

CHAPTER- I

INTRODUCTION

1.0 Introduction

India's recent escalation and development with 1.2 billion people and being the world's fourth largest economy has been one of the most significant achievements. Over the six and half decades since independence, India has brought about a landmark agricultural revolution that has transformed the nation from her chronic dependence on grain imports into a global agricultural powerhouse that is now a net exporter of food. Life expectancy has more than doubled, literacy rates have quadrupled, health conditions have improved, and a sizeable middle class has emerged. India is now home to globally- recognized companies in pharmaceuticals, steel, information and space technologies, and is now recognized as a growing voice on the international stage i.e. more in keeping with her enormous size and potential.

Historic changes are unfolding and unleashing a host of new opportunities to forge a 21st century nation. India will soon have the largest and youngest workforce the world has ever seen. At the same time, the country is in the midst of a massive wave of urbanization as some 10 million people move to towns and cities each year in search of jobs and opportunities, which is also the largest rural-urban migration of this century. These historic changes unfolding have placed India at a unique juncture.

Indian Economy – An Overview

The Indian economy, following the slowdown induced by the global financial crisis in 2008-09, responded strongly to fiscal and monetary stimulus and achieved a growth rate of 8.6 per cent and 9.3 per cent respectively in 2009-10 and 2010-11. However, with the economy exhibiting inflationary tendencies, the Reserve Bank of India (RBI) started raising policy rates in March 2010. High rates as well as policy constraints adversely impacted investment and in the subsequent two years viz. 2011-12 and 2012-13, the growth rate slowed to 6.2 per

cent and 5.0 per cent respectively. Nevertheless, despite this slowdown, the Compound Annual Growth Rate (CAGR) for Gross Domestic Product (GDP) at factor cost, over the decade ending 2012-13 is 7.9 per cent.

According to 'Ipsos Economic Pulse of the World' survey, India's economic confidence grew by 8 points to 68 per cent in the month of January 2013 as compared to December 2012, making it the second most economically confident country in the world. India's services sector has emerged as a prominent sector in terms of its contribution to national and state incomes, in a comparison of the services performance done across the top 15 countries over the 11 year period from 2001 to 2011. India stood first in terms of increase in share of services in the Gross Domestic Product (GDP) with 8.1 per cent, among top 15 countries during 2001-2011. According to Cushman & Wakefield's report 'International Investment Atlas' India was among the top 20 real estate investment markets globally with investment volume of Rs 190 billion (US\$ 3.46 billion) recorded in 2012. According to Deloitte, India is also expected to be the second largest manufacturing country globally, followed by Brazil as the third ranked country in the next five years.

The World Bank's latest India Development Update, a bi-annual report on the Indian economy, stated that India is expected to record 6.1 per cent Gross Domestic Product (GDP) growth in the current fiscal and this growth is expected to increase further to 6.7 per cent in 2014-15. While, the Prime Minister's Economic Advisory Panel expects the economic growth rate to increase to 6.4 per cent in 2013-14 from 5 per cent during 2012-13, on the basis of improvement in performance of agriculture and manufacturing sectors.

Table 1.0 Growth in GDP at Factor Cost at 2004-5 Prices (per cent)

	2005-06	2006-07	2007-08	2008-09	2009-10 ^{3R}	2010-11 ^{2R}	2011-12 ^{1R}	2012-13 ^{AE}
Agriculture, forestry & fishing	5.1	4.2	5.8	0.1	0.8	7.9	3.6	1.8
Mining & quarrying	1.3	7.5	3.7	2.1	5.9	4.9	-0.6	0.4
Manufacturing	10.1	14.3	10.3	4.3	11.3	9.7	2.7	1.9
Electricity, gas, & water supply	7.1	9.3	8.3	4.6	6.2	5.2	6.5	4.9
Construction	12.8	10.3	10.8	5.3	6.7	10.2	5.6	5.9
Trade, hotels, & restaurants, transport & communication	12.0	11.6	10.9	7.5	10.4	12.3	7.0	5.2
Financing, insurance, real estate & business services	12.6	14.0	12.0	12.0	9.7	10.1	11.7	8.6
Community, social & personal services	7.1	2.8	6.9	12.5	11.7	4.3	6.0	6.8
GDP at factor cost	9.5	9.6	9.3	6.7	8.6	9.3	6.2	5.0

Source : Central Statistics Office (CSO).
Notes: 1R : First Revised Estimate, 2R: Second Revised Estimate, 3R: Third Revised Estimate, AE : Advance Estimate.

Gross Fixed Capital Formation (GFCF) at current price is estimated to expand by 2.47 per cent in 2012-13. GFCF, at current prices, is estimated at Rs. 7, 55, 466 crore (US\$ 139.63 billion) in Q3 of 2012-13 as against Rs. 6, 75, 030 crore (US\$ 124.76 billion) in Q3 of 2011-12. India's per capita income is estimated to have gone up 11.7 per cent to Rs 5,729 (US\$ 105.88) per month in 2012-13 at current prices, compared with Rs 5,130 (US\$ 94.81) in the previous fiscal reflecting an overall improvement in the living standard. The value of exports during February, 2013 was valued at US\$ 26, 259.36 million and the cumulative value of exports for the period April-February 2012 -13 was US\$ 265, 946.37 million.

1.1.1 Foreign Direct Investment (FDI) in India

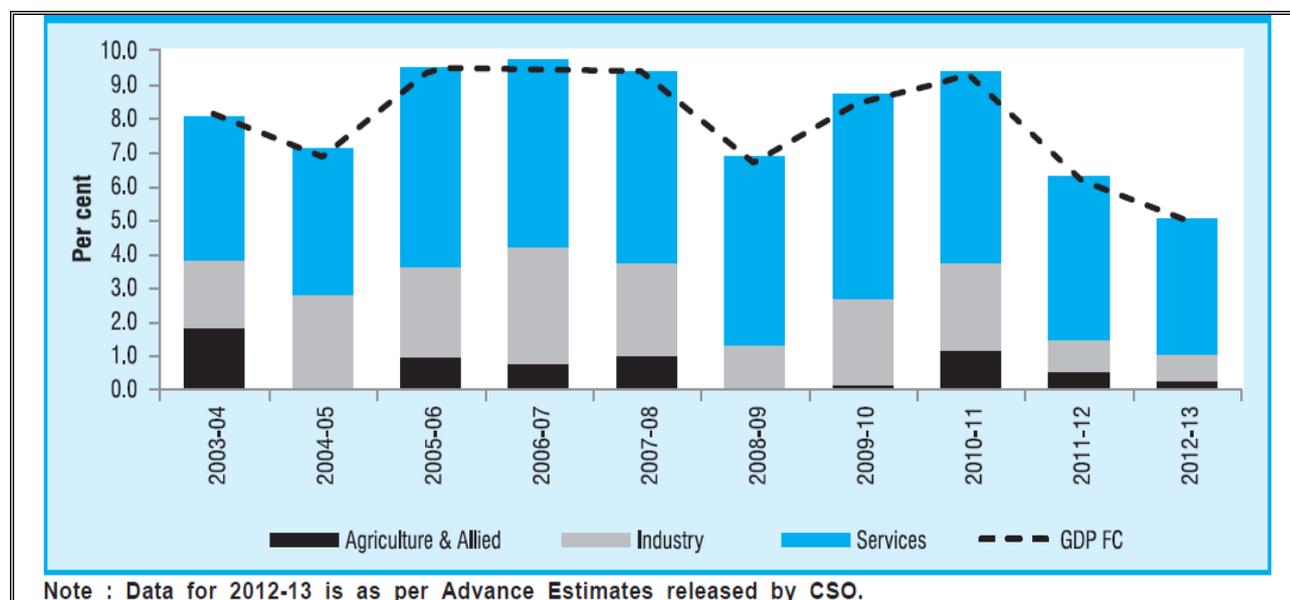
The latest data released by the Department of Industrial Policy and Promotion (DIPP) revealed that India received FDI worth US\$ 30.82 billion during April-January 2012-13 while FDI equity inflows during January 2013 stood at US\$ 2.16 billion. The sectors which have received high level of FDI during the first ten months of 2012-13 include services (US\$ 4.66 billion), construction (US\$ 1.21 billion), drugs & pharmaceuticals (US\$ 1 billion), hotel and tourism (US\$ 3.19 billion), metallurgical industries (US\$ 1.38 billion) and automobile (US\$ 895 million).

According to the data released by Reserve Bank of India (RBI) Indian companies have invested US\$ 1.65 billion abroad in February 2013. According to data published by Securities and Exchange Board of India (SEBI) Foreign Institutional Investors (FIIs) made a net investment (including equity and debt) worth Rs 168,367 crore (US\$ 30.72 billion) in 2012-13. Moreover, US\$ 310.47 million in the equity and US\$ 41.32 million in the debt market were invested by FIIs, as on May 16, 2013, as per the SEBI data. Foreign Exchange Earnings (FEE) from tourism in India registered a growth of 19 per cent to touch Rs 10,186 crore (US\$ 1.86 billion) in February 2013 as compared to Rs 8,502 crore (US\$ 1.55 billion) during the same period last year.

The growth in the Indian economy as observed in the last decade has increasingly come from the services sector, whose contribution to overall growth of the economy has been 65 per cent, while that of the industry and agriculture sectors has been 27 per cent and 8 per cent respectively.

The following figure shows the contributions of these sectors to the overall growth of the Indian economy from 2003-04 to 2012-13.

Fig 1.0 GDP Growth and Point Contribution of Different Sectors



1.2 Agriculture and Food Management

Agriculture is the dominant sector of Indian economy which determines the growth and sustainability of it. About 65 per cent of the population still relies on agriculture for employment and livelihood. India is the first in the world in the production of milk, pulses, jute and jute-like fibres; second in rice, wheat, sugarcane, groundnut, vegetables, fruits and cotton production; and is a leading producer of spices and plantation crops as well as livestock, fisheries and poultry.

However, agriculture including allied activities, accounted for only 14.1 per cent of the GDP in 2011-12. The declining share of the agriculture and allied sector in the country's GDP is consistent with the normal development trajectory of any fast growing economy, but fast agricultural growth remains vital for jobs, incomes, and food security. Average annual growth of the agriculture and allied sector during the Eleventh Five Year Plan at 3.6 per cent fell short of the target of 4 per cent but was higher than the average annual growth of 2.5 and 2.4 per cent achieved during the Ninth and Tenth Plans respectively.

An important reason for the dynamism of the agriculture sector has been a step up in the Gross Capital Formation (GCF) relative to GDP of this sector. Overall GCF in agriculture (including the allied sector), more than doubled in the last 10 years and registered an average annual growth of 8.1 per cent. During the Eleventh Plan period, food grains production witnessed an increasing trend, except in 2009-10. During 2011-12, total food grains production reached a record of 259.3 million tonnes. However, the production of 2012-13 kharif crops is likely to be adversely affected by deficiency in the south-west monsoon and resultant acreage losses. The output for all the major crops is expected to decline. In order to boost investments in the sector, the Government of India has allowed 100 per cent Foreign Direct Investment (FDI) under automatic route in storage and warehousing including cold storages. The government has also allowed 100 per cent FDI under the automatic route for the development of seeds.

1.3 Industry and Infrastructure

Sluggish industrial performance has also affected corporate performance. The rate of growth of sales of the listed manufacturing companies in the private sector declined from an average of 28.8 per cent in the first quarter of 2010-11 to 11.4 per cent in the second quarter of 2012-13.

The aggregate resource flow to industry, including credit disbursed by the banks and money raised in domestic and overseas market through other instruments, however, has been showing some signs for optimism. The total flow of financial resources to the commercial sector in the current financial year so far (up to 11 January 2013) has been higher compared to the corresponding period of the previous year.

The eight core infrastructure industries registered a growth of 3.3 per cent during April-December 2012 compared to 4.8 per cent during the same period of the previous year. The decline in growth in the current year so far is mainly on account of negative growth witnessed in the production of coal, natural gas, and fertilizers. Among infrastructure services, freight traffic by railways has been comparatively higher during the first eight months of the current year. In the road sector the National Highways Authority of India (NHAI) achieved 17.3 per cent growth in widening and strengthening of highways during April-November 2012.

1.4 Services Sector

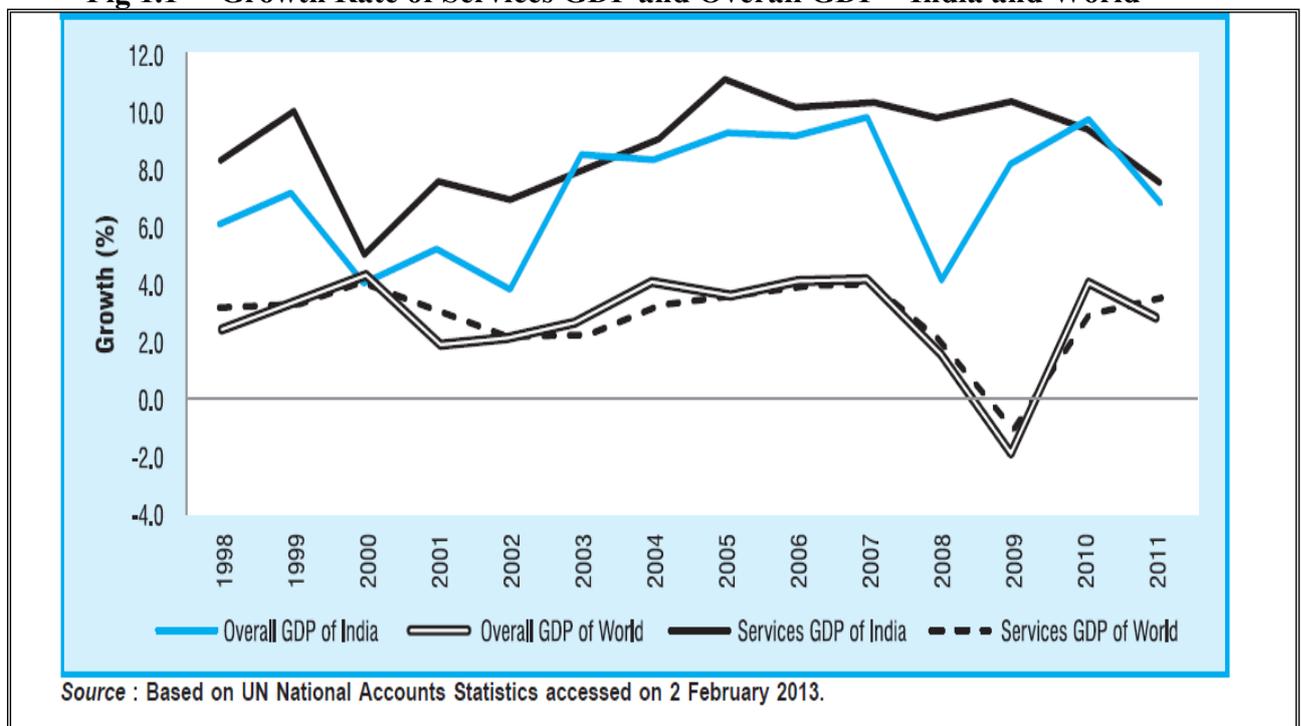
The services sector covers a wide array of activities ranging from services provided by the most sophisticated sectors like telecommunications, satellite mapping, and computer software to simple services like those performed by the barber, the carpenter, and the plumber; highly capital-intensive activities like civil aviation and shipping to employment-oriented activities like tourism, real estate, and housing; infrastructure-related activities like railways, roadways, and ports to social sector related activities like health and education. Thus, there is no one-size-fits-all definition of services resulting in some overlapping and some borderline inclusions. The National Accounts classification of the services sector incorporates trade, hotels, and restaurants; transport, storage, and communication; financing, insurance, real estate, and business services; and community, social, and personal services.

