLP and MFIs**

Source: Srinivasan (2009b).

---

4 This includes repeat loans to existing groups. Data on repeat finance to groups is not given separately in NABARD data sets.
The World Bank has estimated the demand for micro-credit in the country in the region of Rs. 50,000 crore. RBI estimates that in 256 of India’s 626 districts the credit gap is at least 95 per cent or more. According to CRISIL estimates, 120 million households in India continue to face financial exclusion and this translates into a credit demand of Rs.1,200 crore.

**Structure of Microfinance Industry in India**

Specifically, National Bank for Agriculture and Rural Development (NABARD) is the apex agency for the microfinance sector, taking care of the regulatory framework and providing refinance facility. Other government agencies are Small Industries Development Bank of India Ltd (SIDBI) and Rashtriya Mahila Kosh. The entire network of scheduled commercial banks (public sector, private sector, foreign banks), regional rural banks, and cooperative banks either reaches out to the poor client directly or through NGOs or microfinance institutions network. At the last level there are several microfinance institutions which are continuously working with poor clients for their various requirements.

**National Bank for Agriculture Development**

NABARD has been set up as an apex development bank with a mandate for facilitating credit flow for promotion and development of agriculture, small-scale industries, cottage and village industries, handicrafts, and other rural crafts. It also has the mandate to support all other allied economic activities in rural areas, promote integrated and sustainable rural development, and secure prosperity of rural areas.

NABARD has been instrumental in facilitating various activities under the microfinance sector, involving all possible partners in the arena. It has been encouraging voluntary agencies, bankers, socially spirited individuals, other formal and informal entities, and government functionaries to promote and nurture SHGs. The focus has been on training and capacity building of partners, promotional grant assistance to self-help promoting institutions (SHPIs), revolving fund assistance to
MFIs, equity/ capital support to MFIs to supplement their financial resources, and provision of 100 per cent refinance against bank loans provided by banks for microfinance activities. According to NABARD (2009), total refinance disbursed to banks against banks’ loans to SHGs during 2008-9 was Rs. 2620.03 crore as against Rs. 1615.50 crore during 2007-8 registering a growth of 62.2 per cent. Further, the cumulative refinance disbursed under the SHG-bank linkage programme by NABARD to banks till March 31, 2009, stood at Rs. 9688.09 crore.

**Small Industries Development Bank of India**

The SIDBI Foundation for Micro Credit (SFMC) was launched by SIDBI in January 1999 for channelizing funds to the poor in line with the success of the pilot phase of the micro credit scheme. SFMC’s mission is to create a national network of strong, viable, and sustainable microfinance institutions from the informal and formal financial sectors to provide microfinance services to the poor, especially women.

SFMC is the apex wholesaler for microfinance in India providing a complete range of financial and non-financial services such as loan funds, grant support, equity, and institution building support to retailing MFI including two-tier MFIs so as to facilitate their development into financially sustainable entities, besides developing a network of service providers for the sector. Capacity assessment rating was introduced by SFMC as a supplementary tool to assess risk perception. On SFMC’s initiative, four rating agencies have started rating MFIs.

**Rashtriya Mahila Kosh**

The National Credit Fund for Women or the Rashtriya Mahila Kosh (RMK) was set up in March 1993 as an independent registered society by the Department of Women and Child Development in the Ministry of Human Resource Development with an initial corpus of Rs. 310,000,000. The objective was not to replace the banking sector but to fill the gap between what the banking sector offers and what the poor need. RMK’s objectives are:

- to provide or promote the provision of micro-credit to poor women for income generation activities or for asset creation
- to adopt a quasi-informal delivery system, which is client friendly, uses simple and minimal procedures, disburses quickly and repeatedly, has flexibility of approach, links thrift and savings with credit, and has low transaction costs for both borrower and lender
- to demonstrate and replicate participatory approaches in the organization of women’s groups for thrift and savings and effective utilization of credit
- to use the group concept and provision of credit as an instrument of women’s empowerment, socio-economic change, and development
- to cooperate with government, state governments, union territory administrations, credit institutions, industrial and commercial organizations, NGOs, and others in promoting the objectives of the Kosh
• to receive grants, donations, loans, etc. for the furtherance of the aims and objectives of the Kosh.

Microfinance Programmes in India

The microfinance programmes in India can be divided into three categories; SHG-Bank Linkage Programme, MFI-Bank Linkage Programme, and various microfinance programmes provided by MFIs.

SHG-Bank Linkage Programme

The SHG – bank linkage programme started as an action research project in 1989. This model involves banks directly financing SHGs. In 1992, the findings from the project led to the setting up of a pilot project. The pilot project was designed as a partnership model between three agencies, viz. SHGs, banks, and NGOs.

SHGs were to facilitate collective decision-making by the poor and provide doorstep banking. Banks as wholesalers of credit were to provide the resources. NGOs were to act as agencies to organize the poor, build their capacities, and facilitate the process of empowering them.

More than 1.6 million SHGs have been linked with 35,294 bank branches of 560 banks in 563 districts across various states. Cumulatively, they have so far accessed credit of Rs.6.86 billion. About 24 million poor households have gained access to the formal banking system through the programme.\(^5\) Table 3 provides details.

Table 3: Bank Loans Disbursed to SHGs

<table>
<thead>
<tr>
<th></th>
<th>During the Year</th>
<th>Loans disbursed by Banks to SHGs during the Year</th>
<th>Per SHG loan disbursed (Rupees)</th>
<th>Out of Total: Bank loan disbursed to SHGs under SGSY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. Of SHGs</td>
<td>% Share</td>
<td>Amount</td>
<td>% Share</td>
</tr>
<tr>
<td>Commercial Banks</td>
<td>2007-08 1004587</td>
<td>59.9 36.7</td>
<td>5403.90 8060.53</td>
<td>61.1 65.8</td>
</tr>
<tr>
<td>(Public &amp; Private Sector)</td>
<td>2008-09 735119</td>
<td>62.4 36.7</td>
<td>8060.53 49.2</td>
<td>65.8</td>
</tr>
<tr>
<td></td>
<td>% growth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Rural banks</td>
<td>2007-08 405569</td>
<td>26.7 23.8</td>
<td>2651.84 3193.49</td>
<td>30.0 26.1</td>
</tr>
<tr>
<td></td>
<td>2008-09 327650</td>
<td>25.2 23.8</td>
<td>3193.49 20.4</td>
<td>26.1</td>
</tr>
<tr>
<td></td>
<td>% growth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooperative Banks</td>
<td>2007-08 199430</td>
<td>13.4 20.9</td>
<td>793.52 26.0</td>
<td>9.0 8.2</td>
</tr>
<tr>
<td></td>
<td>2008-09 165001</td>
<td>12.4 20.9</td>
<td>999.49 26.0</td>
<td>8.2</td>
</tr>
<tr>
<td></td>
<td>% growth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2007-08 1609586</td>
<td>100.00 31.1</td>
<td>8849.26 38.5</td>
<td>100.00 100.0</td>
</tr>
<tr>
<td></td>
<td>2008-09 1227770</td>
<td>100.00 31.1</td>
<td>12253.51 38.5</td>
<td>100.00 100.0</td>
</tr>
</tbody>
</table>


Promotional Support by NABARD to SHG-Bank Linkage Programme

NABARD offers support to the promotion of the SHG-bank linkage programme through a number of measures.

**Microfinance Development and Equity Fund (MFDEF):** The Microfinance Development Fund (MFDF) was formed in 2000-1, with an initial contribution of Rs.100 crore to be funded by RBI and NABARD (Rs.40 crore each). The balance of Rs.20 crore was to be contributed by commercial banks. In the union budget for 2005-6, the government decided to redesignate the existing MFDF as the microfinance development and equity fund (MFDEF) and raised its corpus from Rs.100 crore to Rs.200 crore while maintaining the same ratio of contribution from the original promoters. MFDEF is managed and administered by NABARD. The objective is to facilitate and support the orderly growth of the microfinance sector.

**Training:** NABARD organizes / sponsors training programmes and exposure visits for the benefit of officials of banks, NGOs, SHGs, and government agencies to enhance their effectiveness in the field of microfinance. Training supplements and materials are supplied to banks and other agencies.

**Microenterprise Development Programme for Skill Development:** The programme was launched in March 2006 to enhance the capacities of members of matured SHGs to take up micro enterprises through appropriate skill upgradation/development in the existing or new livelihood activities, both in farm and non-farm sectors, by way of enriching knowledge of participants on enterprise management, business dynamics, and rural markets. It is tailor-made and focuses on skill building.

**Grant Support to Partner Agencies for Promotion and Nurturing of SHGs:** NABARD has been instrumental in the formation and nurturing of quality SHGs by means of promotional grant support to NGOs, RRBs, DCCBs, farmers’ clubs, and individual rural volunteers, and by facilitating capacity building of various partners.

**Pilot Project on SHG-Post Office Linkage Programme:** The pilot project for the SHG-Post Office Linkage programme was initially launched in five districts of Tamil Nadu, viz. Sivaganga, Pudukottai, Tiruvannamalai, Thanjavur, and Tiruvarur, with the objective of examining the feasibility of utilizing the vast network of post offices in rural areas in disbursement of credit to rural poor, through SHGs, on agency basis.

The progress has been encouraging. As on March 31, 2009, 2,835 SHGs have opened zero- interest savings accounts with select post offices in Tamil Nadu and 889 SHGs have been credit linked with loan amounting to Rs.213.11 lakh. In addition to Revolving Fund Assistance (RFA) of Rs.3 crore sanctioned to the Department of Posts, NABARD has sanctioned RFA of Rs.5 lakh to post offices in Meghalaya for on-lending to 50 SHGs in East Khasi Hills.

**Support to Activity-Based Groups:** During 2008-9, NABARD introduced a scheme for supporting small-scale activity-based groups wherein capacity building, production, and investment credit and
market-related support would be extended. The scheme focuses on forming and nurturing groups engaged in similar economic activities such as farmers, handloom weavers, craftsmen, fishermen, etc. to improve production efficiency and realize better terms from the market through economies of aggregation and scale.

**Support to SHGs’ Federations:** Recognizing the emerging role of the SHGs’ federations in nurturing of SHGs, enhancing the bargaining powers of group members and livelihood promotion, NABARD introduced a flexible scheme in 2007-8 to support such federations on a model neutral basis. Support to the federations is extended by way of grant for training, capacity building, and exposure visits of SHG members, etc. as also under all of NABARD’s existing promotional schemes.

**MFI-Bank Linkage Programme:** This model covers financing of MFIs by banking agencies for on-lending to SHGs and other small borrowers covered under the microfinance sector. This model has also been initiated by NABARD.

### Table 4: Overall Progress under NABARD’s Microfinance Programme

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No of SHGs '000s</td>
<td>Amt</td>
<td>No of SHGs '000s</td>
<td>Amt</td>
<td>No of SHGs '000s</td>
</tr>
<tr>
<td><strong>A. SHG Linkage Model</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Savings of SHGs with Banks as on 31 March</td>
<td>416</td>
<td>3512.71</td>
<td>5010</td>
<td>3785.39</td>
<td>20.4</td>
</tr>
<tr>
<td>Out of which SGSY</td>
<td>956</td>
<td>757.50</td>
<td>1203</td>
<td>809.51</td>
<td>25.8</td>
</tr>
<tr>
<td>Bank Loan disbursed to SHGs during the Year</td>
<td>110</td>
<td>6570.39</td>
<td>1228</td>
<td>8849.26</td>
<td>11.0</td>
</tr>
<tr>
<td>Out of which SGSY</td>
<td>189</td>
<td>1411.02</td>
<td>247</td>
<td>1857.74</td>
<td>30.5</td>
</tr>
<tr>
<td>Bank Loan outstanding with SHGs as on 31 March</td>
<td>289</td>
<td>12366.4</td>
<td>3626</td>
<td>16999.9</td>
<td>25.3</td>
</tr>
<tr>
<td>Out of which SGSY</td>
<td>687</td>
<td>3273.03</td>
<td>917</td>
<td>4816.87</td>
<td>33.4</td>
</tr>
<tr>
<td><strong>B. MFI Linkage Model</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank Loan disbursed to SHGs during the Year</td>
<td>0.334</td>
<td>1151.56</td>
<td>0.518</td>
<td>1970.15</td>
<td>55.1</td>
</tr>
<tr>
<td>Bank Loan outstanding with SHGs as on 31 March</td>
<td>0.550</td>
<td>1584.48</td>
<td>1.109</td>
<td>2748.84</td>
<td>101.6</td>
</tr>
</tbody>
</table>


_Microfinance Sector in India: Evolution and Current Challenges_
NABARD’s Promotional Support to MFI-Bank Linkage

Just as NABARD offers promotional support to the SHG-Bank Linkage Programme, it also offers a variety of promotional support to the MFI-bank linkage programme. Some of its support activities are described below.

