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Editorial

In this issue we place before you five papers. Of them three are marketing management related, one is on finance and the other is on human resource management. Industry-wise also they are diversified. All these articles are useful in one way or the other and try to enrich the knowledge in their respective fields.

Telecommunications industry, especially mobile phone services or cellular services, is one of the fast growing industries across the world. India is no exception. Indian cellular operators are faced with the challenges of economic operation and customer retention. Sreekumar and Ramanujam, in their article titled “A Study on Service Quality and Customer Satisfaction in Mobile Phone Services”, have defined customer satisfaction; affirmed the relation between service quality and customer satisfaction; explained how the customer satisfaction leads to loyalty, retention and profits; emphasized the need for monitoring information relating to customer perceptions and reviewed the relevant literature. Measurement of customer satisfaction helps to promote an increased focus on customer outcomes and stimulate improvements in the work practices and processes used within the company. They have tried to analyze customer satisfaction as an antecedent to the customer perception-expectation gap as proposed in the SERVQUAL model. It is a valuable contribution to the existing knowledge in the field. The study is significant in diverse ways to business/marketing practitioners, policy makers, stakeholders, managements of mobile telecom networks,

Sovereign wealth funds have become popular in recent years. Experts estimate that all sovereign wealth funds combined together hold more than \$5 trillion in assets in 2012. A sovereign wealth fund is a state-owned pool of money that is invested in various financial assets. It is a special purpose vehicle of the government funded by foreign currency assets, with a higher risk tolerance and higher return expectation. The money typically comes from a nation's budgetary surplus. When a nation has excess money, it uses a sovereign wealth fund as a way to funnel it into investments rather than simply keeping it in the central bank or channelling it back into the economy. The motives for establishing a sovereign wealth fund vary from country to country. The primary purpose of a sovereign wealth fund is to stabilize the country's economy through diversification and to generate wealth for future generations. NageswarRao and Vani, in their paper, discussed the meaning of sovereign wealth fund, different types of sovereign wealth funds, need for setting up sovereign wealth fund in India and the risks involved in it. It is considered useful for managing the country's resources.

In recent times, ‘competency mapping’ has become a catch phrase. The concept of ‘Competency’ has made the art of Human Resource Management (HRM) to shift its focus from performance appraisal to performance management. ‘Competency Mapping’ is a process of identification of the competencies required to perform successfully a given job or role or a set of tasks at a given point of time. It consists of breaking a given role or job into its constituent tasks or activities and identifying the competencies needed to perform the same successfully. It helps individuals as well as organizations in the process of change and development. The paper authored by SatyanarayanaRaju and Masthan throws light on one such exploration in order to demonstrate its utility in the various bodies of State Government. It discusses the processes of mapping, assessment and development of the competencies in the Central Designs Organization (CDO), one of the key technical wings in the Irrigation Department of AP. This study uses Multi-rater Assessment and Feedback System (360 degree appraisal and feedback) to achieve the purpose. The findings of the study are very much useful to the Organization for implanting better H.R Management practices.

Apparel is one of the basic necessities of human civilization along with food, water and shelter. Apparel is a highly symbolic product category due to its high visibility. The Apparel industry reflects people's lifestyles and shows their social and economic status. The Apparel and Textile industry is India's second largest industry after the IT Industry. It is one of the fastest growing industry segments and is also the second largest foreign exchange earner for the country. The apparel industry accounts for 26% of all Indian exports. SandeepBhanot, in his article, studied the apparel consumer behaviour among the college students. It is useful for the fast growing apparel industry in the country. The last paper is on retail format selection in food and grocery retailing in India. The findings in that article are useful to the food and grocery retail trade which is the most promising area in the country.

Chief Editor

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A STUDY ON SERVICE QUALITY AND CUSTOMER SATISFACTION IN MOBILE PHONE SERVICES

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Abstract: Elecommunication industry, especially Mobile phone services, is going through a high speed growth trajectory, worldwide as well as in India. It is one of the most happening places today. More and more technological features and conveniences are added to the ever growing subscriber base, which stands at more than 50 crores in India, with certain states like Kerala reporting a tele-density of nearly 90%. With the call charges continuously dropping and ARPU (average revenue per user) one of the lowest in the world, Indian cellular operators are faced with the double challenge of economic operation and customer retention. Within the basic marketing premise that a happy customer is a loyal customer, these companies are trying to improve the service delivery so as to make the customer satisfied. In this context it becomes necessary to periodically check the satisfaction level of existing customers and try to plug any holes in the service quality delivery. The situation becomes more complex with the introduction of Mobile number portability (which means a dissatisfied customer need not, will not wait for the company to recover the service failures), sharing of infrastructure between firms, use of multiple SIM cards, e-payment services and vast majority of customers switching over to Pre-paid connections etc. ISO 9000:2000 also mandates periodic study of customer satisfaction and management interventions. This study tries to analyse customer satisfaction as an antecedent to the customer perception- expectation gap proposed in the SERVQUAL model on various service quality dimensions and attributes and the prioritizing of these dimensions by the customers. The influence of these dimensions on overall satisfaction is also studied. It also gives a SWOT analysis of firms under study, socio-economic profile of mobile phone users today, their behavioral patterns and an analysis of common problems faced by customers

Key Words: Service quality, Customer satisfaction, telecom, servqual, perception, expectation

1. Introduction

Philip Kotler (1996) defines Customer Satisfaction as “the level of a person’s felt state resulting from comparing a product’s perceived performance in relation to his expectations from it”. It is a comparative behavior between inputs beforehand and post obtainments. Many other studies subsequently affirmed the relation between service quality and customer satisfaction. (Tsoukatos, E. and G. Rand, 2006; Wicks, A. M., & Roethlein, C. J. 2009; Gilmore, A. and McMullan, R. 2009). If the gaps between customer perception and customer expectation about quality of service delivery can be quantitatively measured, this will be an accurate indication of the level of customer satisfaction, which in turn leads to loyalty, retention and profits.

Periodic checking, review and managerial intervention in the customer satisfaction area is now mandatory for all organizations coming under ISO certification. Clause 8.2.1 in ISO 9000: 2000 states: “As one of the measurements of the performance of the Quality Management System, the organizations shall monitor information relating to customer perception as to whether the organization has met customer requirements. The methods for obtaining and using this information shall be determined” The requirement has been there in the QS 9000 standard clause 4.1.6 which says: “... Trends in customer satisfaction and key indicators of customer dissatisfaction shall be documented and supported by objective information. These trends shall be compared to those of competitors, or appropriate benchmarks, and reviewed by senior management.”

There is obviously a strong link between customer satisfaction and customer retention. Customer’s perception of Service and Quality of product will determine the success of the product



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or service in the market (Kumar, V., Smart, P., 2008). With better understanding of customers' perceptions, companies can determine the actions required to meet the customers' needs. They can identify their own strengths and weaknesses, where they stand in comparison to their competitors, chart out path future progress and improvement. Customer satisfaction measurement helps to promote an increased focus on customer outcomes and stimulate improvements in the work practices and processes used within the company. Mobile phone services or cellular service is one of the fast growing industries across the world as well as in India. The number of customers who became mobile phone users in the past decade is mind boggling (Southern Success, 2011). A communication revolution is happening in the country with foot print of coverage reaching even rural parts of India and entry charges for customers in to the network dropping drastically (TRAI report, 2011, The Hindu, June 8, 2011). The usage charges are also now just a fraction of what it was in the beginning. The entire youth of the country is now addicted to mobile phones and the content and applications of it are ever growing due to emerging technologies. With the introduction of number portability feature, the possibility of dissatisfied customer switching the service provider is very high and hence the firms in this business are interested to periodically assess the satisfaction levels of their consumers and take corrective actions as warranted. Introduction of pre-paid connections have eliminated the interactions between company staff and customers. Use of dual SIM phones makes customers use different service companies at the same time. Sharing of hardware between companies has added another dimension to the tangibility aspect. Recharge coupons for as low as Rs.10 has changed the price perception of customers and many of them cannot keep track of their monthly expenses on phone, compared to the monthly billing system. Those who use roaming facility try to keep local SIM cards for each location of travel and enjoy local charges only, not roaming charges.

This study tries to analyze customer satisfaction as an antecedent to the customer perception-expectation gap proposed in the

SERVQUAL model (Parsuraman, A., Zeithaml, V.A., & Berry, L.L., 1988) on various service quality dimensions and attributes and the prioritizing of these dimensions by the customers. A descriptive research was conducted to report the status quo of customer satisfaction among mobile phone users in Kerala as a cross sectional study. A structured questionnaire containing demographic questions, 22 attribute questions on service quality dimensions as per SERVQUAL model was administered as a schedule to a random sample of 437 respondents from three major areas of the state, representing four major mobile service providers. The collected data was analyzed using SERVQUAL tool, Chi2 tests, ANOVA and Multiple Regression and percentage analysis to test the hypothesis and meet the objectives of the study.

2. Review of Literature

Customer satisfaction is a term that has received much attention and interest among scholars and practitioners perhaps because of its importance as a key element of business strategy, and goal for all business activities especially in today's competitive market (Anderson et al., 1994). It is therefore important to understand this terminology in detail as conceptualised in this study. Some of the definitions given by scholars for customer satisfaction are as follows:

Customer satisfaction is a "psychological concept that involves the feeling of well-being and pleasure that results from obtaining what one hopes for and expects from an appealing product and/or service" (WTO, 1985).

Customer satisfaction is "an experience-based assessment made by the customer of how far his own expectations about the individual characteristics or the overall functionality of the services obtained from the provider have been fulfilled."

"Satisfaction is a person's feeling of pleasure or disappointment resulting from comparing a product's performance (outcome) in relation to his or her expectation." (Kotler, P. & Kevin, L. K., 2006 p.144).

Kerala is a consumer state as the bulk of products and services consumed by the people are not produced within the state, but brought from other states of the country. High literacy rates and

education levels, presence of large number of NRI families, compact geography of the state etc. are factors supported the widespread acceptance of mobile phone service in the state and today it claims a teledensity which is much above the national average. The state of customer satisfaction with service delivery is not clear as the scanty documentation of the issue. Moreover, many changes in technology and service delivery have taken place in the recent past which will affect the customer behavior and perception in mobile services.

Kerala witnessed a rapid increase in the diffusion of the mobile since the dawn of the new millennium. The most revolutionary aspect of the use of mobile phones in the state is the increase in the air time of the telephone calls. Mobile service providers enjoyed a leap in their growth rate ranging from 70 to 142 percent with a corresponding growth in income. Six mobile service providers earned more than 210 million rupees in the financial year 2006–2007. Overall Kerala, with little more than three percent of the population of the Indian subcontinent, has the highest proportion of mobile usage in the country (Malayala Manorama, Business Magazine April 8, 2007).

Service quality is assessed by measuring customer response in terms of Expected quality and perceived quality. Customer should decide which service attributes are more important and beneficial to him rather than the service provider dictating it. Parasuram et al have provided 10 determinants of service quality as

1. access
2. communication
3. competence
4. courtesy
5. credibility
6. reliability
7. responsiveness
8. security
9. tangibles
10. understanding/knowledge about customers

For this study, these 10 attributes are reduced

to 5 Dimensions, combining similar attributes.

1. Tangibles
2. Reliability
3. Responsiveness
4. Assurance (competence, courtesy, credibility, security)
5. Empathy (access, communication, understanding)

Service Quality SQ of a feature = P-E (perceived value minus expected value of an ideal firm. If perceived value is less, this will give a negative SQ. This shows a gap in quality.)

Service quality of a Dimension = $\text{Sum (P-E)} / n$, where n is the number of items in a Dimension

Overall SQ = sum of SQ for all attributes.

Higher the value of SQ, higher is the Perceived service quality.

3. Research methodology

3.1 Statement of the problem

Evidently, the growth trend in the mobile telecom industry does not provide empirical support or the claim that customer satisfaction is tied with the service delivery of the firms. In view of the above, the main problem of this study is : A relationship to satisfaction is tied with the service quality delivered by Mobile Telecom Networks? For the above identified research problem, the aim and purpose of this study is to assess and analyse customer satisfaction with service delivery in mobile service providers.

3.2 Objectives of study

Based on the literature review and research questions discussed above, the main objectives for the study are set as follows.

- To analyze the demographic profile of customers and its possible influence in perception/satisfaction
- To measure the Service Quality Perception-Expectation gaps from Customers and the Priority for Service Dimensions
- To estimate the overall satisfaction level of customers towards Mobile phone service and

satisfaction among the firms.

3.3 Significance of the study

The study is immensely significant in diverse ways to business/marketing practitioners, policy makers and stakeholders. To the management of mobile telecom networks, the findings and results that will be reported in this study will provide a more reliable scientific measure and perspective for describing and evaluating the level of their customer satisfaction with the services they deliver. It will essentially uncover dimensions of service quality that customers consider as important as well as customers' intention to switch to other competitor networks. This will provide empirical support for management strategic decisions in several critical areas of their operations, and above all, provide a justifiably valid and reliable guide to designing workable service delivery improvement strategies for creating and delivering customer value, achieving customer satisfaction and loyalty, building long-term mutually beneficial relationship with profitable customers and achieve sustainable business growth. To policy makers like government agencies such as the Department of telecom and Telecom Regulatory Authority, the finding and results of this study will provide invaluable insights and a more reliable guide to monitoring the impact of the operations of telecom firms.

- Data Collection - Primary data were collected by using a structured questionnaire and the required secondary data were gathered from text books, articles, theses and internet sources.
- Sampling - The sample size was 437 persons selected on random basis from an infinite population.
- Analysis tools- Servqual model, percentage analysis, Chi² test, ANOVA and Regression model.
- Geographical Area of sampling- three major districts in Kerala, a Southern state of India.

4. Data Analysis and Findings

a. Demographic analysis: Out of 437 respondents, 54% were males and 46% females

indicating a fairly balanced gender distribution. Most of them (62%) were having private jobs, 18% were public servants, 16% were self-employed. 70% of the respondents were within the ages of 20-39 years and 16% were between 40 and 59 years, signifying that majority of them were in the economically active population. Almost 50% of the respondents earned monthly income below Rs. 10,000, 36% earned between 10,000 and 20,000 monthly income. 70% of the respondents had school or higher education while 30% had tertiary or other education. 75% respondents paid a monthly phone bill of less than Rs. 500. This is in line with the ARPU data for Indian users of mobile phone services. A large majority of the respondents travel within state only and do not use roaming facility, 20% use roaming facility. 56% of the respondents used handsets with minimum features or entry level models. 38% had higher featured models. Advanced models like 2G, 3G etc. are yet to become popular. 50% of the users are using it for 2 to 6 years now, and there are many longtime users also as the service is now 15 years old in Kerala. A large majority, 91% is using Pre-paid connections now.

b. The Servqual model analysis showed perception-expectation negative gaps for all the 22 attributes of services under five dimensions. Mean score for expectation is 4.12, which means the customer expectations from the companies are high, whereas the perception about service received has a mean value of 2.55 which is below average. The service quality delivery gap is 1.5 on a 5 point scale, which is considerably large. Maximum value for perception is 3.1 and minimum value for expectation is 4.2. This means customer satisfaction is low on all attributes. It shows a similar analysis Dimension-wise also. Maximum negative values are for Physical facilities, appearance of staff, individual attention, spending time to solve customer problems. Relatively more positive attributes are, prompt service, deliver service as promised, customer feel safe to deal with company etc. customers are not interested in physical facilities etc., but they want to be treated well and company should deliver quality as promised. Any complaints should be attended promptly. However, there is scope for improvement in all 22 attributes of service by adopting suitable strategies.

c. Prioritisation- Customers ranked the five service dimensions in the order-

- **Tangibles-** Modern technologies, Latest features, Physical facilities (towers, offices, dealers), ability of staff, communications
- **Reliability-** Delivering promised service; perform right first time itself, quality of network and range.
- **Responsiveness-** deal effectively with customer complaints, keep error free records
- **Assurance-** knowledge, experience, courtesy, maintain client confidence, credibility, security, willingness to help, never too busy
- **Empathy-** individual attention,

understanding / knowing the customer, has customer's best interest in mind.

d. Chi² analysis showed there is significant relation between demographic variables like gender, age, education, experience of respondents and overall customer satisfaction. Estimated values of Chi² were greater than the corresponding table values, thus rejecting all the Null Hypotheses on Demographic variables and overall satisfaction.

e. Analysis of Hypothesis whether the **satisfaction among firms** are same, using one way ANOVA test.