1.4.1 An Overview of India's Services Sector

India ranked 9th in overall GDP and 10th in services GDP among the top 15 countries with the highest overall GDP in 2011. A comparison of the services performance of the top 15 countries in the eleven-year period from 2001 to 2011 shows that the increase in share of services in GDP is the highest for India (8.1 per centage points) followed by Spain. While China's highest services Compound Annual Growth Rate (CAGR) of 11.1 per cent was accompanied by marginal change in its share of services for this period, India's very high CAGR (9.2 per cent) which was second highest was also accompanied by the highest change in its share. India's services sector has emerged as a prominent sector in terms of its contribution to national and states incomes, trade flows, FDI inflows, and employment.

Services GDP - The growth story overall and services of world and India in the 2000s began from almost the same level of around 4-5 per cent. But over the years, India's overall and services growth rates have outpaced those of the world. Interestingly, unlike world services growth, which has been moving in tandem with its overall growth with mild see-saw movements over the years, India's services growth has been consistently above its overall growth in the last decade except for 2003. Thus, this sector has been pulling up the growth of the Indian economy with a great amount of stability (Figure 1.1).

Fig 1.1 Growth Rate of Services GDP and Overall GDP – India and World



As per Advance Estimates (AE) the share of services in India's GDP at factor cost (at current prices) increased from 33.3 per cent in 1950-1 to 56.5 per cent in 2012-13, including construction, the share would increase to 64.8 per cent in 2012-13. Among the various services sub-sectors trade, hotels, and restaurants as a group is the largest contributor to India's GDP with an 18.0 per cent share, followed by financing, insurance, real estate, and business services with a 16.6 per cent share. Community, social, and personal services with a share of 14.0 per cent is in third place. Construction, a borderline services inclusion, is at fourth place with an 8.2 per cent share.

Table 1.1 Share and Growth of India's Services Sector (at factor cost)

	(per cent)								
	2000-01	2005-06	2006-07	2007-08	2008-09	2009-10 [^]	2010-11 [@]	2011-12 [*]	2012-13 ^{**}
Trade, hotels, & restaurants	14.6 (5.2)	16.7 (12.2)	17.1 (11.1)	17.1 (10.1)	16.9 (5.7)	16.5 (7.9)	17.2 (11.5)	18.0 (6.2)	25.1# (5.2)
Trade	13.3 (5.0)	15.1 (11.6)	15.4 (10.8)	15.4 (9.8)	15.3 (6.7)	15.1 (8.5)	15.7 (11.5)	16.6 (6.5)	
Hotels & restaurants	1.3 (7.0)	1.6 (17.4)	1.7 (14.4)	1.7 (13.0)	1.5 (-3.3)	1.4 (1.9)	1.5 (10.8)	1.5 (2.8)	
Transport, storage, & communication	7.6 (9.2)	8.2 (11.8)	8.2 (12.6)	8.0 (12.5)	7.8 (10.8)	7.7 (14.8)	7.3 (13.8)	7.1 (8.4)	
Railways	1.1 (4.1)	0.9 (7.5)	0.9 (11.1)	1.0 (9.8)	0.9 (7.7)	0.9 (8.8)	0.8 (5.9)	0.7 (7.5)	
Transport by other means	5.0 (7.7)	5.7 (9.3)	5.7 (9.0)	5.6 (8.7)	5.5 (5.3)	5.3 (7.3)	5.3 (8.2)	5.4 (8.6)	
Storage	0.1 (6.1)	0.1 (4.7)	0.1 (10.9)	0.1 (3.4)	0.1 (14.1)	0.1 (19.3)	0.1 (2.2)	0.1 (9.4)	
Communication	1.5 (25.0)	1.6 (23.5)	1.5 (24.3)	1.4 (24.1)	1.4 (25.1)	1.4 (31.5)	1.1 (25.4)	0.9 (8.3)	
Financing, insurance, real estate, & business services	13.8 (4.5)	14.5 (12.6)	14.8 (14.0)	15.1 (12.0)	15.9 (12.0)	15.8 (9.7)	16.0 (10.1)	16.6 (11.7)	17.2 (8.6)
Banking & insurance	5.4 (-2.4)	5.4 (15.8)	5.5 (20.6)	5.5 (16.7)	5.6 (14.0)	5.4 (11.4)	5.6 (14.9)	5.7 (13.2)	
Real estate, ownership of , dwellings & business services	8.7 (7.5)	9.1 (10.6)	9.3 (9.5)	9.6 (8.4)	10.3 (10.4)	10.4 (8.3)	10.4 (6.0)	10.8 (10.3)	
Community, social, & personal services	14.8 (4.6)	13.5 (7.1)	12.8 (2.8)	12.5 (6.9)	13.3 (12.5)	14.5 (11.7)	14.0 (4.3)	14.0 (6.0)	14.3 (6.8)
Public administration & defence	6.6 (1.9)	5.6 (4.3)	5.2 (1.9)	5.1 (7.6)	5.8 (19.8)	6.6 (17.6)	6.1 (0.0)	6.1 (5.4)	
Other services	8.2 (7.0)	7.9 (9.1)	7.6 (3.5)	7.4 (6.3)	7.5 (7.4)	7.8 (7.2)	7.9 (8.0)	7.9 (6.5)	
Construction	6.0 (6.1)	7.9 (12.8)	8.2 (10.3)	8.5 (10.8)	8.5 (5.3)	8.2 (6.7)	8.2 (10.2)	8.2 (5.6)	8.2 (5.9)
Total Services	50.8 (5.4)	53.1 (10.9)	52.9 (10.1)	52.7 (10.3)	53.9 (10.0)	54.5 (10.5)	54.4 (9.8)	55.7 (8.2)	56.5 (6.6)
Total Services (incl. Construction)	56.8 (5.5)	61.0 (11.1)	61.0 (10.1)	61.2 (10.3)	62.4 (9.4)	62.7 (10.0)	62.6 (9.8)	63.9 (7.9)	64.8 (6.5)
Total GDP	100.0 (4.3)	100.0 (9.5)	100.0 (9.6)	100.0 (9.3)	100.0 (6.7)	100.0 (8.6)	100.0 (9.3)	100.0 (6.2)	100.0 (5.0)

Source : Central Statistics Office (CSO).

Notes :Shares are in current prices and growth in constant prices;

Figures in parenthesis indicate growth rate;

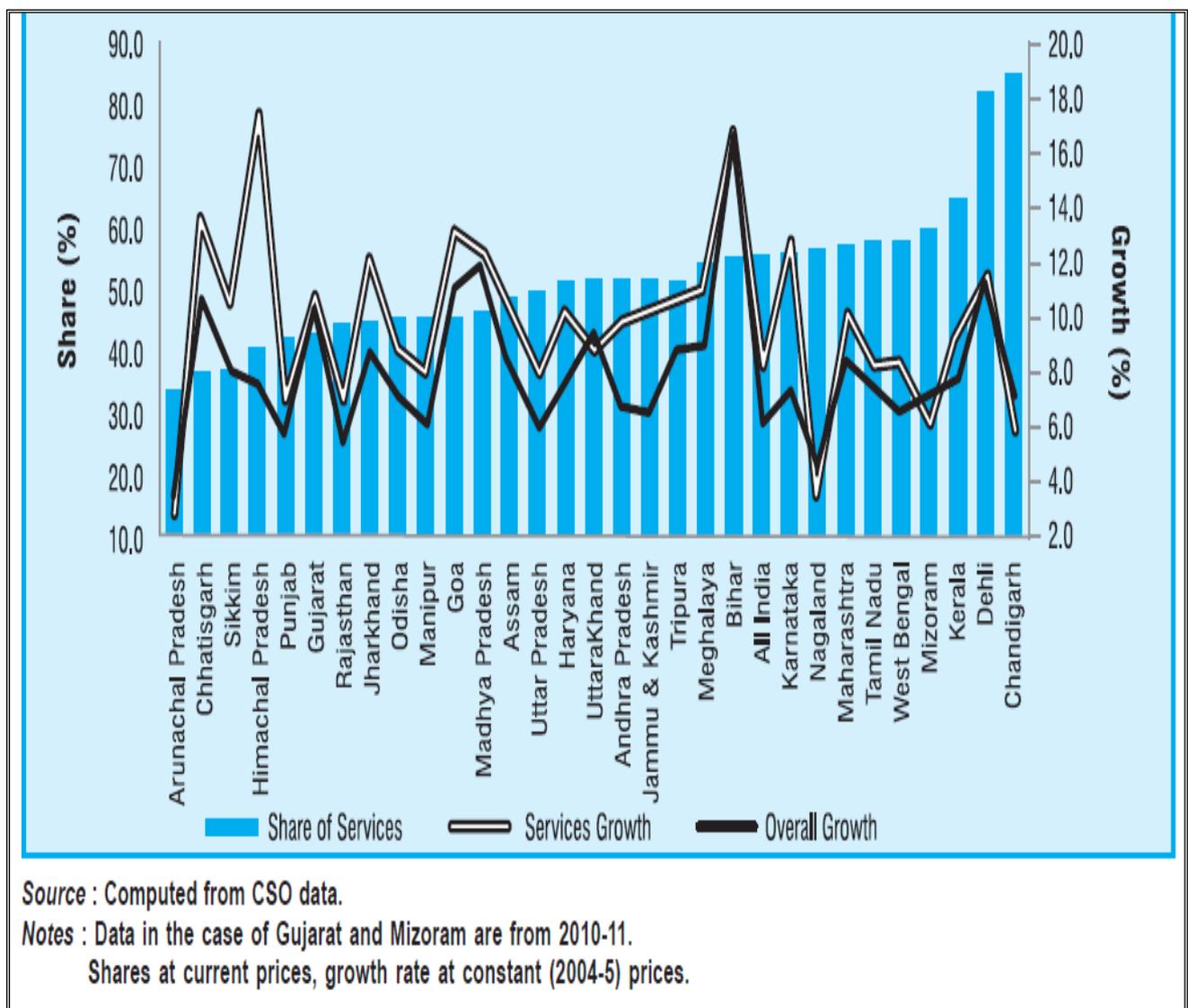
* first revised estimates, @ second revised estimates, ^ third revised estimates,

** Advance Estimate (AE);

includes the shares and growth of both trade, hotels, & restaurants and transport, storage, & communication only for 2012-13.

The CAGR of the services sector GDP at 10 per cent for the period 2004-5 to 2011-12 has been higher than the 8.5 per cent CAGR of overall GDP during the same period. However, in 2011-12 and 2012-13, there has also been a deceleration in growth rate of services sector at 8.2 per cent and 6.6 per cent respectively. Among the major broad categories of services, ‘financing, insurance, real estate, and business services’, which continued to grow robustly both in 2010-11 and 2011-12 decelerated to 8.6 per cent in 2012-13. While in 2011-12 growth in ‘trade, hotels, and restaurants’ and ‘transport, storage, and communication’ slowed down to 6.2 per cent and 8.4 per cent respectively, in 2012-13 ‘trade, hotels, and restaurants’ and ‘transport, storage, and communication’ combined grew by an estimated 5.2 per cent.

Fig 1.2 State Wise Comparision of Share and Growth of Service Sector in 2011-12



FDI in the Services Sector - The growth of the services sector is closely linked to the FDI inflows into this sector and the role of transnational firms. While the ambiguity in classifying the different activities under the services sector continues, the combined FDI share of financial and non-financial services, construction development, telecommunications, computer hardware and software, and hotel and tourism can be taken as a rough estimate of the FDI share of services, though it could include some non-service elements. This share is 47 per cent of the cumulative FDI equity inflows during the period April 2000- November 2012. The five service sectors are also the sectors attracting the highest cumulative FDI inflows to the economy with financial and nonfinancial services topping the list at US\$ 36.04 billion during the period April 2000-November 2012. This is followed by other service sectors like —construction development (US\$21.77 billion), telecommunication (US \$12.62 billion), and computer software and hardware (US \$ 11.54 billion). If the shares of some other services or service-related sectors like trading (1.96 per cent), information and broadcasting (1.65 per cent), consultancy services (1.11 per cent), construction (infrastructure) activities (1.06), ports (0.88 per cent), agriculture services (0.80 per cent), hospital and diagnostic centers (0.82 per cent), education (0.36 per cent), air transport including air freight (0.24 per cent), and retail trading (0.02 per cent) are included then the total share of cumulative FDI inflows to the services sector would be 56.08 per cent.

In 2011-12, FDI inflows to the services sector (top five sectors including construction) grew robustly at 57.62 per cent to US \$ 12.14 billion compared to the growth of overall FDI inflows at 33.6 per cent. However, in 2012-13 (April-November), overall FDI inflows fell by 43.3 per cent to US\$ 15.85 billion from US\$ 27.93 billion in the corresponding period of the previous year. Following this trend, FDI inflows in the top five services also fell by 9.7 per cent to US \$ 8.19 billion. Among them, while FDI inflows to the top four services sectors fell in the range of 14 to 97 per cent, FDI inflows to the hotel and tourism sector increased by a very high 328 per cent over the corresponding period in the previous year.

