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**A STUDY OF SERVICE MARKETING MIX IN PRIVATE HOSPITALS**

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**ABSTRACT**

Indians are spending more than ever before on their healthcare. Noticeably increasing number of Indians are spending money on services of private hospitals for their well-being. From 1980's onward, and especially after the liberalisation, Privatisation and Globalization (LPG) policy of the Indian Government in the 1990's the growth of the Private Hospitals, which include nursing homes, small, medium and large private hospitals, has been rapid. According to the NSSO Survey (April 2016) people in India rely more on private hospitals, with 72% in rural areas and 79% in urban areas, being treated in the private sector. They dominate the healthcare industry in India, and is the largest health sector in the world. However there is a lack of national legislation or mechanism for registration of health establishments, and this aspect to implement laws on hospitals is left to the states. Private hospitals are run on a commercial basis. This means the hospitals should use the seven P's of marketing to give quality services to the patient. This paper studies the marketing of hospitals from the point of view of hospital owners and/or managers. The area chosen for study is the area of Sangli-Miraj-Kupwad Municipal Corporation and includes the study of Private hospitals listed under the District Industries Centre (DIC), Sangli. This area has a concentration of hospitals that treat patients from not only the local communities but also from neighbouring states and even foreign lands.

**KEYWORDS**

hospital marketing, 7P's of service marketing, marketing mix.

**INTRODUCTION**

Marketing involves understanding and meeting customer needs. The main aim of marketing is satisfaction of needs and wants through exchange of values. In present times every organization in any sector (agricultural, industrial, or service), whether profit or non-profit, government or private, require marketing to make this exchange possible. Marketing has proven beneficial not only for the organization providing goods/services, but it is also beneficial to the receiver of the goods/service, as well as to the community or society as a whole. Healthcare has been transformed into a vital service sector industry. This means the seven P's of service marketing—Product, Price, Place, Promotion, Physical evidence, Processes and People have to be considered to make a marketing offer. The Product in this context is the services rendered by the hospital. The marketing offer consist of these hospital services in combination with the rest of the P's. The combination of these P's is the hospitals service offer to the patients seeking the hospitals services. Hospital Marketing Promotion (HMP) is done in various ways. However, it is true that marketing of hospital services is a recent phenomenon. In the past healthcare industry did not acknowledge the importance of marketing. Marketing was regarded as unprofessional and unethical and so its need was ignored. The increasing number of hospitals, the demand for expertise and quality services by patients, the changing technology, the improved standards of living and many such factors underline the need to have an open mind towards the use of a marketing approach for selling hospital services. The importance of hospital marketing is grudgingly being accepted by all stakeholders—the hospital owners/managers, employees, patients, the government, the community or the public at large. The marketing concept itself has evolved over time and is not restricted to exchange of values anymore. The concept of relationship marketing, societal marketing, holistic marketing, and ethical marketing have been adopted by some hospitals that not only increases the well-being of needy patients, but will simultaneously boost the ROI of the hospitals giving them a competitive edge. Regarding the marketing of hospital services, the three aspects of marketing that is its Availability, Accessibility and Affordability of the hospitals services is necessary, and the fourth "A" that is Awareness of these has to be created in the community seeking these services. The marketing orientation includes, drawing up a marketing plan, this also includes the vision of the founders, the mission statement, drawing up of marketing strategies with reference to the seven P's of marketing. The seven P's of services marketing or the services marketing mix consists of:

1. **The Product Mix:** The product in this regard are the array of medical services offered by the hospital, and consists of core, supplementary and auxiliary services. A service blueprint that is giving a shape to the service, and includes factors such as service benefit, service offer, service form, service expectation, service elements, service level, and service quality/standard has to be drawn. The tangibles such as the equipment and other infrastructure, and the intangible aspects of the service product such as the skills of the doctors and staff, the attitude etc. form a part of the product offered. Thus it includes the additional services the hospital offers such as blood-bank, laboratory, laundry, and canteen & catering services. Clean linen, sterilised equipment, clean rooms and pleasant premises and all such aspects is a part and parcel of the service offer. The various departments in the hospital is the product line, which may be expanded or reduced over time.
2. **The Price Mix:** The price is the value received by the hospitals for services rendered. The pricing may be on cost basis, competition basis, or it may be demand based pricing. Demand based pricing will depend on patient's perception of value. Prices will be revised with change in technology and other environmental factors. Pricing will depend on the service package and quality of services offered. The pricing for inpatient treatment will depend on whether patient has opted for the general ward, semi-private room, private room or deluxe room as well as the complexity of the treatment rendered.
3. **The Place Mix:** This refers to making the hospital service available to the patients. Place i.e. the location of the hospital where services are provided as well as the medical camps where services are made available and also expertise and skill utilised in other hospitals is the place utility offered, the time involved to give these services, which includes emergency and 7x24 hours services is the time utility offered to patients seeking these services.
4. **The Promotion Mix:** Promotion refers to the various strategies used by the marketer to communicate and inform customers about the service product with the intention to sell them. The various tools of promotion mix are personal selling, advertising, sales promotion, public relations, publicity, packaging, advertising etc. Hospitals for promotion use either advertisement or PR or both after taking into consideration the target customers, media type, budget and the sales promotion. TV, other media of promotion are used innovatively. Unlike the urban area, in rural areas newspapers and magazines do not have the same impact in conveying messages. In villages, hoardings and wall writings near the markets and recreation centers attract the attention of villagers. This group



has large discretionary income. These discerning consumers are very careful in choosing health care services. The health care field has become very competitive. Although around one-fourth of our population stays in urban India, three fourths of the total doctors have engaged themselves in this part. Many of these doctors visit the rural areas, but they reside in the urban area. The patients of upper middle and upper income group have a wide choice to make from a number of clinics and hospitals. A person in need of a health care service does not know for sure where to search for relevant information. He consults his family members, relatives and friends first. The patients who come to a hospital generally have the old patients of that hospital as referrals. Word-of-mouth plays an important role during information acquisition stage of the customers (patients) as there are no objective performance measures to judge the various alternatives available to them. Therefore, satisfied past patients of a hospital can bring more number of patients to that hospital than a number of advertisements. Word-of-mouth plays a very important role in promotion of hospitals. This is the very reason why patients should be rendered excellent services, as they will be the ones telling others about their experiences.

5. **The Physical evidence:** Physical evidence is the “the service-scape” in which the service is delivered and where the firm and the customer interact, and includes any tangible components that facilitate performance or communication of the service. The physical evidence helps reduce the intangibility feature of the service, as the core benefit a customer seeks is proper diagnosis and cure of the problem. For a local small time, dispensary or hospital, physical evidence may not be of much help. In recent days some major super speciality hospitals are using physical evidence for distinguishing itself as something unique. Physical evidence can be in the form of smart buildings, logos, mascots etc. a smart building infrastructure indicates that the hospital can take care of all the needs of the patient.
6. **The Processes:** The actual procedures, mechanisms and flow of activities which are involved in the service delivery all constitute the service processes. Thus it may take the production-line/ standardized approach or the process might be customized. Process generally forms the different tasks that are performed by the hospital. The process factor is mainly dependent on the size of the hospital and kind of service it is offering. Generally, hospitals deal with two types of patients, (1) the in-patients who stay in the hospital for treatment and cure and (2) the out-patients who come for consultation. Processes vary with each of this type. Thus processes for in-patients involve processes related to the arrival of patient, diagnosis, line of treatment advised by doctors, information to be given regarding future action, Patient's Discharge procedures, appointment for post-hospitalization check-up. The out-patient processes involve meeting doctors at appointed time, Diagnosis, line of treatment, medication.
7. **The People:** All those individuals involved in the sale and purchase of the service constitute one the extended P's of marketing. Thus all the actors involved in the service delivery process i.e. the service provider or the contact person (service personnel), the customer, and other customers in the service environment are all influencing the quality of service and the service experience. Under hospital marketing the marketing mix variable people includes all the different people involved in the service providing process (internal customers of the hospitals) which includes doctors, nurses, supporting staff etc. The earliest and the best way of having control on the quality of people will be by approving professionally sound doctors and other staff. Under hospital marketing a right person for the right job has to be appointed and they should be adaptable and possess versatility. The patients in the hospitals are already suffering from trauma, which has to be understood by the caregivers, i.e. doctors and other staff. The people of the hospital should be constantly motivated to give the best of their effort.

## OBJECTIVES OF THE STUDY

The paper attempts to study the marketing of hospital services using the seven P's of marketing, and also understand the viewpoint of the owners of private hospitals regarding the same.

1. To study the marketing efforts with respect to the seven P's of marketing with respect to the private hospitals under study.
2. To study the relationship between marketing efforts and the inflow of patients to the hospital.

## HYPOTHESES

1. There is association between marketing efforts and the inflow of patients to the hospital.
2. There is association between marketing efforts and occupancy of beds.

## METHODOLOGY FOR DATA COLLECTION AND ANALYSIS

Primary and Secondary data was used for this study. Primary data was collected thru the medium of a pretested structured questionnaire. Primary data are collected through discussions, personal interviews of the concerned persons & through questionnaires. The secondary data required for the study was collected from the hospital booklets and information brochures, various books, journals, articles, internet sources, published, unpublished research studies were also used. Primary data has been collected through the medium of structured questionnaire to owners and/or managers. A structured questionnaire was prepared and discussed. A pilot study was conducted to test the reliability and validity of the questions. Primary data was collected, through survey method by administering separate well-structured pre-tested questionnaire to hospital owners/managers. An interval response scale was used for data collection from hospitals owners/managers. The 7 P's of marketing-- Product (hospital service), Price, Place (service availability), Promotion, Process, Physical Evidence, and People was measured on a scale using 1 to 5 bipolar scale i.e. there is a neutral point. The two ends of the scale are at 5 (strongly agree), 4 (agree), 3 (cannot say), 2 (Disagree), 1 (Strongly Disagree). A response scale of 1 to 5 was used.

Additional information is collected from the owners of the hospitals under the study, by conducting informal interviews. In interviews open ended questions were asked to gather more information that was rather difficult to collect with the help of questionnaire. Data from hospitals was collected by drop-off and pick-up, and sometimes remaining with the respondents during the answering of the questionnaire.

## REVIEW OF RELATED LITERATURE

Chen Chuan-Biau, Kao-Pi Lien, state that the increasingly complicated doctor-patient relationship; and increasingly serious legal problems hospitals are facing has resulted in hospitals turning to marketing, promotion, and advertisement to ensure their survival. Currently, most hospitals still mainly use their Public Relations department to communicate with consumers and conduct marketing activities (Chang, 2000) <sup>1</sup>. Dr. Sreenivas T, Dr. Srinivasrao B., Dr. U. Srinivasa Rao conclude in their paper that good marketing programme will build up more awareness among the public, create loyalty, and establish a kind of tie-up with potential customers. Thus it may be concluded that application of marketing principles in the Indian hospitals cannot be ignored or delayed any longer<sup>2</sup>. Wu Chao-Chan in his research paper states that the current medical service market favours the buyer, rather than the seller (Lee et al., 2010). Hence, the field of medical service is now emphasizing the importance of customer-oriented marketing. Hospitals endeavour to establish marketing strategies which promote brand image among patients for enhancing the satisfaction and loyalty<sup>3</sup>. Hazrul Nik M., Onn, Lee Kok Onn, Alam, Syed Shah, state a positive effect between market orientation and firm performance. As marketing orientation leads to greater customer satisfaction and force hospitals to focus more on cost control, it is likely that business performance should be enhanced. Since such organizations embrace the notion of service excellence as top priority, they should be better attuned to meet the requirements of customers. A market-oriented hospital is market-driven and therefore, should be able to achieve superior firm performance due to broad understanding of its customers and competitors. Specifically, greater emphasis on market orientation should enable hospitals to engage in superior service quality, which in turn leads to customer retention and profitability<sup>4</sup>. Ali Samar S., in their article write that many private hospitals (in India) already established endeavour to provide quality comparable to leading hospitals of the world. The strategy ensures that customers return to the same hospital for treatment and recommendation; which is made in their social circles. Although the importance of relationship quality as a mediating role between predictors and relationship outcomes is well established in the literature, some central questions concerning the relationship between these constructs have not been fully explored<sup>5</sup>. In their paper Dr. Patil P.L, Dr. Suryavanshi A.G., Prof. Marulkar K.V. (2012), state that patient satisfaction is related to the perspective of hospital management and its employees. A better understanding of the employee's perspectives will result in successful service encounters that result in better service to the patient<sup>6</sup>. In their paper Jager and Plooy<sup>7</sup> (2011) Marketing

was regarded as unprofessional and unethical and so its need was ignored. However, with growing complexities of the modern world such as increasing competition, increasing costs, demanding customers (patients), changing technology, and globalization of the healthcare service to name a few, make it all the more necessary to undertake marketing efforts<sup>7</sup>. In their article Dr. S. Dhinesh Babu, Mrs. K. Rajalakshmi (2009) have discussed the 7 P's of marketing regarding hospital services<sup>8</sup>.