The above table indicates that the p-value (0.00) is less than the significance level (0.05) providing strong support for rejecting the null hypothesis that the means are equal. Therefore, we can safely conclude with 95% confidence

Table showing One-Way ANOVA test summary

	Sum of squares	Degree of freedom	Mean square	F ratio	Cut off value
Between groups	35.8	3	11.93	11.47	2.9(F ratio) p-value .000
Within groups	456.2	434	1.04		
total	492	437			

level that overall satisfaction or dissatisfaction among the networks is not the same or equal

f. Multiple Regression Analysis

The following table shows the output from Excel formula on computer for the Regression

Dependent variable: Customer satisfaction

$R^2 = 0.486$

Adjusted $R^2 = 0.478$

Table showing Regression Beta, t values and significance

Service Quality Dimensions	β	Std. error	Standardised β	t	significance
Constant	0.482	0.320		1.507	0.133
Tangibility	0.035	0.101	0.024	0.346	0.730
Reliability	0.519	0.089	0.376	5.866	0.000
Responsiveness	0.103	0.089	0.074	1.154	0.249
Assurance	0.398	0.062	0.365	6.394	0.000
Empathy	-0.147	0.055	-.131	-2.673	0.008

Interpretation

The positive coefficient for the service quality dimensions of tangibility, reliability, responsiveness and assurance suggests that high service quality leads to higher level of customer satisfaction. However, the empathy dimensions had negative coefficient, meaning decreasing level of customer satisfaction with high empathy element of service quality. In other words, higher empathy results in decreasing client loyalty. Additionally, among the variables, only reliability, responsiveness and assurance have significant values and thus, significantly contributed to the explanation of the dependent variable. Overall, this study concluded that mobile service provider service quality elements affects customer satisfaction by explaining 48 percent of the variance in the Dependent Variable (customer satisfaction) which is quite respectable.

The regression equation for the relation between dependent variable and independent variables under study can be approximated as,

Customer satisfaction = $0.482 + 0.519 \times \text{reliability} + 0.398 \times \text{assurance} + 0.103 \times \text{Responsiveness} + 0.035 \times \text{Tangibility} - 0.147 \times \text{Empathy} + \Sigma$ (an unknown value to explain the influence of other exogenous variables)

5. Suggestions and recommendations

Customers are showing more maturity and quality consciousness as the industry has completed 15 years in Kerala. The customers are not much charmed by the physical facility, posh offices, etc. but they are more concerned about getting promised, quality and reliable service. The findings of this study foresee the following implications for the mobile phone service companies.

- Focus more on quality and reliability aspects.
- Customers are reasonable educated, which means it is easy to communicate with them, but at the same time they will be analytical and critical about the company interactions.
- Multiple SIM cards use and Mobile number portability features are not much used by customers.

- The general satisfaction levels on all the service quality parameters are low and calls for improvement. Overall satisfaction also is below a satisfactory 4 on a 5 point scale.
- Satisfaction among companies is not the same and those who are low in the order can initiate steps to improve it.
- Over dependence on outsourcing and distribution channels takes the company away from its customers and hence more efforts for customer interactions should be sought.
- Break in service or signals are indicated as a main problem by customers, for which suitable technical solutions can be thought off.
- Segment-wise, company-wise studies are possible for further research into any of the relevant customer satisfaction and service quality delivery areas.

6. Conclusion

The final conclusion of this study is that generally customers are not satisfied with service quality delivered by mobiletelecom networks in Kerala or that the dissatisfaction is considerably low. They give importance to reliability and responsiveness dimensions than tangibles and empathy. There are no significant relations between demographic variables and overall satisfaction. Hence the companies have to try to improve satisfaction by focusing on the above aspects as many factors like pre-paid connections, number portability, dual SIM cards etc. are changing the customer perception towards service delivery quality and customer satisfaction.

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SOVEREIGN WEALTH FUND - HOW FAR IT IS SUCCESSFUL IN INDIA?

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Abstract: *Sovereign wealth funds have attracted a lot of attention in recent years as more countries open funds and invest in big-name companies and assets. Some experts estimate that all sovereign wealth funds combined to hold more than \$5 trillion in assets in 2012, a number that is expected to grow relatively quickly. A sovereign wealth fund is a state-owned pool of money that is invested in various financial assets. The money typically comes from a nation's budgetary surplus. When a nation has excess money, it uses a sovereign wealth fund as a way to funnel it into investments rather than simply keeping it in the central bank or channeling it back into the economy. The motives for establishing a sovereign wealth fund vary by country. The primary functions of a sovereign wealth fund are to stabilize the country's economy through diversification and to generate wealth for future generations. The paper focuses on various types of SWFs, need for SWF in India and risks in it.*

Key Words: *Sovereign wealth fund, International Investments, International markets, etc.*

1. Introduction

In a move to better utilise its \$280 billion of foreign exchange reserves, the government of India is considering a sovereign wealth fund (SWF) with an initial corpus of \$5 billion to acquire companies abroad, reports The Economic Times, quoting sources. The directive for setting up such a fund has come from the Prime Minister himself. The fund may also be used for acquiring coal mines and oil and gas blocks abroad.

It should be noted that this development just comes following finance minister P Chidambaram recently ruling out any proposal to set up an SWF. SWF is a special purpose vehicle of the government, funded by foreign currency assets, with a higher risk tolerance and higher return expectation. The management of assets under SWF is separate from the management of the official reserves. Unlike official reserves, which are usually held in short duration US bonds, the SWF portfolio has a product mix of different fixed income, equity, commodity and realty instruments. Since the funding is being done in foreign currency and also since the investments

are done in foreign markets, there can be no inflationary pressures due to sterilisation (which could have been the case if the reserves were being used for infrastructure funding), these funds are often considered to be a win-win solution for increasing revenues.

Globally, sovereign-wealth funds or the state-run investment pools, have an estimated \$2-3 trillion under management and are playing an important role in cross-border investment. Middle East, the oil-rich Gulf states and cash-rich Asian countries have been very active. Recently, the governments of Singapore, Kuwait and South Korea provided funds to the tune of \$21 billion, almost a lifeline to the distressed Citigroup and Merrill Lynch, two banks that have lost fortunes in America's credit crisis.

In this paper the definition of Sovereign Wealth Fund, Various types of SWFs, need for SWF in India and risks in it are discussed.

Definition of SWF

SWFs are special purpose public investment funds, or arrangements. These funds are owned or controlled by the government and hold, manage, or administer assets primarily for medium- to long-term macroeconomic and financial objectives. The funds are commonly established out of official foreign currency



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operations, the proceeds of privatizations, fiscal surpluses, and/or receipts resulting from commodity exports. These funds employ a set of investment strategies which include investments in foreign financial assets. Some of the definitions of SWFs are given hereunder:

1. Investopedia—Internet site for Forbes Media: December 2007:

“Pools of money derived from a country’s reserves, which are set aside for investment purposes to benefit the country’s economy and citizens. The funding for SWFs comes from central bank reserves that accumulate as a result of budget and trade surpluses, and even from revenue generated from the exports of natural resources.”

2. Deutsche Bank, September 2007:

“Sovereign wealth funds—or state investment funds—are financial vehicles owned by states which hold, manage, or administer public funds and invest them in a wider range of assets of various kinds. Their funds are mainly derived from excess liquidity in the public sector stemming from government fiscal surpluses or from official reserves at central banks.”

3. U.S. Treasury, June 2007:

“There is no single universally accepted definition of an SWF. [In this paper,] the term “SWF” means a government investment vehicle which is funded by foreign exchange assets, and which manages those assets separately from the official reserves of the monetary authorities.”

4. BPM6: March draft following world-wide consultation:

“Some governments create special-purpose government funds, usually called sovereign wealth funds, to hold assets of the economy for long-term objectives. The funds to be invested commonly arise from commodity sales, the proceeds of privatizations, and/or the accumulation of foreign financial assets by the authorities.”

5. McKinsey Global Institute, October 2007:

“Sovereign wealth funds are usually funded by the nation’s central bank reserves and have

the objective of maximizing financial returns within certain risk boundaries.” McKinsey contrast these funds with government holding corporations such as Temasek (Singapore) and Khazanah (Malaysia).

Sovereign Wealth Funds (SWFs) are part of a country’s foreign exchange reserves that have been separated to invest in global equity, infrastructure, commodities and other financial instruments. Country holds several billion dollars in forex reserves. Normally, these would just lie there, growing at a paltry interest rate. SWFs are a way to improve the country’s finances as well as hedge against future crises.

Types of SWFs

SWFs are a heterogeneous group and may serve various purposes. Five types of SWFs can be distinguished based on their main objective:

- (i) *Stabilization funds*, where the primary objective is to insulate the budget and the economy against commodity (usually oil) price swings;
- (ii) *Savings funds* for future generations, which aim to convert nonrenewable assets into a more diversified portfolio of assets and mitigate the effects of Dutch disease;
- (iii) *Reserve investment corporations*, whose assets are often still counted as reserve assets, and are established to increase the return on reserves;
- (iv) *Development funds*, which typically help fund socio-economic projects or promote industrial policies that might raise a country’s potential output growth; and
- (v) *Contingent pension reserve funds*, which provide (from sources other than individual pension contributions) for contingent unspecified pension liabilities on the government’s balance sheet.

Sovereign wealth funds or a source of

The Important SWFs Through Outthe World are Detailed Below:

Country Name	Assets \$bn	Inception Year
UAE: Abu Dhabi Investment Authority	875.00	1975
Norway Government Pension Fund : Global	380.00	1996
Singapore : GIC	330.00	1981
Saudi Arabia: Various	300.00	NA
Kuwait : Reserve Fund for Future Generations	250.00	1953
China: China Investment Corporation	200.00	2007
Singapore: Temasek Holding	159.20	1974
Libya : Oil Reserve Fund	50.00	2005
Qatar : Qatar Investment Authority	50.00	2005
Algeria: Fond de Regulation des Recettes	42.60	2000
US: Alaska Permanent Fund Corporation	38.00	1976
Brunei: Brunei Investment Authority	30.00	1983
Others	171.40	
Total	2876.20	
Of which Oil and Gas related	2103.40	

Source: Morgan Stanley

tapping the surplus savings of developing countries have proliferated in recent years owing to bumper oil prices and surging Asian exports. Since the subprime-mortgage fiasco unfolded last year, such funds have mobilized almost \$69 billion on recapitalising the rich world's biggest investment banks. Sovereign wealth funds are considered a preferred choice as there is so much money to invest and allows for such close political scrutiny of the activities, funds are drawn to investment opportunities that can swallow their cash without giving them too hefty a stake.

Morgan Stanley reckons that sovereign-wealth funds have spent \$35 billion since the start of last year on strategic stakes in financial organizations. While, the argument continues that the Indian government should float such a fund or not, there are various sovereign wealth funds who have already forayed into the country. The current trend being observed is that these SWFs buy into private equity firms thereby giving them an indirect presence in the countries where these PE firms invest. China Investment Corporation

(CIC), sovereign wealth fund from China, with an initial corpus of \$200 billion, almost 87 per cent of India's total forex reserves — has already made an indirect foray into India through its substantial \$3 billion stake in US-based private equity group Blackstone, giving it an indirect entry into India. Among the top three private equity funds active in India, Blackstone already has a 50 per cent stake in textile major Gokaldas, 14.5 per cent in Nagarjuna Constructions, and stakes in even defense supplier MTAR Technologies — and was even in the race for the troubled public sector financial behemoth Industrial Finance Corporation of India (IFCI). Singapore government's Temasek has been the largest investor in Bharti Infratel deal.

Users of SWFs

SWFs are not new; Kuwait and Kiribati have had them since the 1950s. Today there are 30 such funds in the world. Abu Dhabi, Norway, Yemen, Qatar, Saudi Arabia, China, Russia and Singapore are some countries that are successfully using this instrument. Abu Dhabi has the biggest, with over

\$800 billion being managed. Norway in fact has a 'fund of funds' of sorts; it helps other countries invest their money.

SWFs became famous when in May last year, China bought up 10% of the American Blackstone Group for \$3 billion out of its SWF. Soon after, Qatar bid to buy J Sainsbury, a British retailer. The West fears that emerging economies could buy out firms in 'sensitive' sectors or take over their infrastructure.

It is estimated that over \$2.5 trillion has been placed in Sovereign Wealth funds worldwide. Analysts believe that this figure can increase to anything between \$8-17 trillion by 2011. In fact, financial services firms are scrambling to position themselves as Sovereign Wealth Managers.

Risks in SWF

Some of the risks that the authorities need to be cognizant of are as follows:

1. **Market Impact:** Since the investments by SWF could be of gigantic proportions, any withdrawal of these investments over a short period of time could adversely affect stock markets in which investments have been made, as this could trigger a massive fall in stock prices. Such impact was felt by the Asian economies during the Asian financial crisis of the late 1990s when foreign investors such as hedge funds and other institutions pulled out these markets all of a sudden thereby exacerbating the collapse of these economies.
2. **Security Concerns:** There are certain sensitive industries such as defense equipment, telecommunications, media and the like where investment by foreign sovereign entities would be of grave concern to recipient countries' governments. Even countries such as the United States (US) that led the free-market and liberal investment policy juggernaut have taken to closed-door policies when it came to such sensitive sectors of the economy. For instance, recent amendments to the US legislation governing the Committee on Foreign Investment in the United States (CFIUS) give wide powers to the US Government to block deals by foreign
- players that are against US national interest. These legislative changes were triggered due to overtures in the past by the state-owned China National Offshore Oil Corporation (CNOOC) to take over Unocal, and by Dubai Ports World to acquire Peninsular and Oriental Steam Navigation Company, that were eventually warded off by the US. Even key European nations, through outspoken heads of states in the likes of Angela Merkel (of Germany) and Nicholas Sarkozy (of France) have called for protecting important industrial sectors from political influence of other nations.
3. **Political Influence:** Some commentators perceive a risk that investing sovereigns will exercise political influence by leveraging their large stakes in the markets of other countries, although it is not entirely clear whether such instances have yet occurred. Fears have been expressed that investing sovereigns could lobby for favourable tax treatment, special benefits for companies in which they have invested and the like.
4. **Lack of Transparency:** Unlike financial investors and commercial entities that are answerable to their shareholders, and thereby have disclosure and reporting requirements, SWFs by and large do not have similar obligations. Hence, their investment policies and strategies are shrouded in secrecy. Information about investment patterns of SWFs may not be generally available in the financial markets or to countries in which they make investments.

With this background, there appear to be two schools of thought emerging with respect to SWFs: The first school takes a more **liberal approach**, whereby commentators argue that SWFs should not be restricted from investing in other financial markets and ought to be treated on par with commercial investors. They urge a dispassionate and financially prudent strategy on the part of recipient countries. The only area where they call for a different approach is to enhance disclosure obligations on SWFs so that an element of transparency is introduced in their operations. Finance & Development, a quarterly magazine of

the International Monetary Fund (IMF) states “[t]here’s no apparent reason to see the continued existence of these funds as destabilizing or worrying. In fact, IMF has strongly encouraged exporters of nonrenewable resources to build up exactly such funds in preparation for a “rainy day.”

On the other hand, there is another school of thought that adopts a more **cautious approach**. In an article in DNA - Money, Mukul Asher states:

“Open societies with still-developing regulatory, and data gathering and mining capabilities such as India need to be particularly cautious when the investments by the SWFs are involved in strategic areas such as banks, telecommunications, and ports. There is a possibility of national policies being undermined by transactions undertaken by SWFs of different countries. India also needs to substantially enhance its regulatory and monitoring capacity for not just approving the foreign direct and portfolio investments, but also their behaviour over time. India should consider developing a database of foreign investments by type of financial institutions, including SWFs.”

SWF and India

As far as India is concerned, there are two primary issues that Indian regulators ought to consider while dealing with SWFs. The first issue relates to how the Indian regulators should control investments by foreign SWFs into Indian companies (SWF Inflows), and what the risks associated with such investments.

First, the RBI could allow a faster pace of currency appreciation which should help reduce the size of the current account balance. While such a policy is clearly something that should be pursued more vigorously by countries with large current account surpluses such as China and oil-exporting countries (most notably Russia), India is running a current account deficit and there are growing concerns of loss of export competitiveness with the appreciation of the rupee as noted above.

Second, the RBI and related authorities could attempt to reduce the size of the capital account surplus by promoting capital outflows and/or

curbing capital inflows. However, such selective manipulations of the capital account quickly run into diminishing returns and become counter-productive at some stage.