Rating of Microfinance Institutions: In order to identify, classify, and rate MFIs and empower them to function as intermediaries between lending banks and clients, NABARD has introduced a scheme for providing financial assistance to avail the services of accredited rating agencies for rating MFIs. Banks can avail the services of CRISIL, M-CRIL, ICRA, CARE, and Planet Finance for rating MFIs and avail financial assistance, subject to a maximum of Rs. 1 lakh. The facility is available for the first rating of a MFI.

During 2008-9, a new scheme was introduced under which 100 per cent of the professional fees of the credit rating agency, subject to a ceiling of Rs. 3 lakh, will be borne by NABARD in respect of only those MFIs approaching NABARD directly for capital/ equity support and/or Revolving Fund Assistance (RFA) from the Micro Finance Development and Equity Fund (MEDEF). Criterion for eligibility for MFIs is minimum loan outstanding of Rs. 50 lakh.

Capital / Equity Support to Microfinance Institutions: A scheme to support MFIs was introduced in 2007-8 under which capital/ equity support to various types of MFIs would be provided by NABARD to enable them to leverage commercial and other funds from banks. During 2008-9, capital support amounting to Rs. 11.75 crore had been sanctioned to 13 agencies taking the cumulative support to Rs. 21 crore covering 24 agencies under the scheme and an amount of Rs. 17 crore has been released so far. NABARD introduced a new scheme for capital support to start-up MFIs having potential to scale-up their activities but lacking in capital, infrastructure, and managerial skills.

Revolving Fund Assistance to Microfinance Institutions: NABARD provides revolving fund assistance (RFA) on a selective basis to MFIs. RFA is necessarily to be used for on-lending to SHGs or individuals and the amount is to be repaid along with the service charge between 6.5 per cent and 9.5 per cent within 3 to 7 years. This enables MFIs to build a ‘history’, which would help them access credit facilities through regular banking channels. During 2008-9, RFA of Rs. 6.25 crore was sanctioned. Cumulatively, RFA of Rs. 42.98 crore has been sanctioned to 38 agencies and an amount of Rs. 33.94 crore has so far been released against which an amount of Rs. 13.62 crore was outstanding as on March 31, 2009.

Microfinance Programmes from MFIs: MFIs play a vital role in the process of financial inclusion in the country. Some of them operate in small geographical areas and therefore are at an advantage because of their understanding of the requirements of the people in that region. They differ from each other in terms of lending method, calculation of interest, portfolio of lending, legal structure, and products.
Various legal forms of microfinance institutions are given below:

- **Not-for-profit MFIs**: societies, public trusts and non-profit organizations
- **Mutual Benefit MFIs**: cooperatives registered under state or national acts and mutually – aided cooperative societies
- **For profit MFIs**: non-banking financial companies, producer companies, and local area banks

MFIs are estimated to have total outstanding loans of Rs. 11,000 – 12,000 crore as on March 31, 2009. The microfinance sector in India is fragmented – there are more than 3000 MFIs, NGOs, and NGO-MFIs of which about 400 have active lending programmes. The top 10 MFIs are estimated to account for around 74 per cent of total loans outstanding for MFIs; around 17 MFIs had outstanding loans of more than Rs.100 crore as on March 31, 2009, with the top three MFIs crossing Rs. 1000 crore in terms of outstanding loan portfolio.

The trends in growth of and disbursements by microfinance institutions are shown in Figures 3 and 4.

**Figure 3: Growth Trends in Microfinance**

![Growth Trends in Microfinance](image)

*Source: CRISIL, India Top 50 Microfinance Institutions.*

**Figure 4: Microfinance Disbursements**

![Microfinance Disbursements](image)

*Source: CRISIL, India Top 50 Microfinance Institutions.*

---

6 CRISIL, India Top 50 Microfinance Institutions, A Financial Awareness Initiative, October 2009.
Developmental Challenges with Delivery Models

Issues and challenges faced by the microfinance sector and the institutions therein are discussed below.

SHG-Bank Linkage Programme

Regional Imbalances: The first challenge is the skewed distribution of SHGs across states. About 44 per cent of the total SHG credit linkage in the country is concentrated in the southern states of India. However, in states which have a larger share of the poor, the coverage is comparatively low. The skewed distribution is attributed to:

- the overzealous support extended by some of the state governments to the programme
- skewed distribution of NGOs
- local culture and practice

Quality of SHGs: Ensuring the quality of SHGs in an environment of exponential growth is one of the major challenges. Owing to the fast growth of the SHG-bank linkage programme, the quality of SHGs has come under stress. This is reflected particularly in indicators such as poor maintenance of books and accounts. The deterioration in the quality of SHGs is explained by a variety of factors including:

- the intrusive involvement of government departments in promoting groups
- inadequate long-term incentives to NGOs for nurturing them on a sustainable basis
- diminishing skill sets of SHG members in managing their groups

Impact of SGSY: The success of the programme has motivated the government to borrow its design features and incorporate them in its poverty alleviation programme. This is certainly welcome but for the fact that the government’s programme (SGSY) has an inbuilt subsidy element which tends to attract linkage group members and causes migration generally for the wrong reasons. Also, microlevel studies have raised concerns regarding the process through which groups are formed under SGSY. It is said that in many cases members are induced to come together not for self-help but for subsidy.

Emergence of Federations: The emergence of SHG federations has thrown up another challenge. On the one hand, such federations represent the aggregation of collective bargaining power, economies of scale, and are a fora for addressing social and economic issues. On the other hand, there is evidence to show that every additional tier, in addition to increasing costs, tends to weaken the primaries.
MFI Delivery Model

MFIs are an extremely heterogenous group comprising NBFCs, societies, trusts, and cooperatives. They are provided financial support by external donors and apex institutions including the Rashtriya Mahila Kosh (RMK), SIDBI Foundation for micro-credit, and NABARD, and employ a variety of ways for credit delivery. Since 2000, commercial banks including regional rural banks have been providing funds to MFIs for onlending to poor clients. Though initially only a handful of NGOs were into financial intermediation using a variety of delivery methods, their numbers have increased considerably in recent times. While there is no published data on private MFIs operating in the country, the number of MFIs is estimated to be around 800. Out of this not more than a dozen MFIs have an outreach of 1,00,000 microfinance clients. A large majority of them operate on a much smaller scale with clients ranging between 500 and 1,500 per MFI. It is estimated that the MFIs’ share of the total institution-based micro-credit portfolio is about 8 per cent. MFIs can play a vital role in bridging the gap between demand and supply of financial services if the following critical challenges confronting them are addressed:

Sustainability: The first challenge relates to sustainability. It has been reported in literature that the MFI model is comparatively costlier in terms of delivery of financial services. An analysis of 36 leading MFIs by Jindal and Sharma (2001) shows that 89 per cent of the MFIs in the sample were subsidy-dependent and only 9 were able to cover more than 80 per cent of their costs. This is partly explained by the fact that, while the cost of supervision of credit is high, the loan volumes and loan size are low. It has also been commented that MFIs pass on the higher cost of credit to their clients who are interest insensitive for small loans but may not be so as loan sizes increase. It is therefore necessary for MFIs to develop strategies for increasing the range and volume of financial services.

Lack of Capital: The second area of concern is paucity of owned funds. Many of the MFIs are socially oriented institutions and do not have access to capital. As a result they have high debt-equity ratios. Presently, there is no reliable mechanism in the country for meeting the equity requirements of MFIs. The Micro Finance Development Fund (MFDF) redesignated as the Micro Finance Development Equity Fund (MFDEF), is expected to play a vital role in meeting the equity needs of MFIs. Amarnani and Amarnani (2009) recommend the suitability of venture capital for funding microfinance institutions.

Borrowings: In comparison with earlier years, MFIs are now finding it relatively easier to raise loan funds from banks. This change came after 2000, when RBI allowed banks to lend to MFIs and treat such lending as part of their priority sector funding obligations. Private sector banks have since designed innovative products such as the Bank Partnership Model to fund MFIs and have started viewing the sector as a good business proposition.

Capacity of MFIs: It is now recognized that widening and deepening the outreach of the poor through MFIs has both social and commercial dimensions. Since the sustainability of MFIs and their clients complement each other, it follows that building up the capacities of MFIs and their primary
stakeholders are pre-conditions for the successful delivery of flexible, client responsive, and innovative microfinance services to the poor. Here, innovations are important – both of social intermediation, strategic linkages, and new approaches centered on the livelihood issues surrounding the poor, and the re-engineering of the financial products offered by them as in the case of the bank partnership model.

**Some Delivery Innovations**

One of the major successful innovations in India has been the SHG-bank linkage programme. However, over the years there have been a number of innovations as far as delivery modes are concerned for financial inclusion.

**Bank Partnership Model**

This is an innovative way of financing MFIs. The bank is the lender and MFI acts as an agent for handling items of work relating to credit monitoring, supervision, and recovery. In other words, MFI acts as an agent and takes care of all relationships with the client, from first contact to final repayment. The model has the potential to significantly increase the amount of funding that MFIs can leverage on a relatively small equity base.

A variation of this model is where MFI, as an NBFC, holds the individual loans on its books for a while before securitizing them and selling them to the bank. Such refinancing through securitization enables MFI increased funding access. If an MFI fulfils the ‘true sale’ criterion the exposure of the bank is treated as being to the individual borrower and the prudential exposure norms do not then inhibit such funding of MFIs by commercial banks through the securitization structure.

**Banking Correspondents**

Bank correspondents (BCs) are technology partners with the bank and carry on all banking activities for the bank. A business correspondent can be an individual or a local grocery shop doing financial transactions with banks on behalf of people. For banks, they ensure significant savings in terms of not having to open and run branches in far-flung areas while allowing a wide reach. For the unbanked, they offer a degree of comfort and trust in how their finances are handled. According to RBI data, out of the 600,000 villages with a population of 2,000 or more, only 30,000 have access to banking services.

**Service Company Model**

The service company model developed by Accion and used in some of the Latin American countries is worth noting. It may hold significant interest for state owned banks and private banks with large branch networks. Under this model, the bank forms its own MFI, perhaps as an NBFC, and then works hand in hand with that MFI to extend loan and other services. On paper, the model is similar to the partnership model: MFI originates the loan and the bank books it. This model has two very different and interesting operational features:

1. MFI uses the branch network of the bank as its outlets to reach clients. This allows the client to be reached at lower cost than in the case of a standalone MFI. In the case of banks which have a large branch network, it also allows rapid scaling up. In the partnership model, MFIs may enter into
contracts with many banks in an arms length relationship. In the service company model, MFI works specifically for the bank and develops an intensive operational cooperation between them to their mutual advantage.

2. The partnership model uses the financial and infrastructure strength of the bank to create lower cost and faster growth. The service company model has the potential to take the burden of overseeing microfinance operations off the management of the bank and put it in the hands of MFI managers who are focused on microfinance to introduce additional products.

**Issues and Challenges in Indian Microfinance Sector**

While the Indian microfinance sector has made significant progress in the last two decades, there are issues and challenges which it needs to address to make further progress.

**Quality of Growth**

As already mentioned earlier, the Indian microfinance sector has been growing at a very fast rate. The outreach has improved and the quality of processes adopted by the sector has also improved over the period. However, there still remain some concerns for the sector.

**Intense Competition and Borrower Fatigue:** The aftermath of entrenched default in some parts of Karnataka seems set for a protracted reconstruction process. It must be added that the problems are small, constituting a portfolio share of less than 0.5 per cent and confined to a few geographical locations. But the possibility of a virulent spread to other regions and among other institutions is worrisome.

**Skewed Growth:** The regional skew is continuing to be addressed by both the banking sector and MFIs. Northern states have turned in a better performance as also the southern region. The Eastern and North-eastern regions have recorded moderate growth rates while the Central and Western regions have shown a decline in the number of groups with loans.

**‘Andhra Pradesh Issue’**

In the case of Andhra Pradesh (AP), lending and outreach have reached extraordinary levels. More than two crore microfinance clients have been financed to the tune of Rs.123,000 crore in AP. The number of households in AP is about 1.6 crore. Statistically more than 125 per cent of all households in AP are covered by microfinance loans. If only poor families had been targeted, then each family had been financed eight times (the number of poor households is about 0.252 crore) under microfinance. The average debt outstanding is estimated at Rs 49,000 per household, which is about eight times the national average MFI loan outstanding and about 11 times the average member-level loan outstanding in the case of SHGs. There is a clear indication of fierce competition and multiple lending in three states – Andhra Pradesh, Tamil Nadu, and Karnataka. The concentration risk in developed geographies is growing and is an area of major concern.
**Loan Size:** The average loan size has increased significantly especially in the case of MFIs and the proportion of clients that is offered lower size of loans has come down significantly. This is a welcome development as it improves the chances of clients getting viable size of loans to pursue livelihood activity and moderates the temptation for multiple borrowing. It also improves the profitability and the revenue to cost ratio per client in the case of MFIs and banks. However, the average loan sizes are still quite low compared with the requirements of livelihood activities that can produce a poverty-mitigating income for households.