Services Employment in India - The pattern of sectoral share of employment has changed over the last two decades with the share of agriculture falling from 64.75 per cent in 1993-4 to 53.2 per cent in 2009-10 and of industries (excluding construction) falling from 12.43 per cent to 11.9 per cent. The shares of the services and construction sectors in employment, on the other hand, increased in the same period from 19.70 per cent to 25.30 per cent and 3.12 per cent to 9.60 per cent respectively. As per the National Sample Survey Office's (NSSO)

report on Employment and Unemployment Situation in India 2009-10, on the basis of usually working persons in the principal and subsidiary statuses, for every 1000 people employed in rural India, 679 people are employed in the agriculture sector, 241 in the services sector (including construction), and 80 in the industrial sector. In urban India, 75 people are employed in the agriculture sector, 683 in the services sector (including construction) and 242 in the industrial sector. Construction; trade, hotels, and restaurants; and public administration, education, and community services are the three major employment-providing services sectors.

Performance of Services Firms: A Sectoral Overview - The Centre for Monitoring Indian Economy's (CMIE) analysis of the sector-wise performance of services activities based on firm-level data show that the performance of sectors such as transport logistics, aviation and construction in the year 2012-13 is subdued in comparison to with the previous year. High negative PAT in hotel sector continued. The health services and telecom sectors are projected to have rebounded in the year 2012-13. Overall the year 2013-14 is projected to be better for most of the sectors, except retail trading, which is projected to have negative growth in profitability. This negative growth is contributed by two factors—one is the base effect with high Profit After Tax (PAT) growth in the year 2012-13; and the other is an expected shrinking of margins in 2013-14 due to increase in operating costs and price cuts driven by high competition (Table 1.2).

Table 1.2 Performance of Select Services Firms

Sector	Annual Growth (per cent change over previous year)								
	Sales			PAT			Expenditure		
	2011-12	2012-13*	2013-14*	2011-12	2012-13*	2013-14*	2011-12	2012-13*	2013-14*
Transport logistics	11.0	1.8	11.9	5.8	-2.5	16.3	13.4	3.1	10.8
Shipping	9.3	12.9	4.2	-78.5	63.7	84.0	23.0	9.5	0.0
Aviation	10.6	-0.2	8.0	-	-	-	21.0	-4.2	7.5
Retail trading	-10.3	10.6	12.3	24.9	169.6	-59.4	-2.5	7.8	12.3
Health services	16.6	21.1	19.5	-22.0	52.4	24.7	18.8	20.0	17.8
Hotel	9.2	9.5	11.0	-77.5	-76.2	-11.7	16.4	12.9	10.9
Telecom	8.9	9.5	11.8	-71.0	39.9	56.2	13.0	12.6	11.4
Software	21.3	19.3	10.7	16.2	19.6	5.2	26.0	18.5	11.8
Construction	18.6	12.1	17.2	-2.6	0.4	19.3	21.6	13.6	16.4

Source: CMIE Industry Analysis (Compiled by Exim Bank of India).
Note: * Forecast.

1.4.1.1 Indian Aviation Industry

The aviation sector in India holds immense potential for growth; more so because it receives great impetus from the booming tourism industry driven by higher disposable incomes and favourable demographics. The last five years have witnessed significant investments by large and small domestic companies, indigenous aerospace and defence industry has been evolving in a big way.

According to the data released by Department of Industrial Policy and Promotion (DIPP) the total domestic passengers carried by the scheduled domestic airlines in November 2012 were 5.02 million (465, 000 higher than those carried in October 2012). The number of passengers carried by domestic airlines was 53.4 million between January-November 2012. The air transport (including air freight) in India has attracted Foreign Direct Investment (FDI) worth US\$ 448.40 million from April 2000 to December 2012. Moreover, according to 'Indian Aviation: Spreading its Wings'- a report prepared by PwC with an industry body, the Indian civil aviation sector has continued to witness high passenger growth (domestic traffic Compounded Annual Growth Rate [CAGR] is 17 per cent from 2009 to 2011), and if the trend sustains, it could be among the top three aviation markets in the world by 2020.

1.4.1.2 Banking Sector in India

Banking is the heart of India's financial services sector. The banking industry has undergone numerous changes over the past few years to be at par with international banking norms and standards. While the banks' motive has shifted from social banking to profit banking, dependence on ledgers, documents, cheques and slips has been replaced by electronic initiatives or cashless banking.

According to the Reserve Bank of India (RBI)'s 'Quarterly Statistics on Deposits and Credit of Scheduled Commercial Banks', March 2012, Nationalized Banks accounted for 53.0 per cent of the aggregate deposits, while the State Bank of India (SBI) and its Associates accounted for 21.8 per cent. The share of New Private Sector Banks, Old Private Sector Banks, Foreign Banks, and Regional Rural Banks in aggregate deposits was 13.0 per cent, 4.8 per cent, 4.4 per cent and 3.0 per cent, respectively. Nationalized Banks accounted for the highest share of 52.0 per cent in gross bank credit followed by State Bank of India and its Associates (22.5 per cent) and New Private Sector Banks (13.5 per cent). Foreign Banks, Old

Private Sector Banks and Regional Rural Banks had shares of around 4.8 per cent, 4.8 per cent and 2.4 per cent, respectively

RBI revealed that foreign exchange reserves increased by US\$ 1.05 billion and stood at US\$ 293.37 billion for the week ended March 22, 2013. Furthermore, India's economic expansion has made Indian banks more global in their approach. Ten banks have opened 100 branches in foreign jurisdictions as of February, 2013. Increasing mobile penetration, coupled with higher Smartphone adoption has led an uptrend in mobile banking. Number of transactions through mobile banking witnessed a jump of 64 per cent in the April-December 2012 period, according to data from the RBI.

1.4.1.3 Healthcare Industry in India

India is the most competitive destination with advantages of lower cost and sophisticated treatments, as highlighted by the RNCOS report titled 'Indian Healthcare - New Avenues for Growth'. The Indian healthcare sector is estimated to reach US\$ 100 billion by 2015, growing 20 per cent year-on-year (y-o-y), as per rating agency Fitch. The industry is expected to touch US\$ 280 billion by 2020, on the back of increasing demand for specialised and quality healthcare facilities.

According to data provided by Department of Industrial Policy and Promotion (DIPP) the hospital and diagnostic centre in India has attracted Foreign Direct Investment (FDI) worth US\$ 1,542.35 million, while drugs & pharmaceutical and medical & surgical appliances industry has registered FDI worth US\$ 9,783.31 million and US\$ 584.14 million, respectively during April 2000 to December 2012. As per RNCOS report titled 'Indian Pharma Sector Forecast 2014'. Indian pharmaceutical industry is projected to show double-digit growth in near future owing to a rise in pharmaceutical outsourcing and rising investments by multinational companies.

1.4.1.4 Real Estate Industry in India

The Indian economy has witnessed robust growth in the last few years and is expected to be one of the fastest growing economies in the coming years. Demand for commercial property is being driven by India's economic growth. The sector is not only the biggest contributor to Gross Domestic Product (GDP) of the country but is also the fourth largest sector in terms of Foreign Direct Investment (FDI) inflows in the country. Construction development sector

(including townships, housing, built-up infrastructure & construction-development projects) has attracted a cumulative FDI worth US\$ 21,765.55 million from April 2000 to November 2012. FDI flows into the construction sector for the period April-October 2012-13 stood at US\$ 691 million, (Department of Industrial Policy and Promotion - DIPP).

The two main reasons responsible for boom in the real estate industry in India include liberalisation of Government policies, which has decreased the need for permissions and licenses before taking up mega construction projects and the expanding industrial sector. The Indian real estate market size is expected to touch US\$ 180 billion by 2020. In fact, the demand is expected to grow at a Compound Annual Growth Rate (CAGR) of 19 per cent between 2010 and 2014, with tier I metropolitan cities projected to account for about 40 per cent of this.

1.4.1.5 Indian Telecom Industry

The telecommunication services have been recognised as an important tool for socio-economic development of a nation. It is one of the prime support services needed for rapid growth and modernisation of various sectors of the economy. India with a user base of 120 million is the world's third largest internet market and is poised to have up to 370 million users in 2015.

India is expected to have 130.6 million mobile internet users by March 2014, according to a joint study by the Internet and Mobile Association of India (IAMAI) and Indian Market Research Bureau (IMRB). The number of users accessing internet through mobile devices was 87.1 million in December 2012.

With the number of internet connections and the usage of computing devices on the rise, India's internet industry can contribute up to US\$ 100 billion to India's Gross Domestic Product (GDP) and generate about 22 million jobs by 2015, as per a report titled 'Online and Upcoming: The internet's Impact on India', released by McKinsey and Co. Internet services and devices industry has potential to increase its contribution up to 3.3 per cent to the country's GDP by 2015. The telecommunications industry attracted Foreign Direct Investments (FDI) worth US\$ 12,623 million between April 2000 to December 2012, an increase of 7 per cent to the total FDI inflows in terms of US\$, according to the latest data published by Department of Industrial Policy and Promotion (DIPP).

1.4.1.6 Education Sector in India

Education is an important means of modernisation. There is a huge demand for up gradation of education as India is expected to have a surplus of 47 million people in the working age group by 2020. As a result, both the formal education sector (including K-12 and higher education) as well as informal sector (including coaching institutions, pre-schools and vocational institutions) are witnessing rapid growth in India.

According to the consulting firm Technopak the Indian education system, considered as one of the largest in the world, and is divided into two major segments of core and non-core businesses. India Ratings expects the Indian education sector's market size to increase to Rs 602,410 crore (US\$ 111.16 billion) by FY15 due to the expected strong demand for quality education. The sector grew at a compounded annual growth rate of 16.5 per cent during FY05-FY12. The private education sector is estimated to reach US\$ 70 billion by 2013 and US\$ 115 billion by 2018.

According to the data released by the Department of Industrial Policy and Promotion (DIPP) the education sector has attracted Foreign Direct Investments (FDI) worth Rs 3,239.76 crore (US\$ 597.68 million) during April 2000 to December 2012.

1.4.1.7 Financial Services in India

The Indian financial services market happens to be one of the oldest and robust across the globe, comprising primary markets, Foreign Direct Investments (FDI), alternate investment options, banking, insurance and asset management segment. It is definitely fast growing and best among other emerging economies. Insurance Sector: Life insurance industry, comprising over 20 companies, including public sector Life Insurance Corporation (LIC) of India, collected total premium of Rs 84, 501.75 crore (US\$ 15.48 billion) during the April-February period of 2012-13 fiscal. Private insurers together raked-in Rs 23, 796.29 crore (US\$ 4.36 billion) in these 11 months.

1.4.1.8 IT & ITeS Industry in India

The Indian Information Technology (IT) and Information Technology enabled Services (ITeS) sectors go hand-in-hand in every aspect. The industry has employed almost 10 million Indians and hence, has contributed a lot to social transformation in the country.

Industry body National Association of Software and Services Companies (Nasscom) predicts that the ITeS industry will bring in around US\$ 225 billion by 2020, wherein 80 per cent of the growth would come from the presently untapped sectors and regions.

According to Nasscom, a majority of the Fortune 500 and Global 2000 corporations are sourcing IT/ITES from India and it is the premier destination for the global sourcing of IT & ITES accounting for 55 per cent of the global market in offshore IT services and garnering 35 per cent of the ITES/BPO market. India's IT and BPO sector exports are expected to grow by 12-14 per cent in FY14 to touch US\$ 84 billion - US\$ 87 billion. The report entitled 'Online and Upcoming: The internet's Impact on India', released by McKinsey and Co. stated that internet industry of India is expected to contribute US\$ 100 billion to the country's Gross Domestic Product (GDP) and generate about 22 million jobs by 2015. The Department of Industrial Policy and Promotion (DIPP) also stated that between April 2000 and December 2012, the computer software and hardware sector attracted cumulative Foreign Direct Investment (FDI) of Rs 52,377.08 crore i.e. US\$ 9.63 billion.

1.5 Tourism & Hospitality Industry in India

India's rich cultural heritage and history, food, friendly people, architectural monuments, hospitality and services are positive strengths for its tourism sector, which place it ahead of many of the emerging markets.

Today, tourism is the most vibrant tertiary sectors and has a strong hold on the economy. The sector contributes 6.23 per cent to the national Gross Domestic Product (GDP) and 10.2 per cent of the total employment in India. As per the Twelfth Five Year Plan approach paper, India's travel and tourism sector is estimated to create 78 jobs per million rupees of investment compared to 45 jobs per million rupees in the manufacturing sector. Moreover, according to the report entitled 'Competitiveness of Tourism Sector in India with Selected Other Countries of the World' by Ministry of Tourism, stated that India stands 42nd in the world rankings in terms of Foreign Tourist Arrivals (FTAs) in the country. The World Travel and Tourism Council (WTTC) named India as one of the fastest growing tourism industries for the next 10 to 15 years. In addition, as per the RNCOS report entitled 'Booming Medical Tourism in India', India has also developed as one of the world's most cost-efficient medical tourism destinations, and is anticipated that the Indian medical tourism market will register a Compound Annual Growth Rate (CAGR) of 27 per cent during 2011-15.

As per the data provided by Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce, the amount of Foreign Direct Investments (FDI) inflow into the hotel and tourism sector during April 2000 to January 2013 was worth US\$ 6,561.78 million. FTAs have shown a growth of 2.8 per cent in March 2013 over March 2012 while the growth rate in Foreign Exchange Earnings (FEEs) from tourism stood at 21 per cent over the same period in rupee terms. FTA during March 2013 was recorded at 640,000 as compared to 623,000 during the month of March 2012. The Visa on Arrival (VoA) Scheme of the Government of India has registered a growth of 54.6 per cent in February 2013. A total number of 1,947 VoAs were issued last month as compared to 1,259 VoAs issued in February 2012.

1.5.1 Major Developments & Investments

- According to the data released by South African Tourism, India is among the top five tourism source markets for South Africa. The country has received 79,306 Indian tourists during January-September 2012.
- According to a cost comparison study done by TripAdvisor on common incidental items and services that travelers purchase while staying at a hotel, Mumbai is among the 10 most affordable destinations in the world.
- The International Tourism Mart organized by the Ministry of Tourism was inaugurated at Guwahati by Mr. Janaki Ballav Patnaik, Governor of Assam. It is the first international tourism event to be organized in the North Eastern region of India.
- India and Canada plan to strengthen cooperation in tourism sector. Both the countries will identify areas for working together and explore new opportunities in tourism sector.
- India and Japan plan to strengthen cooperation in tourism sector. Both the countries will identify areas for working together and explore new opportunities in tourism sector especially in the field of human resource development and investment in the tourism sector.
- Egypt has initiated talks with the Tata Group to set up a hotel chain in the African country.
- InterContinental Hotels Group (IHG) has signed 13 new hotels in India in 2012, boosting its existing pipeline of hotels in the country to 47.