## DATA ANALYSIS AND INTERPRETATION

The data given below are the responses of the owners of the private hospitals under study.

TABLE NO. 1

Variables	Average response score	S.D.	95% Confidence Interval	
			Lower limit	Upper limit
Product	4.24	0.41	4.24	4.25
Price	4.33	0.47	4.32	4.33
Place	4.13	0.49	4.12	4.13
Promotion	2.94	0.91	2.93	2.95
Process	3.76	0.45	3.76	3.77
Physical evidence	3.88	0.35	3.87	3.88
People	4.31	0.27	4.30	4.31

Various variables of marketing, along with 7P's were studied during the study (n = 11 hospitals). Each of these aspects was evaluated with average score reported for series of close-ended questions for that typical variable by respondent (for details – see questionnaire). Thus, average response score for each variable is average of mean score of all 11 hospitals for that specific variable.

Product ( $4.24 \pm 0.41$ ), Price ( $4.33 \pm 0.47$ ), Place ( $4.13 \pm 0.49$ ) and People ( $4.31 \pm 0.27$ ) were marketing attributes which have been given more emphasis (mean score greater than 4). While Promotion ( $2.94 \pm 0.91$ ), Process ( $3.76 \pm 0.45$ ) and physical evidence ( $3.88 \pm 0.35$ ) were observed with mean response score below 4.

TABLE NO. 2: STATISTICAL VALUES OF CORRELATION OF PATIENTS INFLOW AND BED OCCUPANCY WITH MARKETING EFFORTS

variables	Correlation 'r'	t-value	d.f.	P-value
Marketing efforts and patients Inflow	0.437	1.458	9	0.179
Marketing efforts and bed occupancy	0.682	2.794	9	0.021*

\*: significant

The Pearson correlation coefficient 'r' of marketing efforts scores and patients inflow was observed to be 0.437 which suggests though there is positive correlation between marketing efforts and patients inflow, it is not significantly higher (t = 1.458, P-value = 0.179)).

The positive correlation (r = 0.682) was observed between marketing efforts score and bed occupancy. Correlation was significantly higher (t-value = 2.794, P-value = 0.021) at 5% level of significance. Thus bed occupancy can be associated with marketing efforts.

Scatter plot of marketing effort vs. patient inflow suggest moderate positive correlation. Scatter plot of marketing efforts vs. bed occupancy shows strong positive relation between them compared to that between marketing efforts and bed patient inflow.

## DISCUSSION

The data given below are the responses of the owners of the private hospitals under study.

### PRODUCT ANALYSIS

The hospitals under study responded very positively regarding the awareness of the name and location of the hospital. The average response score was 4.24 indicating hospitals are giving emphasis on all the attributes of service offering. The S.D. is 0.41, this means the responses of hospitals do not vary greatly. All these hospitals have built a reputation over the past years and hence patients know about the hospital and the services they offer. These hospitals offer expert and specialty services and hence are able to satisfy the needs of the surrounding community. Affordable services are offered by these hospitals and hence local patients as well as people from nearby towns and states flock these hospitals. The surgery services offered by hospitals helps enhance hospital image, however some hospitals have more consulting and counselling services than giving surgical services. The hospitals claim to have a systematic housekeeping department, one of the hospitals lack the organizational structure to have a full-fledged housekeeping department. All the hospitals positively agree that they provide good patient care. The responses of hospitals were varied regarding satisfactory emergency transportation services. This is because some hospitals have own emergency vehicles such as ambulances, some hospitals rent them while some have neither of the arrangements. The hospitals are offering good reception services, with satisfactory seating arrangements. The Hospitals indicated they had the potential to develop and launch new services, indicating that all have similar responses regarding their future plans of further development. This means the hospitals have planned a good service offering.

### PRICE ANALYSIS

Hospitals are social organizations and hence serving the society is also one their major goals. This means they want to provide services to all of members of the community. Thus hospitals offer different service packages and pricing is done accordingly. The average response score was 4.33 indicating hospitals are giving emphasis on all the attributes of service offering. The S.D. is 0.47 this means the responses of hospitals do not vary greatly. The hospitals answered positively as to whether they provided services at affordable prices. Regarding if hospitals had varied price packages for different customers all the hospitals gave positive responses. The hospitals under study responded that their pricing policy is indeed stable. Ten of the eleven hospitals under study said that they charge reasonable rates for laboratory tests that are available in their laboratories, while one of the hospitals replied in the negative as they did not have a laboratory. All hospitals tend to give discounts to needy patients, and charge lower price to poor patients. Some of these hospitals are already charging low prices to patients and hence do not offer free services in special cases. One of the hospitals under study do not have tie-ups with banks or insurance companies as they find it a cumbersome procedure.

### PLACE ANALYSIS

Hospitals services give place utility to patients, by making its services available and accessible to the patients who are in need of these services. The average response score was 4.13 indicating hospitals are giving emphasis on all the attributes of service offering. The S.D. is 0.49 this means the responses of hospitals do not vary greatly. These hospitals are located on main roads and hence very noticeable to passers-by, and all kind of transport facilities including bus, Rickshaw, taxi, 'shared rickshaw' (an affordable, convenient alternative) are easily available. Also, Miraj railway station is a junction where trains from far and near stop and leave, this makes the hospitals in SMK Corporation area very accessible. The hospitals responded positively to the question as to whether they are able to attract patients from nearby areas. Since the area of SMK Corporation is an area where there is a dense network of hospitals and hospital related services, patients from neighbouring villages, cities and states come for treatment. The response as to whether hospitals have extended their services to other areas, response in this respect is varied as only some and not all the hospitals under study extend their services to other areas due to limited human resources. The responses of the hospitals are positive as to whether the hospital has established a reputation for other hospitals to refer their patients for better and/or advanced treatment. The responses of the hospitals are diverse regarding sharing their expertise with other hospitals as each of the hospitals under study have their own policy regarding this matter.

**PROMOTION ANALYSIS**

The aims of promotion activity are manifold, to name a few, giving information, creating awareness, persuasion etc. The average response score was 2.94 indicating hospitals are not giving much emphasis on all the attributes of service offering. The S.D. is 0.91 this means the responses hospitals regarding using promotional tools to market hospital services is varied. Public awareness camps are useful to educate the public regarding health related issues. It is observed that big hospitals which have more resources at their disposal conduct various programs including Public awareness camps, the same goes for health check-up camps. Response are again varied regarding the distribution of brochures and pamphlets to create awareness regarding hospital and its services, as it was learned that some hospitals are averse to conducting such activities. The response of hospitals regarding the use of mass coverage to cover hospital related events was diverse, the main reason is that bigger hospitals tend to get more media attention, also in big hospitals a specific person is authorized for the liaison between the hospital and the press and other media. Response to the question as to whether the hospitals used media channels to advertise hospital services, the response was a mixed one, the reason being some hospitals believe that using media channels to advertise services helps in better communication with patients, however the rest of the hospitals shied away from media advertisement as a promotion tool. The response of hospitals regarding giving interviews on Radio and/or T.V., indicates this question too has diverse responses as even in this respect big hospitals, with established liaison with media, give interviews, expert advice on T.V. and Radio. The response of hospitals as to having website is diverse response and in line with responses of other related questions on 'promotion'. Three of the hospitals do not have a website. Regarding weather hospitals keep their websites updated, in context of the earlier question, among the eight hospitals that have a website only 1 hospital has not updated it. When asked if hospitals give news releases and have articles featured in magazines and journals, again indicates a diverse response, which falls in the same pattern of other responses on promotion, for the same reasons. When asked if hospitals use various media sources to give advertisements to promote their services, hospitals indicated a diverse response the reason is that only 2 hospitals have budgets that include outlays on advertisement. Regarding if hospitals are partnering in events to promote their services, hospitals gave a diverse response, which again reflects that only the big hospitals have resources for undertaking such promotional activities.

**PROCESS ANALYSIS**

Service processes refers to all those activities including the steps, procedures and mechanisms that are involved in delivering services. The factors involved in the process of service delivery is the service provider, the intermediaries, the service receiver and the technology used. In the analysis of the hospitals service processes data, The S.D. is 0.45, indicating similarity in responses but the average response score is 3.76 indicating more attention has to be paid to this attribute by all the hospitals. All except one of the hospitals responded positively saying that they have sufficient service counters with helpful employees. 1 of the hospitals responded as that during peak times there is rush of patients resulting in overcrowding that is a challenge to the hospital. Regarding whether the waiting time for patients is considerably less, 2 of the hospitals indicated a negative response as during busy days especially on Mondays, hospitals tend to get overcrowded and patients have to wait for long hours. When asked if bill settlement process is easy, all of the hospitals said their bill settlement process is easy. This is essential as patients and their families come from far-off places and want to settle bills as quickly as possible so they can go to their native towns Thus 91% of the hospital respondents said that the discharge process is simple. The discharge procedure of all these hospitals is simple. However, there is a varied response regarding emergency discharge procedure, 45% hospitals responded positively, while 55% of the hospitals replied in the negative. The main reason for this difference is that emergency patients many a times have been admitted without completing all the formalities, like necessary paper work, etc. which a regular patient completes and that explains the complexities involved for emergency patient discharge procedure, also in case of emergency patients who are involved in accident and similar occurrences, report to the police station may be necessary, this makes the discharge process more complicated.

**PHYSICAL EVIDENCE ANALYSIS**

In hospital complexes a pleasant and soothing atmosphere definitely helps to elevate the mood of patients and people accompanying them. This begins with a well maintained hospital building and its premises. The average response score is 3.88, indicating this attribute has to be given more emphasis, the S.D. is 0.35, indicating there is less diversity in the responses given, regarding this "P" of marketing. When asked as to whether hospitals had a well maintained hospital building, all of the hospitals under study gave a positive response. As to whether comfortable waiting and seating room is available there was not much variation in the responses of the hospitals under study. There is a positive response from the hospitals regarding making available clean drinking water facilities, and maintenance of sanitation and hygiene. There was varied response from hospitals regarding provision of canteen facilities, add to patient's convenience. Four of these hospitals do not have a canteen, and hence have responded negatively. Similarly, seven of the hospitals do not have mortuary facilities and hence gave a negative response. Except three all the other hospitals have a suggestion box that is visible and accessible. When the hospitals under study were questioned whether they have a satisfactory provision of fire extinguisher, all the hospitals responded positively. Fire extinguisher is made compulsory by law for all such organizations, and hence all of them have this facility.