**Microinsurance:** Insurance coverage has been increasing, but not in the explosive manner of credit. The insurance sector has not been able to come up with dedicated microinsurance institutions that focus on small clients and their risk mitigation needs. The Insurance Regulatory and Development Authority (IRDA) has indicated that the insurance density at 46 (though an improvement from 38 in 2006) still has a long way to go. The penetration ratio estimated for India in 2007 was 4.7 per cent which was lower than the level achieved in 2006 at 4.8 per cent. Moreover, poor claim settlement processes plague microinsurance.

**Policy Environment**

Currently, there are many legal forms (mainly not-for profits, mutual benefits, and for-profits) through which microfinance is delivered in India. The multiplicity of legal forms itself indicates that different acts and laws will govern the sector and, thus, give rise to several issues and challenges.

**Proposed Microfinance Development and Regulation Bill, 2010:** The bill was first placed in the Lok Sabha in March 2007 but it expired with the lapse of the 14th Lok Sabha. The purpose was to provide for the promotion, development, and regulation of microfinance organizations in rural and urban areas and thereby for securing easy access to credit, thrift, and other financial facilities of women and certain disadvantaged sections of the people, and for matters connected therewith or incidental there to. It is expected that a revised bill will soon be placed in the Lok Sabha.

The highlights of the bill are:

- Constitution of Microfinance Development Council: an advisory body
- Micro Finance Development and Equity Fund (MFDEF)
- Redressal Mechanism - Microfinance Ombudsman
- Regulatory and development powers to NABARD for microfinance organizations; regulation to be framed by it
- Powers to the government to make rules to implement provisions of the act and decide the penalties for offences.

---

Malegam Sub-Committee Report: RBI set up a sub-committee in October 2010 to study the issues and concerns in the microfinance sector under the chairmanship of Shri Y. H. Malegam. The committee has recommended creation of a separate category of NBFCs operating in the microfinance sector to be designated as NBFC-MFIs. To qualify as a NBFC-MFI, NBFC should be “a company which provides financial services predominantly to low-income borrowers, with loans of small amounts, for short-terms, on unsecured basis, mainly for income-generating activities, with repayment schedules which are more frequent than those normally stipulated by commercial banks” and which further satisfies the regulations specified in that behalf.

The committee has recommended that banks lending to NBFCs which qualify as NBFC-MFIs will be entitled to priority lending status. With regard to the interest chargeable to the borrower, it has recommended an average margin cap of 10 per cent for MFIs having a loan portfolio of Rs. 100 crore and 12 per cent for smaller MFIs and a cap of 24 per cent for interest on individual loans. It has also proposed that, in the interest of transparency, an MFI can levy only three charges: processing fee, interest, and insurance charge.

The committee has made a number of recommendations to mitigate the problems of multiple-lending, overborrowing, ghost borrowers, and coercive methods of recovery. These include:

- A borrower can be a member of only one SHG or a joint liability group (JLG)
- Not more than two MFIs can lend to a single borrower
- There should be a minimum period of moratorium between the disbursement of loan and the commencement of recovery
- The tenure of the loan must vary with its amount
- A credit information bureau has to be established
- The primary responsibility for avoidance of coercive methods of recovery must lie with MFI and its management
- RBI must prepare a draft customer protection code to be adopted by all MFIs
- There must be grievance redressal procedures and establishment of ombudsmen
- All MFIs must observe a specified code of corporate governance

The committee has recommended that entities governed by the proposed act should not be allowed to do the business of providing thrift services. It has also suggested that NBFC-MFIs should be exempted from the state money lending acts.

---

Changing Landscape

The entire microfinance ecosystem is undergoing a transformation. The major changes are described below:

**Urban Microfinance** : Urban microfinance has become a magnet for several large and small MFIs. However, the growth posted in urban locations during 2009 has been moderate compared to rural business.

**Professional Management** : Some of the new institutions that entered the sector have professional promoters and a clear vision backed by sound business models. These institutions are able to find both equity and bank funding. Comparatively, MFIs with NGO parentage find it difficult to expand; access to banks’ funds is a limitation which they need to overcome. Banks are not too comfortable with their past record as a socially oriented institution.

**Increased Competition** : Eight million accounts have been opened by banks using the banking correspondents so far (which is about 50 per cent of the new customers acquired by the microfinance sector). If this gathers momentum, competition for microfinance customers is bound to be severe. The guidelines issued on mobile banking have not led to the kind of explosive activity expected by sector watchers.

**Funding Trends in the Sector**

Both NABARD and SIDBI had reported significant increase in their exposure to microfinance in 2009. Another bulk funder, Friends of Women’s World Banking (FWWB), is also an important source of finance for the microfinance sector. RMK is also in the process of restructuring, its corpus is to increase from Rs. 100 crore to Rs. 500 crore over a period of three years. Funds are also coming from international organizations such as the World Bank, Kreditanstalt fir Wiederaufbau (KFW), Department for International Development (DFID), and others.

**Technology**

The use of smart cards, biometrics, and mobile-based transaction devices for financial inclusion is being experimented with varying degrees of success. However, the comfort level of MFIs with different technologies is at best mixed. Failure of cards, card terminals, and software has been reported. The manual override of procedures adopted in the case of technology failure is fraught with risks of misuse and fraud. Further, some of the technologies that offer smart card-based financial inclusion have been found to be expensive.

**Conclusion**

The microfinance sector in India has developed significantly to reach its current stature. We conclude that there exists a gap in terms of outreach or quality of growth. By outreach we mean penetration
within the poor states in the country and outreach in terms of the very poor people covered by the programme. There also exists a gap as far as a stable policy framework for the sector is concerned. Numerous vacillations have seen the private sector alternate between microfinance purveyor to exploiter and even victims of politically supported willful default. The passing of the microfinance bill with changes recommended by the Malegam committee is imperative at this stage of growth for the sector. A major gap also exists in terms of funds available to the sector. Only with an improved availability of funds will the sector be able to adopt better technologies to improve its efficiency and outreach.

References


Websites

http://www.nabard.org/introduction.asp
http://www.sidbi.com/micro/aboutus.htm
http://rmk.nic.in/chap1.htm
http://rural.nic.in/latest/SGSY_Agenda_15032010.pdf
Emergence of E-Banking in India

Nityesh Bhatt *
Zakiya Khan **
Meera Mathur ***

World over, information technology has moved from being a mere tool of automation for existing functions to an important tool in the decision making process and a major element in delivering services to customers. The impact of this change can be found significantly in the banking, financial services, and insurance (BFSI) sector. According to Vij (2006), “I.T. has introduced new business paradigms and is increasingly playing a significant role in improving the services in the banking industry.” In this context, Talwar (2008) says that “In the last few years, it is no wonder that the banking sector has seen a virtual cornucopia of new products: credit cards, tele-banking, ATMs, quick collection facilities for outstation cheques, retail EFT, Electronic Clearing Services (ECS), debit and credit for repetitive payments like dividend, interest, utility bills, Internet Banking, etc.”

Technological innovations affect banking capacity by changing production costs and spurring disintermediation, increase competition by lowering entry and exit barriers, and help the internationalization process. Technology has shaped banking business both internally and externally: internally by means of the reconstruction of banks’ internal organization and production processes and externally by spurring product innovation and establishing new distribution channels.

Varma (2006) states that a bank which moves fast and tries to capture the first mover advantage can think of succeeding in
this sector. Another key success factor will be the value which the online operations of banks offers to the consumer. Shaw and Yu (2004) assert that the Internet affected the competitive landscape of the banking industry in many ways. First, it changed the industry structure and, in doing so, altered the rules of competitions. Secondly, it created competitive advantages for banks giving them new ways to outperform their rivals. Finally, the internet had spawned the creation of new businesses that were beyond the traditional banking domains.

**Evolution of Technology in Indian Banks**

The foundation for induction of computer technology in the Indian banking sector was laid by Dr. Rangarajan Committee’s two reports in 1984 and 1989. Both strongly recommended computerization of banking operations at various levels while suggesting an appropriate architecture. In 1993, the employees’ unions of banks signed an agreement with bank managements under the auspices of the Indian Banks’ Association (IBA). This agreement was a major breakthrough in the introduction of computerized applications and development of communication networks in banks. Since then, banks have started exploring the idea of total bank automation, although, in most cases, it was confined to branch automation only. The vision statement of IBA mentions about leveraging technology as follows:

“To evolve into a strong, sound, and globally competitive financial system, providing integrated services to customers from all segments, leveraging on technology and human resources, adopting the best accounting and ethical practices, and fulfilling corporate and social responsibilities towards all stakeholders.”

It also states that the customer would continue to be the centre point of business strategy (Rao, 2004).

In the 1990s, banks started thinking about tying up disparate branches together to facilitate information sharing. Entry of private banks and foreign banks in the banking arena with radically different strategies and huge IT budgets gave a big fillip to e-banking in India. Technology enabled these banks to provide a whole new range of financial products and services at minimal cost.

In the early years, the network and backend infrastructure (composed of servers, workstations, networks, datacenter, bandwidth, etc) was generally decentralized. In other words, each branch had its own server(s), banking applications, database(s), and other such assorted systems. This setup created operational and financial problems in terms of updating applications and troubleshooting as well as a wide gamut of people and support aspects.

New delivery channels like the Internet and mobile required that, irrespective of the branch or channel the customer used, the database be accessed and updated on a real-time basis. The networks had to be up and running and be managed with lesser costs. Realizing the costs and benefits of scale and scope, datacentre architecture also got centralized. This has helped a lot in improving and simplifying the network from the operations, user, and administration perspectives. Subsequently, the network also evolved into a unified IP network.
Centralization of IT infrastructure has led to the implementation of core banking in India. Shyamala Gopinath, Deputy Governor of the Reserve Bank of India says, “The banks in India started from a disparate IT infrastructure in general and moved over to consolidation and virtualization of databases and servers gradually over the years in order to achieve efficiency, cost reduction, and improvement in customer services, and to address the issues arising from competition from other market players. The core banking concept to a great extent emerged from this centralization process and has since received a complete and focused attention from all banks for its rapid implementation.”

With regard to the implementation of core banking and electronic banking, banks have made considerable progress in recent years as far as the centralization of customers’ accounts are concerned; however, we can also think of making it more useful by expanding the coverage of core banking with essential services / banking products like treasury, CRM, corporate banking, MIS, etc.

**Core Banking Applications**

Core banking applications help provide complete front and backend automation of banks. Core stands for “centralized online real-time exchange.” These applications also help banks achieve centralized processing and provide anywhere, anytime non-stop services. Retention of customers, lowering service costs, standardization of processes within the bank, and optimization of IT infrastructure are other major advantages. General core banking functions include deposit accounts, loans, mortgages, and payments which banks make available across multiple channels. Leading global and Indian core banking application vendors are Misys, Infosys, TCS, Accenture, SAP AG, Oracle, and CSC. Banks having core banking applications are assigned an Indian Financial System Code (IFSC) for various inter-bank and intra-bank transactions.

An RBI report shows that 94.6 per cent public sector bank branches have been fully computerized while 67.7 per cent have installed core banking systems. Allahabad Bank, Canara Bank, Dena Bank, and UCO Bank are laggards with regard to adoption of core banking solution. Branches of Andhra Bank, Indian Overseas Bank, Punjab and Sind Bank, Syndicate Bank, and UCO Bank are least computerized.

**Introduction to E-Banking**

An array of banking services offered to retail and wholesale customers through an electronic distribution channel is collectively referred to as e-banking (Rajshekar, 2004). E-banking is a mix of services which include Internet banking, mobile banking, ATM kiosks, fund transfer system, real time gross settlement (payment and settlement system), credit/debit/smart/kisan cards, cash management services, and data warehousing, operational data for MIS, and customer relationship management.

Using telephone banking, the customer can control his bank accounts by giving the bank instructions over the telephone. It has been established that increasing the role of technology in banks can serve to reduce costs and often improve service reliability (Lee, 2002). The motivation of cost reduction has been argued to be the primary reason for banks adopting the Internet platform in recent years (Daniel, 1999; Howercroft, Hewer, and Durkin, 2003).
Internet Banking or Online Banking

The Internet is increasingly used by banks as a channel for receiving instructions and delivering their products and services to their customers. This form of banking is generally referred to as Internet banking (Rajshekar, 2004). Prohibitive costs of real estate would always make Internet banking a much more viable option in the long run. Internet banking increases operational efficiencies and reduces costs, besides giving a platform for offering value added services to the customer, thereby fulfilling all the essential prerequisites for a flourishing banking industry (De and Padmanabhan, 2006).

Internet banking is often compared with PC banking. Hurst (2006) explains the difference: “PC banking requires special software which can be installed on one’s PC and changed every time the bank upgrades its service. Customer can only access the account from one’s own PC which is connected directly to the bank’s intranet via a modem and a telephone line. Internet banking, on the other hand, offers 24-hour, 7-days-a-week access from virtually anywhere in the world where there is an Internet terminal.”