- Marriott International plans to open 52 more properties in India over a period of four years.
- Tourism Corporation of Gujarat Ltd (TCGL) and Indian Oil Corporation Ltd (IOCL) have signed a Memorandum of Understanding (MoU) to help promote tourism in the State by offering facilities to tourists at IOCL petrol pumps.
- Accor, a European hotel operator, had first launched its property, Hotel Formule 1, in Gujarat. Now, the company is contemplating to have another property in the same city. The group owns brands like Sofitel, Pullman, MGallery, Novotel, Suite Novotel, Mercure, Adagio, Ibis, and Formule1, which range from budget to luxury hotels, and the upcoming property could be any one of them. Accor has 19 hotels with 3780 rooms and two convention centers in India. Formule 1 is its low-cost brand. After opening a Formule1 in Greater Noida recently, it opened the second Formule 1 in Ahmedabad. It is all prepared to launch a third one in Pune and intends to have 15 Formule 1 hotels in India over the next few years.

1.5.2 Government Initiatives

- The Ministry of Tourism, Government of India, has consistently been working on improving India as a prime destination for tourists. It further aims at promoting various Indian tourism products vis-à-vis competition faced from various destinations and to increase India's share of the global tourism market.
- The Government of India allows 100 per cent Foreign Direct Investment (FDI) in the hotel sector on automated basis.
- The allocation for Ministry of Tourism in the Union Budget 2013-14 has been increased by Rs 87.66 crore (US\$ 16.03 million) to Rs 1,297.66 crore (US\$ 237.23 million).
- Moreover, the Indian companies in the hotel sector, with a total project cost of Rs 250 crore (US\$ 45.70 million) or more, irrespective of their geographical location, have been allowed to tap the External Commercial Borrowing (ECB) route. The maximum ECB by an individual company or group, as a whole, has been restricted to US\$ 3 billion.
- The fourth meeting of ASEAN and India Tourism Ministers was held in Vientiane, Lao People's Democratic Republic (PDR). A protocol to amend the Memorandum of

Understanding (MoU) between ASEAN and India to strengthen tourism cooperation was also signed.

- In a bid to give a boost to tourism in Uttarakhand, the State Government has identified 21 places endowed with natural beauty to develop them into major tourist destinations.
- The Ministry of Tourism has also sanctioned Central Finance Assistance (CFA) worth Rs 43.87 crore (US\$ 8.02 million) for the development of Solapur mega circuit in Maharashtra.

1.6 Hospitality Industry

The Indian Hospitality Industry is one of the fastest growing sectors of the Indian economy. Riding on the economic growth and rising income levels that India has been experiencing in the past few years, it has emerged as one of the key sectors driving the country's economy. Currently its market size is USD 23 billion, accounting for 2.2% of the GDP. The disposable income of Indians is on the rise. An average increase in household income, with more and more double income households in the urban areas, is also contributing to this phenomenon. According to National Council for Applied Economic Research (NCAER) estimates, there are 56 million people in households earning USD\$4,400- US\$21,800 a year, which is defined as the middle class. The upper middle and high-income urban households were estimated to have grown to 38.2 million in 2007 from 14.6 million in 2000. India topped the 2006 AT Kearney Global Retail Development Index. This is indicative of a rise in spending on consumer durables, electronics, clothes, entertainment, vacations and lifestyle products. Vacations have emerged as the top priority for disposing of extra money. Compared to 2002, Indians are now spending 30-35% more on their holidays.

Within the hospitality industry, there are a number of key industries; prominent amongst them are hotels and restaurants, each of which has witnessed a surge in their growth over the past few years.

As per an analysis by the Economy Survey of India and Technopak (2008), the Hotel industry is a USD 17 Billion industry. Of this, 70% (USD 11.85 Billion) contribution comes from the unorganized sector and the remaining 30% (USD 5.08 Billion) comes from the organized sector. A break up of the organized hotel industry indicates that the foremost contribution is coming from 5 star rated hotels. Despite a dip in the year 2009, an upward trend in growth of

overall Hotel Industry is further expected, whereby it is expected to grow to USD 36 Billion by 2018.

On the demand side, over the past few years there has been a consistent increase in the number of hotel rooms which is close to 5 % in the last 3-4 years. However the rate of increase is still not enough to meet the rising demand, and requires further investment in this sector to meet the increased demand. The investment scenario however looks positive. In an addition to over 20 new international hotel brands in 2011, the Hospitality sector is expected to see an estimated investment of USD 12.17 billion in the next 2 years.

Most hotels adopt an aggressive marketing strategy for the MICE (Meetings, incentives, conferences, and exhibitions) segment and demand from this category is likely to rebound strongly. The outlook for the hospitality market in India is optimistic and will continue to remain so. The economy's buoyancy, initiatives to improve infrastructure, growth in the aviation and real estate sectors and easing of restrictions on foreign investment – will fuel demand for hotels across star categories in the majority of markets. India's hotel industry is increasingly being viewed as investment-worthy, both within the country and outside, and several international chains are keen to establish or enhance their presence here. It is anticipated that, over the next three to five years India will remain as one of the world's fastest growing tourism markets and will be hard to ignore.

Nevertheless, marketing tools innovations are overriding today, due to the evolution and the characteristics of the food industry. Therefore, Hotels have constantly to add new tools in their marketing strategy in order to get a real competitive advantage on the market. For instance, Internet, own website, booking page or even a delivery service are some of the new tools. Another tool that the Hotels have taken initiation to implement but the customer is not much aware of it is the Sensory Marketing. According to samresearch.com the general definition of the concept states that “Sensory Marketing is an effective tool in gaining sensory customer insights for a marketing strategy”. It measures and explains emotional customer decision-making by variability of products, concepts, packaging, and marketing mix scenarios to ensure long-lasting success. In the food industry, sensory marketing is already being used to some extent. Many restaurants, fast-foods and bakeries try to galvanize the five senses of the customer by artificial systems like smell injector machines, lighting, sound system and so on.

According to Rieunier (2002), the sensory marketing approach tries to fill in the deficiencies of the “traditional marketing” which is too rational. Classic marketing is based on the idea that the customer is rational, that his/her behaviour is broken up in defined reasoned steps, according to the offer, the competition or the answer to his/her needs.

In contrast to the traditional marketing, sensory marketing puts the experiences lived by the customers and their feelings in the process. These experiences are not only functional, but also have sensorial, emotional, cognitive, behavioural and relational dimensions. Sensory marketing aims to create the adequacy of the products with their design and their packaging, and then to valorize the product in a commercial environment to make the product attractive. Wherein, the customer behaves according to his/her impulsions and emotions, more than his/her reason.

For many marketers and customers, the affectivity, perception, experience and pleasure are more important than the price of the product/service. Since many products are now technically found similar, they have to be differentiated or be unique in some other way. For example, the catering marketplace this statement comes highly true, because it is often difficult to differentiate between two bakeries or two pizzerias. The good taste of the product is not enough in this context. The surrounding, the sensation of pleasure created by stimulating the senses of the customers will imminently come into play and would provide competitive advantage.

To substantiate the above statement, Kotler (1973) in his research had already mentioned the need for brands to position themselves differently, i.e. according to the price or the assortment. Kotler explain the influence of the point of sale’s physical environment on the behaviour of the customers and gave a definition of the atmosphere as “the creation of a consumption environment that produces specific emotional effects on the person, like pleasure or excitation that can increase his possibility of buying”. He considered the creation of this atmosphere as the most important strategic way of differentiation for retailers.

In business today, there is a need for the marketers to understand that the more number of senses a brand appeals to, the stronger becomes the connection and communication with the customers. When this concept is applied to the hospitality marketplace, appealing the senses of the customers becomes the core activity. Therefore, sensory marketing is an efficient tool for the brand which wants to ameliorate its offer, as all the senses can be mastered. Sensory marketing, which need to be developed in companies as strategies, could be thus integrated as

a promising marketing strategy in the future as it offers the companies “something more” than others, than the competition.

In short, it is sought to know how Sensory Marketing, which is known in a theoretical way, can be used in the real professional world. The most impelling thing about it is the subject itself: for it is always interesting to study upcoming techniques, something that has not been fully used so far but that has future ahead.

The interviews informally conducted by the researcher with the General Managers, Marketing Heads, Hotel Guests available during the course of the study and distribution of the questionnaire in the select different hotels and cities, revealed that the use of sensory marketing suffers of a lack of awareness from the hospitality marketplace’s actors. In order to make this tool gain in better knowledge, it would be interesting to develop formation and practicing of this concept, which was also suggested and given consent by the people mentioned above.

There has been tremendous growth in the hospitality sector and the markets are abuzz with anticipation. There have been a few notable hotel asset transactions and investments that have taken place, reinstating the fact that the investors and buyers have faith in the business. Budget and the mid-market segments are likely to command a greater voice as the most preferred investment categories and are most likely to sustain market demand during this passing period of uncertainty, during which concepts such as Spa resorts, convention centres and wellness centers could be sought out as interesting alternatives which drive demand and offer hotels sustainable advantages.

As the nature of Hospitality services are similar, it is essential to implement a new marketing strategy to differentiate one brand of Hotel from the other in a way to combat competition and hence the relevance of this study.

This study on Multisensory Marketing in hospitality sector holds good as it concentrates on the less explored aspect of Multisensory which positively impacts the overall growth and sustainability of the Hotels. The literature review also reveals that application of Multisensory Marketing in service sectors, specifically Hotels, is an exclusive and promising strategy.

1.7 Literature Review of Multisensory Marketing

1. Deborah J. MacInnis and Linda L. Price, (1987), “The Role of Imagery in Information Processing: Review and Extensions”, *The Journal of Consumer Research*, Vol. 13, No. 4, Mar., 1987, pp. 473-491 - This study describes imagery, characterizing it as a processing mode in which multisensory information is represented in a gestalt form in working memory, and discusses research on the unique effects of imagery at low levels of cognitive elaboration. It specifies researchable propositions for the relationship between high elaboration imagery processing and consumer choice and consumption behaviours. Imagery is likely to have a positive impact on incidental learning. Since much of consumer learning is incidental, imagery may be even more important in consumer contexts than in other problem-solving contexts. Imagery processing also may encourage within-brand product evaluation strategies. Within-brand strategies, in turn, have implications for how missing information is dealt with. Imagery processing provides a uniquely appropriate mode for evaluating the sensory qualities of products.
2. Evelyn Gutman, (1988) “The Role of Individual Differences and Multiple Senses in Consumer Imagery Processing: Theoretical Perspectives”, (1988), *Advances in Consumer Research*, Volume 15 – This study is based on an important marketing issue concerning how consumers evaluate information. Imagery processing can influence how consumers respond to marketing stimuli. Understanding how consumers use imagery in their multiple senses will allow markets to realize the benefits that effective use of imagery offers. This study discusses individual differences in imagery ability, single sensory vis-a-vis multisensory stimulation and neuroscience perspectives on processing in various senses to provide background for testing marketing issues. Differences in mental imagery and separation of sensory activities mean that people can be reached in different ways. Future research that correlates brain activity with various responses would be illuminating. Understanding how individuals differ in their abilities to process imagery in various senses, and how use of imagery influences the way consumers interpret their environment, can help identify more effective ways to reach the consumer.
3. Meryl P. Gardner, (1990) “Consumers' Mood States and the Decision-Making Process”, *Marketing Letters*, Vol. 1, No. 3 (Nov., 1990), pp. 229-238 - This manuscript investigated the effects of mood states on the decision-making process by examining its effects on internally generated thoughts. Specifically, the effects of mood states on thoughts

associated with needs that are higher and lower in Maslow's hierarchy, sensory benefits, and experiential and informational processing are examined. Literature addressing these issues is reviewed, hypotheses are developed, and an empirical study is described. Findings suggest the decision-making process may be related to needs higher in Maslow's hierarchy, involve more sensory thoughts, and be more experiential when consumers are in positive mood states. Conversely, findings suggest the decision-making process may be related to needs lower in Maslow's hierarchy, involve fewer sensory thoughts, and be more informational when consumers are in negative moods.

4. Alvin C. Burns, Abhijit Biswas, Laurie A. Babin, (1993) "The Operation of Mental Imagery as a Mediator of Advertising Effects", *Journal of Advertising*, Vol. 22, No. 2, pp. 71-85. - The study suggests that advertising strategists should be interested in visual imagery because it may represent a useful way to shape consumers' impressions. A framework is tested which casts visual imagery as a mediating factor and individual differences, such as style of processing, as potential moderators of certain advertising strategies which elicit attitude and intentions differences in consumers. Results indicate that the vividness of visual imagery does operate as a latent cognitive construct when concrete wording is used in advertising copy. Instructions to imagine, however, are not found to induce visual imagery. It is concluded that visual imagery vividness has the potential to trace consumers' mental reactions to certain advertising strategies and to explain attitudinal and intentions consequences.
5. Charles S. Gulas and Peter H. Bloch, (1995) "Right under Our Noses: Ambient Scent and Consumer Responses", *Journal of Business and Psychology*, Vol. 10, No. 1, (Sep., 1995), pp. 87-98 - Based on research from several disciplines, a model describing the effect of ambient scent on consumers was proposed. Ambient scent was portrayed as an environmental cue that is compared with scent preferences to influence affective responses and ultimately approach-avoidance reactions. The role of ambient scent on consumer behaviour remains largely unexplored. Decision making in the area of atmospherics is still largely based on trial and error or intuition. Unlike decision areas such as pricing and promotion, there is relatively little atmospherics research to provide guidance. Research into the effects of scent may also help understand the ambient effects and situational variables in general. By detailing the effects of one situational variable,

ambient scent, one may gain insight into the overall importance of this group of variables and the amount of variance that might be explained by them.