While the idea of investing reserves has many supporters in India, there remains strong opposition from within the Indian government. **The three major arguments against creating an Indian SWF are:**

a). *India’s reserves are built from capital account inflows and are hence encumbered assets that are subject to capital flight:*

The fact that India has a merchandise trade deficit of \$65 bn and a current account deficit of \$9.9 bn does make us different from other large reserve holders whose reserves have been built up from huge trade surpluses. However, the current account deficit as a percentage of GDP is manageable and if you add software and services income, the trade deficit is reduced to \$32bn. As a result, India’s balance of payments and trade position appear stable given the size of the economy. In addition, the RBI estimates that the ratio of volatile capital flows (cumulative portfolio investment and short-term debt) was only 38 per cent of the reserves as of March 2007. Clearly, at \$272 bn we have far exceeded the cushion needed for any capital flight and to cover the current account deficit.

b). *India should reduce reserves by opening the capital account and making it easier to invest abroad:*

While there is no doubt that it should be made easier for Indians to invest abroad, the marginal return on capital in developing countries like India that have scarce capital and surplus labour should always be higher than in developed countries. Hence over the long term, we should continue to see capital move from developed countries to high-growth developing countries like India. Opening the capital account for outward investment may slow down net capital inflows but is unlikely to reverse the process. This means that the RBI will, therefore, have to continue to accumulate foreign currency to prevent more appreciation in the rupee, which will further increase the reserves and the need to have an appropriate investment framework.

- c). *An Indian SWF will be subject to corruption and mismanagement and could be misused to promote domestic political or foreign policy objectives:*

A very valid concern, given governance in India and the scale of funds involved, however, one that can be mitigated through designing the fund correctly and limiting the amount of funds available. In order to minimise this risk, the fund should have the sole objective of maximising returns and the structure should be designed to minimise government interference, increase transparency and enhance accountability. Norway has already set up a good template for its fund that has now in effect become the gold standard for other SWFs.

None of the arguments above are reasons enough to justify the huge loss in income that Indian citizens are bearing. In fact, India's reluctance to form an SWF is more symptomatic of a fundamental malaise affecting Indian policymaking.

Firstly, India still has to come to terms with its new prominence in the world financial order where developing countries' reserves and GCC oil wealth have made these countries powerhouses in the world financial markets. Witness the recent investments in OECD financial institutions from Asian and Middle-Eastern SWFs.

Secondly, the Indian establishment still remains uncomfortable with India's integration into world financial markets with the resultant rapid flows of inward and now outward capital.

- The finance ministry and the RBI should, therefore, immediately go back to the drawing board and evaluate the creation of an SWF with the following five best practices that can be drawn from the experiences of other countries:
- Ensure accountability through a board of directors that includes the Prime Minister, so there is a political cost of mismanagement (for example, Singapore and Malaysia).
- Use third-party fund managers, so professionals can invest and conflicts are reduced (for example, UAE and Norway).

- Determine asset allocation (public vs private and equity vs debt) and return expectations.
- Follow high standards of transparency and disclosure (for example, Norway).
- Adopt socially responsible investment practices (again, Norway).

While this government may not have the political capital to implement this, it is essential that work on designing the fund starts now so that the proposal can be implemented when politically possible.

There is much that India can learn from other countries' experiences with SWFs. Denying the existence of our vast foreign asset holdings, losing income that can be earned from investing these or being unsure about our new position in the integrated world financial system cannot be great policy.

Obviously, all this is not about economics, as it seems on a superficial level. As SWFs deploy their assets, political friction with target countries is likely to accelerate. No wonder many countries have now put in place well-defined foreign investment review processes. It is indeed time that the Indian regulators too discuss this issue and ensure appropriate policy response to this vexatious issue. Nevertheless, what is ironical to note here is that globalisation had contained the seeds of this protectionist state of play — a point that was missed by many.

Conclusion

Sovereign funds have existed at least since the 1950s, but their total size worldwide has increased dramatically over the past 10–15 years. In 1990, sovereign funds probably held, at most, \$500 billion; the current total is an estimated \$2–3 trillion and, based on the likely trajectory of current accounts, could reach \$10 trillion by 2012.

The challenge to the policymakers is to find a balance for government-backed funds that contain geo-political issues without discouraging orderly global movement of capital — a Herculean task considering the inherent paradox contained in the idea.

Naturally issues get blurred when questions are raised concerning direct or strategic investment

by SWFs — i.e. when management stakes, sensitivity and security risks, size and, of course, strategic interests are involved. The response would naturally be equally blurred, diffused and to that extent arbitrary.

Even though there is no consensus on the approach towards SWFs, one thing appears fairly clear – that SWFs are likely to continue to undertake substantial investments in various countries, and hence investment destinations such as India need to adopt a clear policy stance towards such investments. We could expect pronouncements not only a national level by the Indian regulatory authorities, but also from the World Bank and IMF that are currently exploring guidelines and standards for SWFs. This debate is not likely to fade away soon.

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MAPPING AND ASSESSMENT OF BEHAVIOURAL COMPETENCIES OF DEPUTY EXECUTIVE ENGINEERS- 360 DEGREE APPROACH (A STUDY IN GOVERNMENT ORGANISATION, INDIA)

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Abstract: In recent times, 'competency mapping' has become a catch phrase. A lot of work is being done on how it helps individuals as well as organizations in the process of change and development. The present paper throws light on one such exploration in order to demonstrate its utility in the various bodies of State Government. At a more specific level, it discusses the processes of mapping, assessment and development of the competencies in the Central Designs Organization (CDO), a body in the State of Andhra Pradesh. CDO is one of the key technical wings in the Irrigation Department of AP, approves all project designs implemented in the state being an Apex authority. This study uses Multi-rater Assessment and Feedback System (360 degree appraisal and feedback) to achieve its purpose. The study is a pioneer on Deputy Executive Engineers, one level in state Irrigation Departments and can be conducted in other levels such as Executive Engineers and Superintending Engineers, so also extended to R&B, Panchayat Raj, Public Health Engineering Departments in the state. The Findings and suggestions of study very much help the Organization for implanting better H.R Management practices.

Key words: Behavioral Competencies, Mapping & Assessment, 360 Degree Feedback, Government Organization.

Theoretical Frame Work

The concept of 'Competency' has made the art of Human Resource Management (HRM) to shift its focus from performance appraisal to performance management. The change in focus has taken place owing to the pioneering work of McClelland (1973) on competencies. Since then competency has turned from a phrase to a movement across the globe in diverse sectors. More than a few scholars have attempted to define the term 'competency'. (McClelland, 1973; Boyatzis, 1973; Lyle, S. M. and Spencer, M. S., 1993; Ulrich, D. 1997; Hay Group, 2003; Sharma, R.R. 2002; Rao, 2003 & 2007; Naik, P. & Rahman, 2005; Sanghi, S., 2007; Premarajan, 2008).

However, for the purpose of this paper, the authors accept the following definition, which is widely accepted in industry and academia. Accordingly, '*Competencies are underlying characteristics of a person, that enable him/her to deliver superior performance in a given job, role or situation. They include knowledge, skills, attitudes, behaviors and motives*'.

Similarly, the term '*Competency Mapping*' also needs to be understood. Competency Mapping or Competency Profiling refers to studying the job behavior of people to identify their knowledge, skill, self-concept, attitude, trait and motive which results either in success or failure on the job (anonymous scholar). In this regard, Steve Garrett (2002) defines Competency Mapping as a 'process, an individual uses to identify and describe competencies that are the most critical to success in a work situation or work role'.



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Another crisp definition was given by Rao (2003), who defined Competency Mapping, as ‘*a process of identification of competencies, required in people to perform a given job successfully or a role or a set of tasks at a given point of time*’. The definitions, thus give a meaning that the Competency Mapping is a process of identification of the competencies required to perform successfully a given job or role or a set of tasks at a given point of time. It consists of breaking a given role or job into its constituent tasks or activities and identifying the competencies needed to perform the same successfully.

Studies on the competency mapping reveal that the people in an organization with superior competencies play a predominant role in determining the success of organizations (Shailendra et al, 2008; Rao et al, 2003; Sahu, 2007; Sanghi, S. 2007; Sharma, R.R. 2002; Rankin, 2004). Therefore, the role played by competency in the success of an organization is vital to its long-term survival. The studies have proved how the competency based approach to human resources can make the organizations to have a right approach towards selection, training and development, performance appraisal, and succession planning systems. In consequence, certain new approaches such as competency-based selection, competency-based training and development, competency- based performance appraisal and competency-based succession planning have emerged in the field of study.(Rao, 2002, 2003 & 2004; Sarma, R. 2002; Sanghi, S. 2007; Soundari, 2003; Whiddett et al, 2003; William et al, 1999; Sundararajan, 2008; Wadman et al, 1998; Nair, G. 2005; Chaterjee, U, 2005; Danny G.L. et al, 2002). The studies also strongly endorse a view that, if the competency based human resource management is applied in any organization, the human capital of that organization would be relieved from the pitfalls of HRM such as human resource underutilization, mismanagement and misunderstandings. Needless to mention that unlike other capitals in an organization that might possibly depreciate, the human capital appreciates more and more as you develop and use it. Therefore, the HR needs to be managed properly in an organization wherein competency mapping is the best possible approach

available today in human resource management (Shailendra et al, 2008; Rao et al, 2003; Sahu, 2007; Sanghi, S. 2007; Sharma, R.R. 2002; Rankin, 2004).

Classification of Competencies

Personnel in any organization are involved in performing a variety of activities that require a variety of capabilities or competencies (Rao, 1984). A review of literature on competencies reveals various ways of grouping of competencies. Katz (1970) categorized skills into three broad areas- Technical, Human and Conceptual. Rao (2003) classified competencies into four groups: Technical (dealing with the technology or know-how associated with the function, role and task), Managerial or Organizational (dealing with managerial aspects, organizing, planning, mobilizing resources, monitoring and systems use), Human or Behavioral (competencies that are personal, interpersonal and team related) and Conceptual or Theoretical (competencies like visualizations and model building) (cited in Pandu et al, 2005). Similarly, the Indian IT giants like Tata Consultancy Service (TCS) and iGate have grouped the critical competencies of their employees into three broad categories: Behavioral, Managerial and Technical (vide the pre-placement talk by a Senior executive of TCS company in Hyderabad in 2008 and from www.igate.com).

Need for the Present Study

The Central Designs Organization (CDO), which is being studied, is one of the key technical wings in the department of Irrigation and Development of the Government of Andhra Pradesh (India). The organization is manned by 173 qualified engineers in different capacities (in the order of their hierarchy-Assistant Executive Engineers (AEEs), Deputy Executive Engineers (DEEs), Executive Engineers (EEs), Superintending Engineers (SEs) and a Chief Engineer (CE) who actively involved in the process of designs of irrigation projects (see annexure for a brief profile on CDO).

As such, having observed the trends happening in human resource management function, the CDO wished to come out of its bureaucracy system of handling of HR function

to experiment with a new tool such as competency mapping process. Nevertheless, a survey of literature reveals that only a few research studies (James Lindner, 2001; Arun Prasad & Kamalanabhan, 2004; Hamlin & Susan, 2008) are available in the public domain that reveal the attempt of a few government organizations in India and abroad to apply the competency mapping in their organizations. Nevertheless, none of the scholars did focus on Competency based HRM in Irrigation departments. Therefore the present study: Competency Mapping and Assessment in Government Organization would fill such knowledge gap.

Objectives

The specific objectives set for this study are to:

1. Map the behavioral competencies for the select Job (DEE)
2. Assess the level of competencies of job performers (DEEs) through 360 degree (self, peers, superiors and subordinates) evaluation
3. Measure the difference in the assessments of Multi-rater groups (self, peers, superiors and subordinates)
4. Identify the underlying dimensions in the behavioral competencies
5. Discuss the implications of this study

Hypotheses

Keeping the above objectives in view, the following hypotheses have been formulated.

1. There is no significant difference in the assessment rates (self, superiors, subordinates and peers) on behavioral competencies
2. There is no significant difference in the assessments of the self and others (superiors, subordinates and peers) on behavioral competencies.

Methodology

In the light of above objectives & hypotheses, the methodology for study is designed. The discussion followed dwells on the rationale in selection of 360 degree appraisal tool for competency assessment, procedure followed in designing of questionnaire, rationale in

selection of sample method and the tools used for data analysis.

Why 360 Degree Appraisal?

The various tools and methods used for assessing the success competencies are job task analysis, psychometric tests, individual interviews, performance appraisal reports, performance based reference checking, critical incident technique, repertory grid, behavioural event interview, Delphi technique, questionnaire, multi rater assessment and feedback system (MAFS/360 degree appraisal and feedback), and assessment centers (Fletcher, 1997; Garavan and others, 1997; London & Smither, 1995; Nowack, 1993; Brett & Atwater, 2001; Mahapatra & Chawla, 2002; Bailey & Fetcher, 2002; Naik, P. & Rahman, 2005; Rao, 2004). The two methods which are widely in use in many leading corporates in India and abroad for assessing competencies are 360 degree feedback and assessment centers (Sanghi, S. 2007). Of the two, the 360 degree feedback method is widely used in research (Bernardin, H.J., 1986; Brett & Atwater, 2001; Edward et al, 1986). Almost every Fortune 500 company uses the '360 degree appraisal' in one form or another (www.talentsmart.com and Rao, 2004). In India, many leading companies in software industry (TCS, Infosys, Wipro, Satyam, iGate, Honeywell, Aztec, Mindtree, WNS), financial services (National Stock Exchange, State Bank of India, Union Bank of India, Bank of Baroda), manufacturing (Raychem RPG, Tisco, BHEL, ONGC, Titan, Dr. Reddy), logistics (Gati), health services (Wockhardt) use the 360 degree feedback tool in their performance management/competency mapping process (Sharma, R. R., 2002; Rao and others, 2002, 2003, 2004 & 2007; Naik, P. & Rahman, 2005; Brett & Atwater, 2001; Joan, B.F. 2001; Hazucha et al, 1993; London, M. et al, 1995; Eadman, 1998; Girish Nair, 2005; Urmi Chatterjee, 2005; Archana, A. 2005; Prasad, T.C.C., 2005; Sanghi, S. 2007; Rao T.V and Dutta, S. (2002), Rao and Annapurna and Rao and Mohit).

The popularity of this method may be, because of it being user friendly in administration and a belief that developmental feedback can improve performance (Bernardin, H. J., 1986;

Brett & Atwater, 2001; Edward et al, 1986; Carroll & Schneier, 1982; Cummings & Schwab, 1973). As a tool it is a structured process of feedback from key stakeholders and aims at strengthening one's competencies by identifying and working on areas of improvement. As a tool it enhances the ability to observe and measure various job facets (Borman, 1974; Henderson, 1984). It can be used as a tool for self-reflection and correction (Mahapatra & Chawla, 2002; Bailey & Fletcher, 2002). It also facilitates performance by increasing an individual's level of self-awareness (Fletcher, 1997; Garavan, et al., 1997; London & Smither, 1995; Nowack, 1993), measures the degree to which we see ourselves as others see us (Wohlers & London, 1989) and act as greater reliability, fairness and ratee acceptance (Letham, G. P., Wexley, K. N., 1982). Commenting on its use in terms of performance feedback, a scholar opines: "The slave knows the master better than the master knows the slave" (Guinn U.L, in Sahu 2007) and "the peer appraisals are seen as better than self-appraisals given the chance of self-serving bias" (Sahu, 2007).

Thus, in view of its wider usage and benefits, the present study also adopts the '360 degree appraisal and feedback' for data collection.

Data Source

The study uses both primary and secondary data. The primary data has been obtained from Assistant Executive Engineers, Deputy Executive Engineers and Executive Engineers through a structured questionnaire. The secondary data have been obtained from Central Designs Organization (CDO) and from published literature such as books, journals and business dailies.

Construction of Questionnaire

A Likert type questionnaire has been developed for eliciting opinions from the respondents on specific behavioural competencies. The questionnaire is constructed and subjected to validity and reliability tests. The test procedure adopted for assessing validity and reliability is in the lines of similar competency mapping studies (Siraj et al, 2005 and Ray Choudari, S. 2005). The test procedure adopted for the pilot study includes the process of

identification of competencies of DEEs, that have undergone a series of filters (the procedure is explained in detail in Mapping Competencies section) with the help of 25 knowledgeable officers (one chief engineer, four SEs, 10 DEEs, 10 AEEs) of the CDO and under the supervision of a psychometrician, who verified the content and construct validities of questionnaire. The validity of scale is established through content validation based on the judgment of the experts.