Internet - Only Bank

These are banks that have no branch network and are exclusive available on the Internet. Some of the Internet-only banks are FNBO Bank, Bancotrasatlantico (erstwhile Griffon Bank), Zions Bank, NetBank, and SFNB. Many of these banks faced resistance and lawsuits from different stakeholders. Because of this, some of them were acquired by other banks while others closed down. An Internet bank is a lot less expensive to run than a high street operation, and is therefore able to pass these savings on to its customers through cheap loans and higher interest rates on savings. In India, hitherto, there are no such banks.

Advantages and Disadvantages of Online Banking:

Advantages of online banking are convenience, ubiquity, speed of transaction, efficiency (in terms of cost and time), and effectiveness (in terms of scope of activity). Its limitations are registration hassles, navigation difficulties, security and trust, and frequent changes in site features. According to Industry estimates, a bank teller costs at Re 1 per transaction, ATM transaction Re 0.45, phone banking Re 0.35, debit cards Re 0.20, and Internet banking Re 0.10 per transaction (De and Padmanabhan, 2006).

ICICI Bank was the first to adopt internet banking in India providing the services by the name INFINITY. Citibank, IndusInd Bank, HDFC Bank, and Timesbank (now part of HDFC Bank) were also the early ones to adopt this technology in 1999. PSU banks have remained laggards in the race for adopting Internet banking practices. There are very few nationalized banks such as State Bank of India, Bank of Baroda, Allahabad Bank, Syndicate Bank, and Bank of India that offer Internet banking services. Despite positive news like this, PSU banks still have a lot of catching up to do on the Internet banking services front (De and Padmanabhan, 2002). An empirical study of Malhotra and Singh (2006) of 88 banks for the period of 1998-2005 reveals that banks offering Internet banking facility had better accounting efficiency ratios and higher returns on equity and returns on assets than non-Internet banks. However, multiple regression results revealed that profitability and offering of Internet banking did not have any significant association.
Mobile Banking

Mobile banking can be defined as that type of execution of financial services in the course of which—within an electronic procedure—the customer uses mobile devices. It keeps the customer informed and updated about the significant transactions in his account (Bhatt and Khan, 2006). Mobile banking services can be classified as transaction vs. enquiry that include services like fund transfer and bill payment, account statement inquiry, cheque status inquiry, cheque book requests, bill payment alerts, recent transaction history, financial services like share trading, credit/debit alerts, minimum balance alerts, and account balance inquiry. Union Bank became the first to launch mobile banking facility, named U mobile (available only on GSM mobiles), after RBI announced the guidelines for mobile banking in September 2008 (Business Line, November 15).

RBI has stipulated further that banks should offer mobile-based banking service only to their own customers, and should have a system of registration before provided mobile based payment services.

Automated Teller Machines (ATMs)

ATMs have gained prominence as a delivery channel for banking transactions in India. While ATMs facilitate a variety of banking transactions for customers, their main utility has been for cash withdrawal and balance inquiry. Migrating routine transactions to the ATM channel enables banks to free resources while focusing on revenue generation and improving customer satisfaction.

A significant growth comes from the latent potential within the Indian market, which has only 28 ATMs per million people. In countries such as US and Canada, there are nearly 1,300 ATMs per million people while in Mexico it is about 200 ATMs per million. The highest density of ATMs is seen in South Korea where it is about 1,600 ATMs per million. At 55 ATMs per million, China’s tally is almost double that of India. Despite rapid growth, India has a long way to go compared to other markets. For example, China has about 80,000 ATMs and the US more than 40,000; in India, the count is about 35,000 ATMs (Rao, 2008).

HSBC set up the first ATM machine in 1987. This led to other banks investing in ATMs. ICICI Bank, which offers its Internet banking services by the name INFINITY, stayed ahead being the first mover and taking advantage of technology opportunity. Among PSBs, SBI is the leader. In Kerala, in 2004, SBI provided ATM facility on a ferryboat (between Ernakulum and Vypeen Island) so that it can be used by customers on ride. It was the world’s first facility of such kind. This ATM was designed by NCR Technology and called Persona 70. NCR Technology also has installed an ATM for UTI Bank at Thegu in Sikkim situated at an altitude of 13200ft., making it India’s highest ATM. Initially, majority of large banks deployed their own ATMs at various places. ATM machines were very costly, making them unaffordable for small banks. This led to setting up the shared payment network system.

Shared Payment Network System: The Indian Banking Association (IBA) took the leadership for its member banks in 1997 to share their ATMs for customers. Called SWADHAN, India’s first shared
payment network system (SPNS) was started with the intention of reducing the investment that was required to deploy ATMs in different locations. Swadhan had connected 32 banks' public sector banks, private sector banks, foreign banks, and cooperative banks' with more than 1,000 ATMs (both online and offline) in around 64 cities, and this continued till 2003.

Later, some other ATM sharing networks began operating. Prominent and the largest interbank network among them is the National Financial Switch (NFS), which was launched on August 27, 2004. It was conceived and run by IDRBT, an arm of the Indian central bank RBI and managed by Euronet India Pvt. Ltd. In 2009, it was transferred to National Payments Corporation of India. By December 2009, the network had grown to connect 49,880 ATMs of 37 banks, thereby emerging as the largest network of shared ATMs in the country. Banks ATM Network and Customer Services (BANCS), which was launched on February 25, 2004 with 13 member banks, Cashnet, CashTree, and Multilateral ATM Network Sharing arrangement (MITR) are other interbank networks operating in India.

Commensurate with the branch network, larger banks have deployed more ATMs. Table 1 gives data on the spread of ATMs. One aspect which can be seen easily is the ATM network of new private banks and foreign banks. Percentages of offsite ATMs to total ATMs for private banks and foreign banks were 55.6 and 76 respectively. Percentage of ATMs to total branches for private banks and foreign banks were 150.1 and 377.4 respectively, which were much higher compared to other categories of banks. This shows the focus and intensity of technology in these banks.

According to Boss, Mcranahan, and Mehta (2000), despite introduction of ATMs, consumers did not stop using tellers to the extent banks had hoped. Kamakodi and Khan (2008) describe that, despite the comfort and willingness to use e-banking channels, many feel that human contact is necessary. A study of Kamakodi (2009) found that ATM and debit card facilities have got maximum acceptability among IT based services. Over 90 per cent of respondents expressed happiness about the services they enjoyed with their current banker. Customers were upbeat about technology usage in banking but they also shared a concern that it has increased the ‘gap’ between clients and banks.

Biometric ATMs: Kant (2008) says that the limit in ATM usage is greatly constrained by using the keyboard for entering the password. Biometric technology can be used in breaking the hurdles of keypad usage to help the rural and illiterate people. ATM enhancements with biometric support envisaged by vendors eliminate the need for PIN entry and authenticate customer transactions by thumb impressions to reduce literacy requirements.

Banks in India have started looking at deploying biometric ATMs to reach the unbanked population in rural India. Establishing the identity of a rural depositor through biometrics makes it possible for illiterates or barely literate people to become part of the banking community. When a customer inserts (or swipes) his/her card in a biometric-enabled ATM, he/she is prompted to set his/her finger in the fingerprint scanner. The transaction along with the customer’s biometric information is passed on to the switch. The switch verifies the fingerprint with the server, and, if successful, requests the banking application to authorize the transaction. Based on the result, the switch instructs the ATM to complete the transaction (Murli and Jaishankar, 2008).
In 2003, technologists at IIT, Chennai, under the guidance of Prof. Ashok Jhunjunwala, designed a low cost ATM for ICICI Bank, ideal for rural customers. It had fingerprint recognition instead of PIN and was designed to withstand extreme weather conditions and power cuts and was priced only at Rs.30000. Citigroup also plans to introduce biometric ATMs to serve India’s poor and illiterate communities. The machines use thumb print identification and voiceover technology to let illiterate customers access their bank accounts. (Katz, 2006). In November 2008, SBI has launched the first biometric ATM at Munnar in Kerala (Business Line, November 15).

**RBI and Information Technology**

RBI has taken several measures to provide efficient and integrated payment and settlement systems in the country while simultaneously taking steps to mitigate risks. The main thrust is on electronification of payment systems and building appropriate legal and technological infrastructure. Noteworthy measures of RBI towards the proliferation of e-banking in India are as follows.

**Payment and Settlement System:** Bulk and repetitive transactions in India are routed through Electronic Clearing Service (ECS), which is further divided into two categories: ECS Credit (one debit and multiple credits, e.g. salary, dividends) and ECS Debit (one credit and multiple debits, e.g. bill payments, SIPs, etc). According to Chalam and Nageswara (2007), ECS followed by Electronic Fund Transfer (EFT) are quite popular now. A satellite based communication network (INFINET established by RBI) will be initially used to establish systems like EFT, ECS, and e-mail, and the scope will gradually expand to cover all aspects of the payment system.

For one-to-one transactions, India has two main electronic funds settlement systems - RTGS and NEFT. Brief descriptions of both are given below.

**Real Time Gross Settlement System (RTGS) :** RTGS can be defined as continuous (real time) settlement of funds transfers individually on an order-by-order basis (without netting). Real Time means processing of instructions at the time they are received rather than at some later time while Gross Settlement means settlement of funds transfer when instructions are given individually (on an instruction-by-instruction basis). RTGS system, in operation since 2004-5, facilitates faster movement of high value transactions.

Based on the recommendations of an internal group which examined various aspects of payment systems, particularly relating to switching over to electronic modes, a minimum threshold value of Rs.1 lakh was introduced on January 1, 2007. Transactions below this amount are routed through national electronic funds transfer (NEFT). The RTGS system has gained significance in terms of both coverage and value of transactions. The number of RTGS enabled bank branches stood at 55,006 as on March 31, 2009, with the addition of 11,494 branches to the RTGS network during 2008-9. The increased network coverage is reflected in the increase in volume and value settled in RTGS is shown in Figure 1.

---

1 An electronic mode of payment/receipt for transactions that are repetitive and periodic in nature. ECS is used by institutions for making bulk payment of amount (ECS Credit) towards distribution of dividend, interest, salary, pension, etc., or for bulk collection of amounts (ECS Debit) towards telephone/electricity/water dues, cess/tax collections, loan instalment repayments, periodic investments in mutual funds, etc.

2 An electronic exchange or transfer of money from one account to another, either within a single financial institution or across multiple institutions, through computer-based systems.
**National Electronic Funds Transfer (NEFT) System**: NEFT is a nation-wide system that facilitates individuals, firms, and corporates to transfer funds electronically from any bank branch to any individual, firm, or corporate having an account with any other bank branch in the country. It is an electronic fund transfer system that operates on a Deferred Net Settlement (DNS) basis which settles transactions in batches. In DNS, settlement takes place with all transactions received till the particular cut-off time. Currently, NEFT operates in hourly batches - there are eleven settlements from 9 am to 7 pm on weekdays and five settlements from 9 am to 1 pm on Saturdays. Although the NEFT system is a deferred net settlement system, increase in the number of settlements has made it a near real time system.

NEFT, operationalized in November 2005, is gaining importance with increase in both usage and coverage. The banks are providing various e-payment services to their customers using NEFT as backend. Currently, more than 60000 branches of various banks are NEFT-enabled.

On December 20, 2007, the Payment and Settlement Systems Act, 2007 (PSS Act, 2007) received assent of the President and came into force on August 12, 2008. Under this Act, two regulations have been promulgated by RBI, namely, the Board for Regulation and Supervision of Payment and Settlement Systems Regulation, 2008 (BPSS 2008) and the Payment and Settlement Systems Regulations, 2008. Since the PSS Act became effective, it has received applications for authorization from operators/proposed operators of prepaid and other cards, payment gateways, money transfers, mobile payments, ATM network, etc. Authorization has so far been accorded to 21 entities for operating specified payment systems. Banks providing mobile payment services in accordance with the Mobile Banking Transactions in India: Operative Guidelines for Banks issued on October 8, 2008, under Section 18 of the PSS Act are required to obtain approval from RBI. Approval has so far been accorded to 29 banks to provide mobile payment services. All these initiatives have increased the proportion of electronic bank transactions in India, as shown in Figure 2. Table 2 provides a summary of various payment systems from 2005-6 to 2008-9.

**Cheque Truncation System**: In order to enhance the efficiency of the paper based clearing system, RBI has implemented a cheque truncation system (CTS). Truncation is the process of stopping the flow of a physical cheque issued by a drawer at some point enroute to the drawee branch. In its place, an electronic image of the cheque is transmitted to the drawee branch along with relevant information like data on the MICR band, date of presentation, and presenting bank. This effectively eliminates the associated cost of movement of physical cheques, reduces the time required for their collection, and brings elegance to the entire activity of cheque processing. RBI has implemented CTS as a pilot project in the National Capital Region (NCR) with effect from February 1, 2008. After the migration of the entire cheque volume from MICR system to CTS effective July 1, 2009, the traditional MICR-based cheque processing has been discontinued in NCR. Based on the advantages realized by the stakeholders and experienced gained from the pilot roll-out in NCR, RBI has decided to operationalize CTS across the country.