**PEOPLE ANALYSIS**

In a service organization the people giving services are of utmost importance as they come in direct contact with service receivers. In a hospital, the service quality is judged on the way the doctors & nurses, and other hospital staff and employees behave and treat its patients and their relatives. The average response score was 4.31 indicating hospitals are giving emphasis on all the attributes of service offering. The S.D. is 0.27, this means the responses of hospitals do not vary greatly. All the hospitals have positively responded regarding having skilled and well qualified doctors. All the doctors in these hospitals regularly attend CME's and SME's. All the hospitals responded positively towards organization of Seminars, literature series. Out of the hospitals under study, one hospital is faced with the problem of getting qualified and supporting nursing staff. This hospital finds it difficult to meet the salary and other demands of the qualified staff, the same hospital does not give much training to its hospital staff, as it does not have the resources and inclination to do this. All of the hospitals responded positively as to whether patients were treated alike and sympathetically. When asked if honorary doctor's visit the hospitals, all hospitals responded positively. Three of the hospitals do not arrange for patient awareness program.

The responses of hospitals indicate that 'people's' 'P' has been of prime importance to all the hospitals.

**SUGGESTIONS**

The marketing activities help to improve the awareness of the hospital in the community and establish a good image and reputation. All this helps in increased inflow of patients resulting in generating more revenue. However, caution needs to be taken regarding Indian sensibilities, and to avoid aggressive advertisement.

**CONCLUSIONS REGARDING THE SEVEN P'S OF MARKETING OF HOSPITALS UNDER STUDY**

From the research study the researcher concludes that the importance of marketing and its need cannot be ignored all of the private hospitals are using the seven P's of marketing, the hypothesis testing shows that:

1. There is a positive co-relation between patient in-flow with marketing efforts.
2. There is a positive co-relation between occupancy of bed with marketing efforts.

**CONCLUSIONS**

The services offered by hospitals under study is its 'product' in marketing terms. All the hospitals are offering services to patients near and far. The Kripamayee Institute of Mental Health, is well known for its psychiatric treatment in the whole of Asia. The Price offered is reasonable and that is why people from neighbouring states get their treatment from these hospitals. Compared to hospitals in cities like Pune or Mumbai the price of medical services are not exorbitant. Varied price packages are available. Also hospitals are offering government of India's schemes like 'The Rajeev Gandhi Jeevan Dayi Aarogya Yojana' to patients. Pricing strategies could be cost oriented, demand oriented, competition oriented, or maximum reimbursement oriented. The hospitals in the study have very good accessibility. The geographical location itself is such that patients from neighbouring cities and states can approach these hospitals. Patients from Sangli, Satara, and Solapur districts and Karnataka come in huge numbers. The railway routes and bus routes are well connected. The services offered by these hospitals are truly fulfilling the needs of the community. Hospital Marketing Promotion (i.e. HMP) as it is now a days acknowledged is an important tool for informing and educating patients, and

seeking hospital services, building up good image of the hospital. Hospitals promote their services through Health check-up camps, Public awareness camps, and such other methods. Majority of times a patient seeking hospital services does not have any idea where to seek relevant and reliable information. Guidance is taken from family members, friends and acquaintances as well as old patient's referrals are considered. Thus presently word-of mouth is the most potent tool in the promotion of the hospital. From the moment the patient seeks the services of the hospitals till the patient is discharged, a lot many processes are involved. Efficient systems will ensure patient satisfaction. Timely and accurate service provision is a must. The Physical environment includes all those tangible factors in which the service is delivered. Patients, their relatives and friends and all other visitors perceive the quality of services based on these 'atmospherics'. Thus the structure of the hospital, its architectural plan, the lighting and the free flow of air, the colour of walls, paintings and motifs, the garden and surrounding greenery and many such tangibles are necessary as each and everything counts. Dedicated employees is the need of every organization, this is more so with regards to hospitals. Hospitals can add value to their services thru their employees. The patients coming to the hospital for its medical services are generally stressed out because of their medical problems. They require a helping hand and a sympathetic ear. The hospital staff needs to assure them through their interaction with these patients and their relatives and put their fears to rest. Also the hospital (its doctors and staff) need to be alert all times to attend to patients at all hours. They need to be on their toes to attend to patients at odd hours and in emergencies. People (employees) are the greatest asset of every hospital. These employees need to be qualified to do their assigned jobs. Also the doctors and other staff have to bilingual to be able to communicate with the patients. They need to be educated and sensitized to the needs of the patient. This is possible if all these service providers are motivated enough to go the extra mile with regards to patient's needs. There are multiple Medical colleges, nursing colleges in the area of Sangli, Miraj, and Kupwad Corporation, which are the sources of skilled and well qualified people.

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## ANNEXURE

DIAGRAM NO. 1: AVERAGE RESPONSE SCORES

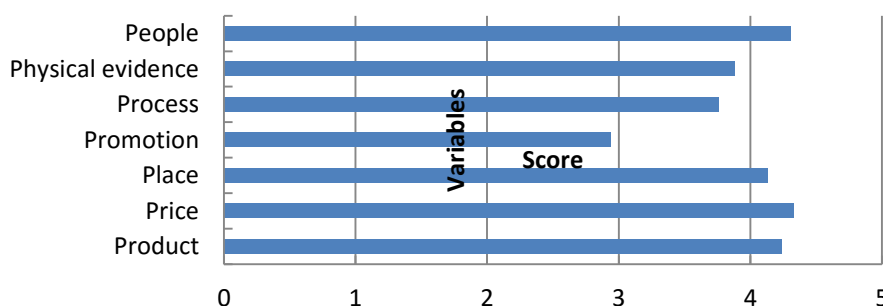


DIAGRAM 2: SCATTER PLOT - MARKETING EFFORTS VS. PATIENT INFLOW

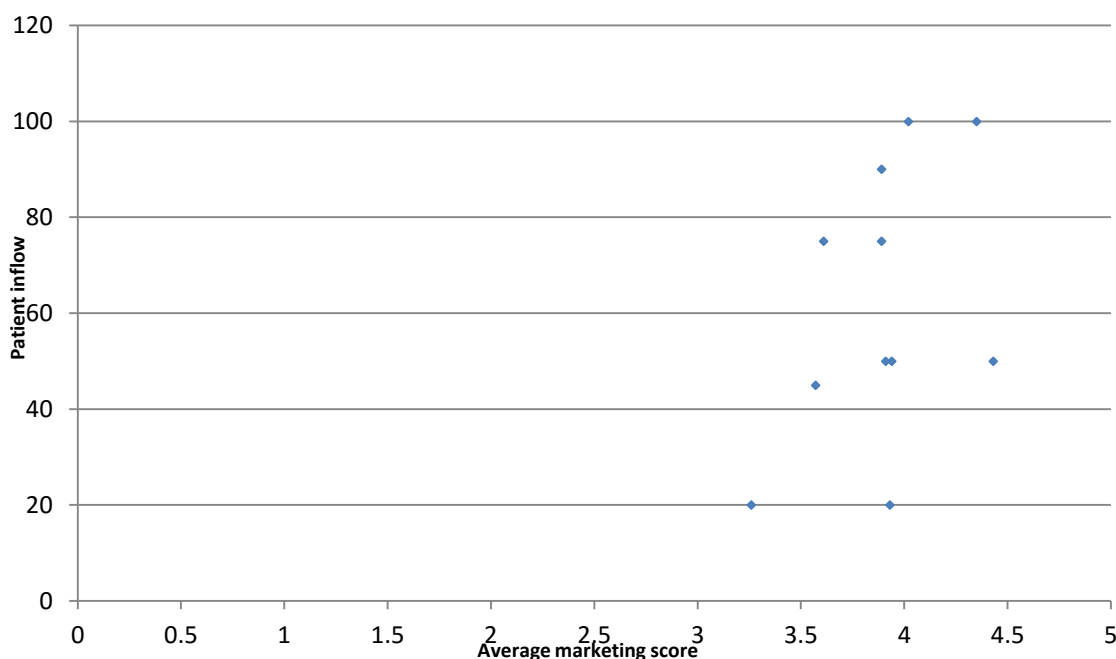
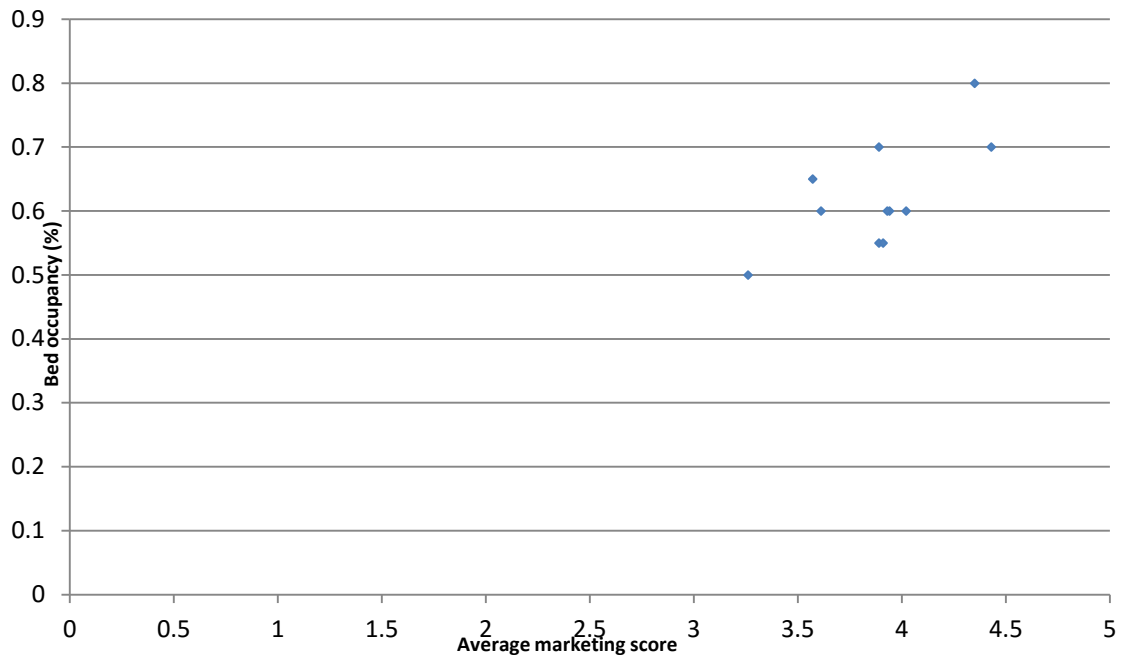


DIAGRAM 3: SCATTER PLOT - MARKETING EFFORTS VS. BED OCCUPANCY



**DEREGULATION OF PETROL AND DIESEL PRICES AND THE RESULTANT ISSUES IN MADURAI DISTRICT**

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**ABSTRACT**

*The petrol price was freed from Government in June 2010. Diesel price was deregulated partially in January 2013 and completely from October 2014. Among others it was expected that removal of Govt. control in fixation of prices would result in passing of benefits to the customers then and there. However, the indirect tax levied by the States at differential rates stand as a bottleneck to the benefits expected and State Governments take this an avenue to raise funds to contain their fiscal deficits. The revenue generated by Central and State Governments in recent years (2012-13 to 2014-15) with that of the revenue generated correspondingly a decade before (2002-03 to 2004-05) shows an increase in revenue to the tune of 188 per cent, 193 per cent and 167 per cent respectively in the three periods of comparison. A Study was conducted in Madurai District to know about the views of petrol bunk owners relating to the issues in pricing of petrol and diesel, the major findings are presented in this paper.*

**KEYWORDS**

confirmatory factor analysis, deregulation, differential rate, omcs.