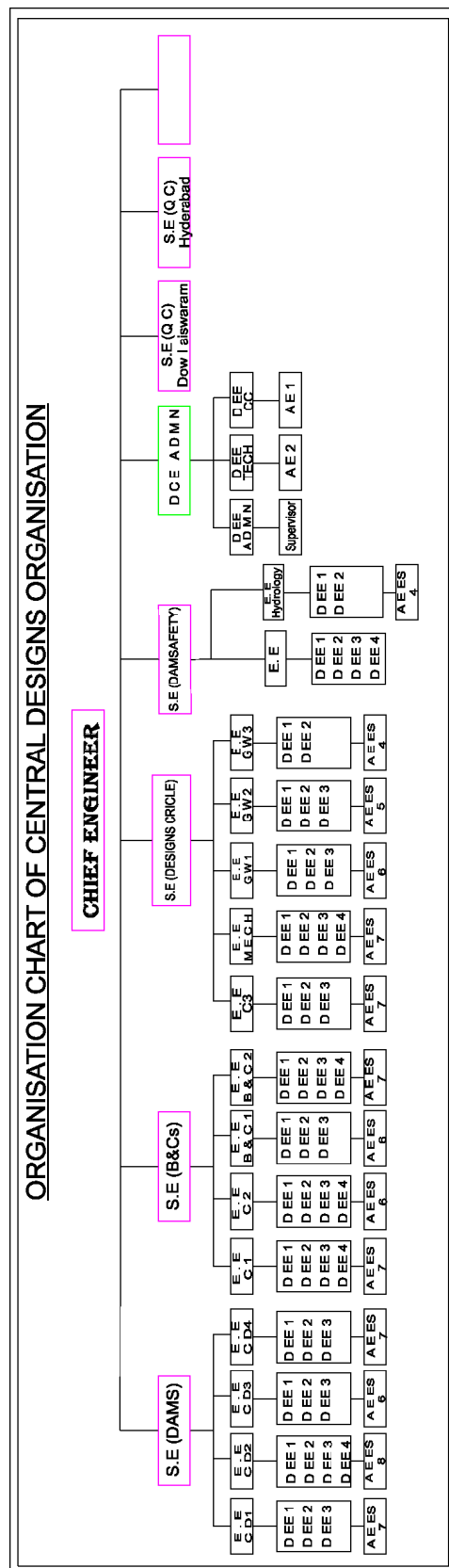
The reliability of scale has been found using Cronbach's α and is 0.966, which is reasonably found good from a study of Harris & Schaubroeck (1988) who did a meta-analysis of self-superior, self-peer and peer superior ratings, covering 42 studies sourced from an internationally acclaimed journals over a period (Academy of Management:1958-1986; Journal of Applied Psychology:1956-1986; Journal of Educational Psychology:1956-1986; Journal of Occupational Psychology:1970-1986; Journal of Vocational Behavior:1970-1986; Organizational Behavior and Human Decision Processes (Formerly Organizational Behavior and Human Performance: 1966-1986) also found that the average reliabilities of those studies are substantially higher than the 0.60 figure. Therefore the alpha value (0.966) obtained in this study speaks the rationale in relying on the scale used for the study.

The factor analysis run on the data also reveals two underlying dimensions in the behavioral competencies (13).

Selection of Sample

The employee strength of CDO is 223. Of them, 173 are technical staff (100 AEEs, 52 DEEs, 16 EEs, 4 SEs and 1 Chief Engineer) and 50 are non-technical staff. For the purpose of the study, the competencies of DEEs are assessed by multi raters - self (DEEs), peers (DEEs), superiors (EEs) and subordinates (AEEs) who form a sample frame for this study. Of 52 DEEs, those who involved in the design work (36 DEEs) were only studied and the rest (16) were omitted from the study, to have homogeneity in the assessee group. SEs are not involved in the study as they are not direct superiors to the DEEs. Considering the norms followed in multi rater feedback

Figure 1
Organizational Chart of CDO



mechanism, it is decided to involve minimally one superior, one/two peer/s and one/two subordinate/s for evaluating a DEE. Therefore, 36 DEEs are assessed by 70 subordinates (AEEs), 45 peers (DEEs), 11 superiors (EEs) and 36 self (DEEs).

Judgment and Purposeful sampling method is followed while selecting the assesses and assessors. The reason is the study happened in one organization (CDO) and for the sample frame of 223. Of them, the assesses (36 DEEs) who involved in the designs only are chosen (purposefully). However, a choice of selection happened only in case of assessors. For the purpose, a panel of experts (consisting CE, SE and EE) was constituted for choosing the assessors from peers (DEEs) superiors (EE) subordinates (AEEs). As the panel knew the reporting relationships in the CDO, the objectives set for this study (from the researchers) and need of objective discussions, the selection of sample was not become difficult.

Demographic details of Sample

The demographic details of sample are as follows: 53% of the respondents are with below five years of experience in CDO followed by the experience group of 11-15 years (18%) and 16-20 years (16%). Regarding the educational background 52% possess B.Tech and 48% have M.Tech qualifications. With reference to their age, 34% of the respondents are under the age group of 20-30 years, followed by the age group of 41-50 years (32%) and 31-40 years (19%). The sample consists of 61% Male and 39% female employees.

Statistical tools

Data has been analyzed using a few statistical tools like Mean, T-test, ANOVA and Factor analysis. The data analysis is done with the help of SPSS 14.0 version.

- Mean score is used to assess the competencies of DEEs.
- ANOVA technique is used to know the significant difference in the assessments of rater groups. (self, peers, superiors and subordinates)
- Student 't' - test is used to find the significant

difference in the ratings of self and others (peers, superiors and subordinates) on each competency variable.

- iv. Factor analysis is used to reconfirm the dimensions observed during the pilot study.

The subsequent analysis discusses the objectives set for this study.

Mapping Behavioral competencies

The procedure followed in mapping behavioural competencies of DEEs are as follows. Initially ten behavioural competencies were identified as critical for DEEs. The same were circulated among 25 experts drawn from various categories of Engineers - Superintending Engineers, Executive Engineers, Deputy Executive Engineers and Assistant Executive Engineers of Central Designs Organisation (CDO) for addition or deletion in the first list of competencies. Following their feedback, the list of behavioural competencies increased to 33. Another few rounds of discussions (Delphi Technique) were held among the members of an expert panel till they reach a consensus on dimensions. Finally, 13 behavioural competencies were identified as critical competencies for DEE job, therefore incorporated in the questionnaire.

The behavioral competencies identified are: (i) Commitment to Job, (ii) Decision Making Skills, (iii) Result Orientation, (iv) Willing to Take Responsibility, (v) Hard Working Nature, (vi) Time Management, (vii) Positive Attitude, (viii) Belief in Team Work, (ix) Supportive, (x) Lead by Example, (xi) Communication Skills, (xii) Open to Ideas, and (xiii) Flexibility in Approach.

Assessment of Behavioral Competencies

In order to assess the behavioral competencies of DEEs, mean scores are obtained and to find the significant difference among the rater groups ANOVA values are obtained. The discussion on the results (Pl. see Tables 1 & 2) on each dimension follows.

1. Commitment to Job: *“Working with dedication and loyalty to the organisation in the assigned work”*. Job performers’ (DEEs) commitment to the job is rated ‘high’ (M=4.29) by Peers and ‘low’ (M=3.78) by Superiors. While

assessing the ‘Commitment to job’, the raters (self, peers, superiors and subordinates) differ significantly as $F(3,178) = 2.785$ and $P < 0.05$.

2. Decision Making Skills: *“Ability to assess the options and implications, in order to identify a solution and firmly taking decision”*. Job performers’ (DEEs) ‘Decision making skills’ are rated ‘low’ (M=3.53) by Superiors and rated ‘high’ (M=3.98) by their Peers. However, the assessment of raters does not differ significantly as $F = 1.585$ and $P > 0.05$.

3. Result Orientation: *“Does the work to achieve result utilizing optimal resources”*. Job performers’ (DEEs) ‘Result Orientedness’ is rated ‘high’ (M=3.94) by Subordinates and rated ‘low’ (M=3.71) by themselves (Self). However, the difference in raters assessment is not significant as $F = 0.792$ and $P > 0.05$.

4. Willingness to Take Responsibilities: *“Takes initiative to do the assigned job by taking full responsibility”*. Job performers’ (DEEs) ‘Willingness to take responsibility’ is rated ‘high’ (M=4.00) by Subordinates and rated ‘low’ (M=3.69) by Superiors. ‘Willingness to take responsibility’ of Job performers (DEEs) have been rated commonly by all the raters as $F = 1.107$ and $P > 0.05$.

5. Hard Working Nature: *“Working hard with dedication and devotion to achieve the end results”*. Hard working nature ‘of the Job performers is rated ‘high’ (M=4.17) by Subordinates and rated ‘low’ (M=3.69) by Superiors. There is no significant difference among rater groups on the hard working nature of the job performers as $F=2.140$ and $P > 0.05$.

6. Time Management: *“Able to plan and organize things in time-frame and achieve goals within stipulated time”*. Peers have rated ‘high’ (M=3.93) and Superiors have rated ‘low’ on the ‘Time Management’ dimension of the Job Performers. Rater groups do not differ significantly while rating the ‘Time Management’ of the Job Performers (DEEs) as $F=0.612$ and $P > 0.05$.

7. Positive Attitude: *“Constructive way of thinking in solving a problem”*. Job performers’ (DEEs) have rated themselves ‘high’ (M=4.23),

Table -1
Assessment of Behavioural Competencies: Mean and SD Values

S.No	Name of the Competency	Superior (EE)(N=36)		Subordinate (AEE)(N=70)		Self (DEE) (N=31)		Peers (DEE)(N=45)	
		Mean(M)	S.D	Mean(M)	S.D	Mean(M)	S.D	Mean(M)	S.D
1	Commitment to Job	3.78	0.98	94.20	0.942	4.23	0.717	4.29	0.695
2	Decision making skills	3.53	0.910	3.77	0.995	3.77	0.845	3.98	0.866
3	Result Oriented	3.75	0.967	3.94	0.832	3.71	0.643	3.82	0.747
4	Willing to take	3.69	1.037	4.00	0.993	3.87	0.718	3.78	0.704
5	Hard working responsibility	3.69	1.091	4.17	0.992	3.94	0.814	4.02	0.753
6	Time Management	3.67	1.014	3.86	1.053	3.90	0.831	3.93	0.720
7	Positive Attitude	3.69	0.889	4.01	0.860	4.23	0.560	3.82	0.777
8	Belief in Team work	3.58	1.02	3.80	0.957	4.06	0.629	3.82	0.806
9	Supportive	3.61	0.964	4.23	0.887	4.06	0.680	3.78	0.902
10	Lead by example	3.44	0.969	3.57	1.001	3.61	0.844	3.62	0.860
11	Communication skills	3.67	1.095	3.69	0.971	3.52	0.677	3.60	0.809
12	Open minded	3.64	0.899	3.64	1.05	4.10	0.746	3.73	0.837
13	Flexibility in Approach	3.42	0.996	3.73	1.04	4.06	0.680	3.80	0.757

Source: Field survey

Table-2
Agreement among the Rater Groups on Assessment of Behavioural Competencies: ANOVA Values

S.No	Name of the Competency		Sum of Squares	Df	Mean Square	F	Sig.
1	Commitment to Job	Between groups	6.20	3	2.067	2.785	0.042
		Within groups	132.086	178	0.742		
2	Decision making skills	Between groups	4.052	3	1.351	1.585	0.195
		Within groups	151.712	178	0.852		

3	Result Oriented	Between groups Within groups	1.569 117.486	3 178	0.523 0.660	0.792	0.50
4	Willing to take responsibility	Between groups Within groups	2.665 142.901	3 178	0.888 0.803	1.107	0.348
5	Hard working	Between groups Within groups	5.570 154.430	3 178	1.857 0.868	2.140	0.097
6	Time Management	Between groups Within groups	1.611 156.081	3 178	0.537 0.877	0.612	0.608
7	Positive Attitude	Between groups Within groups	5.713 114.622	3 178	1.904 0.644	2.958	0.034
8	Belief in Team work	Between groups Within groups	3.87 140.099	3 178	1.290 0.789	1.636	0.183
9	Supportive	Between groups Within groups	11.255 136.537	3 178	3.752 0.767	4.891	0.03
10	Lead by example	Between groups Within groups	0.744 155.964	3 178	0.248 0.876	0.283	0.837
11	Communication skills	Between groups Within groups	0.708 149.628	3 178	0.236 0.841	0.281	0.839
12	Open minded	Between groups Within groups	4.976 151.887	3 178	1.659 0.853	1.944	0.124
13	Flexibility in Approach	Between groups Within groups	7.199 149.664	3 178	2.40 0.841	2.854	0.039

Source: Field survey

Table: 3
Managerial Behavioural Competencies of Deputy Executive Engineers by Students' T-Distribution

S.No.	Behavioural Competencies	Self (a)	Peers (b)	Superiors (c)	Subordinates (a), (b), (c)	Average Deviation	Standard distribution	Value from t-	Hypothesis (Ho)
1	Commitment to Job	4.27	4.29	3.914	4.200	4.134	0.196	1.200	Accepted
2	Decision Making	3.77	3.98	3.500	3.800	3.760	0.243	0.070	Accepted
3	Result Oriented	3.73	3.82	3.800	4.000	3.873	0.110	2.251	Accepted
4	Willing to take responsibility	3.87	3.78	3.700	4.000	3.826	0.155	0.491	Accepted
5	Hard work	3.94	4.02	3.700	4.200	3.973	0.253	0.225	Accepted
6	Time Management/ Punctuality	3.93	3.93	3.700	3.900	3.843	0.125	1.206	Accepted
7	Positive Attitude	4.23	3.82	3.700	4.000	3.840	0.151	4.478	Rejected
8	Belief in Team work	4.10	3.82	3.600	3.800	3.740	0.122	5.128	Rejected
9	Supportive	4.06	3.78	3.600	4.200	3.860	0.308	1.125	Accepted
10	Lead by Example	3.63	3.64	3.000	3.600	3.580	0.072	1.201	Accepted
11	Communication skills	3.52	3.60	3.500	3.680	3.646	0.040	5.478	Rejected
12	Open to ideas	4.10	3.73	3.667	3.830	3.733	0.095	6.697	Rejected
13	Flexibility in Approach	4.06	3.80	3.6400	3.7400	3.6530	0.2042	3.4520	Accepted
14	Average	3.94	3.85	3.62	3.92	3.804	0.140	1.6740	Accepted

Table value corresponding to Level of Significance 0.05=4.303; Degree of Freedom=2 (Anand Sharma P718)

H0 "Accepted" means There is no significance difference between ratings of self and others

H0 "Rejected" means There is significance difference between ratings of self and others

whereas their Superiors rated 'low' ($M= 3.69$) on 'Positive Attitude' competency. Rater groups differ significantly while assessing the Positive attitude of Job Performers (DEEs) as $F(3,178)=2.958$ and $P<0.05$.

8. Belief in Team work / Team Building: *"Works to promote a positive climate, good morale and cooperation between team members, builds team spirit, respecting sentiments of team members and their perceptive owns responsibilities for success and failures"*. 'Belief in Team work' of Job Performers was rated 'high' ($M=4.06$) by Self and 'low' ($M=3.58$) by the Superiors. However, the rater groups do not differ significantly while assessing the 'Belief of Team work' of the Job Performers (DEEs) as $F(3,178) = 1.636$ & $P>0.05$.

9. Supportive: *"Developing and maintaining win relationships with subordinates, peers and superiors possessing supportive attitude"*. Subordinates rate supportive competency of Job performers 'high' ($M=4.23$) whereas Superiors rate 'low' ($M=3.61$). A significant difference is found among rater groups while assessing 'supportiveness' of job performers as $F(3,178) = 4.891$ and $P<0.05$.

10. Lead by Example: *"Influence the team members and events by exhibiting leadership qualities, high character and integrity. Be a role model to others"*. Peers have rated 'high' ($M=3.62$) and Superiors have rated 'low' ($M=3.44$) on 'Lead by Example' dimension of the Job Performers. However, rater groups do not differ significantly in the assessment as $F(3,178)=0.283$ and $P>0.05$.

11. Communication Skills: *"Speaks in concise, organized, effective and culturally appropriate manner tailored to the situation, and raise succinctly in a clear convincing and organized manner. There will be clarity in expression, and writing in a convincing manner"*. Subordinates rating is 'high' ($M=3.69$) whereas self-rating is 'low' ($M=3.52$) on 'Communication skills' of job performers. However, the raters do not differ significantly in the assessment as $F(3,178)=0.281$ and $P>0.05$.

12. Open Mindedness/Open to Idea/Change: *"Personal willingness and ability to affectively work in and adopt to change"*. Rating

by Self is 'high' ($M=4.10$), whereas Superiors as well as Subordinates rate 'low' ($M=3.64$) on the 'Open mindedness' of Job performers. However, the rater groups do not differ significantly in their assessments as $F(3,178) = 1.944$ and $P>0.05$.