As part of the national roll-out, a grid-based approach is envisioned. The entire cheque volume in the country across numerous locations will be consolidated into five or six grids. Each grid will provide
processing and clearing services to all the centres under its jurisdiction, which could involve an entire state or a group of contiguous states. Chennai has been identified as the next centre for roll-out. The Chennai grid, once fully operational, will not be confined to the city of Chennai, but will cover as many as 17 MICR centres managed / operated by other banks in the states of Karnataka, Kerala, and Tamil Nadu.

**ATM for Financial Inclusion:** RBI has been encouraging bank to use the ATM channel for greater financial inclusion. Table 3 gives details of card based payments. According to RBI, the use of card based payments has risen, but remains negligible compared to conventional cheque based payments. From the figures, we can conclude that credit card transactions outnumber debit card transactions in both volume and value but debit cards have registered a higher growth than credit cards.

**Setup of IDRBT:** In the early 1990s, top management of different banks realized the urgent need for training, research, and development activities in the area of banking technology. In 1994, RBI formed a committee on Technology Upgradation in the Payment Systems. The committee recommended a variety of payment applications which can be implemented with appropriate technology upgradation and development of a reliable communication network. The committee also suggested setting up an information technology institute for the purpose of research and development as well as consultancy in the application of technology to the banking and financial sector. This paved the way for setting up the Institute for Development and Research in Banking Technology (IDRBT) in 1996 in Hyderabad.

IDRBT is one of the certification authorities for digital signature for the banking sector. It used to manage the National Financial Switch (NFS), which was transferred to the National Payments Corporation of India in 2009. IDRBT also manages the Indian Financial Network (INFINET) which provides inter-city and inter-bank connectivity and integration of message transfer facilities within the country with that of the Society for Worldwide Inter-bank Financial Telecommunication (SWIFT). To fulfill the need for a secure and common messaging across intra-bank and inter-bank applications, and to serve the requirements of domestic financial messaging, the Structured Financial Messaging Solution (SFMS) was launched on December 14, 2001, at IDRBT.

**Other Initiatives:** In order to use IT systems efficiently and to provide for business continuity, state-of-the-art data centres are being set up. RBI has also created a comprehensive document that lays down a number of security-related guidelines and strategies for banks to follow in order to offer Internet banking. The guidelines broadly talk about the types of risks associated with Internet banking, technology and security standards, legal issues involved, and regulatory and supervisory concerns. Any bank that wants to offer Internet banking must follow these guidelines and adhere to them as a legal necessity.

---

3 INFINET is the communication backbone for the Indian banking and financial sector. All banks, (public sector, private sector, cooperative), and premier financial institutions in the country are eligible to become members of INFINET. Presently, the network is spread across 300 cities in India.

4 SWIFT operates a worldwide financial messaging network which exchanges messages between banks and other financial institutions. Approximately 9,000 financial institutions in 209 countries and territories exchange an average of over 15 million messages a day.
Customer and E-Banking

With cybercafes and kiosks springing up in cities, access to the Internet is getting easy. With increased access, more customers are switching from traditional banking to e-banking. Among the elite Internet banking users – who belong to the socio-economic class A1 in the top five cities – it has been found that people access their account through the Internet once every week. Similarly, users visit an ATM centre twice a week. The workplace happens to be the most favoured place to access the Internet for banking purposes. The home comes a close second while cybercafes take the third place. ATM in the close vicinity to the office is the most preferred place among users for banking. Those who access an ATM near their office mostly go during the first half of the day, between 9 and 12 noon, but the most preferred time by all users (41 per cent) is between 6 and 9 pm (De and Padmanabhan, 2006). Banks are also leveraging technology to maintain and improve their relationship with its key customers through customer relationship management (CRM) tools. Driven by innovation of technology, CRM has the power to help bankers directly improve customer satisfaction.

Conclusion

It is clear that e-Banking, used earlier as a strategy for gaining competitive advantage, has now become a necessity for banks’ survival. Looking into the benefits for stakeholders, banks have started leveraging technology in an aggressive manner. The Indian government and RBI have provided a conducive platform for banks to offer e-banking services.

At a time when ICT has become a central force for achieving strategic objectives, banks also need to realize that people aspects cannot be ignored. Along with IT, personal touch will be necessary for banks to retain their clients and attract new clients. In a country like India, in spite of the availability of new technology-driven channels, the customer expects a humane relationship with his/her banker. At least for next one or two decades, technology can surely supplement but cannot become a substitute for face-to-face interaction with bankers for major transactions. While aligning the corporate strategy with IT strategy, banks should keep their customers in the core and leverage a mix of channels to tap their current and future customers.

References


### Table 1: Branches and ATMs of Scheduled Commercial Banks

<table>
<thead>
<tr>
<th>Type of the Bank</th>
<th>Rural</th>
<th>Semi-urban</th>
<th>Urban</th>
<th>Metropolitan</th>
<th>Total</th>
<th>On-site</th>
<th>Off-site</th>
<th>Total ATMs</th>
<th>Per cent ATMs to Branks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheduled Commercial Banks</td>
<td>19,557</td>
<td>15,055</td>
<td>13,726</td>
<td>12,794</td>
<td>61,132</td>
<td>18,486</td>
<td>16,303</td>
<td>34,789</td>
<td>46.9</td>
</tr>
<tr>
<td>Public Sector Banks</td>
<td>18,526</td>
<td>12,685</td>
<td>11,260</td>
<td>10,409</td>
<td>52,880</td>
<td>12,902</td>
<td>8,886</td>
<td>21,788</td>
<td>40.8</td>
</tr>
<tr>
<td>Nationalised Banks</td>
<td>13,198</td>
<td>8,140</td>
<td>8,440</td>
<td>7,997</td>
<td>37,775</td>
<td>8,320</td>
<td>5,035</td>
<td>13,355</td>
<td>37.7</td>
</tr>
<tr>
<td>Private Sector Banks</td>
<td>1,031</td>
<td>2,368</td>
<td>2,417</td>
<td>2,159</td>
<td>7,975</td>
<td>5,315</td>
<td>6,652</td>
<td>11,967</td>
<td>55.6</td>
</tr>
<tr>
<td>Old Private Sector Banks</td>
<td>808</td>
<td>1,498</td>
<td>1,270</td>
<td>874</td>
<td>4,450</td>
<td>1,436</td>
<td>664</td>
<td>2,100</td>
<td>31.6</td>
</tr>
<tr>
<td>Foreign Banks</td>
<td>-</td>
<td>2</td>
<td>49</td>
<td>226</td>
<td>277</td>
<td>269</td>
<td>765</td>
<td>1,034</td>
<td>74.0</td>
</tr>
</tbody>
</table>


### Figure 1: Trends in Real Time Gross Settlement (RTGS) Transactions

Figure 2: Share of Paper-based versus Electronic Transactions

Table 2: Payment System Indicators: Annual Turnover

<table>
<thead>
<tr>
<th>Item</th>
<th>Volume (000s)</th>
<th>Value (Rs Crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. High Value clearing</td>
<td>15,924</td>
<td>18,730</td>
</tr>
<tr>
<td>2. RTGS</td>
<td>1,767</td>
<td>3,876</td>
</tr>
<tr>
<td>Total</td>
<td>17,691</td>
<td>22,606</td>
</tr>
<tr>
<td>Growth (in %)</td>
<td>(4.6)</td>
<td>(5.7)</td>
</tr>
<tr>
<td>3. MICR Clearing</td>
<td>10,15,912</td>
<td>11,25,373</td>
</tr>
<tr>
<td>4. Non-MICR Clearing</td>
<td>2,54,922</td>
<td>2,23,177</td>
</tr>
<tr>
<td>5. Retail Electronic Clearing</td>
<td>83,241</td>
<td>1,48,997</td>
</tr>
<tr>
<td>6. Cards</td>
<td>2,01,772</td>
<td>2,29,713</td>
</tr>
<tr>
<td>Total</td>
<td>15,55,847</td>
<td>17,27,260</td>
</tr>
</tbody>
</table>

Note: 1. At the end of April 2009, the MICR clearing was available at 66 centres (60 centres during previous year).
2. Electronic clearing comprise ECS, EFT, National/Special Electronic Funds Transfer (NEFT/SEFT)
3. Cards include credit cards and debit cards. 4. Figures in parentheses are ratios to GDP at current market prices.

<table>
<thead>
<tr>
<th>Type</th>
<th>Volume of Transactions (000s)</th>
<th>Value of Transactions(Rs crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Cards</td>
<td>156,086</td>
<td>169,536</td>
</tr>
<tr>
<td></td>
<td>(20.6)</td>
<td>(8.6)</td>
</tr>
<tr>
<td>Debit Cards</td>
<td>45,686</td>
<td>60,177</td>
</tr>
<tr>
<td></td>
<td>(10.0)</td>
<td>(31.7)</td>
</tr>
</tbody>
</table>
Trade Openness and Economic Growth: An Econometric Study of India

Dharmendra Singh *

The relation between trade openness and economic performance has been a topic of discussion among policymakers and academia for more than a century. Trade openness is also supported by the comparative advantage theory of Hecksher-Ohlin; according to it trade openness can be beneficial in improving the economic performance of a country. Based on this theory, a country will export products having comparative advantage and import goods having no comparative advantage and this will lead to increased efficiency of a country, thus increasing economic growth.

In practice it is possible to establish long-run relationships between trade openness and economic growth in a number of ways. Exports are the most important source of foreign exchange, which can be used to ease pressure on balance of payments and generate job opportunities in developing countries like India. The export-led growth strategy also aims at increasing the capability of producing goods that can compete in the world market using advanced technology and making provision for foreign exchange needed to import capital goods. On the other hand, import liberalization helps in promoting technology transfer through the import of advanced capital goods. Therefore, an open economy generally leads to higher growth. This is because there are some economic factors, such as returns to scale and the impact of competition, which probably produce a more
satisfactory economic performance under an open trade policy. India and many other developing countries have ushered in financial and trade liberalization. One of the main objectives of such liberalization and financial measures was to achieve higher economic growth.

There are a number of empirical studies linking economic growth to the openness of the trade regime (Little, Scitovsky, and Scott, 1970; Balassa, 1971; Bhagwati, 1978; Krueger, 1978; Heitger, 1987; Romer, 1989; Quah and Rauch, 1990; Michaely, Papageorgiou, and Choksi, 1991; Dollar, 1992; Edwards, 1992; Harrison, 1995; Bakht, 1998; Onafowora and Owoye, 1998). On the other hand, Quinn (1997), and Kraay (1998) have shown that openness does not have any effect on economic growth.

Trade liberalization may also have negative impact on economic growth. Trade openness exposes a country to volatility of exchange rate and output. If the magnitude of volatility is beyond the absorptive capacity of the country, the forces of dynamic comparative advantage push the economy away from the direction of industrial activities that stimulate long run economic growth. This view is supported by Rodriguez and Rodrik (1999), who argue that the measures of trade openness used in most of the papers showing positive links between trade liberalization and exports are faulty. On the other hand, Harrison (1996), and Harrison and Hanson (1999) suggest that the nature of relationship is dependent on the chosen measure of openness and the specification used. A review by Greenaway, Morgaon, and Wright (1998) concludes that trade liberalization has resulted in both increase and decrease in the growth rate depending on country circumstances. Similar findings were reported by Bolaky and Freund (2004).

Empirical evidence thus shows that the relationship between trade openness and economic growth is mixed. Some studies have found a positive relationship between openness and GDP growth in developing countries; however, other studies have shown that openness does not accelerate economic growth. In this paper, an effort has been made to investigate the causality and cointegration between trade openness and economic growth in India.

**Literature Review**

Much work has been done to suggest causality between trade openness and economic growth. Measures mostly used include ratio of trade (sum of imports and exports) to GDP as a proxy measure for trade openness. In most of the cases, per capita GDP or natural log of GDP is used as a proxy measure of economic growth.

Harrison (1995) examined the relationship between openness to international trade and economic growth in developing countries using cross-section and panel data from 1960 to 1987. The results suggested that the choice of time period or analysis is critical, i.e. more evidence of the positive impact of openness to international trade on economic growth is found when a longer time series is used. Openness to international trade positively affects economic growth. The results of Granger causality suggested that the causality between openness to international trade and economic growth runs in both directions: more openness to international trade precedes a higher economic growth and a higher economic growth leads to more openness to international trade.
Toda and Yamamoto (1995) examined the long-run relationship among import, export, and economic growth for the period 1960 to 2003. The results showed unidirectional causality from export to output while no significant causality was reported between import and export.

Harrison (1996) addresses the effects of trade openness on growth using panel data and compares predictions of several measures of trade openness. In this view, openness and growth impact each other in both directions.

Vamvakidis (2002) examined the relationship between openness to international trade and economic growth in developed and developing countries using cross-section data for the period 1920-90. Estimating economic growth over a long period provides useful conclusions on the robustness of openness to international trade and other explanatory variables in the empirical model. The results showed that there was no positive relationship between openness to international trade and economic growth before 1970. The positive relationship between openness to international trade and economic growth was only a recent phenomenon. However, it was sensitive to the measures of openness to international trade. This finding may suggest that openness to international trade when protection in the world economy is high does not result in economic growth.