**INTRODUCTION**

The petrol price was freed from Government in June 2010. A partial deregulation of diesel prices was done in January 2013, thereby the oil companies were permitted to raise diesel prices by a small quantum periodically till such time they are able to cover Rs.9.60 per litre loss they incurred on diesel at that time. Diesel price was completely deregulated from October 2014. As a result, IOC, BPCL and HPCL use fortnightly average of benchmark oil price and exchange rate to fix the price to be paid to refineries on 1<sup>st</sup> and 16<sup>th</sup> of every month. On 30<sup>th</sup>/31<sup>st</sup> and 15<sup>th</sup> of every month, they use the average price of international benchmark and foreign exchange rate in a fortnight to decide what should be the price of fuel from 1<sup>st</sup> and 16<sup>th</sup> of every month respectively. Deregulation was intended to give scope for long-term survival of the Indian oil industry, to increase competition and to attract private capital in the industry through partial removal of Govt. control, withdrawal of State interference, simplification of Govt. rules and regulations and encouraging free market operations.

**REVIEW OF LITERATURE**

B B Bhattacharya, Amita Batra in their article "Fuel Pricing Policy Reform in India: Implications and Way Forward" This paper undertook an examination of the differential impact of international oil prices on domestic inflation and output growth in India under two alternative scenarios. One scenario is, when domestic fuel prices are allowed a formula-based automatic alignment with international oil prices and the second, when as per current policy, fuel prices have evolved as a consequence of revisions specified periodically by the government. The differential impact analysis has been undertaken in a structural Vector Autoregressive framework using the technique of innovation accounting.

Dr. Shefali Dani in his article "Escalating Petrol Prices in India: Repulsive Government Policies and Turbulence in Public" Attempted to bring forward the reasons for soaring petrol prices in India. The author has also analyzed the government policies for petrol sector, identified the major causes for this amplifying rise in petrol prices and explained the adverse effect of rise in the petrol on general public of India. In this article it is found that the rise in the petrol price mostly because of the cost of the crude oil and refined products in the international market, the government pricing policy and the absence of compensation to oil companies. He has suggested that the government needs to extend the subsidy to targeted consumers.

Kumar G Prasanna on "The Critique of the Petroleum Pricing Policy Of Government Of India" Thesis submitted in June 1997 in Mahatma Gandhi University in which he has made a major study on pricing of the petrol. In his study he has shown how petrol was priced in earlier days. And then how the system of pricing changed. The objectives of his study are based on economic efficiency, financial viability, and Social equity. He has used trend series to show the prices of the petrol and consumption in Delhi for the period of 1968-1995. He has also used percentage to show the sartorial composition of net profits of public sector enterprises in 1994-95.

**STATEMENT OF THE PROBLEM**

A rise in fuel prices implies a rise in the cost of everything without any increase in salaries or income. In the short term and medium term overall inflation will rise. The reasons for the fluctuation in the petrol prices are many, some of which are:

- Variations in the price of crude oil
- Strong global requirement
- Limited production capacity
- Political issues in oil producing countries
- Increased taxation
- Govt. Regulations
- Geographical location
- Increase in Demand
- Competition
- Supply-demand imbalances

**OBJECTIVE**

To know about the views of petrol bunk owners relating to the issues in pricing of petrol and diesel.



## RESEARCH METHODOLOGY

The issues on the pricing policies of petrol and diesel at present especially after deregulation from the petrol bunk owners' point of view is studied in Madurai District consisting of 13 blocks

Census method of Sampling is used for collecting data for the purpose of this Study. In the study area (Madurai District), a total of 120 petrol bunks are located at various places. Of them 73 bunks are in Madurai city and the rest 47 are in other places of Madurai District. Of the 120 bunks in Madurai District, 62 bunks are Indian Oil Corporation Ltd. (IOCL) bunks, 33 are Hindustan Petroleum Corporation Ltd. (HP) bunks and 25 are Bharat Petroleum Corporation Ltd. (BP) bunks. All the owners of 120 petrol bunks were interviewed to understand their views on pricing policies of petrol and diesel and to understand their problems in owning the petrol bunks.

## LIMITATIONS

This Study has the following limitations.

Suitable alternatives to the existing pricing policies of petrol and diesel are not sought from the respondents (owners of the petrol bunks). Hence the views of the owners relating to the consequences of the existing system of pricing policy of petrol and diesel such as customers consequences, owners consequences, oil company consequences, Govt. consequences, Economic consequences and price consequences only are analysed.

## ANALYSIS

The issues relating to pricing are measured with the help of thirty one variables. The owners are asked to rate the variables in the pricing policy of petrol and diesel at five point scale according to their order of importance from very high to very low. The assigned score on these scales are from 5 to 1. The score of the variables have been included for exploratory factor analysis in order to narrate the variables into important factors.

Initially, the validity of data for factor analysis has been conducted with the help of Kaiser-Meyer-Ohlin (KMO) measure of sampling adequacy and Bartlett's test of sphericity. Both these two tests satisfy the validity of data for exploratory factor analysis. The factor analysis results in six important factors such as Consequences to customers, owners, oil company, Govt., economy and price. The Eigen value, per cent of variation and cumulative per cent of variation of each factor are summarized in the following Table.

**TABLE 1: IMPORTANT VIEWS ON PRICING POLICY OF PETROL AND DIESEL (IVPPD)**

Sl. No.	IVPPD	No. of variables in	Eigen value	Per cent of variation explained	Cumulative per cent of variation explained
1.	Customers consequences	8	5.8183	18.77	18.77
2.	Owners consequences	6	4.0962	13.21	31.98
3.	Oil company consequences	5	3.8806	12.52	44.50
4.	Government consequences	5	3.6693	11.84	56.34
5.	Economic consequences	4	2.8604	9.23	65.57
6.	Price consequences	3	2.1173	6.83	72.40
KMO measure of sampling adequacy: 0.7673			Bartlett's test of sphericity: Chi-square value: 81.09*		

\*Significant at five per cent level.

The first two important factors identified by the factor analysis are customers and owners consequences since their Eigen value are 5.8183 and 4.0962 respectively. The per cent of variation explained by these two factors are 18.77 and 13.21 per cent respectively. The next two important factors are oil company consequences and Government consequences since their Eigen value are 3.8806 and 3.6693 respectively. The per cent of variation of above said two factors are 12.52 and 11.84 per cent respectively. The last two factors identified by the factor analysis are economic and price consequences since its Eigen value are 2.8604 and 2.1173 respectively. The per cent of variation of the factors are 9.23 and 6.83 respectively. The narrated six factors explain the thirty one variables to an extent of 72.40 per cent.

### OWNERS' VIEW ON CONSUMERS CONSEQUENCES (CC) OF THE PRICE POLICIES

The consumer consequence (CC) consists of eight variables such as higher consumers' price, Frustration of customers, Burden to customers, No full benefit of deregulation, Reduction of customers trust, Reduction of customers satisfaction, Frequent enquiry by customers and No long queues in petrol bunk.

The highly viewed variables in CC by the owners in IOCL are 'frequent enquiry by customers' and 'reduction of customers' satisfaction. Among the owners in HP, these two variables are reduction of customer's satisfaction and burden to customers. Among the owners in BP, these two variables are burden to customers and no long queues in petrol bunk since their mean scores are 3.6688 and 3.6082 respectively. Regarding the view on variables in CC, the significant difference among the three groups of owners have been noticed in their view on five out of eight variables in CC.

The reliability and validity of variables in CC was examined with the help of confirmatory factor analysis. The overall reliability of variables in CC have been tested with the help of Cronbach alpha. The standardized factor loadings of variables in CC are varying from 0.6882 to 0.9246 which reveals its content validity. The significance of 't' statistics of the standardized factor loadings of variables in CC reveal its convergent validity. It is also supported by the composite reliability and average variance extracted since these are greater than its standard minimum of 0.50 and 50.00 per cent respectively. The included eight variables in CC explain it an extent of 81.72 per cent since its Cronbach alpha is 0.8172.

The level of view on consumers consequences of the pricing policies among the owners have been measured by the mean scores of the variables in it. The important SOCC among the owners are 3.01 to 4.00 and above 4.00 which constitute 42.50 and 25.00 per cent to the total. Among the owners in IOCL, the first two SOCC are 3.01 to 4.00 and above 4.00 which constitute 38.70 and 29.03 per cent to its total respectively. Among the owners in HP, these two are also the same which constitute 51.51 and 21.21 per cent to its total respectively. Among the owners in BP, these two are also 3.01 to 4.00 and 2.00 to 3.00 which constitute 40.00 and 28.00 per cent to its total respectively. The owner in IOCL is having higher view on the consumer consequences than that among the owners in HP and BP.

### OWNERS' VIEW ON OWNERS' CONSEQUENCES (OC) OF THE PRICE POLICIES

The owner's consequence (OC) consists of six variables such as Affect profitability, Unfair to overhead, Poor ROI, No windfall profits, Minimum commission and Increase in credit sales. The highly viewed variables in OC by the owners in IOCL are increase in credit sales and affect profitability. Among the owners in HP, these two are no windfall profits and increase in credit sales. Among the owners in BP, these two are 'minimum commission' and 'unfair to overhead'. Regarding the view on variables in OC, the significant difference among the three groups of owners has been noticed in their view on three out of six variables in OC.

The CFA has accepted only five variables. The included five variables in owner's consequences explain it to an extent of 73.49 per cent since its Cronbach alpha is 0.7349. The standardized factor loadings of variables in OC are greater than 0.60 which reveals its content validity. The standardized factor loadings of variables in OC are significant at five per cent level which indicates the convergent validity. It is also supported by the composite reliability and average variance extracted since these are greater than its standard minimum of 0.50 and 50.00 per cent respectively.

The level of view on the owners consequences have been measured by the mean scores of the variables in OC. The important SOOC among the owners are 3.01 to 4.00 and above 4.00 which constitute 41.67 and 35.83 per cent to the total. The important SOOC among the owners in IOCL are 3.01 to 4.00 and above 4.00 which constitute 37.09 and 29.03 per cent to its total respectively. Among the owners in HP, these two are 3.01 to 4.00 and above 4.00 which constitute 51.52 and 36.36 per cent to its total respectively. Among the owners in BP, these two are above 4.00 and 3.01 to 4.00 which constitute 52.00 and 40.00 per cent to its total respectively. The analysis reveals that the levels of view on owner's consequences are higher among the owners in BP than that among the owners in IOCL and HP.

**OWNERS' VIEW OIL COMPANY'S CONSEQUENCES (OCC) OF PRICING POLICIES**

The company's consequence consists of five variables such as Earn more, Fixation of prices, Take independent decision on pricing, No credit sales and Reduction of losses. The highly viewed variables in OCC by the owners in IOCL are 'earn more' and 'no credit sales'. Among the owners in HP, these two are 'fixation of prices' and 'earn more'. Among the owners in BP, these two are 'fixation of prices' and 'take independent decision in pricing'. Regarding the view on variables in OCC, the significant differences among the three groups of owners have been noticed in their view on no credit sales and reduction of losses.

The CFA has accepted only four variables in it. The standardized factor loading of variables in OCC are varying from 0.6544 to 0.8917 which reveals the content validity. The significance of 't' statistics of the standardized factor loading of variables in OCC reveal its convergent validity. It is also proved by the composite reliability and average variance extracted since these are greater than its standard minimum of 0.50 and 50.00 per cent respectively. The included four variables in OCC explain it to an extent of 78.41 per cent since its Cronbach alpha is 0.7841.

The level of view on the oil companies consequences of the deregulation of petroleum prices have been measured by the mean scores of all four variables in it. The important SOOC among the owners are 3.01 to 4.00 and above 4.00 which constitute 40.00 and 36.67 per cent to the total. Among the owners in IOCL, the first two SOOC are 3.01 to 4.00 and above 4.00 since it constitutes 41.94 and 30.65 to its total respectively. Among the owners in HP, these two are above 4.00 and 3.01 to 4.00 which constitute 42.42 and 30.30 per cent to its total respectively. Among the owners in BP, these two are 3.01 to 4.00 and above 4.00 which constitute 48.00 and 44.00 per cent to its total respectively. The analysis reveals that the levels of view on oil employee's consequences are higher among the owners in IOCL than that among the owners in BP and HP.