6. Andrew Steptoe, Tessa M. Pollard and Jane Wardle, (1995) “Development of a Measure of the Motives Underlying the Selection of Food: the Food Choice Questionnaire”, Appetite, Volume 25, Issue 3, December 1995, pp. 267–284, describe that a number of factors are thought to influence people’s dietary choices, including health, cost, convenience and taste, but there are no measures that address health related and non-health-related factors in a systematic fashion. This study described the development of a multidimensional measure of motives related to food choice. Nine factors emerged and were labeled health, mood, convenience, sensory appeal, natural content, price, weight control, familiarity and ethical concern. Differences in motives for food choice associated with sex, age and income were found.
7. Anna S. Mattila, (1999) “Do Emotional Appeals Work for Hotels? An Exploratory Study”, Emerald 10, (1999). This research investigates that despite huge expenditures spent in the advertising of hotels, the communication of service quality is a relatively unexplored research topic. The main goal of this study was to examine the relative effectiveness of emotional appeals in advertising hotels to potential new customers. Moreover, the author explores the effectiveness of the following cues in the message strategy: employees or customers portrayed in the ad, pricing information, and documentation strategy emphasizing service excellence. The results of this investigation suggest that appealing to a novice consumer’s emotional responses may be highly desirable in terms of creating a favorable attitude toward a hotel brand.
8. Ann Marie Fiore, Xinlu Yah, and Eunah Yoh, (2000)“Effects of a Product Display and Environmental Fragrancing on Approach Responses and Pleasurable Experiences”, Psychology & Marketing, Vol. 17(1):27-54 (January 2000)- The effects of atmospherics (i.e., a product display, pleasant and [in] appropriate ambient fragrances) on approach responses toward a product (global attitude, purchase intention, estimated price, and price the customer is willing to pay) and pleasurable experiences (sensory, affective, and cognitive pleasure) were investigated. In addition, the mediating effects of sensory, affective, and cognitive pleasure on approach responses toward a product were examined.

Findings suggest the importance of combining a display with environmental fragrancing as a marketing tool to enhance the sale and profit margin of certain products.

9. J. M. Murray and C. M. Delahunty (2000), "Consumer Preference for Irish Farmhouse and Factory Cheeses", *Irish Journal of Agricultural and Food Research*, Vol. 39, No. 3 (2000), pp. 433-449 – Conducted a study wherein descriptive, sensory and clustered consumer-preference data were related using Partial Least Squares (PLS) regression and the sensory characteristics of cheeses preferred by the consumer segments were identified. One segment preferred a "coloured" cheese with a "balanced", "sweet" and "nutty" flavor, whilst a second segment preferred cheese with "Cheddary" and more "strength" of flavor and a more "firm", "grainy" and "crumbly" texture. A third segment preferred cheese with "rancid", "mouldy", "mushroom" and "bitter" flavor and a fourth segment liked all cheeses, but preferred a factory cheese characterized by "strength" of flavor.

10. Adrian Palmer, Patrick McCole, (2000) "The Role of Electronic Commerce in Creating Virtual Tourism Destination Marketing Organizations", *International Journal of Contemporary Hospitality Management*, 12/3 (2000), pp. 198-204. This study examines the reciprocal linking of Websites to create "virtual" tourism destination organizations, whereby consumers can access information and purchase multiple components of a holiday online. A very simple starting point in the formation of a virtual destination marketing organization is the linking of individual suppliers' Websites, so that a visitor arriving at one site can click through to complementary sites which contribute to the total destination offer. This study examines the theoretical and practical benefits of virtual co-operation and reports on a survey, which examines the extent to which electronic commerce is superseding or complementing traditional hierarchical marketing organizations. Based on a sample of tourism suppliers' Websites in Northern Ireland, very little co-operation was observed. The reasons for this are discussed and recommendations made for future co-operation.

11. Claire Dormann, "Seducing Consumers, Evaluating Emotions", (2001), *IHM-CHI*, pp. 10–14, investigates the role and value of emotion in electronic commerce. Emotion plays a critical role in shopping, as shown by marketing studies. Although emotional research is emerging in human- computer interaction, practical measures of affective responses are few. SAM (Self-Assessment Manikin) originally developed by Lang, is proposed as a tool.

This study examines the suitability of using SAM for the emotional evaluation of web pages. The study finds a relation between emotions and design factors and finds colour and product representation influencing the user's reaction. The study helped to gain some insights in emotional design and the possible correlation between emotions and usability. The study concludes that, emotion has a strong influence on people's behaviour and if a consumer is not emotionally satisfied with a page or a site then the site might be perceived as less usable. The reverse might also be true.

12. Charles Spence and Alberto Gallace, (2001) "Multisensory Design: Reaching out to Touch the Consumer", *Psychology & Marketing*, 28(3), 2001, pp. 267-308. – This article states that touch plays an important, though often under acknowledged, role in the evaluation/appreciation of many different products, therefore, there has been growth of interest in "tactile branding" and tactile marketing. This article reviews the evidence from the fields of marketing, psychology, and cognitive neuroscience, demonstrating just how important the feel of a product, not to mention the feel of its packaging, can be in determining people's overall product evaluation. Problems for tactile design associated with the growth of the aging population, and the growth of Internet-based shopping, are highlighted. The research argues that tactile stimulation may influence multisensory product evaluation by means of affective ventriloquism: It suggests that the hedonic attributes of a product perceived via one modality (such as touch) can "pull" a person's estimates of the quality and pleasantness of the product derived from other sensory modalities into alignment, and by so doing, modulate a person's overall (multisensory) product experience.

13. Hairong Li, Terry Daugherty, and Frank Biocca, (2002) "Impact of 3-D Advertising on Product Knowledge, Brand Attitude, and Purchase Intention: The Mediating Role of Presence", *Journal of Advertising*, Vol. 31, No. 3, Advertising and the New Media (Autumn 2002), pp. 43-57 - The study is designed to explore the concepts of virtual experience and presence, with the results largely supporting the proposition that 3-D advertising is capable of enhancing presence and, to varying degrees, ultimately influencing the product knowledge, brand attitude, and purchase intention of consumers. The study interestingly finds that 3-D advertising results in better knowledge and more positive brand attitude than 2-D advertising. The conceptualization of a virtual experience has emerged because advancements in computer technology have led to a movement

toward more multisensory on-line experiences. The marketing implications are immediate because the ability to create a compelling virtual product experience is not beyond the current capability of interactive advertising. By creating compelling on-line virtual experiences, advertisers can potentially enhance the value of product information presented and engage consumers in an active user-controlled product experience.

14. Martin Lindstrom, (2005) “Broad Sensory Branding”, *Journal of Product & Brand Management*, 14/2 (2005), pp. 84–87. The purpose of this research paper was to reveal data that have emerged from an extensive study into the relationship between the five senses and brands. Results revealed that 99 per cent of all brand communication currently focuses on only two of the senses – sight and sound. Emotional connections are effectively made with a synergy of all five senses, and as such those brands that are communicating from a multi-sensory brand platform have the greatest likelihood of forming emotional connections between consumers and their product.
15. Stephen Bell, (2006) “Future Sense: Defining Brands through Scent”, *GDR Creative Intelligence* 2006, Issue 21. This study demonstrates that a brand will undoubtedly reach deeper into a consumer’s psyche if it can communicate with them on many levels. The possibilities for brands to benefit from scent-sory branding are big, but it has to be relevant to the target audience and how the brand wants them to feel. For those brands considering the scent-sory approach, it really is about relevance and creating an experience. Scent-sory branding doesn’t have to be just about selling; it can build a relationship too. The sensory future will be defined by those products and services that enhance the experiences and stimulate the less-exploited senses. Brands that will be most successful will be the ones that use a multi-dimensional approach that defines their identity and unexpectedly reaches out to consumers beyond the visual appeal of their environments, advertising or packaging. If executed in the right way, it should result in making relationships deeper. And that is the key. No one wants to be overpowered by a brand’s smell – but they do respond well to gentle triggers or signals they can identify with. And with so far only 35% of leading companies predicted to be taking this on board in the next.
16. Alistair Williams, (2006) “Tourism and Hospitality Marketing: Fantasy, Feeling and Fun”, *International Journal of Contemporary Hospitality Management*, Vol. 18 No. 6, 2006, pp.

482-495. This study seek to introduce the experiential marketing debate and demonstrate how the questions raised by the concept are critical to an understanding of marketing theory and research within the tourism and hospitality sectors. Experiential marketing is arguably marketing's most contemporary orientation, but as with many marketing innovations it has been largely overlooked by those involved in tourism and hospitality marketing and promotion. Whilst in many industries companies have moved away from traditional features and benefits approaches, to putting experiential marketing centre-stage, marketing in the tourism and hospitality sectors does not appear to have explicitly engaged the theoretical issues involved. The tourism and hospitality sectors cannot be seen to be immune to fundamental changes in the orientation of marketing. Innovative experience design will become an increasingly important component of tourism and hospitality firms core capabilities. Those who go beyond service excellence and market experientially will lead the creation of value in the sector.

17. Dr. Martin Kern, Dr. Paolo Tamagni, Sven Henneberg, (2006) "The Right Juice for Every Taste - Sensory Marketing", *Fruit Processing International Journal* Volume 6/2006, pp. 386-390 – The study considers the success of a fruit juice or a soft drink like any other product depends upon its marketing mix. Product presentation is the leading enticement for the consumer's initial purchase; the product's intrinsic, sensory properties are the key drivers for a repeat purchase. Sensory marketing allows manufacturers to customerize the marketing-mix elements to fit and ascertain the needs of various groups. Sensory marketing may turn products into sensory benchmarks. The study shows that an undifferentiated strategy loses valuable market potential because more specific consumer needs are not met. Sensory marketing approach not only reveals the importance of their interaction, uncovers market potential and identifies the direction towards successful general concepts. Sensory marketing points the way towards all product relevant criteria, i.e. sensory properties, packaging, layout, price, product claims, etc. Through sensory marketing, the marketing strategies will be more efficient and prevent consumer confusion; product development becomes a systematic and innovative approach.
18. Jurgen Bihler, (2007) "Multisensory Packaging Design Increases Brand Loyalty, Shelf Impact" *Packaging Digest*, May 2007. This research demonstrates sensuality is enticing, which is why producers of brand-name goods are increasingly banking on differentiation through point-of-sale (POS) packaging that appeals to all human senses. Multisensoric is

more than just a new buzzword in packaging design. Since the latest research findings tell that the brain ignores brands, producers of brand name goods and packaging experts are well advised to appeal to consumers at the POS in a multisensoric manner by using their products and packaging to stimulate and arouse emotions. The study proves: More than 60 per cent of consumers want multisensory packaging and are prepared to pay for it. Lindstrom forecasts that two out of every 10 of the world's leading producers of brand-name goods will soon analyze and redefine their so called brand signature. This will result, in multisensory strategies to secure sustained loyalty for their brands—and thus to secure their existence as well. This also means optimizing the design of their produce packaging as a component of branding.

19. Jeff Stephens, (2007) “Stop and Smell”, ABA Bank Marketing, October 2007 - This article, elicits three ways to prove a brand story through the sense of sound: music, sound (non-music) and speech. Muzak's Bob Finigan, vice president of product and marketing is of the opinion that What the bank's brand sounds like has increasingly become important to banks, and that Banks see music as the best way to experientially connect with customers. Thus sound is one of the Multisensory Marketing tools which the banks should use to prove its story and let customers know exactly what the bank stands for. The research also suggests there are multiple ways to express bank’s uniqueness; however, the key is to be consistent.
20. Neelima Ruparel, (2007) “From CRM to CEM (Customer Experience Management): The New Marketing Paradigm for Competitive Advantage”, Enhancing Enterprise Competitiveness (Marketing, People, IT and Entrepreneurship), 2007, Institute of Management, Nirma University of Science and Technology, Allied Publishers. As evolution is also on the more in the present day business environment that has become highly volatile and perplexing. Not so long ago, companies were talking about how to deliver a differentiated product offering and constantly improve customer service in order to achieve customer satisfaction. However, products and services are no longer the primary differentiator since they are commoditized to a form of almost uniform blandness. Thus the only differentiator that companies can rely on to achieve a competitive advantage is the experience created with a brand that a customer carries in his head, CEM is becoming the new frontier of marketing for customer-centric organizations.

21. Massimiliano Zampini et al, (2007) “The Multisensory Perception of Flavor: Assessing the Influence of Colour Cues on Flavor Discrimination Responses”, *Food Quality and Preference* 18 (2007), pp. 975–984. This research reports two experiments that were designed to investigate the influence of visual colour cues on people’s flavor discrimination and flavor intensity ratings for a variety of fruit flavored solutions. In Experiment 1, the participants had to associate specific flavors with solutions of various colours simply by looking at them (i.e., without tasting them). In Experiment 2, the participants tasted the solutions and had to discriminate the flavor of solutions that had been coloured either ‘appropriately’ or ‘inappropriately’, or else presented as colourless solutions. It was also worth noting that the colours that are present in food and might affect people’s flavor identification at both a perceptual and at a more semantic level. With regard to the nature of any semantic interactions between visual cues and flavor perception, the notion of redness could presumably be communicated to participants either by colouring the drink red, or else by packaging the drink in a red container perception.
22. C. Raz, D. Piper et al., (2008) “From Sensory Marketing to Sensory Design: How to Drive Formulation Using Consumers’ Input?”, *Food Quality and Preference* 19 (2008) pp. 719–726, conducted a research emphasizing companies need to continuously innovate to maintain market leadership. When the market is overloaded the challenge consists in creating innovative products able to attract and satisfy consumers. The aim of this research was to set-up an operational protocol that aids in creating innovative products using a sensory marketing approach, i.e. involving consumers at different stages of the process and demonstrates the validity of this protocol. The chosen product – a specific category of drink – has been duplicated by many competitors; therefore, it is necessary to create again differentiation by improving its sensory characteristics. The results showed that the main factors which drive consumer preference for this concept are colour intensity and flavoring. Pack size and label type are taken into account by the consumer to a lesser extent. The ideal combination of the studied factors was also determined and lead to an agreement between product developers and marketers.
23. Andrew G. Parsons, (2009), “Use of Scent in a Naturally Odorless Store”, *International Journal of Retail & Distribution Management*, Vol. 37 No. 5, 2009, pp. 440-452 - The purpose of the study here was to introduce the concept of associated scents for retail

stores that are normally odorless, and provide an understanding of how associated scent can be used by these non-scented retailers to influence shopper behaviour and the appeal of the store. Previous studies have suggested that simply having a pleasant scent present can enhance liking for the store and encourage positive sales behaviour, however, this study shows that for a store that is normally odorless, the scent needs to have a perceived association with the store-type to gain positive responses. Presence of a pleasant but non-associated scent can actually lead to negative affective or behavioural responses.