13. Flexibility in Approach: *"Open to change, new information and alternative approaches - accepts change and new situation as opportunities for learning and growth"*. Self-rating is 'high' ($M=4.06$) whereas Superiors-rating is 'low' ($M= 3.42$) on 'Flexibility in Approach' of the Job performers. There is a significant difference among raters in assessing the flexibility approach of job performers as $F(3,178) = 2.854$ and $P<0.05$.

Self –Other agreement

With the help of t - test results, it is found that there is a significant difference in the assessments of self and others on four behavioural competencies viz., Positive attitude, Belief in team work, Communication skills and Open to ideas. On the other hand, there is no significant difference in the assessments of self and others in respect of the remaining nine behavioural competencies: Commitment to job, Decision making skills, Result orientation, Willing to take responsibility, Hardworking nature, Time management, Supportive, Lead-by-example and Flexibility in approach (Pl. refer table -3).

Key Behavioral Dimensions

In order to find the underlying dimensions in behavioral competencies, the output on factor analysis is obtained by requesting Principal Component Analysis and specifying a rotation.

Table-4 discloses the output of factor analysis comprising the communality for all 13 behavioral competencies and their Eigen values. The competencies having Eigen values of 1 or more than 1 are extracted. It is noticed from the cumulative percentage column that, the two factors extracted together account for 64.38 percent of the total variance. This is a pretty good bargain, as we lost only 35.62 percent of the information content (64.38 percent is retained by the two factors extracted out of the 13 behavioral variables). We also notice from table-5 that the competencies Q7, Q8, Q9, Q11, Q12 and Q13 have

loadings of 0.725, 0.778, 0.691, 0.626, 0.816 and 0.799 on factor 1 which is a combination of six original variables viz., 'positive attitude', 'belief in teamwork', 'supportive', 'communication skills', 'Open minded/Open to idea' and 'Flexibility in approach'. Thus the factor 1 could be named as '*Team Orientation*'.

As such in table-5, down the column for factor 2, it can be found that the competency variables: Q1, Q2, Q3, Q4, Q5, Q6 and Q10 have high loadings of 0.824, 0.599, 0.628, 0.753, 0.818, 0.751 and 0.639. This indicates that the factor 2 is a combination of these seven variables. The related statements are: 'commitment to job', 'decision making skills', 'result orientation', 'willing to take responsibilities', 'hard work', 'time management' and 'lead by example'. We may combine these variables into a factor called '*Performing Leadership*'.

Findings and Conclusions

From the foregone discussions, the following findings and conclusions could be drawn.

- Superiors have rated 'low' on most of (11 out of 13 competencies except two viz., (i) Result Orientation and (ii) Communication) competencies of Job Performers, compared to other groups (refer table-6). Variance in the assessment of superiors and others on many competencies may be due to the comprehensive understanding gained by superiors over the years by observing the performance of their subordinates (in this case DEEs) that could have reflected in their conservative and realistic rating.

- Subordinates of job holders rated the latter 'high' on most of the competencies (refer table 6). This high rating of subordinates of their superiors may be either due to admiration on the competencies of their bosses or to appease their bosses with high ratings thereby averting any uncomfortable relations with former in future. On researcher's enquiry with the concerned officials, one of them observe: "due to lack of enough experience in the department, the subordinates who joined CDO recently might not be able to judge their superiors realistically like superiors. Therefore the new recruits might have taken a safe route of rating their superiors high". This view was observed by the researchers during the interactions

with the officials, in considerable number of cases.

- Generally, peers are perceived to be '*jealous of their colleagues*' growth. But the results of this study reveals otherwise. The peers gave a liberal (high) rating on certain competencies: (i) Commitment to job, (ii) Decision making skills (iii) Time management and (iv) Lead by example, which is a good sign for the organization (Refer table 6). The reason for high rating might be to avoid any inter personal conflicts with their colleagues if they give low rating the latter.

- Respondents have rated themselves high on (i) Hard Working, (ii) Positive Attitude, (iii) Belief in Team Work and (iv) Open Mindedness. This may be due to their (self) perception that they are better team players and hard workers, but the truth is otherwise. For instance, the superiors rated low on these four behavioural competencies (Refer table 6).

- ANOVA results reveal that there is a significant difference among the perception of groups while assessing some behavioural competencies of job performers viz. (i) Commitment to Job, (ii) Supportiveness, (iii) Positive Attitude and (iv) Flexibility in Approach. The factors like assessor's status, experience, and maturity levels could have caused the significance difference in the ratings. (Table-2). The analysis shows that the null hypothesis – that there is no significant difference in the assessments of rater groups - is rejected only in the assessments of above four behavioral competencies only. On other nine behavioral competencies by rater groups (self, peers, superiors, and subordinates') did find no significant difference in their ratings.

- The 't' test results found that there is a significant difference in the assessments of self and others on only four out of thirteen behavioral competencies viz., positive attitude, belief in team work, communication skills and open to ideas. The reason is high assessment by self on those competencies (Refer table 3). Further, the analysis supports us to reject the Null hypothesis stated – that there is no significant difference in the assessments by the self and by others – in those cases.

- Factor analysis notices two important dimensions from the 13 behavioral competencies

(Tables 4&5). They are identified as 'Team Orientation' and 'Performing Leadership, which are required in DEEs for giving better performance at CDO.

Implications of this Study

Against the backdrop of the above findings and conclusions, let us discuss how this study would add to the existing body of knowledge and on the CDO.

Contribution to the existing body of knowledge

The study finds that:

- i. There are 13 behavioral competencies identified as critical for Deputy Executive Engineer job in the design wing of Irrigation Department.
- ii. Superiors' assessment would be low compared to the ratings of Self which is in line with the findings of studies by Frank Shipper & Jeenett (2002), Harris & Schaubroeck (1988). Maybe and West (1982).
- iii. Subordinates rate their superiors high (the findings could not be compared with other studies as such approach was not much probed by other scholars, at least from our review of literature).
- iv. There is no significant difference among the assessments of rater groups (self, superiors, subordinates, peers).
- v. There is no significant difference between the assessments of self and others (the findings are in contrary with those of Thorntoe (1980) who in his summary of self ratings concluded that "individuals have a significant different view of their job performance than held by other people and those of Harris & Schaubroeck (1988) but completely in line with that of Hamlin (2002), whose study found that the self-perceptions of managers and the perceptions of supervisors and subordinates are very similar and only differ on a limited number of criteria and also that of Frank Shipper & Jeenett (2002), which indicates that a complex set of relationships

exists among self and others' evaluation.

- vi. Finally, but very important finding of the present study is also that there are two key behavioral dimensions: 'Team Orientation' and 'Performing Leadership, which are required in DEEs for giving better performance at CDO.

For Central Designs Organisation (CDO):

From the findings and conclusions the following suggestions have been made to CDO.

- i. **Developing Employee Competency Profiles:** The CDO could develop a data bank of competencies of its employees to be used for various purposes such as training, promotions and placement. The CDO can initiate a special counseling and feedback session for each employee, if possible with a counseling expert, for disclosing his/her strengths and weaknesses and motivate him/her towards the areas of development.
- ii. **Planning HRD Activities:** Referring the status of Human Resource Development (HRD) process, a senior executive made a critical observation: "Human Resource Development (HRD) initiatives at CDO are held as a routine affair like any other government body. In a year, only 10% of technocrats are being provided training. In the light of the study's findings, the CDO can also plan HRD initiatives. It can plan for a series of need-based training programmes both in-house and outside, covering every individual (100 percent of employees) for imparting training for a duration of at least 10 days in a year (which has been a practice internationally).

The CDO needs to focus on trainings of employees in the management and behavioural areas. The management and behavioural training, in particular should stress on two aspects: '**Art of working in Teams**' and '**Performing Leadership**' (see section on behavioural dimensions). A programme on *Art of working in Teams* has become essential because the present study found a significant difference in the ratings of self and others on teamwork related competencies: 'Positive attitude', 'Belief in teamwork', 'Supportive', 'Communication skills', 'Open to

Table-4
Results of Factor Analysis

Factor	Eigen Values	% of Variance	Cumulative %
I	7.023	54.026	
II	1.347	10.360	64.387

Table-5
Results of Rotated Factor Matrix

No.	Name of Competency	Factor -1	Factor-2
Q1	Commitment to job	0.119	0.824
Q2	Decision making skills	0.481	0.599
Q3	Result Oriented	0.469	0.628
Q4	Willing to take responsibility	0.360	0.753
Q5	Hard work	0.205	0.818
Q6	Time Management/Puntuality	0.286	0.751
Q7	Positive Attitude	0.725	0.271
Q8	Belief in Team Work	0.778	0.174
Q9	Supportive	0.691	0.388
Q10	Lead by example	0.471	0.639
Q11	Communication skills	0.626	0.338
Q12	Open minded/Open to ideas	0.816	0.240
Q13	Flexibility in Approach	0.799	0.246

Table -6
Competency Vs. High and Low raters

S.No	Name of the Competency	High rater	Low rater
1.	Commitment to Job	Peers	Superior
2.	Decision making skills	Peers	Superior
3.	Result Oriented	Subordinates	Self

4.	Willing to take responsibility	Subordinates	Superior
5.	Hard Working	Self	Superior
6.	Time Management	Peers	Superior
7.	Positive Attitude	Self	Superior
8.	Belief in Team work	Self	Superior
9.	Supportive	Subordinates	Superior
10.	Lead by example	Peers	Superior
11.	Communication skills	Subordinate	Self
12.	Open minded	Self	Superior and Subordinates
13.	Flexibility in Approach	Self	Superior

* Based on mean values

ideas' and 'Flexibility in approach'. Similarly, a programme on 'Performing Leadership' is desirable covering topics like 'Commitment to Job', 'Decision Making Skills', 'Result Orientation', 'Willingness to Take Responsibilities', 'Hard Work', 'Time Management' and 'Lead by Example'. In order to develop engineers in those behavioural areas, they may be deputed to the related management development programmes at premier management institutions such as Indian Institutes of Management (IIMs), Xavier Labour Relations Institute (XLRI), Management Development Institute (MDI) and the like. The programmes could be, apart from the present trainings, at Water and Land Management Training Institute (WALAMTARI), Engineering Staff College of India (ESCI), Dr.Marri Chenna Reddy HRD Institute and Administrative Staff College India (ASCI) at Hyderabad.

The present study of competency mapping, assessment and development at Central Designs Organisation is a right step at right time for the state of Andhra Pradesh in its journey towards economic development, through its major focus on irrigation and agriculture, aiming to complete 75 irrigation projects benefiting 10 million acres with a capital outlay of Rs.1,000,000 millions.

Suggestions for further research

Human Resource Management as a profession is in a transition stage in India like

elsewhere. Many studies have been completed focusing the role and importance of human resources management. As new approaches, models, tools and techniques are emerging in the field of HRM, the organizations in both government and private sector have taken initiatives in implementing them. For instance, competency based hiring is taking place in central government bodies such as DRDO and DRDL and the competency based training and development is taking place in NTPC. Therefore, the authors opine that they made a modest attempt to apply competency mapping in a state government body. Owing to the limited usage of competency mapping processes in government organizations, compared to commercial organizations (which are ahead with good HR practices), the future scholars could take up a number of empirical researches in the area of HRM in government sector. The scholars can take up case studies/ comparative studies with different combinations of the departments of State and Central Governments. Further, the scholars can explore the reasons why peers and subordinates rate their colleagues/ superiors high (offer liberal rating) unlike a notion that they rate latter conservatively.

Questionnaire for Competency Assessment

Position : Deputy Executive Engineers
Assessed by AEE/EEs

(Please tick the relevant)

Rating Scale: 5. Excellent

4. Very Good

3. Good

2. Satisfactory

1. Poor

Managerial Behavioral Competencies:
(Please tick the relevant box)

Demographic Details:

1. Designation
2. Total Experience in the Dept.:
3. Qualification : B.Tech/M.Tech/Others
(Please mention)
4. Sex : Male/Female
5. Age : Years.

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Rating Scale						
Sl. No.	Competencies	Excellent	Very Good	Good	Satisfactory	Poor
		5	4	3	2	1
1	Commitment to Job					
2	Decision Making Skills/ Problem Solving Abilities					
3	Result Orientation					
4	Willing to take Responsibilities					
5	Hard Working Nature					
6	Time Management/ Punctuality					
7	Positive Attitude					
8	Belief in Team work/ Team Building					
9	Supportive					
10	Lead by example					
11	Communication Skills					
12	Open Mindedness/ Open to Ideas/Change					
13	Flexibility in Approach					

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About Organisation

The Central Designs Organisation (CDO), which is being studied, is one of the key technical wings in the department of Irrigation of the Government of Andhra Pradesh (India). It is the Apex Designs authority which approves all irrigation project designs in the state. It deals with the designs of Major, Medium, Minor and Lift Irrigation Projects. These designs include Spillways, Non Over Flow Dams, Earth dams, Barrages, Canal Alignment and Hydraulic Particulars, Cross Masonry and Cross Drainage works, viz., Aqueducts, Under Tunnels, Bridges, Super passages and Hydro Mechanical Designs. Irrigation development is the top priority of the Government of Andhra Pradesh at this point in time. The hierarchy of the technical staff at CDO is, at the initial level it is the Assistant Executive Engineers (AEEs), who prepare the designs and drawings that would be submitted to the next level - Deputy Executive Engineers (DEEs) who in turn check the designs thoroughly and make recommendations to their higher ups - Executive Engineers (EEs). If the EEs and their next higher level officers - Superintending Engineers (SEs) are satisfied with the designs, they recommend them for the final approval of the Chief Engineer (CE).

A STUDY OF THE INDIAN APPAREL MARKET AND THE CONSUMER PURCHASE BEHAVIOUR OF APPAREL AMONG MANAGEMENT STUDENTS IN MUMBAI AND NAVI MUMBAI

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Abstract: Apparel is one of the basic necessities of human civilization along with food, water and shelter. The Apparel Industry reflects people's lifestyles and shows their social and economic status. The Apparel and Textile industry is India's second largest industry after the IT Industry. College students as a young consumer group have gained significant importance from marketers in recent years because of their growing purchasing power. They have easy access to credit cards and income from part-time jobs to spend. Students tend to spend money on clothing and beauty products, and find these items to be important. Therefore, college students' apparel shopping orientation is important to research because it is an important sector of consumer behavior. The purpose of the study is to understand the Indian apparel market in terms of market size and growth and to study the important demographic, psychological and socio-economic factors which influence the consumer purchase behaviour for apparel with reference to college going students, especially management students. First a secondary study was done on the apparel market in India through books and the internet. Then a questionnaire was prepared to collect primary data from management students of different areas, family income, gender, and attitude regarding purchase behaviour of apparel. The collected data was then analysed using various quantitative tools. The relation between various demographic variables and consumer behaviour on apparel is expected to be understood. Apparel companies can target the right target segment in terms of gender, age group, family income, personality, culture etc. by understanding the preferences of the students and can devise strategies to enable the students to access their products easily.

Keywords: Apparel, consumer behaviour, management students

1. Introduction

1.1 Apparel Industry: Apparel is one of the basic necessities of human civilization along with food, water and shelter. The Apparel Industry reflects people's lifestyles and shows their social and economic status. The Apparel and Textile industry is India's second largest industry after IT Industry. At present, it is amongst the fastest growing industry segment and is also the second largest foreign exchange earner for the country. The apparel industry accounts for 26% of all Indian exports. The Indian government has targeted the apparel and textiles industry segments to reach \$50 billion by the year 2015.

One of the most interesting features of the apparel industry is that, it migrates from high cost

nations to the low cost nations. The growth of the domestic demand for clothing in India is linked with the success of the retailing sector. India presently has entered the second phase of growth and is witnessing a massive rise in the domestic demand. This is primarily due to the rise in the standard of living caused by the rise in the middle-income groups. In our present economic world of demand and supply, price and quality are the key factors, which determine the success of any business. The key element here though, is the cost of labour. India and China have a comparative advantage in this industry though, their vast labour forces and the relatively low cost of labour.

Since, India and China have the advantage of making textiles and so fabric costs are lower than in other countries, they have become the Apparel sourcing choice for many international companies. Sourcing choices arise from profitability. This includes considering costs, such as, buying factors of production, like land, buildings and machines versus factors affecting revenues, including pricing, marketing, and distribution. The



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issues of labour, material, shipping costs and tariffs structure also affect the sourcing choices. Since, apparel production is a labour-intensive activity, wage rates are also a major factor in sourcing decisions. This gives immediate competitive advantage to producers in countries like India and China to export to more developed and high cost countries like the United States and the European Union.