**OWNER'S VIEW ON GOVERNMENT CONSEQUENCES (GC) OF PRICING POLICIES**

The Govt. consequences consist of five variables such as Additional revenue to oil companies, Increase in excise duties, lesser reduction of prices of petrol and diesel, Recovery of oil companies and Free from indebtedness. The highly viewed variables in GC by the owners in IOCL are recovery of oil companies and additional revenue to oil companies. Among the owners in HP, these two are lesser reduction of prices of petrol and diesel and increase in excise duties. Among the owners in BP, these two are lesser reduction of prices of petrol and diesel and free from indebtedness. Regarding the view on variables in GC, the significant difference among the three groups of owners has been noticed in their view on three out of five variables in GC.

The CFA has accepted only four variables in it. The included four variables in GC explain it to an extent of 76.38 per cent since its Cronbach alpha is 0.7638. The standardized factor loading of variables in GC are greater than 0.60 which reveals the content validity. The significance of 't' statistics of the standardized factor loading of variables in GC reveal its convergent validity. It is also supported by the composite reliability and average variance extracted since these are greater than its standard minimum of 0.50 and 50.00 per cent respectively. The owner's views on GC have been computed by the mean scores of four variables in GC. The analysis reveals that the levels of view on government consequences are higher among the owners in HP than that among the owners in IOCL and BP.

**OWNERS' VIEW ON ECONOMIC CONSEQUENCES (EC) OF PRICING POLICIES**

It consists of four variables such as Good economic development, Removal of subsidy, Good economic policy and End to fuel scarcity. The highly viewed variables in EC by the owners in IOCL are good economic policy and end to fuel scarcity. Among the owners in HP, the first two variables in EC are end to fuel scarcity and good economic policy. Among the owners in BP, these two variables are good economic policy and end to fuel scarcity. Regarding the view on variables in EC, there is no significant difference among the three groups of owners.

The score of all four variables in EC have been included for confirmatory factor analysis. The standardized factor loading of variables in EC are varying from 0.6007 to 0.9044 which reveals the content validity. The significance of 't' statistics of the standardized factor loading of variables in EC reveal its convergent validity. The composite reliability and average variance extracted by this factor also support the convergent validity. The included four variables in EC explain it to an extent of 79.64 per cent since its Cronbach alpha is 0.7964. The levels of owners view on economic consequences have been measured by the mean scores of four variables in it. The analysis reveals that the levels of view on economic consequences among the three groups of owners are more or less same.

**OWNERS' VIEW ON PRICE CONSEQUENCES (PC) OF PRICING POLICIES**

It consists of three variables such as Differentiated price, Free market mechanism and Price independency. The highly viewed variables in PC by the owners in IOCL are free market mechanism and price independency. Among the owners in HP, these two are also the same. Among the owners in BP, these two are differentiated price and free market mechanism. Regarding the view on variables PC, the significant difference among the three groups of owners have been noticed in their view on all three variables.

The score of three variables in PC have been included for confirmatory factor analysis. The included three variables in PC explain it to an extent of 74.09 per cent since its Cronbach alpha is 0.7409. The standardized factor loading of variables in PC are greater than 0.60 which reveals the content validity. The significance of 't' statistics of the standardized factor loading of variables in PC reveals its convergent validity. It is also proved by the composite reliability and average variance extracted since these are greater than its standard minimum of 0.50 and 50.00 per cent respectively.

The levels of view on price consequences among the owners have been derived by the mean scores of the variables in it. The analysis infers that the view on price consequences is higher among the owners in IOCL than that among the owners in HP and BP.

**OWNERS' VIEW ON IMPORTANT CONSEQUENCES OF PRICING POLICY OF PETROL AND DIESEL**

One way analysis of variance was used to examine the profile of the owners and their view on the important consequences of pricing policies on petrol and diesel. Regarding the view on customers' consequences, the significantly associating profile variables are age, level of education, occupational background, years of experience, monthly income, monthly income from other sources and family income. The significantly associating profile variables regarding the view on owner's consequences are age, occupational background, monthly income from other sources and family income.

The significantly associating profile variables regarding the view on oil companies' consequences are age, level of education, family size, occupational background, years of experience, monthly income from other sources, earning members per family and family income whereas in the perception on Government consequences, these profile variables are age, level of education, occupational background, years of experience, monthly income from other sources and family income.

Regarding the view on economic consequences the significantly associating profile variables are level of education, family size, occupational background, years of experience, number of business owned, monthly income, monthly income from other sources, earning members per family and family income whereas regarding the price consequences, these are married status, family size, occupational background, monthly income and family income.

One way analysis of variance was used to examine the profile of the units and the owners' view on the important consequences of pricing policies on petrol and diesel. The significantly associating profile of the units regarding their owners' view on customers consequences are nature of allotment, location, turnover and return on investment whereas in the view on owners consequences, these profile variables are nature of allotment, turnover, and amount of investment. Regarding the view on oil companies consequences the significantly associating profile variables are nature of ownership and turnover whereas in the case of view on government consequences, these are nature of allotment and amount of investment. In the view on economic consequences, these profile variables of nature of ownership and location whereas in the case of price consequences, this profile variable is return on investment.

An attempt has been made to identify the important discriminate consequences among the views of owners in IOCL and HP and the statistical significance has been computed. The significant mean differences are noticed in the case of consumers, oil companies, government and price consequences. The higher mean differences are noticed in the case of consumer and government consequences since its Wilks Lambda are 0.1038 and 0.1338 respectively. The higher discriminate co-efficient are noticed in the case of consumers and oil company's consequences since their co-efficient are 0.2041 and 0.1997 respectively. It shows the higher influence of above said two important consequences in the discriminate function. The higher relative contribution in TDS is noticed in the case of consumers and oil company's consequences since its relative contributions are 45.39 and 39.83 per cent respectively. The estimated two group discriminate function correctly classifies the cases to an extent of 74.82 per cent. The analysis reveals that the important discriminate consequences among the owners in IOCL and HP are consumers and oil companies consequences which are highly perceived by the owners in IOCL than that by the owners in HP.

The important discriminate consequences among the views of owners in IOCL and BP and the statistical significance have been computed. The significant mean differences are identified in the case of consumers, owners and price consequences since their respective 't' statistics are significant at five per cent level. The

higher mean differences are noticed in the case of consumer and price consequences since their mean differences are 0.5561 and 0.5293 respectively. The higher discriminate power is noticed in the case of consumers and price consequences since its Wilks Lambda are 0.1017 and 0.1249 respectively.

The higher discriminate co-efficient are noticed in the case of consumers and owners consequences since its co-efficient are 0.1789 and -0.1548 respectively. It shows the higher influence of above said two consequences in the discriminate function. The higher relative contribution in TDS is noticed in the case of consumers and owners consequences since its relative contributions are 47.09 and 27.59 per cent respectively. The estimated two group discriminate function correctly classifies the cases to an extent of 72.83 per cent. The analysis reveals that the important discriminate consequences among the owners in IOCL and BP are consumers and owners consequences. The consumer's consequences are highly viewed by the owners in IOCL whereas the owner's consequences are highly perceived by the owners in BP.

The important discriminate consequences among the views of owners in HP and BP and the statistical significance have been computed. The significant mean differences are noticed in the case of owners, oil company and Government consequences since their respective 't' statistics are significant at five per cent level. The higher mean differences are noticed in the case of government and owner's consequences since its mean differences are 0.4377 and -0.4205 respectively. The higher discriminate power is noticed in the case of Oil Company and government consequences since its Wilks Lambda are 0.1179 and 0.1341 respectively. The higher discriminate co-efficient are noticed in the case of government and owners consequences since its co-efficient are 0.1881 and 0.1775 respectively. It shows the higher influence of above said two important consequences in the discriminate function. The higher relative contribution in TDS is noticed in the case of government and owners' consequences since its relative contributions are 44.78 and 40.39 per cent respectively. The estimated two group discriminate function correctly classifies the cases to an extent of 76.89 per cent. The analysis reveals that the important discriminate consequences among the owners in HP and BP are government consequences and owner's consequences. The government consequences are highly viewed by owners in HP whereas the owner's consequences are highly viewed by the owners in BP.

## FINDINGS

The analysis of revenue generated by Central and State Governments in recent years (2012-13 to 2014-15) with that of the revenue generated correspondingly a decade before (2002-03 to 2004-05) shows an increase in revenue to the tune of 188 per cent, 193 per cent and 167 per cent respectively in the three periods of comparison. The quantum of increase between 2002-03 and 2012-13 was Rs. 181910 crore. The increase between 2003-04 and 2013-14 was to the tune of Rs. 200985 crore and the increase in revenue to the Central and State Governments between 2004-05 and 2014-15 was Rs. 201674 crore.

The ratio of revenue to Central and State Governments have changed lest in a decade before, the ratio was on an average of 66: 34 and in recent years it was 51: 49. The analysis reveals that in recent years State Governments' share in the total revenue was increased or in other words Central Govt. has shared more revenue with the State Governments than a decade before. Hence, increased levy of tax by the Central and State Governments resulted in more contribution of revenue from petroleum sector.

The owners' view on pricing policies of petrol and diesel and their view on the problems encountered by them in the petrol bunk business are presented in this Chapter.

## SUGGESTIONS

It is suggested to reduce the price of petrol and diesel in India to the maximum extent after providing for a reasonable return to all upstream and downstream companies. Reasonable profit should reach even to the last level of the chain, namely petrol bunks by providing reasonable commission on sales and through other means. This may create a fear of loss of revenue to the exchequers. But a different way of thinking will help to alleviate this fear. If prices of petrol and diesel are reduced to half of the present rate (since tax exceeds cost), this will encourage people to purchase two wheelers and four wheelers. The reduction in operating cost encourages them to increase their standard of living.

The finance industry will flourish through its readiness to provide funds to prospective investors in two and four wheelers. The Govt. may compensate the reduction in revenue from petroleum sector through the income from the finance industry and automobile industry. If people purchase more vehicles, the necessity to improve the infrastructure like roads and the like, provides employment to many people in the industry and the income and standard of living of people connected to this field may come up.

The reduction in the prices of petrol and diesel will have a cascading effect in the prices of essential commodities due to the reduction in the transportation cost. This will help the Govt. to provide essential commodities to the public at cheap rates which will curtail inflation. If inflation can be curtailed the economy will be stable and grow further and further.

Hence checking cartelization of prices by OMCs and by reduction of taxes to a large extent will go a long way in turning the economy with full vigor to compete with developed economies. If this dream materializes, India will become a developed nation very soon.

## CONCLUSION

India, like few other developing nations such as China, has since 2010 taken significant steps towards reforming its policy on fuel pricing to be rational and efficient by way of deregulating petrol and diesel prices. However due to the freedom to the States in the country to fix indirect tax on their own and which are not uniform among States, there is widespread disparity in the prices of petrol and diesel among States.

At a time when the prices are increased by OMCs when there is a spurt in the international crude oil prices, the proportionate benefits are not passed on immediately when there is a slash in crude oil prices. The Governments augment revenue by taxing heavily from this petroleum sector. Any reason whatsoever for not reducing the price will not be acceptable if the tenor of deregulation should convey the real meaning.

Hence it is concluded that the price of petrol and diesel should be uniform throughout India. The Governments should pass on the benefits of price reduction to the consumers instead of finding it as an avenue to raise funds like a goose laying golden eggs.