24. Annica Isacson and Leena Alakoski, (2009) “Using Multiple Senses in Tourism Marketing”, 4th International Scientific Conference “Planning for the Future – Learning from the Past: contemporary Developments in Tourism, Travel & Hospitality”, Rhodes, Greece 3-5 April 2009 - In this research the focus was on inter medial, multisensory applications applicable and beneficial within and for the tourism industry. The research strongly suggests that future development of techniques and technologies for the purpose of tourism marketing communication are strongly driven by customer needs, amusement, excitement, value-added experiences, participation and interactivity. The idea of this project was to enhance the demand and to improve the availability of tourism services through new types of marketing communication involving inter medial solutions and multiple senses. The research argued that in the future the activation of sight and hearing in tourism marketing communication is not enough.

25. Mathieu Blondeau, Amélie Tran, Umeå School of Business, (2009), in their master’s thesis on “Scent Marketing: What is the Impact on Stores in Umea?” – This research suggests that consumers have become less rational and more emotional in their way of buying. The scent marketing is then used to create an atmosphere and to involve the consumer in an emotional purchase process. The research suggests that as relatively few people are aware of this kind of marketing, using it can provide a competitive advantage compared to competitors. The scent marketing is also useful to catch people’s attention outside the shop. People will notice the shop more easily and then enter it more easily also. Manager should remember that the scent marketing should not be used alone but part of a whole sensorial marketing strategy. The more senses are involved to reach customers the more efficient will be the strategy.

26. Anna Fenko et al, (2009) “What Makes Products Fresh: the Smell or the Colour?”, *Food Quality and Preference* 20 (2009), pp. 372–379. This study uses an experimental approach to investigate sensory dominance in the product experience of freshness. Freshness is important for food products, beverages personal care products and cleaning products. Olfaction was found to be more important than vision in determining the degree of freshness for those products for which freshness is relevant for the product’s main function (such as a soft drink and dishwashing liquid). On the other hand, both olfaction and vision seemed to contribute equally to the experience of freshness for those products for which freshness is optional, but not a necessary characteristic (such as a scented candle). These results can help to understand the experience of freshness in different product contexts and can be used in product development.
27. Terhi Suhonen, Jenny Tengvall, Börje Boers, (2009) “Branding In The Air - A Study About The Impact Of Sensory Marketing”, Bachelor Thesis within Business Administration, Jönköping University, December 2009 - This experiment revealed that adding of a congruent sensory stimulus, in this case scent, as a strategic marketing tool had a positive effect on the overall brand perception. It is also revealed that both product-related and non-product-related attributes were perceived more positively as a result of the adding of the sensory stimulus. Generally, quality is perceived higher and price has less importance. Involving the human senses activates unconscious reactions on an emotional level resulting in a stronger attachment towards the brand. Brand associations evoked by the sensory stimulus strengthen the value of the brand as long as the stimulus is congruent with the other brand elements and adjusted for the target. It can therefore be used as a communication tool to highlight the strategically important brand attributes in order to affect consumers on an emotional level.
28. Heather Hartwell and John Edwards, (2009) “Descriptive Menus and Branding in Hospital Foodservice: A Pilot Study”, *International Journal of Contemporary Hospitality Management*, Vol. 21 No. 7, 2009, pp. 906-916 - This pilot study evaluates consumer’s perceptions towards descriptive menus and branding in hospital foodservice. This research uniquely focused on dish description rather than concentrate on palatability and the variety of the menu. Menu description was welcomed with patients preferring familiar foods. The general consensus was that an unfamiliar dish would not be selected on brand name alone. Providing patients with the choice of familiar foods that they enjoy in their

home environment is selection risk free and could help counterbalance their own negative stereotypical views of institutional food. Any initiative such as improved dish description or use of familiar branded products that alleviates patient concern and concurrently leads to greater acceptance must be one that is regarded with favor.

29. The article “Dollars and Sense: The Impact of Multi-Sensory”, 4imprint, Inc, 2009 - Suggests that sensory marketing which is exploding. As companies diversify their product offerings, new sensory marketing tactics will better allow consumers to trial a new product before purchasing. Likewise, sensory cues such as sound and smell will help companies develop greater emotional connections to their brands. Sound is perhaps the easiest point of entry for brands looking to experiment with sensory marketing. The senses influence consumers’ emotions and decision-making. Touch, smell, taste, sound, and the look of a product all play an important role in the consumers’ perceptions, attitudes and consumption of a product. Understanding these roles provides a valuable advantage in the marketplace.

30. Annica Isacson and Leena Alakoski, (2009) “Using Multiple Senses in Tourism Marketing - The Helsinki Expert Case”, presented at the Third International Conference on “Sustainable Tourism Development”, Södertörn University, Stockholm/Huddinge, Sweden, November 25th-27th 2009 - The idea of this study draws on the assumption that traditional tourism marketing methods are not sufficient as they tend to overemphasize the visuals. Smell, sound, touch, taste and sight must be touched, in order for communication to be perceived valuable and interesting, and suggest that the activation of multiple senses enhances the feeling of authenticity and experience. If combined with ration and need, in addition to the involvement of other users, only then can tourism marketing claim to be future-oriented and engaging. In this paper the researcher briefly present how a specific tourism company can benefit from the usage of multiple senses in a campaign/selling situation. According to the research survey sales increased by 51 % during scented weeks. The research has shown studies indicating positive correlations between the use of e.g. ambient scent and consumption, the perception of wellness, quality, service experience, and bonding. There is thus some evidence on the impact of senses in order to engage emotions, feelings, bonding, the perception of quality and success. There is, however, not enough research on inter medial multisensory

combinations, technological solutions and technical applications, at least not within the tourism industry.

31. Jing Bill Xu and Andrew Chan, (2010) “A Conceptual Framework of Hotel Experience and Customer Based Brand Equity - Some Research Questions and Implications”, *International Journal of Contemporary Hospitality Management*, Vol. 22 No. 2, 2010, pp. 174-193 - This research shows the increasing discussion of the way in which quality of experience and brand equity is developed in the hotel industry. Hotels often use advertising, referral marketing and services marketing to help guests acquire brand-related information. In the proposed framework, brand equity includes four dimensions: brand awareness, brand associations, QoE, and brand loyalty. The combination of the first three dimensions culminates in brand knowledge, which is proposed to have an influence on brand loyalty, the core of brand equity. The antecedents of brand equity are proposed to be advertising, WoM, and service performance, all of which hotel managers have utilized to build such equity. Advertising and WoM, which formulate customers’ indirect experiences, mainly shoulder the responsibility of creating brand awareness and brand associations that reflect search image attributes. The framework of hotel brand equity herein proposed in this study claims to be able to answer the questions raised by Keller and Lehmann (2006).

32. A.E. Kirby and A.M. Kent, (2010) “Architecture as Brand: Store Design and Brand Identity”, *Journal of Product & Brand Management*, 19/6 (2010) 432–439 - Conducted a research study with an aim to examine the relationship between the architecture of retail stores and the communication of brand identity. Buildings even in relatively mundane industrial sectors present opportunities to create a distinctive visual style for designers and architects and retail brand strategists. Meaning and the value of the brand changes over time, and through the use of distinctive buildings firms can invoke a sense of continuity and connection to the past. The sense of permanence in architecture contributes to its visual communicative power, and engages with stakeholders in the open-ended co-creation of the brand. Such buildings have an ability to inspire visitors and could be used as a part of a communications strategy by the brand owner. In this context, Jencks (2005) discusses the iconic building’s ability to liberate the imagination, and for retailers to create a more memorable and enjoyable experience through its interpretation.

33. Marija Cerjak, Damir Kovacic, Croatia and Rainer Haas, (2010) “Brand Familiarity and Tasting in Conjoint Analysis - An Experimental Study With Croatian Beer Consumers”, *British Food Journal*, Vol. 112 No. 6, 2010, pp. 561-579 - The aim of the study here was to determine, via an empirical study of beer consumers in Croatia, the influence of tasting on the validity of Conjoint Analysis (CA) under presence of familiar or unfamiliar brands. Beer consumers have relatively well defined preferences for brands and very often associate beer taste with its brand and image. The results of this study indicate that tasting should be used as a stimulus presentation method for CA with food and beverage products/brands, which are unfamiliar to the consumers. When testing familiar brands and brands with established perceptions, simpler and less expensive verbal stimulus presentation can be used.
34. Hannele Kauppinen and Harri T. Luomala, (2010) “Exploring Consumers’ Product-Specific Colour Meanings”, *Qualitative Market Research: An International Journal*, Vol. 13 No. 3, 2010, pp. 287-308 - The study seeks to advance the understanding of the role of package colours in consumers’ product experiences by studying the relationship between colour meanings and product. It also aims at offering insights into the meanings associated with colours in a product context. Based on the evidence, the proposed framework is further elaborated so that it could better capture the connections between colour and consumers’ product experiences. Finally, the study suggests that a very important function played by colours is that of communication. Product-specific colour meanings in marketing research have received attention mainly in food studies, where food colours have been found to communicate product taste and flavor. This study suggests that also package colours evoke expectations about the product, i.e. colours serve as cues of the product experience.
35. Elin Eriksson and Niklas Larsson, (2011) “A Multi-Sensory Brand-Experience – Sensorial Interplay and Its Impact on Consumers' Touch Behaviour”, Master thesis, Linneaus University, School of Business and Economics, Kalmar, June, 2011.– The research show how practitioners can use sensory marketing as a means to enhance customers’ emotional response and behaviour. The study’s result proves that sensory cues and styling elements have a positive impact and is an effective way to create a stimulating environment leading to acknowledgement of products. This research also indicates that

sensory cues and styling elements are inexpensive ways to create stronger brand images where B2C relationships are in focus.

36. Johan Bruwer, Bernadette Miller, and Anthony Saliba, (2011) “Consumer Behaviour and Sensory Preference Differences: Implications for Wine Product Marketing”, *Journal of Consumer Marketing*, 28/1 (2011) Pg. 5–18, conducted a study with an overall aim to gain some insights into the product style preferences of consumers and what this means in practical terms to wine product marketing. Specific differences exist in the wine consumption behaviour and sensory preferences of males and females and between generational cohorts, specifically Millennial and older consumers. What emerged is that females bring significant sensory preference and behavioural differences, to their early encounters with wine; these differences appear to diminish with increasing experience with wine. From a sensory preference viewpoint, fruit tastes and aromas are by far the most important, especially among females, as are vegetative characters, wood/oak, and mouth-feel characters. More males, on the other hand, preferred the aged characters of wine.
37. Roland H. Bartholme’ and T.C. Melewar, (2011) “Exploring the Auditory Dimension of Corporate Identity Management”, *Marketing Intelligence & Planning*, Vol. 29 No. 2, 2011, pp. 92-107 - This research study aimed to expand the domains of corporate identity and corporate communication by focusing on the auditory dimension as a component of company-controlled communication. The study not only illustrated the importance of the auditory dimension as part of corporate identity management, it also provided initial suggestions of antecedent factors that are expected to determine the utilization of sound on a corporate level. The conceptualization of auditory identity alongside visual identity will help to overcome the visual predominance (Balmer, 2001a).
38. Rajnish Jain, and Shilpa Bagdare, (2011) “Music and Consumption Experience: A Review”, *International Journal of Retail & Distribution Management*, Vol. 39 No. 4, 2011, pp. 289-302, conducted a study with a purpose to examine the influence of music on consumption experience and explore the relationships between musical variables and consumer responses in the context of retailing. The studies report that music influences consumption experience at cognitive, emotional, and behavioural levels, specifically with regard to attitudes and perceptions, time and money spend, and moods and feelings, in

retail experience. The influence of music is moderated by customer and store profiles, purchase timings, and other ambience factors. The study concludes: Music of all types, as a sensory stimulus, has a significant effect on shopping experience. Musical variables both structural and affective significantly influence shopping experience and can be manipulated to produce desired responses. The effect of music on shopping experience is moderated by consumer profile, store profile, ambient factors, and time of purchase.

39. Margarita Vergara et al, (2011) “Perception of Products by Progressive Multisensory Integration - A Study on Hammers”, *Applied Ergonomics* 42 (2011) 652-664 - The aim of this work was to determine the influence of multisensory i.e. visual-haptic integration and the level of interaction on the perception of products, including perceived ergonomics. The product selected for the experiment was the hammer, as this will help to establish whether emotional design studies can also apply to ‘commercial’ products. Subjective opinions of users were evaluated through semantic differential tests. Results show that Lightness and Dynamic Effects are quite sensitive to the level of interaction, while Ergonomics/Appearance is partially affected. However, the perceptions of Innovation, Quality/Robustness and Efficacy were not so affected and they could be detected through a lower level of interaction (i.e. seeing photographs). This suggests that commercial products seem sensitive to emotional design studies and that multisensory integration enhances the perception of the factors that are clearly linked with physical interaction between users and tools, i.e. Ergonomics/Appearance, Lightness and Dynamic Effects.
40. Bertil Hulten, (2011) “Sensory Marketing: The Multi-Sensory Brand-Experience Concept”, *European Business Review*, Vol. 23 No. 3, 2011, pp. 256-273 - The purpose of this study is to present the multi-sensory brand-experience concept in relation to the human mind and senses. It also seeks to propose a Sensory Marketing (SM) model of the multi-sensory brand-experience hypothesis. The study provides a theoretical and practical contribution on the multi-sensory brand-experience concept, and a SM model was developed through a methodology that yields new concepts and models. The main conclusion was that the SM-model highlights the significance of the multi-sensory brand-experience in differentiating, distinguishing and positioning a brand in the human mind as an image. A firm can use sensorial strategies expressed through sensors, sensations and sensory expressions in relation to the five human senses in leaving imprints of a good or service. An important theoretical implication was that the multi-sensory brand-experience

is the ultimate outcome of a value-generating process between a supplier and a customer. Another theoretical implication was that the multi-sensory brand-experience is central to branding, as a result of value creation and value-generating processes.