1.2 Consumer purchase behaviour: The actions a person takes in purchasing and using products and services, including the mental and social processes that precede and follow these actions can be called as consumer behaviour. It helps us to answer questions such as:

- (i) Why people choose one product or brand over another?
- (ii) How they make these choices, and
- (iii) How companies use this knowledge to provide value to consumers

Consumer purchase decision process: Behind the visible act of making a purchase, lies a decision that must be investigated. The purchase decision process is the stages a buyer passes through in making choices about which products and services to buy. There are five stages of consumer behaviour: (i) problem recognition (ii) information search (iii) alternative evaluation (iv) purchase decision (v) post purchase behaviour

1.3 Consumer purchase behaviour of apparel: The Indian economy has grown over the last 10 years with new jobs created in the ITES sector, Biomedical, Automotive engineering, Apparel manufacturing and Civil engineering. The growth is strongly led by Information Technology Enabled Services (ITES); this is supported by the education sector with increase in the number of students enrolling for higher education and large numbers of students graduating every year thus creating a large pool of technical and managerial manpower. The working class people segment has grown since the economic growth and it has benefited middle class and upper middle class people. Due to the increase in the number of working people and substantial raise in income, spending power has increased over the years, and particularly the young Indians in the age of 15–

25 like to shop more.

Apparel is a highly symbolic product category due to its high visibility. Individuals will often make assumptions about a person's self-concept simply on the basis of his/her clothing (Soloman&Rabolt, 1999). Self-concept is a dynamic structure that changes according to the nature of the social surroundings or situation (Banister & Hogg, 2006). Consumers will change their consumption behavior based on a current change in their self-concepts (Banister & Hogg, 2006). The symbolic nature of clothing as a visual expression of self-concept can incorporate various clothing styles, brands, retailer outlets and memberships in particular subcultures (Soloman&Rabolt, 1999).

1.4 Consumer purchase behavior of apparel among college going students: College students as a young consumer group have gained significant importance from marketers in recent years because of their growing purchasing power. They have easy access to credit cards (Schor, 1998) and income from part-time jobs to spend. Students tend to spend money on clothing and beauty products, and find these items to be important. Therefore, college students' apparel shopping orientation is important to research because it is an important sector of consumer behavior.

2. Objectives

- i. To study the Indian apparel market in terms of market size and growth, focusing on men's apparel market, women's apparel market, boys' and girls' apparel market.
- ii. To study the important demographic, psychological and socio-economic factors which influence the consumer purchase behaviour for apparel with reference to college going students, especially management students.
- iii. To study how consumer behaviour for apparel is influenced by factors like family income, gender and peer influence. This will help companies to devise different strategies to promote their apparel brands based on preferences of the students.

3. Literature review

3.1 Consumer behaviour of apparel:

Gupta (2004) investigated the factors influencing the choice of private label in departmental stores of Hyderabad for two product categories—processed food and toiletries. A study conducted by **Memon (2006)** wanted to trace the impact of private label brands on retailing dealing in garments. This work considered only two retail brands Westside and Pantaloons in Ahmedabad city and accepted the hypothesis that people are ready to switch over to other brands if the same facilities are available. **Jinhee Nam et al (2007)** in their study examined the **apparel** and shopping preferences of mature women in America. Independent living residents were surveyed concerning fashion consciousness, fashion information sources and shopping **behaviours**. Young and mature **consumers'** reactions to female **apparel** ensembles were compared. Mature subjects purchased **apparel** for pleasure or need, but less for conformity. Recently, **Radha Krishna and Shylajan (2007)** proposed a conceptual model and considered the influence of various marketing and demographic factors on consumers' habitual buying behaviour towards branded articles. But identification of factors, existence of which indulges consumers to go for organized retail apparel brands are still left unturned. **Lahiri, Isita et al (2010)** in their study make an attempt to identify the factors of the **consumers'** buying **behavior** that is influenced by retail **apparel** segment, and to assess the importance of each of them to **consumers** in selecting **apparel** from organized retail outlets. **Krishna, C. V. (2011)** says that Indian retail is in an expansion spree and many companies are joining the retail landscape. After food and groceries segment **apparel** is the next large retail segment and the consumption of **apparel** is also very large in volume. Previously the manufacturing brands used to lead the **apparel** category in the early days and the penetration of the private label brands was very small. But now things have changed and private label brands are leading in every segment. In the **apparel** segment also many private label brands are leading the competition. **Consumer** buying **behavior** is mainly affected by many determinant factors and this paper aims at

understanding and identifying the important determinant factors affecting the **consumer** buying **behavior** towards private label **apparel**. **Sullivan, Pauline et al (2012)** say that despite Generation Y (Gen Y) **consumers'** significant role as a decision maker in the market, it is increasingly challenging for retailers to understand these **consumers'** **behavior** and psychology. To enhance an in-depth understanding of Gen Y **consumers**, this study examined the effect of fashion involvement (FI) and perceived experiential value (EV) on Gen Y **consumers'** retail **apparel** patronage **behaviour**.

3.2 Consumer behaviour for apparel with reference to college going students

McKinney, Letecia et al (2004) The purpose of this research was to examine the influence of selected social factors on the clothing buying behaviour patterns of black **college** consumers. The sample consisted of 333 **students** from two US universities. Results showed that social participation was significantly related to store patronage. No difference was found in patronage behaviour for the variables of **reference** group, social involvement, fashion involvement, clothing benefits sought, and social environment. **Mohamadou L Fadiga et al (2005)** in their study identify sources of demand growth for **apparel** in the US based on **consumer** demographic profiles, regions, and product characteristics. **Cowart, Kelly O.; Goldsmith, Ronald E. (2007)** investigate motivations for online **apparel** consumption using the **Consumer** Styles Inventory. Data from a sample of 357 US **collegestudents** showed that quality consciousness, brand consciousness, fashion consciousness, hedonistic shopping, impulsiveness and brand loyalty were positively correlated with online **apparel** shopping. Price sensitivity was negatively correlated with online spending. **Min-Young Lee et al (2008)** in their paper on Mexican **collegestudents** aim to examine the effects of general **consumer** variables (i.e. normative interpersonal influence and brand consciousness) and brand-specific variables (i.e. perceived quality and emotional value) on purchase intention toward a US **apparel** brand. **Kumar, Archana et al (2009)** examine the direct and indirect effects of individuals' self-concept, product-oriented variables (i.e. **consumer's** need

for uniqueness (NFU), and clothing interest), and brand-specific variables (i.e. perceived quality and emotional value) on purchase intention toward a US retail brand versus a local brand that are available in the Indian market. **Kaushal, Shailesh K. (2011)** examines the teenagers' behavior in reference to fashion apparel purchase intentions and fashion marketing strategies in Lucknow with survey among 700 teenagers regarding their attitudes toward apparel purchase. The paper first uses both exploratory and confirmatory factor analysis to examine the factor structure and psychometric properties of these items.

4. Research Methodology

- i. **Research Design:** First a secondary study was done on the apparel market in India through books and the internet. Then a questionnaire was prepared to collect primary data from management students of different areas, family income, gender, and attitude regarding purchase behaviour of apparel.
- ii. **Sampling design:** A random sample of 60 management students residing in Mumbai and Navi Mumbai was taken and would cover people of different incomes and gender.
- iii. **Data collection:** The primary data was collected using a structured questionnaire.
- iv. **Data analysis:** The collected data was then analysed using various quantitative tools.

5. Findings

The overall size of textile and apparel industry, including the domestic market and exports, is currently estimated at Rs. 3,27,000 crore (US \$ 70 bn).

It is pegged to grow at Rs. 10,32,000 crore (US \$ 220 bn) by 2020, with a CAGR of 11%. As per the latest report by Technopak, Indian Textile & Apparel Compendium 2010, the Indian domestic textile and apparel market size in 2009 was Rs. 2,18,570 crore (US \$ 47bn) and is expected to grow at the rate of 11% CAGR to reach Rs. 6,56,000 crore (US \$ 140 bn) by 2020.

Fig. 1: Total Apparel Market (Rs. Crore)

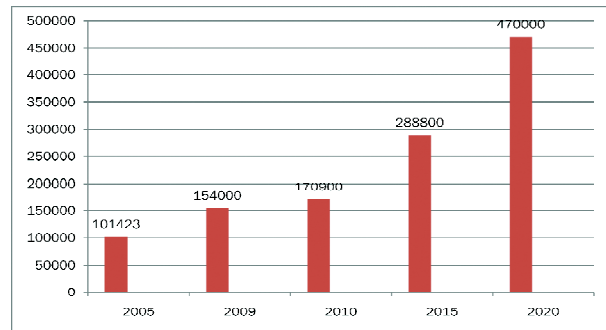
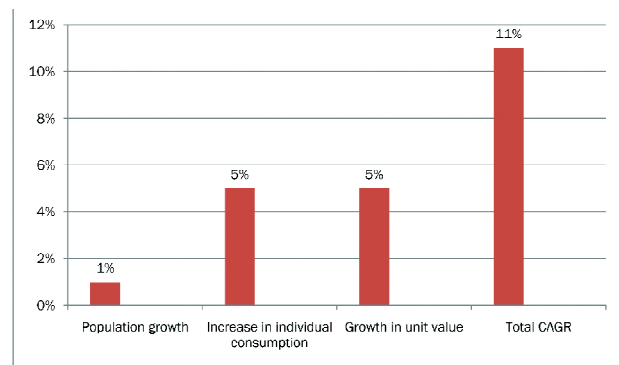
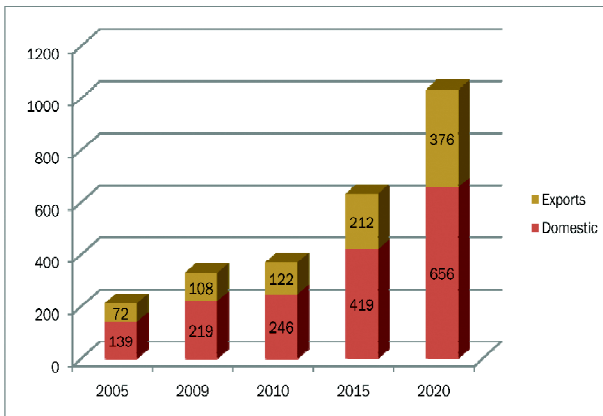


Fig. 2: Components of Apparel Market CAGR



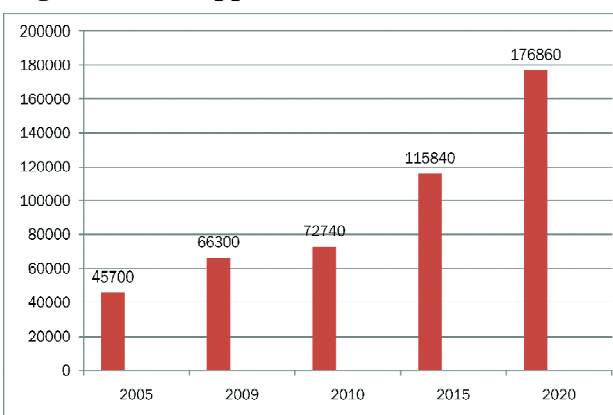
Indian Apparel Market Size and Growth

The Domestic Market: The domestic apparel retail market has been estimated at Rs. 154000 crore (US \$ 33 bn) for 2009 and is expected to reach Rs. 470000 crore (US \$ 100 bn) by 2020, as per the Technopak report. It is highly fragmented, as the organised sector contributed only 14% of the total sales in 2009. The share of the organised sector, however, reached 17% in 2010. The same would reach 25% in 2015 and 40% in 2020, according to the Technopak report. So it is clear that the industry is moving towards higher penetration of organised sector players. Another interesting trend is that the market is shifting from ready to switch (RTS) to ready to wear (RTW) as RTS's current share of about 23% is projected to come down to 21% next year and 16% in 2015. Further it is expected to reduce to 12% by 2020.

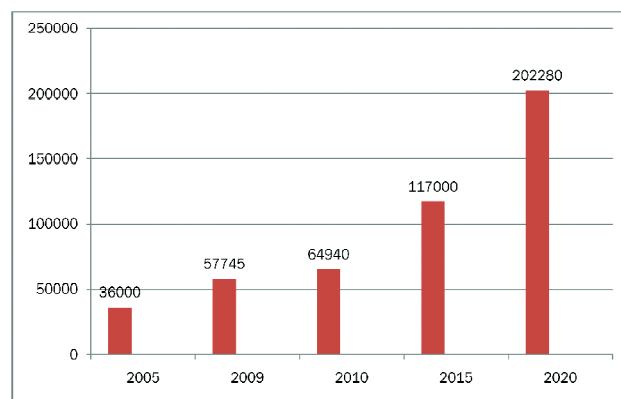
Fig. 3: Domestic and Export Apparel Markets (Rs. Crore)

Source: Nielson's Shopper Trends Study

Men's and women's wear: Currently menswear is the biggest segment of the domestic market with 43% share of the total pie, while women's wear constitutes 38%. About 10% comes from boys wear while girls bring in the remaining 9% sale. The growth rate of women's wear, however, is higher than menswear, and is supposed to surpass the market size of menswear by 2015, when women's wear will capture 41% compared to 40% of menswear as per Technopak estimates. By 2020, women's wear would reach 43% compared to 37% of menswear, as projected by Technopak. Out of the total Rs. 66300 crore menswear market in 2009, shirts contributed to Rs. 20550 crore while Rs. 16720 crore came from sale of trousers. In the women's wear market of Rs. 57745 crore, saree sales formed the largest category at Rs. 24020 crore worth of sales, while salwarkameez and ethnic dresses contributed Rs.

Fig. 4: Men's Apparel Market (Rs. Crore)

Source: Technopak Analysis

Fig. 5: Women's Apparel Market (Rs. Crore)

16660 crore. School uniforms formed the largest category for both boy's wear and girl's wear.

High growth categories in men's market include active-wear, T shirts, inner wear and shirts. High growth categories in the women's market include innerwear, woven tops/shirts and t-shirts. Ethnic wear categories like sarees and salwarkameezes also have high growth potential.

Analysis of primary data:

A sample of 60 management students was taken out of which 33 were male and 27 were female.

Following were the findings among the students:

- In case of male students, approximately equal number of students purchased their apparel from retail stores and malls, while in case of female students; majority of them purchased apparel from malls.
- Majority of male and female students purchased casual apparel rather than formal apparel.
- Majority of male and female students purchased readymade apparel rather than stitched clothes.
- All the male students went for western apparel while majority of female students went for western apparel.
- The number of male and female students buying local and foreign brands was almost equal.

- f) For both male and female students, if their brand is not available, majority of them either shift to another brand or buys whichever is available.
- g) Majority of male and female students said that discount offers or promotion gimmicks influence their choice of apparel.
- h) Most of the male students and all the female students purchased apparel by actually visiting the store and not through e-commerce.
- i) Majority of male students purchased apparel based on their own choice or on the opinion of their friends. Majority of female students purchased apparel based on their own choice.
- j) Seventy percent of the male students were not influenced by their friends' choices of brands or types of apparel, while around half of the female students were influenced by their friends' choices of brands or types of apparel.
- k) Majority of the male and female students spent between Rs. 500 and Rs. 2000 on apparel.
- l) About 18% of the male students and about 25% of the female students said that they got influenced by movies in their choice of apparel.
- m) In case of male students, about 50% of them had their expenditure on apparel funded by parents and 50% by their pocket money. In case of female students, 67% of them had their expenditure on apparel funded by parents and 33% by their pocket money.
- n) The most important factors considered while buying apparel were:
- Good quality
 - Reasonable price
 - Suiting the personality
 - Convenient to wear

6. General Conclusions

(a) Various factors were considered which influence the purchase of apparel. These were given ratings from 1 to 5 on a Likert scale with 1 as highest and 5 as lowest.