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**ROLE OF HOMESTAYS IN SUSTAINABLE DEVELOPMENT OF VILLAGE TOURISM IN WAYANAD DISTRICT****K. C. ROBBINS****RESEARCH SCHOLAR, IGNOU, NEW DELHI; &  
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TRIVANDRUM****ABSTRACT**

*The significance of Wayanad is that the entire district has a number of tourism locations which can be developed as Village tourism destinations. The process of liberalization in Kerala tourism policy in 1986 has made tourism as a cottage industry giving a lot of opportunities for the people who are living in tourism destinations. Government of Kerala has declared Wayanad as a tourism destination, and it provides with high economic turn over from this sector. There is great amount of scope for tourism expansion in this beautiful hill station with landscapes and mist clad mountains, exotic locations for Village tourism. Village tourism is sustainable and viable if properly managed by the local community. Wayanad also consists of small time tourism players who are ex- farmers and successful plantation owners and real-time tourism entrepreneurs. Mostly all tourism activities are handled by Individual land owners who were once into plantation, agrarian activities or tea/coffee manufacturers. As far as Wayanad is concerned, the local community is inter-weave into social fabric of the tourism entity. It is an advantage that tourism activities are directly derived by the local village community. It is evident that the tourism activities through Home stays have promoted community development in the villages to ensure their maximum participation in village tourism. Home stays actively involve local village communities for development of infrastructure; improving moderate facilities for the tourists, in return they provide income and employment opportunities on a regular basis to the local village folk. Travel and Tourism is the world's largest industry and national and regional economies. It has great strategic importance for Kerala's economy due to its capacity for wealth-generation and job-creation. According to the World Travel and Tourism Centre (WTTC) statistics, an investment of Rs 12 lakhs in tourism creates 89 jobs, as against 45 in agriculture. It is often seasonal and mainly generates part-time and unskilled jobs for local people. Further, if not planned carefully, tourism can be destructive of culture and local traditions. Effective promotion of Village tourism can be sustainable model for struggling tourism of Wayanad. The research scholar is trying to present in this paper about the host community through home stays participation in the various facades of village tourism in Wayanad. This paper wish to suggest points on the role of home stays and recommend tangible ways on which village tourism can be developed in Wayanad District.*

**KEYWORDS**

home stay, village tourism, sustainable tourism development, benefits to local community.

**1. INTRODUCTION**

**T**ourism is travel for recreational, leisure or business purposes. Tourism is the world's largest industry with over 10 percent of gross domestic product globally and directly related to tourism activities. Tourism is not an activity for pastime and entertainment but is an enriching and energizing activity. Tourism is the right vehicle for a developing country like India which is on the path of modern economic growth through structural transformation of the economy. The value-added effect of tourism is increasing.

The role of Tourism is essential in the economic development of a country. Tourism is the second largest foreign exchange earner in India. Tourism promotes culture, traditional handicrafts sector. The tourists get an insight into the rich and diverse cultural heritage of India. India is a multifaceted country with a vast potential for tourist attraction. It has a rich architectural legacy dating to ancient past. There are timeless monuments, magnificent temples and breathtaking sites. The delighting backwaters, hill stations and landscapes make India a beautiful country. Historical monuments, forts, beaches, places of religious interests, hill stations, etc. add to the grandeur of the country. India is probably the only country that offers various categories of tourism. These include nature tourism, rural tourism, village tourism, spice tourism, handicrafts tourism, history tourism, adventure tourism, medical tourism, pilgrimage tourism, etc. India has a composite culture.

Tourism has now become a significant industry in India, contributing around 5.9 per cent of the Gross Domestic Product (GDP) and providing employment to about 41.8 million people. As per the World Travel & Tourism Council, the tourism industry in India is likely to generate US\$ 121.4 billion of economic activity by 2015 and Hospitality sector has the potential to earn US\$ 24 billion in foreign exchange by 2015. Indian Tourism offers an assortment of different cultures, traditions, festivals, and places of interest. There are a lot of options for the tourists. India is a country with rich cultural and traditional diversity. This aspect is even reflected in its tourism. The different parts of the country offer wide variety of interesting places to visit. While the international tourism is experiencing a decelerated growth, the Indian counterpart is not affected.

Kerala has emerged as the most acclaimed tourist destination in India. The back waters, beaches, hill stations, wildlife, waterfalls and the diverse flora and fauna makes the small state a unique destination for tourists. During the last fourteen years the government of Kerala has given immense importance for the growth of tourism sector as this sector plays a vital part in the economy of the state and the country. The small state Kerala, has been branded as one of the sought after destination in the world. The government plays an important role for the marketing and promotional activities to make Kerala a branded destination. Kerala is the first state in India to be accorded the status of partner state of the World Travel and Tourism Council [WTTC] in 2002.

Kerala, located on the southernmost tip of India, is hot and trusted tourism brand in India these days. The Satellite Accounting Research conducted by World Travel and Tourism Council [WTTC], states that Kerala's travel and tourism demand is expected to grow by 11.6% per annum over the coming decade and is recorded as the highest growth rate in the world. The God's Own Country [Kerala], is famous for its attractive destinations and tourism initiatives. The dramatic increase in the number of Indian middle class and global promotion campaigns by the tourism department contributed to the increase in tourist traffic to this small Indian state with 38,863 square km and a population of 32 million.

Responsible tourism is a new initiative promoted by the government of Kerala to ensure the participation of important stakeholders in a responsible way. Home stay tourism is one of the best initiatives to implement responsible tourism by ensuring participation of important stakeholders in a local community. "Responsible tourism is a leisure activity implementing practices that are respectful of natural and cultural environment and which contribute in an ethical manner to the local economic development. It therefore favors the tourist awareness concerning his own impacts on the local territory and makes him an actor of his consumption" The state of Kerala decided to take on responsible tourism initiative at four pilot destinations in 2008. These destinations are Kovalam, the famous beach in south Kerala, Kumarakom, the back water destination in central Kerala, Thekkady, a hill resort in central Kerala and Wayanad, a historic, hill station in Northern Kerala.



**WAYANAD TOURISM**

Wayanad is a beautiful district located in the northern part of Kerala. Wayanad one of the panoramic hill stations of Kerala situated in an elevated picturesque mountainous plateau in the Western Ghats. To the perspective of economic development, north Wayanad and south Wayanad were carved out and joined together to form the present district of Wayanad. In the year 1980 Wayanad was formed as the twelfth district of Kerala. Majority of the population depend on agriculture for their daily living

The study focuses on the characteristics of Home stays and also attempts to investigate the development of Village tourism in the district of Wayanad. It is also an effort to measure tourism developments in terms of Economic, Environmental and Socio -Cultural challenges and benefits of home stays. The area chosen for this study was Wayanad northern part of Kerala sharing borders with Karnataka and Tamilnadu states.

The significance of Wayanad is that the entire district has a number of tourist destinations and tourism areas. The process of liberalization in Kerala tourism started in 1986, when the state government declared tourism as an industry giving a lot of incentives and subsidies. This district has many beautiful destinations, government of Kerala has declared as tourism destination, and it provides with high economic turn over from this sector.

There is great amount of scope for tourism expansion in this beautiful hill station with landscapes and mist clad mountains, exotic locations, including Edakkal world heritage sites. The foreign tourist arrivals and domestic tourist arrivals since 2004 shows Wayanad has highest turnover when compared with other districts of Kerala. In the fast pace of urban life Wayanad has great value in terms of unexplored beautiful locations. Therefore, Wayanad has great amount of tourism potential as a district, keeping in view of the unique features of Wayanad, especially the natural attractions and the indigenous culture.

**2. RATIONALE OF THE STUDY**

Village tourism is primarily selling tourism and tourism products to spread its socio economic benefits to the local community and its geographic regions. Village tourism is a new concept which comprise of rural life, art, culture and heritage at rural locations of the villages. The prospects for development of Village tourism in Wayanad district and the role of home stays could create awareness among local community. Village tourism development can act as an effective mechanism to control environmental issues. It is in this context present study assumes special importance and relevance. Certain significant issues challenges have been discussed and highlighted in this paper which may be of immense worth to policy makers, researchers, academicians and home stay owners, and local community engaged in tourism development.

**3. OBJECTIVES OF THE STUDY**

1. To identify the presence of home stays in Wayanad district
2. To uncover the opportunities in village tourism
3. To understand the challenges faced by home stays
4. To list out the role of home stays in tourism development
5. Evaluate ways to overcome challenges

**4. DATA AND METHODOLOGY**

To analyze the various relevant issues relating to the role of Home stays in the development of Village tourism, this study has used relevant available data have been collected from primary secondary sources of information and interview with the district tourism promotion council officials and experts involved in the home stay at Wayanad district. Research papers published in various journals, books, reports, surveys, interviews and ideas of tourism experts have largely contributed towards construction of this paper.

**5. HOME STAYS AND TOURISM DEVELOPMENT**

Home stay is essentially a private home with one to four guest rooms that are used to bring in supplemental rather than primary income where guest avail true flavor of staying with the family, (Cheryl Kimbali, 2004). Home stay hosts general feel is that it provides only the authentic bed and breakfast experience. Home stays doesn't provide sign boards on their properties or advertise, rather rely on reservations. Home stay is a specialist term referring to types of accommodation where tourists or guests pay to stay in private homes interaction takes place with the host or with family usually living, upon the premise with whom public space is to be shared, (Lynch 2005). These definitions can therefore be seen as incorporating a number of other terms including bed and breakfast, guest house, and farm stay. Several historical accounts of the use of commercial home for tourist accommodation note that it has long history in many countries.

**5.1 - HOME STAY BENEFITS**

Home stay is one type of tourism that promotes interaction between host families and visitors. It will function as a guideline for management on natural resources and cultural preservation and distributes income to local residents, preventing leakage of the economy out of the community.

In addition, the framework to develop and promote tourism is concerned about environmental conservation and sustainable tourism principle. Home stay tourism is based on sustainability of tourism; therefore, it is necessary to investigate the overall satisfaction of tourists with home stay services. There are many different patterns in tourist behaviors and lifestyles, depending on their own traditions and cultural backgrounds. This means that there is a wide range of tourist demands in the destinations. Therefore, the result of the study is useful information to improve quality of home stay tourism in the tourism industry.

Hatton (1999) indicated that home stay was one pattern of tourism in which the tourists have to stay with the host in a community, where they will be involved in activities such as cooking, wedding ceremonies and seeing the community's performance. Home stay or participatory rest houses within the community have the following objectives: it is an activity where the community and people in the community are the owner of the project and who receive benefits from these tourism activities. Home stay tourism is an important driver of learning, exchange and strengthening value of community and it is also conservation of environment and cultural preservation.

**5.2 - EMERGING VILLAGE TOURISM**

Village tourism is primarily selling tourism and tourism products to spread its socio economic benefits to the local community and its geographic regions. The objective is to showcase rural life, art, culture and heritage at rural locations in villages, which have core competence in art & craft, handloom, and textiles as also an asset base in the natural environment. The intention is to benefit the local community economically and socially as well as enable interaction between tourists and local population for an exchange in culture. For the visitor, whose expenditure creates revenue for host community service providers; rural tourism adds value through packaged programmes in art & craft imparted by skilled local artisans. Village entertainment groups unveil local history and culture, natural and oral treasures.

The population of a given community is not to be disregarded when considering tourist destination system as manifesting itself at three border point consisting of the population, visitors, tourist, professionals. Earlier study indicates strong connection between how much the tourists are pleased with the given tourism destination and how hospitable the host community is. Tourists expect their destinations to welcome them and offer a pleasant stay which makes them feel happy.

There is increasing recognition of the significant shift away from the predominance of the traditional sun, sand and sea holiday towards more experiential vacations. John King (2002), argues that travel is increasingly about 'experiences, fulfillment and rejuvenation' rather than about 'places and things'. Fortunately Kerala is ideally placed for offering the experiential vacations to the visitors by maintaining the unique identity. The vital factors that contributed to this unique identity may be articulated as.