41. Luca Cian and Sara Cervai, (2011) “The Multi-Sensory Sort (Muses) - A New Projective Technique to Investigate and Improve The Brand Image”, *Qualitative Market Research: An International Journal*, Vol. 14 No. 2, 2011, pp. 138-159 – The study indicates the lack of tools able to catch the symbolic dimension of the brand image, which goes beyond rational and emotional dimensions. This study aims to find and test a new instrument, named “Multi-Sensory Sort” (MuSeS). Muses uses multi-sensory paths, providing results able to support 360 degrees of communication and marketing actions. MuSeS allows for the collection of stimuli (colours, materials, etc.), adjectives and semantic areas connected with the ideal image. MuSeS is suitable for two goals: to analyze the “symbolic links” of an existing brand image (and this happens only in the case of well-known brands) and to explore the brand future implementations and improvements. The multi-sensory marketing seems indeed very profitable also with very common products (Krishna, 2009).
42. M.S. Balaji, Srividya Raghavan and Subhash Jha, (2011) “Role of Tactile and Visual Inputs in Product Evaluation: A Multisensory Perspective”, *Asia Pacific Journal of Marketing and Logistics*, 2011, Vol. 23 Issue: 4, pp.513 – 530. The purpose of this study is to address the gaps, if any and investigate how multisensory evaluation influences overall attitude and purchase intentions. There has been an increased interest in marketing literature in understanding the role of sensory experience. The multisensory interaction of tactile and visual information was found to significantly increase the consumer attitudes for products dominant on single sensory modality of touch. Further, the multisensory evaluation led to greater purchase intentions than visual or tactile evaluation.
43. May O. Lwin and Maureen Morrin, (2012) “Scenting Movie Theatre Commercials: The Impact of Scent and Pictures on Brand Evaluations and Ad Recall”, *Journal of Consumer Behaviour*, Volume 11, Issue 3, pages 264–272, May/June 2012 – The research utilizes a novel advertising context commercials seen in a simulated movie theater setting while ambient scent is emitted into the atmosphere to explore the effects of multisensory cues on brand evaluation and advertising recall. Although both pictorial and olfactory cues enhance brand evaluations and ad recall overall, the research finds that olfactory (vs.

pictorial) cues generate more positive feelings toward the brand and enhance recall to a greater extent. It also finds that, after a long time delay, re-experiencing the scent activates pictures ability to facilitate recall. Theoretical and managerial implications are discussed Cinema advertising is unique because the audience tends to be attentive and engaged and is less likely to be distracted by phones or other electronic media. Where almost all cinemas rely heavily on sight and sound, theaters are now offering more opportunities for Multisensory engagement.

44. Rohit Talwar, (2012) "Hotel 2020 - Responding to Tomorrow's Customer and the Evolution of Technology", R. Conrad, & M. Buck (Eds.), Trends and Issues in Global Tourism 2012 (pp. 21-31). Springer, Berlin - This study sets out to explore the "future factors" and explore the implications for hotel strategy, brand portfolio, business models, customer targeting and innovation. The future of travel and tourism is being driven by a complex set of converging forces which are forcing the industry to think about how they might reshape the experience. The study placed emphasis on the impact of increasing personalization, emerging technologies and changing economic outlook. As people are increasingly traveling, they are facing increasing pressure for leisure time, which is driving the desire for unique and personalized experience.

45. Eric A. Davis, Vincent P. Magnini, Pamela A. Weaver and Nancy Gard McGehee, (2013) "The Influences of Verbal Smell References in Radio Advertisements", Journal of Hospitality & Tourism Research May 2013 vol. 37 no. 2 281-299 - The purpose of this study was to explore how verbal smell references in restaurants' radio advertisements affect consumers' perceived ability to "almost taste" and "almost smell" the advertised product, affective response, and purchase intentions. In an industry plagued by high failure rates and exorbitant amounts spent on marketing, restaurants must find ways to increase the effectiveness of their advertising. The smell reference also significantly affects individuals' affective responses to the ad and purchase intent for the product. Interestingly, this research also finds that the level of "brand excitement" associated with the advertised brand perfectly mediates the relationship between the verbal smell reference and affective responses. From a managerial perspective, these results seem to indicate that verbal smell descriptions in restaurant radio ads can be associated with a number of desirable outcomes.

46. Eunjoo Kang, Carl A. Boger, Ki-Joon Back and Juan Madera, (2013) “The Impact of Sensory Environments on Spagoers’ Emotion and Behavioural Intention”, *Anti Essays*. Retrieved November 19, 2013 - The research objective is to identify and verify the relationships among environmental sensory components (i.e., sight, sound, smell, and touch), consumer emotions, and consumer behavioural intentions in a spa context by applying the Mehrabian-Russell’s Stimuli-Organism-Response model. This research indicates that touch components such as smoothness, softness, comfortable temperature, and humidity are the most important sensory stimulation to please customers in spas. Sight components such as a comfortable and well organized layout; cleanliness; stylish design; and warm colour were proved to be important factors to please spa goers. In addition, this result indicates that only pleasure of emotion is what spa goers seek through spa service. Therefore, spa operators and managers should consider having a balance of sensory components to take advantage of the synergic effect through the sensory combination. These sensory environments can be valued as powerful tactics to increase each customer’s satisfaction and as a strategic differentiator of spas in the competitive market.

1.8 Need for the Study and Research Questions

1.8.1 Need for the Study

The review of literature has given insights into the study and has facilitated to identify the need for the study and frame research questions.

- There is sparse literature on Multisensory Marketing in India, thus creating a need to contribute to the existing body of literature.
- There is a need to encourage academic research in the area of four star and five star hotels, which are rapidly emerging in India.
- Multisensory Marketing needs to be studied as a new marketing tool for the rapidly growing hotel industry in India.
- Multisensory Marketing needs to be explored and undertaken for futuristic development and sustenance of the hotels.

- There is a need to understanding of customer's sensory brand experience in a world of complex targets groups and an increasingly fragmented media world.

Therefore, the need arises to examine and explore the marketability and study the success factors of the sensory stimulus. Thus, sensory marketing has a wide scope be studied, as services are intangible and need to be experienced in the hotel industry.

1.8.2 Research Questions

The above mentioned needs lead to the emergence of following areas of research and study. These are:

- What are the sensory stimulus mechanisms adopted by the Hotels?
- What are the influencing factors that affect the customers during the selection of the Hotels?
- What is the level/amount of importance the customers give to the senses i.e. Sight, Sound, Smell, Touch and Taste?
- What elements of the ambience are considered most important according to the customers?
- What is the impact of visual stimuli on the mood and perception of the customers?
- What is the impact of music on the customer's perception and its relation with revenue generation?
- What is the impact of smell on customer's perception and role of food aroma on the revenue generation?
- What are the sensory factors that influence the customer's sensory perceptions?

1.9 Research Methodology

The research methodology undertaken in the current study comprises designing research instrument (questionnaire) and incorporating questions corresponding to the each of the senses. Secondary data related to Multisensory Marketing in Hotels include theoretical concepts related to the subject, articles published in books, journals, newspapers, magazines and online sources, papers presented at conferences and seminars, case studies and books published on the subject. Responses from the survey population, representative of consumers from four star and five star hotels from Hyderabad and Vishakhapatnam of Andhra Pradesh comprise the Primary data collected in the study. The primary data together with secondary data from prior literature is then used to perform statistical analysis.

- a) **Primary Data:** Data that is collected for the purpose of the study and that has not been existent before (Saunders, 2000). Methods of primary data collection, according to (Daymon and Holloway, 2002) are case studies, interviews, surveys, questionnaire or active participation of the researchers in observing the subjects under the study. In this research the researcher uses interviews and survey method for obtaining primary data. Survey method of data collection was used and first hand information was collected from the respondents i.e. the four star and five star hotel customers, which was not previously

collected. The primary data is also collected from the General Managers and marketing department of the hotels by conducting informal interviews.

- b) Secondary Data:** The secondary data consist of readily available, collected and compiled information. The researcher collected secondary data from sources such as annual report of Hotels, publications, books, dissertations, journals, magazine, papers presented at seminars, conferences and certain online sources. Additionally, information from the websites of the Hotels under the study providing annual reports with information concerning marketing initiatives, sensory brand building practices is used. Journals, reports and publications from institutions such as RBI, IBA, WTO, WTTC, have also been used to provide up-to-date information on key areas of research. The secondary data is also referred to as frame of reference, for the literature related to sensory marketing and practices, especially in Hospitality sector.
- c) Quantitative Research:** Quantitative research, as defined in McDaniel & Gates (1998), uses mathematical analysis that can reveal statistically significant differences. A typical quantitative research methodology begins with a theory (or hypothesis) and tests for confirmation or disconfirmation of this hypothesis (Newman & Benz, 1998). Quantitative designs have dominated most of the consumer behaviour studies, and before-after designs among other designs (Campbell & Stanley, 1973), where control of variables, randomization and valid and reliable measures are required and where generalizability from the sample to the population is the primary objective (Newman & Benz, 1998). The salient feature of the quantitative research method is that measurement is valid, reliable and can be generalized with its clear anticipation of cause and effect (Cassell & Symon, 1994). Whereas being particularistic and deductive in nature, quantitative method is dependent on the formulation of a research hypothesis and confirming them empirically using a specific data set.

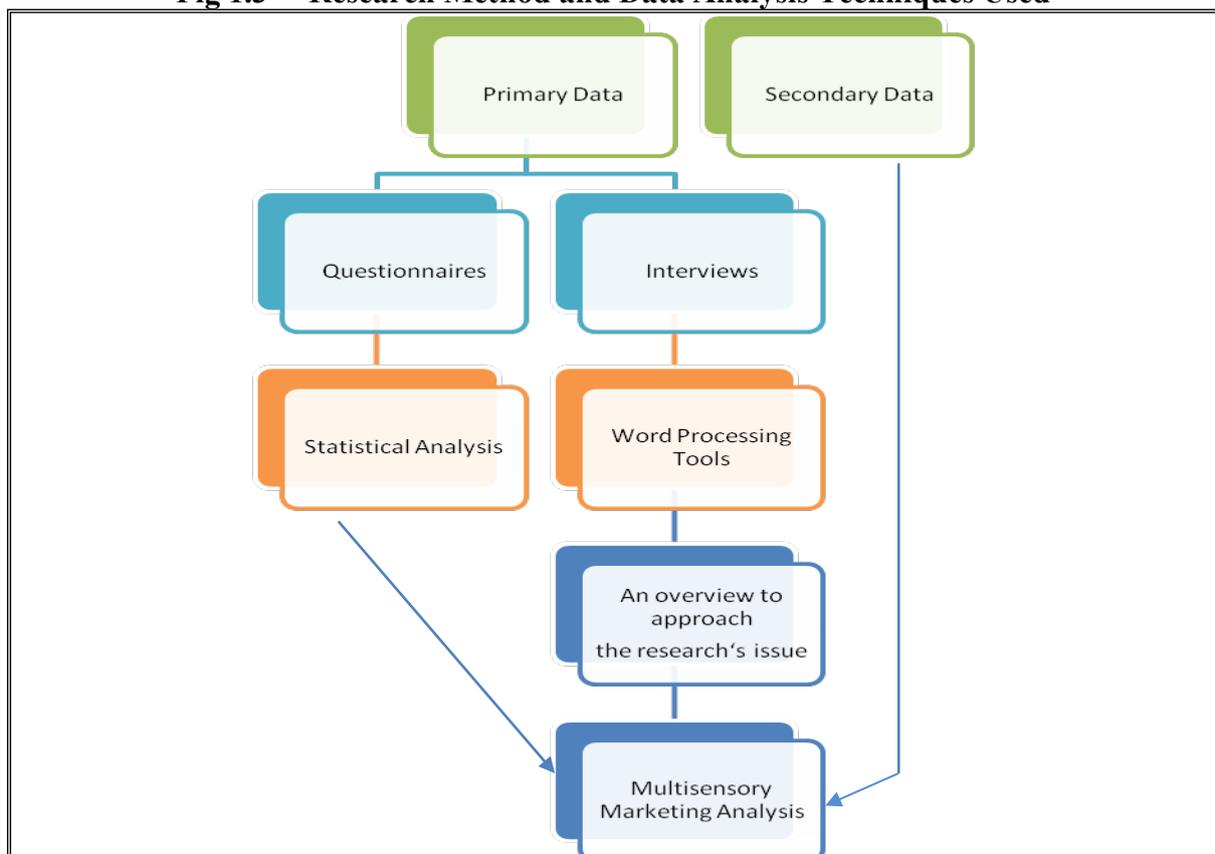
In the current study various quantitative analytical techniques/tools were applied with the help of SPSS (Statistical Package for the Social Sciences). Reliability, validity and internal consistency of the questionnaire were tested with the help of Cronbach's alpha; Chi-square and Factor analysis are used to test hypothesized relationships.

1.9.1 Research Design

Based on the objectives of the study, an exploratory research design is adopted.

- Exploratory research is preliminary study of an unfamiliar problem. Its purpose is to generate new ideas, increase the researcher's familiarity with the problem, make a precise formulation of the problem and gather information for clarifying concepts.
- Exploratory research involves three steps:
 - A review of pertinent literature
 - An experience survey
 - An analysis of insight stimulating cases
- Exploratory research consists of discovery of significant variables in the situation and the discovery of relationships between variables. The findings from such an exploratory research may not be strictly conclusive, but are suggestive.

Fig 1.3 Research Method and Data Analysis Techniques Used



(Source: Compiled by researcher)

1.9.2 Single versus Multiple Case Studies

When implementing case study method, one of the first decisions to make was to decide whether to use a single case study or a multiple case study approach. According to Maylor and Blackmo (2005), the single case study focuses, on a single unit of analysis. Concerning the topic and the purpose of this thesis, this approach does not seem fully appropriate; to study one single Indian Hotel may result in an incomplete picture of the answer to the research question. According to Maylor and Blackmo (2005), the multiple case study approach is useful in order to identify which features are common across cases. This being an objective of the thesis, using this approach seems to be more practical to answer the underlying research questions. A case study of eight subjects seems to be appropriate in order to serve the requirements of a case study approach and to respect its limitations at the same time.

1.9.3 Objectives of the Study

The primary objective was to explore and examine the prospects for Multisensory Marketing in hospitality sector through a study of select hotels and to identify the key factors (sensory elements) that determine customers' selection of hotels.

Specific Objectives

1. To study and explore the mechanisms underlying the Multisensory experience in Hotel environments.
2. To analyze the customer's perception towards the sensory experiences and to study the quality of services delivered contributing to customer satisfaction in hotels.
3. To study the Multisensory Marketing of four star and five star hotels selected for the study. To suggest alternative systems if required. To recommend Key Result Areas (KRAs) where multisensory is found to be useful.
4. To analyze the impact of the stimuli, and its success in generating revenue and provide directions for sustained growth.

1.9.4 Hypotheses

The hypotheses are framed considering the objectives as set above.