S.No.	Particulars	Mean
1	Buying apparel is not expensive here	2.92
2	It saves money	3.00
3	Many options are available	1.62
4	Latest designs are available	1.69
5	It is fashionable to buy from here	2.85
6	Outlet name carries extra weightage	3.08
7	Clothes bought are of high quality	2.00
8	I buy because other people come here	4.23
9	Attracted by ads	3.77
10	Convenient to buy because It offers pick and choice	1.92
11	Buying here increases social recognition	3.62
12	Various discount offers attract me	2.38

Then average rating was found for these factors. It was found that the **most important factors** were

(a) Many options are available

(b) Latest designs are available

(c) Clothes bought are of high quality

(d) Convenient to buy

(b). Chi square test

Gender and Type of Apparel Bought

S.No.	Gender	Particulars	Type of apparel bought		Total
			Casual	Formal	
1	Male	Count	3	0	3
		Expected Count	2.3	.7	3.0
2	Female	Count	7	3	10
		Expected Count	7.7	2.3	10.0
Total		Count	10	3	13
		Expected Count	10.0	3.0	13.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.170 ^a	1	.279		
Continuity Correction ^b	.090	1	.764		
Likelihood Ratio	1.828	1	.176		
Fisher's Exact Test				.528	.420
Linear-by-Linear Association	1.080	1	.299		
N of Valid Cases	13				

Ho: There is no relation between gender and type of apparel bought

Since the significance value is greater than the level of significance 0.05, hence we accept Ho and conclude that **there is no relation between gender and type of apparel bought.**

H1: There is a relation between gender and type of apparel bought

(C) Chi Square Test

Income Group and Type of Apparel Bought

S.No.	Income Group	Particulars	Type of apparel bought		Total
			Casual	Formal	
1	40000-60000	Count	1	1	2
		Expected Count	1.5	.5	2.0
2	60000-80000	Count	3	0	3
		Expected Count	2.3	.7	3.0
3	80000-100000	Count	1	1	2
		Expected Count	1.5	.5	2.0
4	More than 1 lakh	Count	5	1	6
		Expected Count	4.6	1.4	6.0
Total		Count	10	3	13
		Expected Count	10.0	3.0	13.0

Ho: There is no relation between income group and type of apparel bought

H1: There is a relation between income group and type of apparel bought.

Since the significance value is greater than 0.05, we accept Ho and conclude that **there is no relation between income group and type of apparel bought.**

Chi-Square Tests

	Value	df	Asymp.Sig.(2 sided)
Pearson Chi-square	2.672	3	.445
Likelihood ratio	3.093	3	.377
Linear-by-linear association	.182	1	.670
N of valid cases	13		

Income Group and Frequency of Purchase

S. No.	Income Group (Rs.)	Particulars	Frequency of Purchase				Total
			Once a Week	Once a Month	Once Every SixMonths	Any Other	
1	40000-60000	Count	0	2	0	0	2
		Expected Count	.2	1.1	.5	.3	2.0
2	60000-80000	Count	0	1	1	1	3
		Expected Count	.2	1.6	.7	.5	3.0
3	80000-100000	Count	0	1	1	0	2
		Expected Count	.2	1.1	.5	.3	2.0
4	More than 1 lakh	Count	1	3	1	1	6
		Expected Count	.5	3.2	1.4	.9	6.0
	Total	Count	1	7	3	2	13
		Expected Count	1.0	7.0	3.0	2.0	13.0

Chi-Square Test

	Value	df	Asymp.Sig.(2 sided)
Pearson Chi-Square	4.798 ^a	9	.852
Likelihood Ratio	5.808	9	.759
Linear-by-Linear Association	.022	1	.881
N of Valid Cases	13		

(f) ANOVA

Expenditure on Apparel

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	5.026	3	1.675	2.262	.150
Within Groups	6.667	9	.741		
Total	11.692	12			

Ho: There is no significant difference between the average expenditure on apparel among different income groups

H1: There is a significant difference between the average expenditure on apparel among different income groups

Since the significance level is greater than 0.05, we accept Ho and conclude that **there is no significant difference between the average expenditure on apparel among different income groups.**

(g) Unpaired t test

Ho: There is no significant difference between the average expenditure on apparel among men and women

H1: There is a significant difference between the average expenditure on apparel among men and women

Since the significance value is greater than 0.05, we accept Ho and conclude that there is no significant difference between the average expenditure on apparel among men and women.

Expenditure On Apparel	Gender	N	Mean	Std. Deviation	Std. Error Mean
	Male	3	3.33	1.155	.667
	Female	10	3.10	.994	.314

S.No.	Expenditure on apparel	Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
1	Equal variances assumed	.180	.679	.346	11	.736	.233	.675	-1.252	1.719
2	Equal variances not assumed			.317	2.956	.773	.233	.737	-2.132	2.599

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EFFECT OF SHOPPER CHARACTERISTICS IN CHOICE OF A RETAIL FORMAT IN FOOD AND GROCERY RETAILING IN INDIA

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Abstract: Store format selection has also been seen in the context of the risk reduction strategies of the shoppers. Food and grocery is the most promising area for setting up retail business in India. An understanding of shopper retail format choice behaviour will enable retailers to segment their market and target specific consumer groups with strategies premeditated to meet their retail needs. The purpose of this paper is to make a detailed study on the importance of shoppers' demographic, geographic and psychographic dimensions in terms of retail format selection in the fast growing Indian food and grocery retailing. Descriptive research design is adopted applying mall intercept survey method using structured questionnaire for data collection. Both descriptive and inferential statistical tools are used to analyze the data collected from 580 food and grocery retail customers from neighborhood kirana stores and supermarkets in Secunderabad and Hyderabad in Andhra Pradesh in India. The findings suggest that shoppers' age, gender, occupation, education, monthly household income, family size and distance travelled to store have significant association with retail format choice decisions. The choice decisions vary among shoppers' demographic attributes. The findings from shoppers' psychographic dimensions like values, lifestyle factors and shopper activities resulted in understanding the food and grocery retail consumer's behaviour for selection of a retail format. The study has practical implications for food and grocery retailers for better understanding the shopper behaviour in the context of changing consumer demographic and psychographic characteristics in an emerging Indian retail market. The findings may help the retailers to segment and target the food and grocery retail consumers and, as a consequence, to undertake more effective retail marketing strategies for competitive advantage.

Keywords: Consumer behaviour, socio-economic, demographic, and psychographic, Retailing.

Introduction

During the past one decade the retailing environment in India underwent significant transformation. The term organized retailing is defined as "any retail outlet chain which is professionally managed (even if it is family run), has accounting transparency (with proper usage of MIS and accounting standards) and organized supply chain management with centralized quality control and sourcing" (certain part of the sourcing can be locally made) (Mukharjee and Patel, 2004). This perceptible change in the environment seems to be effecting the shopper behaviour. The quantum of growth in various retail formats such

as super markets, discount stores, hyper markets, and non-store formats such as e-tailing, direct selling and television shopping etc. has been phenomenal. Foreign retailers have also forayed into Indian market through various routes such as wholesale cash-and-carry operations, franchising, etc. With the emergence of these new formats the entire activity of retailing has become more organized, much different from the traditional formats of retailing. The paradigm shift in consumers' socio-economic, demographic and geographical proportions are driving what was once a traditional small-scale retail outlets into an organized retail formats aimed at catering to the evolving needs and tastes of discerning consumers.

But the ever changing consumers' psychographic variables like values, activities, interests, opinions, motives and lifestyles have contributed immensely to the growth of store



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format typologies such as convenience stores, discount stores, super markets and hypermarkets (Prasad and Reddy, 2007). Studies on shoppers in India have largely been limited to their time and money spending pattern, demographic profile for a particular format (Sinha, 2003). Furthermore, the espousal of “value for money” and “value for time” have unconditionally altered the consumers’ shopping orientations and buying behaviour towards choice of food and grocery retail formats.

Though most of the previous retail research studies have focused on store image and importance of store attributes in understanding the concept of retail format choice and patronage behaviour (Woodside and Trappey, 1992; Medina and Ward, 1999; Outi, 2001; Sinha and Banerjee, 2004, Sinha et al., 2005; Sinha and Uniyal, 2005; Carpenter and Moore, 2006), yet a few research studies have revealed a connection among demographic, psychographic characteristics and retail format choice suggesting that individual characteristics of consumers influence their shopping behaviour (Fotheringham and Trew, 1993; Stone, 1995; Arnold, 1997; East, 1997; McGoldrick and Andre, 1997; Medina and Ward, 1999; Fox et al., 2004; Carpenter and Moore, 2006, Baltas and Argouslidis, 2007). This study and its outcome is a significant contribution to the field of retailing and retail format choice behaviour in Indian retailing context. Hence, this study assumed significance aiming to examine the association between shoppers’ characteristics and retail format choice decisions in food and grocery retailing in India. The geographical scope of the study is confined to the twin cities of Secunderabad and Hyderabad (population is more than 7,749,334) in Andhra Pradesh in India. The conceptual scope is limited to shoppers’ demographic and psychographic attributes which are pivotal in understanding the retail format choice behaviour in the fastest growing largest consumer.

Objectives of the Study

Retailers operate in a competitive environment facing changes in customer needs, demographics, types of retailing, technology and retail ownership, changes in merchandize. In this booming retail market in India, it became inevitable for the retailers to learn how to retain

their market share as well as to enhance it. With the entry of bigger players, the retail market is getting more and more organized and structured. Competition will soon be very intense. In such an environment, the understanding and prediction of customer satisfaction and their purchase attributes are becoming an important subject. The retailers’ intention is to increase repeat customers.

In the present scenario, the researchers want to venture to explore the role of shopper characteristics and different aspects that have impact on consumers’ buying behaviour and retail format choice in the food and grocery retail segment in India. Retailing covers a very wide range of products and services; hence the researchers have decided to focus on the food and grocery retail format segment. The agenda of the study is to know the shopper characteristics in deciding the retail format. Therefore, this study covered two objectives and following hypothesis regarding the role of shopper characteristics in the selection of retail format in food and grocery retailing.

1. To study and examine the role of shoppers socio-economic, demographic, and geographic characteristics in retail format choice decisions.
2. To evaluate and examine the role of psychographic variables (values, Interests, opinions) in selection of a retail format.

Literature Review

The behaviour of retail shoppers is a subject of study across the world. The behaviour of shoppers differs according to the place where they are shopping and their involvement level with the act of shopping (Berman and Evans, 2005). There is a growing need to evaluate the true drivers of shopping behaviour in the Indian retailing context (Sinha and Banerjee, 2004, p. 483). For many years, marketing researchers have considered issues related to consumer’s retail format choice across various purchasing situations (Carpenter and Moore, 2006). From early traditional retail format choice (Williams and Dadris, 1972) to recent non-traditional internet format choice, the marketing literature has identified several factors that are consumer related and situational factors that impact on retail format choice decision.

Shoppers' Socio-Economic, Demographic and Geographic Factors

Socio-economic class is a group of people who are similar in their behaviour based upon their economic position (education, occupation and income) in the market place (Prasad and Aryasri., 2011, Engel et al., 1990). Socio-economic class of a consumer especially has been proven to be a meaningful determinant of shopping and purchasing behaviour because there exist economic and psychological differences across various social classes (Gupta & Chintagunta, 1994). Usefulness of social class in predicting retail format choice behaviour is well explained by Brown and Fisk (2004). They proposed risk-costs perception of shopping, which demonstrates that people want to shop at the store which maximizes benefits from shopping and minimizes costs and risk required (e.g., time, effort and money). Extensive research indicates that consumers across social strata tend to exhibit characteristically differentiated psychological and behavioral patterns that eventually determine the store choice behaviour (Monroe and Gultinan, 1975; Sheth, 1983; Gupta and Chintagunta, 1994; Brown and Fisk 1965; Kohn et al., 1990; Shim and Kotsiopoulos, 1993; Shim and Bickle, 1994; Morganosky, 1995; East, 1997).

Zeithaml (1985) conducted a field study to examine the effects of five demographic variables (gender, female working status, age, income, marital status) on supermarket shopping variables (e.g. shopping time, number of supermarkets visited weekly, amount of money spent). Stone (1995) compared the demographic profiles of supermarket shoppers and warehouse club shoppers, finding that warehouse club members were younger, more educated, and had higher incomes. Demographic factors such as age, gender, marital status, income, female working status, education, occupation and family size exert enormous influence on choice of store format in grocery retailing (Bellenger and Korgaonkar, 1980; Kopp et al., 1989; Sampson and Tigert, 1992; South and Spitze, 1994; Stone, 1995; East et al., 1995a; East, 1997; Mason, 1996; McGoldrick and Andre, 1997; Arnold, 1997; Bawa and Ghosh, 1999; Sinha and Banerjee, 2004; Fox et al., 2004; Carpenter and Moore,

2006). In general, the closer the consumers are to a retail format, the greater their likelihood to buy from that store. In contrast, the farther away consumers are from a store, the greater the number of intervening alternatives and thus the lower their likelihood to patronize that store (Loudon and Della Bitta, 1993). The travel time to a store is assumed to measure the effort, both physical and psychological, to reach a retail outlet. However, the effect of travel time varies by product. For some products, consumers are willing to travel very far (Runyon and Stewart, 1987; Hawkins et al., 1998).

Psychographic Factors

Psychographics is the study of personality, values, attitudes, interests, and lifestyles. Psychographics is an approach used to define and measure the lifestyles of consumers using activities, interests and opinions (Tam and Tai, 1998). Psychographics or life style studies include attitudes or evaluative statements about the people, place, ideas, and products and so on in consumer behaviour (Hawkins et al., 2002; Gonzalez-Fernandez and Bello, 2002). Values, personality, and lifestyles constitute the basic components of psychographics provide detailed understanding of consumer behaviour (Hoyer *et al.*, 2008). Psychographics dimensions are the measurements of the consumer's mind, which pinpoints how he or she thinks, feels, reacts and reflects (Roy and Goswami, 2007). The psychographic studies are used to develop an in-depth understanding of the market segments in accordance with their activities, interests, opinions (Goswami, 2007), needs, motives, perceptions, lifestyles and attitudes. Traditional demographic variables cannot identify the complete characteristics of an evolutionary retail market because consumers in the same demographic group have very different psychographic make-up (Sinha, 2003).

Previous research studies by Cosmos (1982) revealed that total assortment of goods and services used by a consumer was a mirror image of his/her lifestyle using AIO (activities, interests and opinions) variables. The interaction between consumer values and store attributes seems to be an important missing link in the extensive literature of research examining a specific area in consumer behaviour, the determinants of retail

format choice behaviour. On the one hand, there have been numerous studies establishing a link between consumer values and consumer behaviour. On the other, there has been considerable research examining the link between store attribute importance judgments and patronage behaviour. However, there seems to be an absence of research examining the link between importance judgments of consumer values, shopper characteristics and store attributes.

Values are end-states of life, the goals one lives for (Kahle, 1983). Values-widely held beliefs about what is acceptable and or desirable (Goswami, 2007). Values influence both attitude and behaviour (Kahle, 1996; Rokeach, 1973). Carman (1977) also proposed a model linking values to consumption behaviour. People from the same subculture, social class, and occupation may lead quite different lifestyles (Kotler *et al.*, 2009). Life style is a person's pattern of living in the world as expressed in activities, interests, and opinions. Activities consist of work, hobbies, social events, vacation, entertainment, club membership, community, shopping, and sports (Wells & Tigert, 1971).

Methodology

The present study is descriptive in nature to find the degree of influence of shopper characteristics on retail format choice. The population frame (80 million) would be the retail customers of food and grocery in the state of Andhra Pradesh in India. The sampling frame for the present research would be comprised of adult retail customers of food and grocery formats in the twin cities of Hyderabad and Secunderabad. These conjoint metropolitan cities with a population of 7.7 million are economically and commercially more vibrant. Considering the complexity of the survey, time and funding budget, a mall intercept survey was used (Dabholkar *et al.*, 1996; Sinha and Banerjee, 2004) to collect the data from 580 respondents. The data were collected at 60 different food and grocery retail stores coming under four retail formats such as neighborhood kirana stores (unorganized) and supermarkets (organized). Most of the retailers are domestic retail giants running chain stores in India. The data were collected from 25 neighborhood kirana stores and 35 supermarkets (such as

Foodworld, Food Bazaar, Reliance Fresh, Heritage Fresh, Spencer, More, Usha and Vijetha) These are the prominent retail companies running multiple store formats across the chosen sampling frame work. The data were collected at 60 different food and grocery retail stores by administering a structured and non-disguised questionnaire with the list of questions in a prearranged order. Sample subjects were carefully chosen by administering an initial screen question that "Do you purchase food and grocery products at any other store format than your primary store format?" so as to ensure they are involved in patronizing at least two or more store formats.

The survey instrument consists of two parts: part-A and part-B. Part-A consists of 13 questions connected to respondent's socio-economic, demographic, geographic and store choice behaviour measuring format choice, purchase pattern and volume of purchase. The responses are measured using nominal and interval scales. The second, part-B consists of three questions relating to consumer's psychographic factors covering list of values (LOV, nine statements), 45 statements concerning lifestyle factors such as activities (16 statements), interests (17 statements) and opinions (12 statements) and shopping motives (38 statements) and all items are measured on 5-point Likert scale. All the measurement items were adapted from the existing scales to measure the constructs proposed in the model. For measuring psychographic variables, values related items are adopted from Kahle (1983), interest and opinion statements were adopted from VALSTM Survey, Gonzalez-Fernandez and Bello (2002), Wu (2003) and Kelly (2004). Shopping motives related items were adopted from Sinha (2003). Retail format choice related items were adopted from Sinha and Banerjee (2004) and Carpenter and Moore (2006). The internal consistency of the instrument was tested through reliability analysis using Cronbach's alpha. Reliability estimates for the construct variables are, values (0.71), lifestyles (0.80), shopping motives (0.78) and store choice behaviour (0.75) revealing a high degree of reliability. All reliability results exceeded 0.70 limit of the acceptability. The subjective nature of the face validity of an instrument was systematically evaluated by four eminent academicians in

marketing research to examine whether the scale items adequately cover the entire domain of the construct being measured.