**5.3 - COMMUNITY BASED TOURISM**

Community benefitting through tourism proponents of (CBT) community based tourism argues that the local community could benefit from tourism without having directly involved in it and without having to own or control the business. They further suggested that tourism business in rural area need to be driven by the private sectors to be successful. (Nelson 2000). This view represents a radical departure from the concept of CBT, and a total contrast to the assertion by

Murphy and Murphy (2004) that the communities should build up their capacity to handle community based tourism business around the four essential components of the business models are planning, organization, leadership and control.

In remote isolated communities, leadership required successful person to successfully operate community based tourism projects which are usually non existent. While formal leaders such as village headman are competent in overseeing community's cohesion and welfare based on traditional knowledge, they may not have the capacity to lead a tourism business. Capacity building is therefore a big challenge to help and ensure the initial success of a CBT effort. Longer term success, however requires a transition from a "local champion" to a more diversified management model. (Moeurn et al, 2008)

All the successful models of CBT driven not by formally elected leaders but by such local champions or what Hatton (1999) called a "spark". It is widely acknowledged that the early stages of CBT are important and influential at make or break period (Kelly 2000) during which the role of the champion is crucial.

#### 5.4 TOURISM FRIENDLY VILLAGE

Tourism friendly village can be made by inspiring farmers and plantation owners to open up the rustic village experience for the growing number of travelers seeking to touch the heart of Kerala and unveil its very soul. This scheme is in association of Department of Tourism with the Local Self Government Department presents existing opportunities for the villagers and tourists alike. The scheme aims at promoting new tourist centres, inspiring products and innovative activities like adventure tourism right within the village, enabling the tourists to enjoy the authentic experience of Kerala in its hamlets while providing greater employment opportunities for the villagers. In the villages of Kerala one can enjoy true Indian hospitality, where the guest is God. The colours of the turbans and the saris of the women are in stark contrast to the often parched backdrop of the landscape. One will be amazed by the elegant way these village women carry myriads of pots on their heads, and at their incredible dresses. The women cover the outside of their houses with mud and then paint them with intricate designs, using only their hands and a paste made of lime. Accommodation is so comfortable for the traveller. Many houses previously owned by the local gentry are now being run as small hotels. Even though modern amenities are provided, they have lost nothing of their originality and charm.

#### 5.6 - PLANNING FOR TOURISM DEVELOPMENT

If tourists consume imported goods and products, the local communities do not benefit much. It will be the foreign producers who will benefit because the revenues are shipped out of the country. The tourism activities in the communities generate income and employment and support local communities directly in improving their standard of living. In addition, the local residents are the tourism planners in their communities. This tourism management results in spreading the economic benefits fairly among the communities both revenue and employment, as a multiplier effect on the local communities. Consequently, the sustainable tourism development pays attention to community involvement and environmental conservation. It brings benefits to the community such as improved living standards that strengthen the capacity in the community. This leads to sustainability and to a tendency of a new tourism pattern. This new pattern emphasizes the awareness of environmental conservation and local participation which leads to the emerging of the principle of community based tourism (CBT) in the tourism industry.

#### 5.7. SUSTAINABLE TOURISM

Sustainable tourism is a traditional framework to develop tourism that relates to shareholders in the tourism industry. Tourism supply chain, tourism attractions, local communities, and governments are the main factors involved in the provision of sustainable tourism. Each tourism attraction has to be concerned about the limits of tourism activities. These limits are the carrying capacity of an area, which is the capacity of the area that can be used for tourism activities without degrading the environment, culture, and the interactive harmony among sectors of the economy, group of people, and individuals. Impact assessment and evaluation of the ecosystem must be performed periodically. Tourism attractions should play a big role in tourist education, which may come in forms of environmental education and developing sustainable tourism behavior. In terms of local participation, in principle, the tourism industry creates high levels of income generation and distribution. The local members are major participants in the development of sustainable tourism as community based tourism.

To achieve sustainable tourism, it is essential to determine the maximum number of visitors that a destination can accommodate without destroying the destination image of the tourists. For the development of sustainable tourism, carrying capacity management is a planning and management tool which helps to specify goals and objectives in tourism development. Planning is a multidimensional activity and seeks to be integrative. It embraces social, economic, political, psychological, anthropological and technological factors. It is concerned with the past, present and future". The demand and supply side are the two strong elements of tourism. Tourism plan was prepared in 1991 [UNDP and WTO, 1991] to provide the basis for rectifying existing problems and a logical framework for the expansion of tourism.

## 6. FINDINGS AND INTERPRETATION

### 6.1 NUMBER OF HOME STAYS PRESENT IN WAYANAD DISTRICT

Wayanad district having a total number of 49 villages spread over three Taluks namely Vythiri, Mananthavadi, Sulthan Bathery. It is difficult to find out the exact number of Home stay operators in Wayanad. There are both registered and classified home stay operators existing in Wayanad. The Kerala tourism department started to register home stay operators in respective districts through district tourism promotion council and support them according to capacity development activities. All authorized home stays are holding license or permission from Panchayath Secretary or from Municipality. The owner of the home stay should also collect No Objection Certificate from the nearest Police Station and from the Divisional Forest Officer. Department of tourism, government of Kerala classifies Home stays in three categories according to the specific criteria and standards facilities provided. As on August 2014 home stays are classified as per Table.1

TABLE 1: LIST OF CLASSIFIED HOME STAYS IN WAYANAD DISTRICT

Home Stays in Wayanad District				
Registered Home Stays	298			
Unregistered	102			
Total Home Stays	400			
Classified by DTPC	Diamond	Gold	Silver	Total Classified
	Nil	10	28	38

This study considers registered home stay operators of the Vythiri tourism area and other tourism regions of Wayanad. As there is no exact number of home stays available this thesis only includes the data available from District Tourism Promotion Council (DTPC). According to the DTPC there are more than 400 home stays that have been performing in Wayanad district, it is approximately 298 authorized Home stays exist in the district, but only 38 are classified.

### 6.2 TOURIST ARRIVALS IN WAYANAD DISTRICT FROM 2004 TO 2013

Home stays gradually attracts more tourist in Wayanad. The significant number can be found in home stay have exact recording system and data of visitors but some of them has well managed database updated with every visitor's information. In this thesis 2 samples village's data have been taken for the analysis. The following graphs give the general overview of home stay visitors in Wayanad in the last 10 years.



**TABLE 2: NUMBER OF TOURIST ARRIVALS IN WAYANAD DISTRICT FROM THE YEAR 2004 TO 2013**

S. No.	Year	Domestic Tourists	International Tourists
1	2004	187701	749
2	2005	191184	942
3	2006	225923	2611
4	2007	256190	4093
5	2008	295465	5638
6	2009	370051	5362
7	2010	408151	6620
8	2011	451184	7567
9	2012	480125	9541
10	2013	519306	10844

Table - 2 shows the number of domestic tourists and international tourists visit Wayanad District from the year 2004 to 2013. Comparatively domestic tourist visit rate is higher than international tourists in each year. 749 international tourists arrived in 2004 which is drastically increased in 2006 with more than 10% of the national tourists. The trend again decreased in 2009 and then gradually increased in 2010 and 2011. The rate was very low between 2004 to 2007 because of global economic slowdown.

### 6.3 TOURIST INFLOW TO HOME STAYS OF WAYANAD DISTRICT

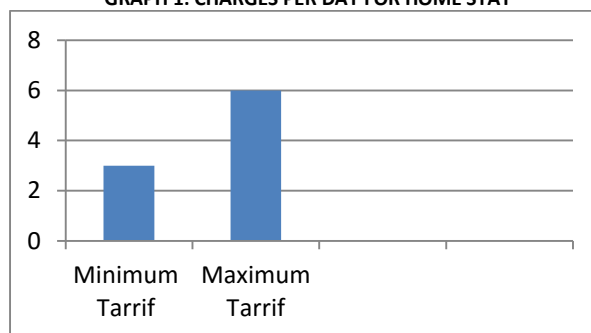
**TABLE 3: TOURIST IN FLOW IN HOME STAYS OF WAYANAD DISTRICT**

S.No.	Year	Domestic Tourists	International Tourists
1	2004	2064	126
2	2005	2347	246
3	2006	2574	347
4	2007	2893	409
5	2008	3056	565
6	2009	4657	698
7	2010	6709	764
8	2011	7634	887
9	2012	8096	979
10	2013	10326	1276

Source: Department of Tourism - Kerala

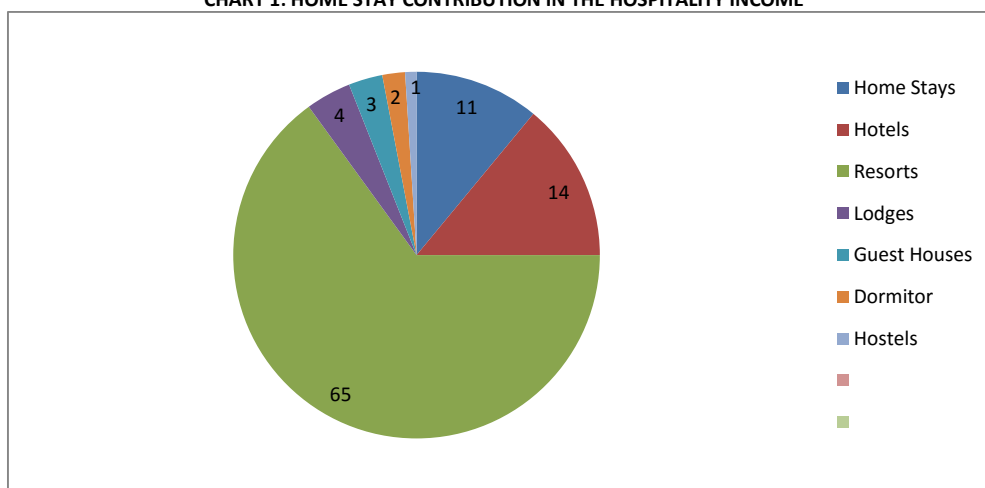
As per the table. 3 Domestic tourists gradually preferred to stay with home stays from 2004 to 2013 the percentage of increase is 5%. During 2004 only 126 International tourists preferred to stay with home stays where as in 2013 the percentage has increased to almost 10 times of 2004.

### 6.4 CHARGES PER DAY FOR HOME STAY

**GRAPH 1: CHARGES PER DAY FOR HOME STAY**

As per the graph 1, there is no exact tariff and general overall rate for visitors applicable as per number persons. The general perspective about the charge is based on 2 persons. If more than 2 persons, each extra person will be charged extra. Children above the age of 12 are considered as extra person. The minimum charge is Rs. 3000 (\$50) and the maximum is Rs. 6000, (\$100) price is varying according to the location of the home stay and as per demand.

### 6.5 HOME STAY CONTRIBUTION IN THE HOSPITALITY INCOME

**CHART 1: HOME STAY CONTRIBUTION IN THE HOSPITALITY INCOME**

As per the chart – I, Home stays contribution in the Hospitality Income is 65% is obvious.

## 6.6 ANALYSIS OF BASIC DATA ON HOME STAYS SPREAD OVER WAYANAD DISTRICT

TABLE 4: DETAILED INFORMATION AND FINDINGS

	Information's sought	Findings
1	Marketing of the home stay	75% of them having own websites, 25% of them does through non affiliated web sites
2	Nature of booking & Reservations	Nature of booking is through Internet. 81% of reservations are through telephone, and online advance payment for confirmed reservations. Balance 19 % are through Tour operator/Travel agents local agents, Auto drivers.
3	Length of stay by guest	One day - 38 % Two days - 43 % Three days - 13 % Four days - 06 %
4	Type of customers visiting	Families, Groups are not entertained; stay for individuals are denied
5	Repeated Guest	Do not get repeated guest, where as 62.5 % of the home stays get referral guests
6	Customer Satisfaction	Customer Satisfaction is measured through Comments cards and through online reviews
7	Attitude of tourists towards the local Community	Friendly - 56.25% Interactive - 37.5% Hostile - 06.25%
8	Activity by the guest in the home stay	Visiting tourism areas, gardening, cooking, participating in arts, festivals, farming, sports, Cycling, adventure, trekking etc.
9	Participation by the local community	Participation by Local Community - 18.75% Used as employees - 81.25%
10	Level of communication	37.5 % home stays owners have communication problem with foreign tourists.