Hypotheses	Statement
Hypothesis 1	Sensory experience contributes to customer satisfaction in the hotel
Hypothesis 2a	The visual appeal of food attracts customer towards food
Hypothesis 2b	The interior colour of the hotel encourages the customers to stay longer and increase consumption
Hypothesis 2c	The hotels make effective use of lights which generate sales
Hypothesis 3a	The aroma of the food makes the customer order more
Hypothesis 3b	The hotel's signature scent leads to brand recognition
Hypothesis 4	The extra duration spent in a hotel due to its music played makes the customer order more
Hypothesis 5	The hotel food's mouthfeel is satisfying to the customer
Hypothesis 6	The dish description available on the Hotel's menu does not help the customer in decision making
Hypothesis 7	Futuristic online Multisensory Marketing is an effective strategy leading to better revenue generation for the hotels

1.9.5 Scope of the Study

The study includes an examination and analysis of various Multisensory Marketing strategies adopted by Four and Five Star Hotels. The data is collected from customers of the Hotels selected from the cities of Hyderabad and Vishakhapatnam, in Andhra Pradesh. It includes a customer survey to elicit their perception and opinion on sensory marketing strategies adopted by the Hotels.

1.9.6 Data Collection Instrument

Data is collected from the customers of four and five star Hotels with the help of a questionnaire. The data collection instrument i.e. the questionnaire is a close ended questionnaire and also highlights five broad types of information being elicited. This includes:

- a) Demographic profile of customers
- b) Questions on factors that influence the customers during the selection of the Hotel
- c) Questions on important elements of the ambience according to the customers
- d) Impact of Music on the Customer's mood

- e) Questions on sensory factors
 - a. Visual Factors
 - b. Auditory Factors
 - c. Olfactory Factors
 - d. Tactile Factors
 - e. Gustative Factors

Information that could not be elicited through the questionnaire due to its close ended nature, is collected through the enumerator's schedule coupled with interviewing the GMs and Marketing Executives of the Hotels.

Table 1.3 Survey Questionnaire Structure

Division	Section	Question Number
Part - I	Demographic Details	Q1-Q9
	Factors that influence the selection of a Hotel	Q1-Q13
	Important elements of the Ambience in a Luxury Hotel	Q14-Q26
	Sense which influences the most	Q27-Q31
	Music controls and improves mood	Q32-Q38
Part - II	Existing facts	Q1-Q9
	Visual Factors	Q1-Q13
	Auditory Factors	Q14-Q22
	Olfactory Factors	Q23-Q30
	Tactile Factors	Q31-Q40
	Gustative Factors	Q41-Q48
	General/Website	Q49-Q53

(Source: Compiled by researcher)

1.9.7 Verification of Conclusions

The statistical analysis of the constructs provide confidence on reliability, internal consistency and validity of a particular construct or the tool or instrument that is used to measure the specific construct or dimension.

1.9.7.1 Reliability

Reliability is defined as the extent to which any measurement procedure produces the same results on performing repeated trials for example, questionnaire, test or observation. It is the stability or consistency of scores over time or across rating respondents. In other words of Joppe (2000), the extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable.

According to Kumar (1999), a research method/model developed is reliable not only if it is consistent and stable, but also if it is predictable and accurate. The reliability is the —degree to which measures are error-free and therefore yield consistent result (Zikmund, 2000). According to Sekaran (2003), the reliability can be divided into two important parts:

1. **The stability of measures:** The ability of the measure to stay same over the time is indicative of its stability and low vulnerability to changes in the situation.
2. **The internal consistency of measures:** This is an indication of homogeneity of the substance. The items are capable of independently measuring the same idea so that the respondents attach the same overall sense to each of the things. In order to make sure that the interviewee understands the questions, the researcher has, if necessary, explained the meaning of the questions to the respondents. Providing stable and consistent measures ensures therefore stability and reliability of the underlying study.

1.9.7.2 Validity

The traditional criteria for validity find their roots in a positivist tradition. Within the positivist terminology validity resides amongst, and is the result and culmination of other empirical conceptions for example, universal laws, evidence, objectivity, truth, actuality, deduction, reason, fact and mathematical data to name a few (Winter, 2000). Joppe (2000) explains validity in quantitative research as determining if the research truly measures what is

intended to measure or truthfulness of the research results. Researchers generally determine validity by asking a series of questions and will often look for the answers in the research of others.

According to Kumar (1999), the validity of a method is given when a logical link is established between the questions and the objectives. Kumar (1999) identifies three types of validity: 1) Face and Content Validity 2) Concurrent and Predictive Validity 3) Construct validity. To test the validity of the method of the questionnaire, the face and content validity is applied. This type of validity is achieved when an instrument is valid in the sense that it measures what it is supposed to. To reduce the subjectivity of logic in conclusions, the researcher has revised the questionnaire many times after both external and internal discussions.

Cronbach's Alpha

Gliem & Gliem (2003) describe Cronbach's alpha as the measure of internal consistency reliability i.e. how closely a set of items are related as a group (Malhotra & Dash, 2010). The final research instrument i.e. here the questionnaire circulated for the data collection is also tested by applying Cronbach's Alpha measure. The results of the same are as follows:

Reliability Statistics	
Cronbach's Alpha	No. of Items
.957	93

The questionnaire is said to be reliable if the Cronbach's Alpha score is above 60 % and as the above table reveals, the Cronbach's Alpha is .957 i.e. 95.7 % which implies that the questionnaires are reliable. The reliability of the final study compared to its pilot study increased from 0.947 i.e. 94.7% to 0.957 i.e. 95.7%.

1.9.7.3 Pilot Study

Before the finalising of the questionnaire, a pilot study was undertaken with a sample of 100 four and five star hotel customers. As there were no changes suggested in the questionnaire, no modifications were made in questionnaire.

Reliability Statistics

Cronbach's Alpha	No. of Items
.947	100

Reliability tested using Cronbach's Alpha score = .947 i.e. 94.7% which indicates a high level of internal consistency and implies that the questionnaires is reliable.

1.9.8 Sample Design

Once the questionnaire was designed for the main study, it was important to decide on the final sample design i.e. selecting of the target population, extent of the survey, sampling frame and sampling procedures. Following is a brief explanation of different decisions undertaken to arrive at the sample design and sampling procedure performed for the main study:

Sample elements: A sampling element is the object about which or from which the information is desired. In a survey design, the element is usually the respondents (Malhotra & Dash, 2010).

Sample unit: The basic unit containing the elements of the population to be sampled is called a sampling unit (Malhotra & Dash, 2010). Four and Five Star Hotels of Hyderabad and Vishakhapatnam, in Andhra Pradesh comprise the sampling unit for the current study.

Sample Extent: From amongst Four and Five Star Hotel customers of Andhra Pradesh, the sample for this study is limited to the customers of the select Four and Five Star Hotels, in the cities of Hyderabad and Vishakhapatnam, Andhra Pradesh.

Sampling Method: Stratified sampling technique is adopted wherein elements would be chosen based on different stratum. The different strata chosen for this study are:



1.9.9 Sample of the Customers

Target population or frame is that part of the total population (universe) to which the study is directed. In other words it requires specification of the subjects, from whom information is desired (Lehmann & Romano, 2005). Target population in this study is “the customers of the Four and Five Star Hotels in the cities of Hyderabad and Vishakhapatnam, Andhra Pradesh”.

Sampling Frame: Sampling frame is the list of the population elements from which the researcher selects the units to be sampled. In this study, there is no list that provides a complete enumeration of individuals who use the services of the Four and Five Star Hotel selected for the current study. As a result, the sample frame is reflected in some procedure that will produce a representative sample of individuals with the desired characteristics. Of all the guests in the selected hotels, those customers who have been regular ‘in-house’ guests of the hotels were approached to participate in the study.

The Sampling procedure used in this study was “complete enumeration of the sampling frame”. The respondents for the study were fairly representative of the population as the guests at the hotels come from all over India and abroad. The customers who participated in the study represent different cultures, ethnicity, regions, educational backgrounds, languages, different domains of work experience and the length of work experience. The demographic profile of the participants is presented in the chapter 3.

A total number of eight hundred customers i.e. 100 from each select Hotel were chosen for this study based on Stratified Random sampling method. This study was restricted to only two big cities of Andhra Pradesh i.e. Hyderabad and Vishakhapatnam. Four hotels i.e. two Five Star Hotels and two Four Star Hotels, were respectively selected. The hotels from each city were also selected based on the consent given by the hotels to participate in the study; and commonality of hotel brands available in these two selected cities.

The data of customers who were surveyed for the study is as follows:

Table 1.4 Sample of Customers under the Study

S.No.	Name of the Hotel	Category	No. of customers - Proposed	No. of customers - Actual	Data Loss
Hyderabad					
1	Taj Vivanta	5 Star	100	100	Nil
2	Accor Novotel	5 Star	100	100	
3	Greenpark	4 Star	100	100	
4	Fortune Park Vallabha	4 Star	100	100	
Vishakhapatnam					
5	Taj Residency	5 Star	100	100	Nil
6	Accor Novotel	5 Star	100	100	
7	Greenpark	4 Star	100	100	
8	Fortune Inn Sree Kanya	4 Star	100	100	
Total	Eight Hotels		800	800	Nil

(Source: Compiled by researcher)

A total number of 925 questionnaires were distributed among the select eight hotels for the purpose of the study. 800 filled in questionnaires were later collected from these select eight hotels, i.e. collecting 100 questionnaires from each hotel respectively.

The sample so chosen is representative of the population as it satisfies the sample adequacy test and is chosen as per Krejcie Morgan Table (Krejcie Morgan Table of Sample Adequacy is given in Appendix). The sample is not biased because it has made considerations in terms of gender of the respondents, their age, their occupation, their education and their income levels.

1.10 Data Analysis Techniques

The data was validated, edited, codified and machine cleaned before the final analysis was performed. Statistical Package for Social Sciences (SPSS 20) developed by IBM was used for

computation of results. Data has been analysed using statistical tools such as Chi-Square test and Factor Analysis. A brief note on the tools used is given below:

1.10.1 Chi-Square Tests

The chi-square (χ^2) test is used to determine whether there is a significant difference between the expected frequencies and the observed frequencies in one or more categories. The chi-square is one of the most popular statistics because it is easy to calculate and interpret. There are two kinds of chi-square tests. The first is called a one-way analysis, and the second is called a two-way analysis. The purpose of both is to determine whether the observed frequencies (counts) markedly differ from the frequencies that would be expected by chance. A chi-square test (also chi squared test or χ^2 test) is any statistical hypothesis test in which the sampling distribution of the test statistic is a chi-square distribution when the null hypothesis is true, or any in which this is asymptotically true, meaning that the sampling distribution (if the null hypothesis is true) can be made to approximate a chi-square distribution as closely as desired by making the sample size large enough. The chi-square (χ^2) test measures the alignment between two sets of frequency measures. These must be categorical counts and not percentages or ratios measures (for these, use another correlation test).

Goodness of fit: A common use is to assess whether a measured/observed set of measures follows an expected pattern. The expected frequency may be determined from prior knowledge (such as a previous year's exam results) or by calculation of an average from the given data. The null hypothesis, H_0 is that the two sets of measures are not significantly different.

Independence: The chi-square test can be used in the reverse manner to goodness of fit. If the two sets of measures are compared, then just as one can show they align, one can also determine if they do not align. The null hypothesis here is that the two sets of measures are similar. The main difference in goodness-of-fit vs. Independence assessments is in the use of the Chi Square table. For goodness of fit, attention is on 0.05, 0.01 or 0.001 figures. For independence, it is on 0.95 or 0.99 figures (this is why the table has two ends to it).

Calculation: Chi-squared, $c^2 = \text{SUM} ((\text{observed} - \text{expected})^2 / \text{expected})$ $c^2 = \text{SUM} ((f_o - f_e)^2 / f_e)$ where f_o is the observed frequency and f_e is the expected frequency.

For the purpose of this research, the Chi Square test is used to test the Hypothesis. It is applied in knowing the relationship between sight, sound, smell, touch and taste and sensory perception of the customers.

1.10.2 Factor Analysis

Factor analysis is a statistical method used to describe variability among observed variables in terms of a potentially lower number of unobserved variables called factors. In other words, it is possible, for example, that variations in three or four observed variables mainly reflect the variations in a single unobserved variable, or in a reduced number of unobserved variables. Factor analysis searches for such joint variations in response to unobserved latent variables. The observed variables are modelled as linear combinations of the potential factors, plus "error" terms. The information gained about the interdependencies between observed variables can be used later to reduce the set of variables in a dataset. Factor analysis in marketing involves the basic steps are:

1. Identify the salient attributes customers use to evaluate products in this category.
2. Use quantitative marketing research techniques (such as surveys) to collect data from a sample of potential customers concerning their ratings of all the product attributes.
3. Input the data into a statistical program and run the factor analysis procedure. The computer will yield a set of underlying attributes (or factors).
4. Use these factors to construct perceptual maps and other product positioning devices.

Factor analysis is applied here, to identify:

- The most influencing factors during the selection of the Hotel
- The most important elements in the ambience of the Hotel
- Identifying the Visual factors
- Identifying the Auditory factors
- Identifying the Olfactory factors

- Identifying the Tactile factors
- Identifying the Gustative factors

1.11 Limitations of the Study

The study is focused only on analyzing Multisensory Marketing in the hospitality sector. It is limited only to eight hotels and hence the findings would only be suggestive and not conclusive. Perceptions and customer's opinions are elicited from the customers from the cities of Hyderabad and Vishakhapatnam only. The inferences drawn are based on the responses elicited from the customers and the hoteliers, and hence may not be conclusive in nature. Besides, the various statistical tools applied carry their respective limitations that may render the interpretations to hold those limitations.

1.12 Thesis Outline

Thus to conclude this chapter embodies the essential aspects of this research in terms of the introductory remarks, the objectives of the study, corresponding hypothesis framed along with the methodology and sampling procedures adopted have been discussed. It is a blueprint of the thesis. Chapter 2 presents an overview of the Hospitality industry, its timeline, classification of hotels, and its present scenario in India - challenges and potentials. Chapter 3 discusses Multisensory Marketing its emergence and application. Chapter 4 presents the analysis and interpretation of the data. Chapter 5 discusses the finding and reports the conclusions. The managerial implications that emerged from the results, the limitations of the study and corresponding future work that can be built based on the finding of the study to further the Multisensory extension research are discussed at the end of this chapter. The research questionnaire used for the study is furnished in the Appendix.

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