Yanikkaya (2003) examined the impact of openness to international trade on economic growth of over 100 developed and developing countries using panel data from 1970 to 1997. The results show that openness to international trade does not have a simple and straightforward relationship with economic growth. However, contrary to the conventional view, the results showed that trade barriers were positively and, in most specifications, significantly associated with economic growth, particularly for developing countries.

Shirazi and Manap (2004) studied the short run and long run relationship among real export, real import, and economic growth on the basis of cointegration and multivariate Granger causality developed by Tang (2006). This study shows that there is no long run relationship among export, real gross domestic product, and imports. it further shows no long-run and short-run causality between export expansion and economic growth in China on the basis of Granger causality while economic growth does Granger cause imports in the short run.

Katircioğlu, Kahyalar, and Benar (2007) examined the possible cointegration and the direction of causality between financial development, international trade, and economic growth in India. Annual data covering the period 1965-2004 were used to investigate cointegration and Granger causality tests between financial development, international trade, and growth. They show that there is a long-run equilibrium relationship between financial development, international trade, and real income growth in the case of India.

Yucel (2009) studied the causality relations between trade openness, financial development, and economic growth (GDP) for the Turkish economy for the period 1989 to 2007. The study shows that trade openness has a positive effect on growth. Moreover, the Granger causality test results discovered the
presence of bi-causal relationship between financial development, trade openness, and growth, indicating that economic policies aimed at financial development and trade openness have a statistically significant impact on economic growth.

A number of studies, however, have failed to establish the link between export and economic growth. For instance, Hsiao (1987) found evidence of no causality for four Asian economies, except Hong Kong, where unidirectional causality from GDP to exports was found. Trade liberalization may also have negative impact on economic growth.

Hassan and Islam (2005) examined whether financial development and openness to international trade can play any positive role in reducing poverty in Bangladesh through their growth enhancing effect for the period 1974-2003. Standard Granger causality test is employed to ascertain whether financial development and trade openness cause growth. The paper does not find any causal relationship between trade openness and growth, and financial development and growth.

Research Methodology

The first step in determining the relationship between trade liberalization and economic growth is whether the data series are stationary or not. Thus, logarithms of time series were taken and augmented Dickey-Fuller test was used for testing stationarity. Then, Johansen co-integration test was used to examine the long-term relationship between trade liberalization and economic growth. After that Granger causality test was used to test the causal relation between trade openness and economic growth.

The present study uses annual time series data for the period 1970-71 to 2008-9 for India on trade openness which is proxied by the ratio of sum of exports and imports to GDP and economic growth measured by natural log of GDP. Both variables were extracted from the Handbook of Statistics on Indian Economy. In the empirical analysis, the variables are used in their log form.

Unit Root Test

The empirical estimation begins with unit root tests. The aim is to examine whether a series is stationary or non-stationary. A series that has a unit root is said to be a non-stationary series. In the study, the Dickey-Fuller unit root test statistics are employed to check the stationary nature of the series.

Johansen Cointegration

It is to be noted that for applying cointegration the first step is to test the stationarity of the variables. Then the presence of cointegration between the series of the same order of integration is found through forming a cointegration equation. The basic idea behind cointegration is that if, in the long-run, two or more series move closely together, even though the series themselves are trended, the difference between them is constant.

It is possible to regard these series as defining a long-run equilibrium relationship, as the difference between them is stationary. A lack of cointegration suggests that such variables have no long-run
relationship: in principle they can wander arbitrarily far away from each other. We employ the maximum-likelihood test procedure of Johansen (1991). Since the main objective of this paper is to assess not only the long run relationship between the variables but also pair-wise nature of causality among the variables as well, we used the Granger causality test.

**Empirical Analysis**

Table 1 shows that both variables were not stationary in levels. This can be seen by comparing the observed values (in absolute terms) of ADF with the critical values (also in absolute terms) of the test statistics at 1 per cent, 5 per cent and 10 per cent levels of significance. Therefore, the null hypothesis is accepted and it is sufficient to conclude that there is presence of unit root in the variables at levels. Following from this result, both variables were differenced once and the ADF test was conducted on them. The result is shown in Table 2. Here both variables are stationary at first difference. On the basis of this, the null hypothesis of non-stationarity is rejected and it is safe to conclude that the variables are stationary. This implies that the variables are integrated of order one, i.e. 1(1).

<table>
<thead>
<tr>
<th>Variables</th>
<th>ADF Intercept</th>
<th>ADF Intercept and Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNGDP</td>
<td>ADF test statistic – 3.219505</td>
<td>ADF test statistic – 1.501226</td>
</tr>
<tr>
<td></td>
<td>Test critical values:</td>
<td>Test critical values:</td>
</tr>
<tr>
<td></td>
<td>1% level – 3.615588</td>
<td>1% level – 4.219126</td>
</tr>
<tr>
<td></td>
<td>5% level – 2.941145</td>
<td>5% level – 3.533083</td>
</tr>
<tr>
<td></td>
<td>10% level – 2.609066</td>
<td>10% level – 3.198312</td>
</tr>
<tr>
<td>LNSUM</td>
<td>ADF test statistic – 0.212955</td>
<td>ADF test statistic – 1.181340</td>
</tr>
<tr>
<td></td>
<td>Test critical values</td>
<td>Test critical values</td>
</tr>
<tr>
<td></td>
<td>1% level – 3.615588</td>
<td>1% level – 4.219126</td>
</tr>
<tr>
<td></td>
<td>5% level – 2.941145</td>
<td>5% level – 3.533083</td>
</tr>
<tr>
<td></td>
<td>10% level – 2.609066</td>
<td>10% level – 3.198312</td>
</tr>
</tbody>
</table>
Table 2: ADF Test on Variables at First Difference

<table>
<thead>
<tr>
<th>Variables</th>
<th>ADF Intercept</th>
<th>ADF Intercept &amp; Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNGDP</td>
<td>ADF test statistic – 5.552369</td>
<td>ADF test statistic – 7.170799</td>
</tr>
<tr>
<td></td>
<td>Test critical values</td>
<td>Test critical values</td>
</tr>
<tr>
<td></td>
<td>1% level – 3.621023</td>
<td>1% level – 4.226815</td>
</tr>
<tr>
<td></td>
<td>5% level – 2.943427</td>
<td>5% level – 3.536601</td>
</tr>
<tr>
<td></td>
<td>10% level – 2.610263</td>
<td>10% level – 3.200320</td>
</tr>
<tr>
<td>LNSUM</td>
<td>ADF test statistic – 4.540582</td>
<td>ADF test statistic – 4.513243</td>
</tr>
<tr>
<td></td>
<td>Test critical values</td>
<td>Test critical values</td>
</tr>
<tr>
<td></td>
<td>1% level – 3.621023</td>
<td>1% level – 4.226815</td>
</tr>
<tr>
<td></td>
<td>5% level – 2.943427</td>
<td>5% level – 3.536601</td>
</tr>
<tr>
<td></td>
<td>10% level – 2.610263</td>
<td>10% level – 3.200320</td>
</tr>
</tbody>
</table>

After confirming the stationarity of the variables at 1(1), the Johansen cointegration test was conducted with assumption of linear deterministic trend. Tables 3 and 4 show the results. Trace statistic test indicates two cointegrating relationships between LNGDP and LNSUM while the maximum Eigen value statistic shows no cointegration at 5 per cent level of significance. Thus, the results of the two tests are contradictory.

However, one should give more importance to trace statistics, as trace statistic considers all of the smallest eigenvalues, and holds more power than the maximum eigenvalue statistic (Kasa, 1992; Serletis and King, 1997). Moreover, Johansen and Juselius (1990) recommend the use of trace statistic when these two statistics provide conflicting results. So, a cointegrating relationship between LNGDP and LNSUM is evident.

Table 3: Cointegration Test Statistic (Trace)

<table>
<thead>
<tr>
<th>Hypothesized No. of CE(s)</th>
<th>Alternative Hypothesis</th>
<th>Eigen value</th>
<th>Trace Statistic</th>
<th>5% Critical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>r = 0</td>
<td>r = 1</td>
<td>0.267239</td>
<td>17.68610</td>
<td>15.49471</td>
</tr>
<tr>
<td>r ≤ 1</td>
<td>r = 2</td>
<td>0.153857</td>
<td>6.181477</td>
<td>3.841466</td>
</tr>
</tbody>
</table>

Note: r stands for the number of cointegrating vectors
Table 4 : Cointegration Test Statistic (Max-Eigen)

<table>
<thead>
<tr>
<th>Hypothesized No. of CE(s)</th>
<th>Alternative Hypothesis</th>
<th>Eigen value</th>
<th>Max-Eigen Statistic</th>
<th>5% Critical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>r = 0</td>
<td>r = 1</td>
<td>0.267239</td>
<td>11.50462</td>
<td>14.26460</td>
</tr>
<tr>
<td>r ≤ 1</td>
<td>r = 2</td>
<td>0.153857</td>
<td>6.181477</td>
<td>3.841466</td>
</tr>
</tbody>
</table>

Note: $r$ stands for the number of cointegrating vectors

Since there is cointegration between the two variables, the next step is to test for the direction of causality using traditional Granger causality test. The results of the test are shown in Table 5. GDP Granger causes trade openness. It also shows that trade openness does not Granger cause GDP. Therefore, the causality is unidirectional.

Table 5 : Pair-wise Granger Causality Test between LNGDP and LNSUM

<table>
<thead>
<tr>
<th>Null Hypothesis</th>
<th>Observations</th>
<th>F-Statistics</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNSUM does not Granger Cause LNGDP</td>
<td>37</td>
<td>1.56731</td>
<td>0.22420</td>
</tr>
<tr>
<td>LNGDP does not Granger Cause LNSUM</td>
<td>3.49595</td>
<td>0.04235</td>
<td></td>
</tr>
</tbody>
</table>

Conclusion

The objective of this paper is to empirically investigate the long-run relation and causality between economic growth measured by GDP and trade openness measured by ratio of sum of import and export to GDP in India over the period 1970-71 to 2008-09.

We have shown that there is a long run relationship between trade and economic growth. An improved economic growth is accountable for enhanced trade situation.

The implications of the causality test are that there are some other factors which are more important than trade openness to Granger cause GDP. But it confirms that improved GDP is responsible for enhancement in export and import of the country. Increasing GDP means more of industrial output which means more consumption in terms of import and increased output means there are chances of increase in exports as well.

References


---

68


Case Study

Rectifiers & Controls, Faridabad

Bimal Kumar Gupta (BKG), Chairman and Managing Director of Rectifiers & Controls, was relaxing after celebrating the most famous Hindu festival, Diwali.

BKG looked back at his early business life with satisfaction. He had traversed through some most difficult experiences in establishing his business. He now tried to focus on future.

He went back to the late 1970s, when, without any business background or financial support, he started his entrepreneurial journey. BKG lost his mother when he was studying in the tenth standard. His father, Bhagwan Das, a clerk at Modi Mills (Patiala, Punjab), wanted all his children to be well educated. Coming from a middle class family, he had no business stories or exploits to tell his children, as none in his family (paternal or maternal branches) was involved in business.

Late 1970s

BKG graduated in electrical engineering from Thapar Institute of Engineering and Technology, Patiala, in 1977.

BKG started his career with CSI, Chandigarh, as a junior research fellow in 1977. After about 7-8 months, he shifted to Technical Associates Private Ltd., Lucknow, where he worked for about two years. This company was involved in manufacturing transformers. Owing to growing potential in

* Students of MBA (Family Business and Entrepreneurship), Institute of Management, Nirma University, Ahmedabad.

** Faculty, Institute of Management, Nirma University, Ahmedabad.

*** Director, Institute of Management, Nirma University, Ahmedabad.

The editor invites responses from interested readers. Responses should be limited to two pages. (A4 size).
the business, Technical Associates opened up another plant in Sangur (Punjab). BKG was selected for posting at the new plant where he worked approximately for a year and a half when the spirit of entrepreneurship stuck him. With a few thousand rupees as capital, he promoted Ajasan Electricals which manufactured electrical control panels and accessories in Patiala (Punjab). He was the first one in his family to start a business, and this later proved out to be a motivational factor for his elder brother, Suresh Gupta, to start a business. The small capital came from BKG's brother-in-law and therefore Ajasan Electricals operated as a partnership firm.

1980s

After about 16-18 months of operations, the partnership oriented home-run business was shut down because of losses. Lack of business experience on the part of BKG was the main reason for the losses. Market was another hurdle. While most of the sales were on cash basis, a few customers delayed payments considerably putting tremendous pressure on funds. This led to the closure of the business venture in April 1981.

In July 1981, BKG joined Jindal Electricals which manufactured transformers and rectifiers. He was heading the company's manufacturing plant and also looked after sales and services, marketing, production, excise, etc. Sales of the company soared in his stewardship. After working for six years, BKG decided to leave when a new plant head was appointed over him. He felt that the company had been unfair to him.