Results and Interpretation

Food & grocery retail customers in the twin cities of Hyderabad and Secunderabad were invited to participate in the survey through mall intercept method. A total of eight hundred retail customers (20 neighbourhood kirana stores and 20 supermarkets) were surveyed. Out of which, six hundred fifty were returned. This is an approximately eighty one percent response rate. Out of this, five hundred and eighty questionnaires were usable and rest were rendered unusable due to incomplete data. The Following sub sections present the data analysis about respondent's socio-economic, demographic, geographic and psychographic attributes.

Respondents Socio-Economic, Demographic and Geographic Attributes

All respondents were adult male and female food and grocery retail customers consisted of 340 female (58.6 percent) and 240 male (41.4 percent) with an average age of 32 years (range 20-62), modal age group 30-40 years and median age was 35 years. Majority of the respondents (86.6 percent) were married and 13.4 percent were un-

married. The major chunk of the respondents (56.4 percent) had graduation as their educational qualification and 20 percent had SSC as their minimum qualification. A major part of the respondents' (38.4 percent) monthly household income was INR 20,000 to INR 30,000, followed by (24.5 percent) with Rs. 10,000 to Rs. 20,000, (19 percent) of them were with the aggregated mean monthly household income was Rs 18,560 with 48.3 percent respondents had paid employment as their occupation and 29.8 percent of respondents are belongs to housewife category. The average family size of the respondents was 4.3, and 80 percent of them belonged to higher socio-economic class. A major chunk (33.4 percent) of the respondents live within half km from different retail store formats and about 61.3 percent had travelled up to 2 km for shopping food and grocery products. Majority of the respondents (55 percent) own two wheelers and 20 percent own four wheelers. As many as 46.8 percent of the respondents are not using any transport, and 34.6 use their own vehicle (two wheeler/four wheeler) for shopping food and grocery products. The results of respondent's demographic, socio-economic and geographic variables (from Q1 to Q10 in Part-A) are summarized in Table 1.1

Table: 1

Respondents' Demographic Profile

Variable	Description	Frequency	Percentage	Mean	S.D
Gender	Male	240	41.4	-	-
	Female	340	58.6		
Age	20-30 Years	169	29.1	32	8.96
	30-40 Years	212	36.6		
	40-50 Years	144	24.8		
	50-60 Years	55	9.5		
Marital Status	Married	502	86.6	-	-
	Un-married	78	13.4		

Education	SSC/Diploma	119	20.5		
	Degree	327	56.4	-	-
	PG & above	134	23.1		
Occupation	House wife	173	29.8		
	Employment	280	48.3	-	-
	Business	81	14.0		
	Others	46	7.9		
Monthly Household Income	< INR10000	110	19		
	INR10000-20000	142	24.5	INR	INR
	INR 20000-30000	223	38.4	18560	6750
	> INR 30000	105	18.1		
Family size	1-3	162	27.9		
	3-5	178	30.7	4.3	0.762
	5 & more	240	41.4		
Purchase Volume	<INR3000	174	30		
	INR3000-4000	163	28.1	INR	INR
	INR4000-5000>	128	22.1		
	INR 5000	115	19.8		
Distance Travelled to Store	<1 Km	194	33.4		
	1-2 Kms	162	27.9		
	2-3 Kms	106	18.4	1.43	0.37
	3-4 Kms	75	12.9		
	>4 Kms	43	7.4		
Mode of Transport Used	Two wheeler	112	19.3		
	Four wheeler	88	15.3		
	Public/Private Transport	108	18.6	-	-
	None	272	46.8		

Source: Primary data

Respondents' Retail Format Choice Behaviour

Considering always value (5) and usually (4) on measurement scale, majority (57.59 percent) of the respondents had supermarket formats as their prime store formats for shopping food and grocery products, followed by neighborhood kirana store formats (42.41 percent). The results

revealed that respondents involved in cross-shopping behaviour among different store formats. It is implicit that respondents patronize booth kirana stores and supermarkets for a multiplicity of reasons. The results of retail format choice behaviour towards neighborhood kirana stores and supermarkets when customers are free to choose formats are presented in Table 2.

Table: 2
Respondents' Retail Format Choice Behaviour at Kirana Stores and Supermarkets

Retail Format Choice	Always (5)	Usally (4)	Percentage (%)	Occasionally (3)	Rarely (2)	Never (1)	Total
Kirana Store (N=580)	141	105	246 (42.41%)	110	126	98	580
Supermarket (N=580)	188	146	334 (57.59%)	128	75	43	580

Note: Respondents were not forced to choose one format over another.

Source: Primary Data

Purchase Pattern of Food and Grocery Products

About 40.86 percent of the respondents visited booth kirana stores and supermarkets more than once in a week for purchasing food and grocery products, out of which about 23.64 percent each for fortnightly and 21.7 percent once in a month. Some 13.8 percent respondents purchased twice in a week; 36.82 percent of the respondents are likely to purchase once in a week

from supermarket, and 46.43 percent of the respondents are likely to purchase once in a week from kirana stores. Chi-square results ($\chi^2 = 25.2$, $df = 3$, $p = 0.038$) have also revealed a significant association between purchase frequency / pattern and type of store format. It was implicit from the findings that retail format choice decisions were dependent on purchase pattern. The outcome of the respondent's purchase pattern at neighborhood kirana stores and supermarkets are presented in Table 3.

Table:3
Respondents' Purchase Pattern at Different Food and Grocery Store Formats

Purchase Patran	Twice in week	Once in week	Once in fortnight	Once in Month	Total
Kirana Store (N=580)	48	114	51	33	246
Supermarket (N=580)	32	123	86	93	334
Total	80	237	137	126	580

Source: Primary Data

Factor Analysis to Determine the Psychographic Variables which Impact the Retail Format Choice

Factor analysis was conducted to reduce the number of variables for List of values (LOV) and lifestyle (Activities, Interests and Opinions). Factor models were selected based on KMO (Kaiser-Meyer- Olkin) measures of sampling adequacy criteria (should be as near to 1 as possible) which is a goodness of fit coefficient, Bartlett's test of shpericity (should be as close to 0 as possible) which is a badness of fit test, the

Eigen values greater than 1 and amount of variance explained by the model. Each model was estimated using principal components analysis as the extraction method. Varimax with Kaiser Normalization rotation method assisted in interpreting the data for list of value factors activity factors, interest factors and opinion factors. Factors were labeled based on salient loadings. All loadings below 0.5 were dropped, and the factor analysis was recalculated. The Cronbach alpha was used to measure internal reliability by unit weighting items with salient loadings in a factor. Results were discussed in the following

paragraphs and summarized in respective tables.

List of Values

Nine statements concerning a list of values which were derived from the LOV scale, was submitted to factor analysis with Varimax rotation. Three factors with eigenvalue greater than 1 emerged explaining 68.3 percent of the variance with a Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy of 0.916, which is considered acceptable as it is near to 1. The application of

Bartlett’s test of shpericity clearly revealed that these factors are related at significance level 0.000. The scree plot also resulted in the acceptance of three factors with total variance of 68.3 percent. Factor one was labelled “joy seeker”, factor two was labelled internally focused” and factor three was labelled “Dependent on others”. Results of the individual loadings, Cronbach’s alpha and variance explained with factor labels for LOV (Question-1 in Part-B) were summarized in Table4.

Table:4
List of Variables (LOV) Factor Analysis

Factor label	Statements	Factor Loadings	Cronbach ‘α’	Variance explained
Joy seeker	Excitement Fun & enjoyment	0.705 0.648	0.721 0.703	24.3%
Internally focused	Self-respect Self-fulfilment	0.696 0.653	0.718	22.6%
Dependent on others	Sense of belonging Warm relationships with others Security Accomplishment	0.714 0.689 0.638 0.523	0.703	21.4%

Extract Method: Principle Components Analysis, Rotation Method: Varimax with Kaiser Normalisation, variance explained 68.3%, p=0.001,

Source: Primary data.

Life Style Factors

A total of 45 statements concerning lifestyle factors such as activities (16 statements), interests (17 statements) and opinions (12 statements) shown in question 2 in part-B were put to factor analysis. The five statements concerning activities were eliminated due to low loadings such as “give or attend a dinner party” (0.320) “Go on a vacation” (0.313), “Go to a nightclub or dance” (0.326), “Engage in hobbies or “do-it-yourself projects” (0.318), “I do enjoy making my own decisions” (0.434) and their Cronbach’s alpha was 0.24. The remaining eleven statements were

reduced to three factors with eigenvalue greater than 1 and accounted for 72.5 percent variance and had Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy of 894 with Bartlett’s tests of sphericity revealed that factors are related at significance level of 0.000. The emerged factors were labeled as per variance explained are entertainment oriented, community oriented, sports oriented and business oriented. Results of the individual loadings, Cronbach’s alpha and variance explained with factor labels for activities were summarized in Table 5

Table:5
List of Activities Factor Analysis

Factor label	Statements	Factor Loadings	Cronbach 'α'	Variance explained
Entertainment Oriented	Go to movies Reading books Listening to music	0.749 0.715 0.523	0.741	21.8%
Community Oriented	I am involved in social organization I am involved community projects	0.738 0.721	0.725	18.6%
Sports Enthusiast	I play sports a lot I exercise regularly to stay fit Attend a sporting event	0.705 0.685 0.635	0.717	16.3%
Business Oriented	I am involved in a business organization Travel for business reasons Attend a charitable event	0.725 0.658 0.634	0.708	15.8

Extract Method: Principle Components Analysis, Rotation Method: Varimax with Kaiser Normalization, total variance explained 73.6%, $p=0.001$,

Source: Primary data

The seven statements concerning interests were eliminated due to low factor loadings such as "Other people usually follow my ideas" (0.482), "I spend a lot of time talking with my friends about shopping" (.381), "I purchase time-saving meals" (0.373), "I am a homebody" (.349), "Go to a festival" (0.347, "Visit an art gallery and/or museum" (0.354), "Dine out in a restaurant (0.347) and their Cronbach alpha was 0.528. The remaining ten statements were reduced to three

factors with an overall variance explained of 65.8 percent and had KMO measure of sampling adequacy of 0.936 with Bartlett's test of sphericity revealed that emerged factors are related at significance level 0.000. The emerged factors were labeled as per variance and loadings are innovative interests, leadership interests and socio-cultural interests. Results of the individual loadings, Cronbach's alpha and variance explained with factor labels for activities were summarized in Table 6

Table:6
List of Interests Factor Analysis

Factor label	Statements	Factor Loadings	Cronbach 'α'	Variance explained
Entertainment Oriented	Go to movies Reading books Listening to music	0.749 0.715 0.523	0.741	21.8%
Innovative interests	I like doing things that are new and different I like to use new and different things in my lifetime I like the challenge of doing something that I have never done before	0.714 0.698 0.658	0.754	25.7%

Leadership interests	I like to lead others	0.574	0.705	22.4%
	I like being in-charge of group	0.709		
	I usually organize people to get things done	0.692		
Socio-cultural	Visit or entertain friend or family regularly	0.662	0.727	17.7%
	I entertain at home	0.681		
	Give or attend a dinner party	0.649		
	Attend a concert or play	0.610		

Extract Method: Principle Components Analysis, Rotation Method: Varimax with Kaiser Normalisation, Total variance explained 65.8%, $p=0.001$

Source: Primary data

The two statements - “the way I look is extremely important to me” (0.472) and “a woman’s life is fulfilled only if she can provide a happy home for her family” (0.458) - were eliminated due to low factor loading and the remaining ten relevant opinion statements were reduced to four factors with an overall variance

of 73.6 percent and had KMO measure of sampling adequacy of 0.853 with Bartlett’s test of sphericity clearly indicated that the factors were closely related at significance level 0.000. Results of individual loadings, Cronbach’s alpha and variance explained with factor labels are summarized in Table 7.

Table:7

List of Opinions Factor Analysis

Factor label	Statements	Factor Loadings	Cronbach ‘ α ’	Variance explained
Family related	If it is good enough for my wife, it is good enough for me also	0.763	0.718	27.6%
	My family is the single most important thing to me	0.662		
	I always take opinion of my family	0.650		
Autonomous related	I am more independent than most people	0.635	0.714	24.2%
	I have more ability than the most people	0.654		
	I think I have more self-confidence than the most people	0.621		
Intellectual related	I feel confident in my ability to shop	0.771	0.685	21.8%
	I have the ability to choose the right products	0.720		
	What you think of your self is reflected by what you buy	0.685		
	I consider myself an intellectual	0.649		

Extract Method: Principle Components Analysis, Rotation Method: Varimax with Kaiser Normalisation, Total variance explained 73.6%, $p=0.001$

Source: Primary data

Theoretical and Practical Implications of the Study

Theoretically, the outcome of this research provides empirical evidence for the influence of selected shopper characteristics in the selection of retail format. The study contributes to the retail marketing literature providing empirical considerations when using consumer's ever changing demographics and psychographic dimensions towards store format choice decisions. The empirical findings also provide comprehensive understanding about segmentation of food and grocery retail customers in the context of Indian retailing. Given the absence of published academic literature relating to store format choice behaviour in grocery retailing, this study may serve as a departure point for future studies in this area of concern. This comprehensive study also provides invaluable information to retailers in relation to shopper's store choice behaviour in Indian food and grocery retailing. Understanding how preferences vary with consumer factors is a key element in developing successful retail marketing strategies. The findings reveal that consumer's socio-economic, demographic and geographic characteristics have significant association with the choice of retail formats. It can be inferred that it is also possible to affect the orientations of the shoppers by offering modern retail formats. In addition, increased time pressure has also lead to changes in shopping behaviour and a reduction in the number of shopping trips made by households.

The findings also established an association between the behaviour and attitude of the shoppers. The five psychographic segments are significantly differed in terms of values, lifestyles and shopping orientations. These findings would enable retailers to develop an effective marketing strategy to optimize the use of marketing and promotional resources in meeting the needs of discerning target customers. With the heightened level of competition in today's food and grocery

retail market, an increasing number of stores are currently facing difficulties in operating profitability. This study enables marketers to adjust market communications and repositioning themselves to retain the existing and attracting potential customers.

Conclusion

The present findings contribute to the understanding of consumer retail format choice behaviour in food and grocery retailing in India, an area that has received scant attention within the academic literature. The overall results of this study show that, Indian food and grocery consumers have cross-shopping behaviour in nature. No single retail format seems to be a prime in meeting consumer needs/wants. The shopper demographic and psychographic characteristics and placing a key role in the selection of retail format choice. Consumers first choose a retail format, and then move to a particular store within the format where they can save time, money and effort. Hence, retaining customer allegiance to a particular retail format is posed as a major task. It is also found that consumers giving due concern to value for money, and see-touch-feel-select concept. Results also emphasize the need for a customized approach to retail marketing.

The study reveals that in the Indian retailing context, demographic factors of consumers do influence store format choice behaviour in food and grocery retailing. It is observed that store choice is a hierarchical process which depends on demographic attributes and current needs of a consumer. Findings from chi-square statistic also revealed that shopping trip pattern has significant relationship with choice of retail formats. The consumer psychographic dimensions like values, lifestyles and shopping orientations significantly affected store format choice behaviour. The emerged five psychographic segments have exhibited different shopping orientations. Time consciousness and local shopper orientations are the significant predictors for choice of kirana store format. Time consciousness and information seeking are the significant predictors for convenience store format choice decisions. Variety seeking, brand conscious, time conscious, local shopper, and price conscious shopping

orientations are significant predictors for supermarket store format choice decisions. Variety seeking, recreational oriented, brand conscious, price conscious, and experience seeking related orientations are the significant predictors for hypermarket format choice decisions. It is suggested that retailers would take note of the emerged food and grocery retail segments while developing retail format strategies.

Directions for Future Research

This study has not explored the critical factors affecting consumers' cross-shopping (multiple store patronage) and store-switching behaviour. Though it is a common phenomenon to patronage multiple stores in an evolving retail market, yet it needs to be investigated. This study has not considered situational factors (task definition, perceived risk, physical surroundings, social factors, etc.) which underlie the frequency of visit to a particular store format, shopping basket and patronage motives. This limitation may be served as an opportunity for future researchers. More importantly, increased sample size and multi-city sampling can be considered for future research for better generalization of the findings.

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