His inner urge to be an entrepreneur took possession of him once again. The business experience that he had gained at Jindal was to be the platform for the next venture. BKG borrowed money from the family and friends for the new business and in September 1987, Rectifiers and Controls (Recon) was born.

Initially, BKG provided repairing services and dealt in spares. During the initial period, he himself went to the field for service and repairs. He slowly moved into manufacturing from merely servicing equipment.

Once again, things did not move very smoothly. The DLF area where he was operating from was highly unsafe owing to very little industrial activity. Thefts were common and Rectifiers & Controls too fell a victim. In February 1988, in spite of best efforts, the company lost copper worth Rs. 40,000 from factory premises when thieves broke open the premises. BKG therefore decided, in March 1988, to shift the plant to a new location in Faridabad.

1990s

Till 1991, sales could reach Rs.1 lakh only though there were signs of growth. In 1991, BKG felt that he was not in a position to concentrate on marketing and therefore decided to appoint a marketing manager. He also decided to add another 12 to 15 workers. Recon had major orders from Usha Rectifiers for rectifiers which were mainly used in electroplating industries. BKG also did job work for another organization. Sales to these two companies gave enough stability to the company.
However, these orders could not last long and another crisis was in the offing. When the crisis was in full swing, he received an offer to add 400 sq. yards to his production facility in another location. He was in a serious dilemma, but his entrepreneur's vision suggested that he go for the addition, even though his manufacturing had come to almost a standstill. Though the two production facilities in separate locations posed difficulties, BKG managed to hold on. He also had a power back-up and made some additions to the shopfloor. At the end of the third year, sales had shot up to Rs. 60 lakh a year, thanks to some major orders.

In 1996, BKG expanded the existing portfolio to include his dream product, voltage stabilizer. Though the product was not new in the market, he decided to move into this segment with an all together different strategy of differentiation. He focused on improved quality along with aesthetics. The technology was rolling contact type stabilizers. This was a niche product. He started with variac type stabilizers. This was done to understand the market and the buyers' mindset.

He hired a few diploma holders to work on this project. However, they did not remain in the organization for long. He had also made additional investment in equipment. Competition and premium prices made it difficult for him to enter the market with variac type stabilizers and in 1998, BKG closed down production of variac type stabilizers.

Learning from the experience, he appointed an engineer to design the process of rolling coil type stabilizers. BKG himself trained the engineer for a year before passing him the steering wheel of research and development of the product.

By the end of 1997, the company recorded sales of Rs.70 lakh a year.

End of 1998 saw the launch of the niche product, stabilizer, in the market. The focus was again on better design, improved quality, and extremely high aesthetics. Initially, the designing work was outsourced to a private designer in Calcutta and the designs were improved frequently at the on-site R&D. To carve out a niche, BKG appointed an extremely intelligent and highly experienced marketing manager to look after marketing operations. He worked with BKG closely and the company was able to supply to some of the well-known organizations in India. This is one of the most successful brands in stabilizers across North India.

**Late 1990s to 2010**

From 1998 to 2007, the company was able to cater to clients such as Airtel, Max Hospitals, Citibank, Reliance Communications, Idea, Dabur, Tata Indicom, Philips, HCL etc. At this time, the company also manufactured low tension (LT) and high tension (HT) stabilizers, and HT transformers with built-in voltage stabilizers.

BKG approached several consultants to develop the market. In the second half of the decade, Recon supplied customized stabilizers to Airtel. It also directly or indirectly exported to countries like Oman, Ethiopia, Nepal, Bangladesh, Dubai, Nigeria, etc. This decade proved out to be the most beneficial for the
company. The company’s sales graph showed an all time high, starting from Rs.1 crore in 1998 and reaching the mark of Rs. 7 crore by 2007.

In recent years, the company has added to its portfolio normal transformers, transformers with OLTC (Oil Load Tap Changer), and dry type transformers (Exhibit 1). Looking at the growing market, the company is targeting a much wider clientele base (Exhibits 2 and 3). Sales reached Rs. 10 crore in 2010. BKG, however, thinks that though the business is running at a good pace, it is essential to change the track. He feels that there is a much larger pool of competitors now in the market, who are indulging in price cutting for survival. As a result, margins have eroded. Also, there has been very slow growth in terms of technology advancement. BKG fears that the business may fall into saturation.

Sushant and Jayant, BKG’s sons, have joined the business. Sushant is an electrical engineer. He is introvert, analytical, and has a broad focus. Jayant is a mechanical engineer. He is a visionary, extrovert, and optimistic.

With growing family needs and dreams to achieve, BKG wishes to expand the business, for which purpose the following facilities have been established.

**Resources**

**Infrastructure**

The company has well established production, testing, and R&D facilities spread over an area of 2250 sq. yards in Faridabad. Advanced technology machines have been installed in the machine shop and these have been upgraded continuously to achieve high quality production. The organization has following facilities:

- customized production facility
- testing facilities
- R&D facilities
- customized packaging facility
- CAD (computer-aided design)
- CAM (computer-aided manufacturing)

**Marketing**

The company has a good marketing team. They are always on the move, visiting customer sites for orders. At present, the company has manual recording systems. These may include getting data from the customers’ end, noting their requirements, feedback, services, etc. and then transmitting the data to the marketing team at the headquarters. This is done through face to face communication or phones.
Research and Development

A dedicated R&D team works on quality enhancement and development of advanced power control equipment. R&D of the organization is aligned with the long term strategy, especially with regard to the needs of international business.

Achievements and Honours

Winners of the ITID quality excellence award, Recon has edge over others owing to quality of raw materials used, testing facilities, workmanship, better efficiency of equipments, and best possible service. The company got ISO 9001:2000 certification in 1995, and since then has been supplying products which conform to international quality standards and safety. The company is ERDA certified and is approved by the Bureau of Energy Efficiency.

BKG's Beliefs as an Entrepreneur

Though BKG did not belong to a business family, he had a vision which gave him the direction throughout his whole entrepreneurial journey. He was the inspiration for the family and has been able to instill the spirit of entrepreneurship in his sons. But, he never takes the credit for anything.

He remembered with gratitude the people who had helped him reach the present position in business. He felt grateful to his employees who stood with him during the ups and downs. He remembered an incident when he was stuck with a serious tuberculosis infection in 1994. It was a very difficult period and his staff helped the business move smoothly. He thought of Mr. B. B. Jindal, his immediate senior at Jindal Electricals, Ludhiana, from whom he had learnt various intricacies involved in running a business. He fondly remembered Mr. Arun Jindal, whom he knows from his graduation days. His wife all through the married years supported him. She belonged to a business family and gave valuable suggestions during tough times.

BKG has immense faith in the almighty and believes that God gave him strength and confidence. Humans are just doers rather than planners, he believes.

BKG has always tried to maintain cordial, healthy, and family-like relations with employees. Though senior management consists of BKG and his eldest son Sushant, they are supported by an employee strength of 100 people.

Vision 2015

Though the father and sons were celebrating, all of them are in deep thoughts pondering on the next course of action.

Browsing through the financial daily, BKG wants to enter aluminium wire production. What are the current players doing? Whom are they serving? Who are the major players in this area? What are the
opportunities in this sector? Should we directly start production, or go with trading first to gain an understanding of the sector?

Sushant has started implementing management systems in the business. His immediate mission is to transform the business into a professional organization by setting up systems for human resources, training existing and new employees, research and development, inventory control systems, quality improvement, and many more. He wondered whether the company should go for further international certification. Should he employ some HR managers? Should he look out for what other companies are doing currently in these areas?

Jayant, on the other hand, is looking at adding new products to the product portfolio. What new strategies are necessary for pushing the existing products more deeply into the market? Which new regions and markets can be covered? Jayant was trying to look into the quantum aspect of the business. Currently, the company’s manufacturing is based on orders it receives. But, looking at the continuously decreasing margin, bulk production is the only way out to remain in this industry, he thinks. The major benefit of standardized large scale production will bring economies of scale, especially in terms of cost reduction in production, R&D, and electricity. Jayant believes that Recon will be able to set its own terms and conditions, rather than follow the dictates of customers. In view of the accelerated growth of the Indian economy and expansion taking place in the electricity sector, turn-key projects, he thinks, would be a great idea. However, this would need some major changes in the organization, which he thinks he should discuss with his brother Sushant.
HT automatic voltage stabilizers and servo voltage stabilizers are used to get stable input voltage, irrespective of the voltage received from electricity authorities. Additionally, these stabilizers also prevent the transformer and other electrical equipment from getting overloaded. Automatic voltage stabilizers and servo voltage stabilizers take care of wide voltage variation ranges continuously and in on load conditions.

The HT transformer is basically a combination of HT AVR and standard HT distribution transformer. The company is HT transformers manufacturer with built-in stabilizers and HT Automatic Voltage Regulators are available in capacity up to 5000 KVA. HT transformers with built-in HT Automatic Voltage Regulators are highly effective for isolating sensitive electrical equipment from spikes, DC leakage, and line voltage transients.

We cover a wide range Oil Filled Transformer with Off Circuit Tap Changer / On Load Tap Changer (up to 5000 KVA in 11 KV and 33 KV) conforming to the international standards of quality and safety for industries and commercial set-ups. These transformers are designed and developed using latest technologies and can be provided with a variety of terminations so as to suit the requirements for new installation or replacement.

Recon's offer technologically advanced range Dry Type (VPI) Transformers use CRGO M3 to MS MOH Lamination and Electrolytic Grade 99.9% pure copper. These transformers are designed for trouble-free performance, confirming to IS - 2026 with low power loss and low noise. These are fitted in enclosure for indoor installations and are totally maintenance free and safe from fire as the material used is metal, ceramic, NOMEX, and resin. It is environment friendly as there is no oil.

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>H.T. Automatic Voltage Stabilizers (HT AVR)</td>
<td>HT automatic voltage stabilizers and servo voltage stabilizers are used to get stable input voltage, irrespective of the voltage received from electricity authorities. Additionally, these stabilizers also prevent the transformer and other electrical equipment from getting overloaded. Automatic voltage stabilizers and servo voltage stabilizers take care of wide voltage variation ranges continuously and in on load conditions.</td>
</tr>
<tr>
<td>H.T. Transformer with Built In H.T. Automatic Voltage Stabilizer (Transformer with Built In AVR)</td>
<td>The HT transformer is basically a combination of HT AVR and standard HT distribution transformer. The company is HT transformers manufacturer with built-in stabilizers and HT Automatic Voltage Regulators are available in capacity up to 5000 KVA. HT transformers with built-in HT Automatic Voltage Regulators are highly effective for isolating sensitive electrical equipment from spikes, DC leakage, and line voltage transients.</td>
</tr>
<tr>
<td>Oil Cooled Distribution Transformer</td>
<td>We cover a wide range Oil Filled Transformer with Off Circuit Tap Changer / On Load Tap Changer (up to 5000 KVA in 11 KV and 33 KV) conforming to the international standards of quality and safety for industries and commercial set-ups. These transformers are designed and developed using latest technologies and can be provided with a variety of terminations so as to suit the requirements for new installation or replacement.</td>
</tr>
<tr>
<td>Dry Type Distribution Transformer</td>
<td>Recon's offer technologically advanced range Dry Type (VPI) Transformers use CRGO M3 to MS MOH Lamination and Electrolytic Grade 99.9% pure copper. These transformers are designed for trouble-free performance, confirming to IS - 2026 with low power loss and low noise. These are fitted in enclosure for indoor installations and are totally maintenance free and safe from fire as the material used is metal, ceramic, NOMEX, and resin. It is environment friendly as there is no oil.</td>
</tr>
</tbody>
</table>
Recon's Transformer with On Load Tap Changer and Electric Tap Changers are designed for trouble-free performance, confirming to IS – 2026 with low power loss and low noise. Use of modern manufacturing techniques and optimum utilization of active materials for On Load Tap Changer Transformers ensure cost effectiveness, reliability, and trouble-free performance.

L.T. Automatic Voltage Stabilizers (L.T. AVR) hold its potential for units having either L.T. supply or low capacity H.T. connections. L.T. AVR prevents direct exposure of fluctuating voltage to critical electrical equipment. It also prevents frequent tripping of overload relays to ensure uninterrupted production. These are designed for balanced supply and unbalanced loads as well as unbalanced supply and unbalanced loads.

Recon has designed silicon rectifiers and electroplating rectifiers to fulfil the needs in electroplating, anodizing, hydrogenation, and other electrochemical processes. These rectifiers are completely tailor-made and are available in a range of 25 amps to 15000 amps at different output DC voltages. Silicon rectifiers are available in three different models.

Source: Rectifiers and Controls
Exhibit 2: Client Groups

RECON offers a wide range of power control equipment which are used mainly in following fields:

- Engineering Units
- Commercial Establishments
- Production Plants
- Rolling Mills
- Hotels and Hospitals
- Processing Units
- Teas Estates
- Office Buildings
- Distilleries and Beverages
- Oils Plants
- Township

Source: Rectifiers & Controls
Exhibit: 3 Clients

Source: Rectifiers & Controls
Book Reviews

Steven D. Levitt and Stephen J. Dubner
FREAKONOMICS: A ROGUE ECONOMIST EXPLORES THE HIDDEN SIDE OF EVERYTHING

Revised and enlarged edition

New York: William Morrow, 2010

Economics which is “Economics-FREE (konomics)”. Unlike any conventional economist, Steven D. Levitt foremostly throws light upon the need for understanding economics to comprehend the ground-level events. It appeals to me as a bridge between economics and something free of economics, hence FREAKONOMICS.

Freakonomics is merely anything more than classical economic analysis applied to social phenomenon. It transpires out to be an engaging read because it seems to be more about sociology and psychology than tedious numerical analysis. It feels to be more of common sense thing that many of us ask ourselves.

Swiftness in writing and easy reading style not only shows how the resulting correlation and causality of data impact our lives but also makes us think differently about universally seen facts and figures. The authors do not make things messy by adding mathematics and other whizkids like number gaming. Their simple approach is to make every citizen understand economics as much as it is adequate to understand; that makes the book for being a best seller, again and again.

The essence of this book smells out like: If morality represents how we would like the world to work, then economics represents how it actually does work. It factually redefines the way in which the modern world is viewed. Why book is so charming and why one freaks out while reading? This is because Levitt and Dubner are simply good at using the tools that they have mastered as economists to answer some of those questions in novel and interesting ways. Consider some of the questions as used in the chapter titles:

- What do schoolteachers and sumo wrestlers have in common? (Chapter: about incentives, how they work in the world and how you can analyse them.)

- How is the Ku Klux Klan like a group of real estate agents? (Chapter: about the power of information in markets.)

- Why do drug dealers still live with their moms? (Chapter: about “the conventional wisdom,” a term coined by John Kenneth Galbraith.)

- Where have all the criminals gone? (Chapter: about the facts and fiction of crime.)
• What makes a perfect parent? (Chapter: about “do parents matter?”)

Levitt and Dubner try to begin explanation with a mountain of data and a simple, unasked question. Some of these questions concern life-and-death issues; others have an admittedly *freakish* quality.

These may not be emblematic questions for an economist to ask. These are the everyday life yet scholastic questions - from cheating and crime to sports and child rearing - and whose conclusions regularly turn the conventional wisdom on its head. Some of these answers might seem obvious and some might surprise you. Mostly, this book gives a single theme, crisply expressed in a sentence or two, and then tells the entire story of that theme: the history of salt; the fragility of democracy; and the use and misuse of punctuation. This book boasts no such unifying theme. This approach employs the best analytical tools that economics can offer, but it also allows us to follow whatever freakish curiosities may occur to us.

The chapter "Where Have All the Criminals Gone?" was most interesting. It talks about the invisible correlations between legalization of abortion in America and a drastic drop in crime rates. The startling decline in crime in major American cities in the mid-1990s is a mystery. No one predicted it. Everyone thought that high crime rates were a permanent feature of urban life. And the standard arguments to explain why crime falls don't seem to work in this case. Levitt and Dubner go through all the usual explanations for crime decreases—a booming economy, decline in the crack trade, innovative policing strategies, tougher gun laws, aging of the population—and find only two that they think really matter. Putting more police on the street, they say, which happened in major cities all over the country in the early 1990s, was a major factor. So were the soaring numbers of young men put away in prison in that same period? But neither of those two factors, they argue, is sufficient to explain the full magnitude of the crime drop. There has to be something else—and their candidate for the missing explanation is the legalization of abortion.

Levitt's argument goes something like this. The huge declines in urban violent crime rates happened, more or less, eighteen years after the passage of *Roe v. Wade*. States that legalized abortion earlier than the Supreme Court ruling saw their violent crime rates fall earlier. When you look at falling crime rates, the reductions in violent behaviour are almost all concentrated in the generation born after the legalization of abortion, not before. People undergo abortions, in other words, for a reason: because they are poor, or don't want a child, or live in an environment where it is hard to raise children. An unwanted child has a higher chance, when he or she grows up, of becoming a criminal. By removing a large number of unwanted children, legalized abortion ended up lowering the crime rate. Levitt makes it clear that he's not passing judgment on this. He's not pro-abortion, as a result of this observation. He's just explaining the way he thinks the world works. He also stresses—and this is because it is even more important—that he doesn't think that crime fell in major American cities solely because of abortion. He thinks abortion is simply one of several factors—albeit a significant one—in crime drop.
The other topics explored in *Freakonomics*, while not as controversial, are equally interesting. In fact, some could be considered amusing. If one is looking for something that spruces up one's intellect with a quality wit, this book is a necessary read. However, that said, it is refreshing to have an odd economist, or at least an economist who asks odd questions, to tease out the most fascinating facts concerning the mysteries of the world around us.

However smartly and sensibly the book is written, it is very easy for any critique to point out many undesired things about the book. The annoying insertion of quotations from external sources about how innovative or creative the authors are as a precursor to every chapter might be considered a revolt by some.

The structure of the book is somehow not so consistent. It fails to attain that essence of micro and macro level economics to convince a level higher people than those laymen who run from economics. Very little methodology is included in *Freakonomics*.

*Freakonomics* gives us a new way to look at our world from the Freak eyes of Economics. This is a short book, about 200 pages and reads very quickly. As each story unfolds from the data, one finds oneself surprised, laughing, and reading passages aloud even as soliloquy. It is wise to compare *Freakonomics* with a treasure hunt as all chapters have little secrets that were there in plain sight much of the time. The authors have created a book that is both entertaining and educative.

**Shaili Raval**  
Doctoral Student  
Institute of Management  
Nirma University, Ahmedabad
Thirty years ago, Jack Trout and Al Ries published their classic bestseller, *Positioning: The Battle for Your Mind*, a book that revolutionized the world of marketing. But times have changed. Competition is fiercer. Consumers are technology savvy. Communications are faster. And once-successful companies are in crisis mode. *Repositioning* shows you how to adapt, compete—and succeed—in today's overcrowded marketplace. Global marketing expert Jack Trout has retooled his most effective positioning strategies—providing a must-have arsenal of proven marketing techniques specifically redesigned for our current climate. With *Repositioning*, you can conquer the “3 Cs” of business: Competition, Change, and Crisis:

1. **Beat the competition:** Challenge your rivals, differentiate your product, increase your value, and stand out in the crowd.

2. **Change with the times:** Use the latest technologies, communications, and multimedia resources to connect with your consumers.

3. **Manage a crisis:** Cope with everything from profit losses and rising cost to bad press and PR nightmares.

Even if a company is doing well, these cutting-edge marketing observations can keep the manager on top of the game and ahead of the pack. One shall discover how expanding product lines may decrease the overall sales, why new brand names often outsell established brands, and why slashing prices is usually a bad idea. One shall learn the dangers of attacking your competitors head-on—and the value of emphasizing value. The manager will see how consumers can have too many choices to pick from—and what one can do to make them pick the particular brand. Drawing from the latest research studies, consumer statistics, and business-news headlines, Trout reveals the hidden psychological motives that drive today's market. Understanding the mindset of your consumers is half the battle. Winning in today's world is often a matter of repositioning. It is how the company think tanks rethink the strategies they have always relied on. It is how one can regain the success for working so hard. It is how one can win the new battle of the mind.

GM and AIG face a branding crisis that many brands face today. Pressured by Wall Street for growth, they sacrificed once well-defined brands in a futile attempt to be all things for all people. The only way to get back on track is to reposition their brands, says Trout. He points to ways to recover a brand from fading away:
• **Hang a negative perception on your competition only if it sets up a benefit for you.** Apple has hung "nerdy" on PCs. McDonald's has been trying to hang the "Snobby coffee" label on Starbucks as it promotes its lattes and cappuccinos.

• **Don't focus on getting big.** AIG collapsed from failing to reposition itself as more than just a big and general life insurance company. Citigroup, Merrill Lynch, and GM face the same challenge.

• **Use a crisis as an opportunity.** The challenge for the post-bankrupt GM is to figure out what each of its four remaining brands is about. “BMW is about drivability. Mercedes is about engineering,” Right now GM stands for nothing.

Trout dissects the fact that price often turns out to be the enemy of differentiating a product or a service. To be different in the times of cut-throat competition the differentiation factors should come from the attributes of the product, its positioning, value proposition, and the association with the customers. He quotes the example of a Venezuelan ketchup maker Pampero whose sales started to decline after the battle rose between two other competitors of Heinz and Del Monte. So Pampero went back to basics to find out what more could be provided to be leader in the ketchup market. The difference it found was that Pampero removed the skin of tomatoes to enhance taste and flavour whereas the competitors did not remove the skin. Pampero too decided to adopt the technique of its competitors keeping in mind the fact that the step would bring them closer to its customers and can challenge other players. In actual, the change from skinless tomatoes to non-skinless tomatoes cost the company a huge amount of money and the idea could not connect with the consumer perception and hence proved to be a repositioning failure.

Trout has drawn inspiration from Clayton Christensen's *The Innovator's Dilemma* where Clayton has coined the concept of "disruptive innovation." Clayton describes it as a process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors. An innovation that is disruptive allows a whole new population of consumers access to a product or service that was historically only accessible to consumers with a lot of money or a lot of skill. Characteristics of disruptive businesses, at least in their initial stages, can include: lower gross margins, smaller target markets, and simpler products and services that may not appear as attractive as existing solutions when compared against traditional performance metrics. (http://www.claytonchristensen.com/disruptive_innovation.html)
Because companies tend to innovate faster than their customers' lives change, most organizations eventually end up producing products or services that are too good, too expensive, and too inconvenient for many customers. By only pursuing “sustaining innovations” that perpetuate what has historically helped them succeed, companies unwittingly open the door to “disruptive innovations”.

Some examples of disruptive innovations include:

<table>
<thead>
<tr>
<th>Disruptor</th>
<th>Disruptee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cellular phones</td>
<td>Fixed line telephony</td>
</tr>
<tr>
<td>Community colleges</td>
<td>Four-year colleges</td>
</tr>
<tr>
<td>Discount retailers</td>
<td>Full-service department stores</td>
</tr>
<tr>
<td>Retail medical clinics</td>
<td>Traditional doctor's offices</td>
</tr>
</tbody>
</table>

(http://www.claytonchristensen.com/disruptive_innovation.html)

Trout concludes that pride of the company leads to overconfidence and finally to arrogance and urgency to look for new possibilities to improve the product or a brand declines. So success in repositioning would come only from inside thinking and experiences gathered by working out in the market.

**Soumi Chatterjee**  
Doctoral Student  
Institute of Management  
Nirma University, Ahmedabad
Guidelines to Contributors

1. Original research papers, articles, case studies, executive experience sharing, and book reviews on business and areas connected with management are welcome.

2. Two copies of the typescript, typed in double space on A4 size paper with adequate margins on all sides, should be submitted. The first page should have the title of the paper and name(s) of author(s) with institutional affiliation. The second page should start with the title of the paper, followed by text. Name(s) of author(s) should not appear anywhere in the text.

3. A soft copy of the typescript in PC compatible MS Word document format should be emailed to the editor at: editor.nujbms@imnu.ac.in

4. The length of the paper including tables, diagrams, illustrations, etc. should not exceed 20 double-spaced pages. Short communications, book reviews, case studies / executive experience, sharing, etc. should not exceed five double-spaced pages.

5. The typescript should be accompanied by an abstract in about 100 words along with a declaration that the paper has not been published or sent for publication elsewhere.

6. All tables, charts, graphs, figures, etc. should be kept to the minimum. They should be given on separate sheets with sources indicated at the bottom.

7. All notes should be numbered consecutively and should appear as endnotes. These should be kept to the minimum. Notes in tables should be appropriately marked, and sources should appear at the bottom of the table.

8. References should be placed at the end of the text and should follow the author-date system. In the text, references should appear as (Bhagwati, 2000) or (Rao, 1974) etc. Multiple references to the same author for the same date should be displayed by suffixing a, b, c, etc. to the date (e.g. Rao 1974a, 1974b).

9. The style of referencing should be as follows:

10. All contributions will be subjected to peer review. The decision of the editorial committee will be final. Papers not accepted for publication will not be returned.

11. The author (or the first author if there is more than one author) of the published paper will receive a complimentary copy of the issue in which the paper appears along with 10 reprints.

12. Typescripts and all editorial correspondence should be addressed to:

   **M. Mallikarjun**
   Editor
   Nirma University Journal of Business and Management
   S.G.Highway, Ahmedabad 382 481, Gujarat, India
   Tel: +91-02717-241900-4, Fax: +91-02717-241916
   E-mail: editor.nujbms@imnu.ac.in
Nirma University Journal of Business and Management Studies is devoted to promoting research in business and management studies. A key objective is to equip practising managers and potential ones to make better decisions in their professional lives. It welcomes original research papers dealing with complex business and economic problems relating to trade, industry, finance, foreign direct investment, international trade, entrepreneurship, and family business.