## 6.7 SUSTAINABLE ACTIONS BY HOME STAYS

It is investigated through close observations that 43.75 % of the home stays are practicing Sustainable tourism practices. 43.75% home stays have own waste management system. 37.5% of the home stays purchase supplies locally to support the local community, 50% suggest their clients to purchase local products from the local shops selling traditional local products. 50% of the home stays encourage planting of indigenous species of trees by their guest and interaction with clients of cultural traditional heritage and make efforts in promoting local festivals and cultural events through local community of the Village. Most of the tourists engaged also in traditional fishing methods, farming practices, understanding ayurveda and tribal medicines, also encouraged participation and promotion of local cuisine. 37.5 % used green products in the home stays business (i.e. biodegradable materials, recycled paper etc.) Use of low energy lighting, Grow or raise organic foods. 43.75% Home stay owners usually make their guest aware of the importance of sustainable tourism practices.

## 7. CONCLUSION

To conclude, Wayanad tourism has vast potential for generating employment and earning large sums of foreign exchange besides giving a flip to the districts overall economic and social development. Much has been achieved by way of increasing road transport and infrastructure facility in important tourism destinations, availability of accommodation by home stays to the hospitality industry and encouraging paying guest accommodation. Since tourism is a multi-dimensional activity, and basically a service industry, it would be necessary for the district tourism promotional council of tourism department, private sector and voluntary organizations become active partners in the attempt to attain sustainability through Village tourism.

It is the requirement of the day to incorporate sustainable tourism Practices into each and every home stay business. They should approach a partner or supplier to adopt new practices, can be attracted by an incentive programme, Classify or differentiate a particular home stay business from the competition. Involving village tourism can attract potential cost savings, can attract environmentally conscious markets, and can enhance the reputation of the business.

Government should bring in policies and restrictive legislations to protect the resources such as land, culture, and wildlife, etc. The suppliers who sell sustainable products such as organic food, alternative fuels, biodegradable items etc should be appropriately supported. It is obvious that other business priorities leave little time to plan for sustainable development in Village tourism.

The socio- economic impacts have positively affected tourism and environmental impacts have negatively affected. The costs to make sustainable environment pays off in the future through financial gains.

The home stays as a whole is negatively impacting the environment since majority of them not practicing sustainable practices. Sustainability is not a top priority of the home stays. Government to implement stricter laws and regulations to protect the environment, have environmental awareness and education programs for people involved in home stay business. Part of the profit should be spending on Village Tourism to help them to preserve and protect the area where home stay and village tourism takes place.

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## A STUDY ON THE RELATIONSHIP BETWEEN TAIWAN SEMICONDUCTOR PRODUCTIVITY AND MACROECONOMIC FACTORS

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### ABSTRACT

*The use of operating revenue represents a productivity for the supply chain in the semiconductor industry. The semiconductor industry in Taiwan, from the upper, middle and lower the formation of the supply chain between each other, in Taiwan Semiconductor is a very important industry, accounting for Taiwan's GDP about 20 percent. However, Taiwan is an island country, exports are very important for Taiwan's economy, thence the purpose of this study want to explore on the relationship between Taiwan semiconductor productivity and macroeconomic factors. Via Taiwan Economic Journal data, we choose nine variables; operating revenue, North American semiconductor book-to-bill ratio, Export Price Index (EPI), Export order, Rediscount Rate, exchange rate, Taiwan weighed stock index, foreign direct investment, unemployment rate during the first quarter of 2008 to the first quarter of 2015. Augmented Dickey-Fuller test of Level was discovered that some variables have unit root. So that nine variables run co-integration, we found rejecting the null hypothesis, expressed nine variables had a long-term and stable relationship. Further, Granger Causal test obtained that Taiwan weighed stock index vs EPI and Rediscount Rate vs exchange rate both are bidirectional causality. Then, ARDL Model executed a total of 256 combinations, which ARDL (2,2,2,2,2,2,2) was best.*

### KEYWORDS

autoregressive distributed lag model, co-integration, granger causal, macroeconomic factor, productivity, semiconductor industry, unit root.

### INTRODUCTION

The main purpose of this study is to investigate the relationship between Taiwan semiconductor productivity and macroeconomic factors. In line with past literature (Hung and Lu, 2008), net operating revenue was as a production efficiency of output items. Accordingly, we took net operating revenue, which could imply a productivity for the supply chain in the semiconductor industry.

The latest news from the eyeProphet, informs "Taiwan's electronics industry last bunker; Semiconductor crises". That subject mentioned that, electronic products was the major export category, however, the semiconductor was the minor support of electronics. Once, the poor semiconductor exports, the poor performance of the company's revenue. Consequence, investors are reluctant to invest, and Taiwan's stock market will be affected.

Taiwan businessmen Trade's Network Newsletter, section 614 reported that worries reproduction Taiwan's economy must be transformed. Content mentioned that Taiwan is highly open island economy, exports occupy about seventy percent of GDP. In addition, exports and domestic investment and consumption derived accounted for export growth contribution estimated that 60% to 70%. Thus export is the most critical factor in determining the fortunes of the economy.

Businesses are increasingly faced with fierce competition and dramatic changes in today's global markets, forasmuch an elaborative supply chain should be built by selecting appropriate integration software tools that meet business-to-business operational characteristics and link together all partners' ERP systems (Chiu and Shih 2009). On the other hand, Taiwan semiconductor is more by the favor and trust of the international companies to complete the middle and lower reaches of vertical integration and specialization (Lin 2012).

Fang et al. (2014) suggested in order to maintain semiconductor's accounting rate of the world's first, the integrity of the upper, middle and lower stream of IC industry supply chain. Intentionally, we aspire to realize the relationship between Taiwan semiconductor productivity and macroeconomic factors.

### REVIEW OF LITERATURE

On Service Industry Management Review, Fang et al. (2014) Evaluated IC design, IC manufacturing and IC packaging and testing manufacturers of static and dynamic operating performance; understanding of the domestic semiconductor supply chain whichever has the better operating efficiency and productivity, they outcropped IC manufacturing and IC packaging and testing companies are deeply affected by the global recession, and productivity sharply declines. Also, Hsu et al. (2014) estimated the Performance Analysis of Semiconductor Distributors in Taiwan, selecting total assets, employee amount, owners' equity and operating expenses as the input factors, and operating revenue and net profit as the output factor. Thus, we adopt operating revenue to mean a productivity for the supply chain in the semiconductor industry.

Book-to-bill ratio (B/B ratio) for North America-based manufacturers of semiconductor equipment, by HUNG et al. (2013) defined that b / b ratio as the economy is good or bad judgment semiconductor index, greater than 1 indicates manufacturers optimistic about the future of the economy, less than 1 denotes the future of the economy look bad. Further information, Lin and Fan (2014) applied Granger Causality Test to inspect whether the relationship between Leading Indicators (SEMI Book-to-Bill Ratio, Index of Export Orders, Stock Price Index) and Exchange Traded Funds.

Li (2015) illustrated that the real exchange rate expressed in import price index (IPI), the export price index (EPI) and the consumer price index (CPI), maybe productive impact, making the Purchasing power parity (PPP) bias test result. Additionally, Tsay et al. (2004) noted in order to follow the trends in the movement of exports in advance, export orders have long been used as important leading indicators of actual exports by researchers and government officials alike.

Feng et al. (2013) discussed that correlation between rediscount and income interest rates price indexes and exchange rates in Taiwan, the results express that increase of the rediscount rate will cause GDP and prices to be reduced, and cause interest rates and foreign exchange rates to be increased. Likewise, Lin et al. (2014) aimed to survey the Influences for the New Taiwan Dollar Exchange Rate to the International Trade Competitiveness of Taiwan, the empirical results show that the exchange rate movements significantly but negatively impact Taiwan's competitiveness.

Ku et al. (2015) examined that the impact of OFDI on the domestic production, export and investment, the empirical result reveals that OFDI may have a negative effect on domestic export if a firm invested in the low-wage countries, while OFDI may be positively related to domestic export if a firm invested in the developed countries. Similarly, Wu et al. (2014) point out that Impact of Taiwan's Unemployment Rate for International Trade Competitiveness, the empirical results bespeak that the increase in Taiwan's unemployment rate will negatively and significantly affect international trade competitiveness.

Lin and Tu (2009) analysis that The Relationship between Export Orders and Macroeconomic Factors, hitting upon that export price index and Taiwan weighted stock index, Unemployment rate form a continuous positive impact on changes of export order; While, BB ratio, discount rate and exchange rate marked gradual negative track. Within discussions about past literature, we would like to comprehend the relationship between Taiwan semiconductor productivity and macroeconomic factors.

## RESEARCH METHODOLOGY

### DATA SOURCE

According to Taiwan Economic Journal (TEJ) data, a total of nine variables; operating revenue (unit: NT \$ 10 million), North American semiconductor book-to-bill ratio (B/B ratio), Export Price Index (EPI, unit: USD), Export order (unit: Millions of USD), Rediscount Rate, exchange rate (unit: USD), Taiwan weighed stock index (1966=100), foreign direct investment (unit: Thousands of USD), unemployment rate during the first quarter of 2008 to the first quarter of 2015.

### METHODOLOGY

We consulted Hill (2009) and utilized Unit Root (Augmented Dickey-Fuller test), Granger Causal. Also, we referred that statistical data analysis software operation (Unit root and co-integration)-EViews. Moreover, we dug out that eviews supply add in ARDL Bound approach.

### UNIT ROOT (AUGMENTED DICKEY-FULLER TEST)

A. Trapletti explained Augmented Dickey-Fuller Test from Said and Dickey (1984), the matters are summarized as follows.

1. Description-Computes the Augmented Dickey-Fuller test for the null that x has a unit root.
2. Usage-`adf.test(x, alternative = c("stationary", "explosive"), k = trunc((length(x)-1)^(1/3)))`
3. Arguments: x-a numeric vector or time series. Then, Alternative-indicates the alternative hypothesis and must be one of "stationary" (default) or "explosive". You can specify just the initial letter. Additional, k-the lag order to calculate the test statistic.

### CO-INTEGRATION

Cointegration is defined when the error term in the regression modeling is stationary. Cointegration has become an important property in contemporary time series analysis. Time series often have trends-either deterministic or stochastic. In a seminal paper, Charles Nelson and Charles Plosser (1982) pointed that most time series have stochastic trends-these are also called unit root processes, or processes integrated of order 1. Similarly, if two or more series are individually integrated (in the time series sense) but some linear combination of them has a lower order of integration, then the series are said to be cointegrated.

### GRANGER CAUSAL

The Granger causality test is a statistical hypothesis test for determining whether one time series is useful in forecasting another, first proposed in 1969(Granger, 1969). Ordinarily, regressions reflect "mere" correlations, but Clive Granger argued that causality in economics could be tested for by measuring the ability to predict the future values of a time series using prior values of another time series. Namely, a variable X that evolves over time Granger causes another evolving variable Y if predictions of the value of Y based on its own past values and on the past values of X are better than predictions of Y based only on its own past values.

### AUTOREGRESSIVE DISTRIBUTED LAG MODEL

Tarverdi M Yashar (2014) made the ardlbound program, that described ARDL bound locates the best lag structure for an ARDL model. It also enforces the Wald test and finds the F-value required for ARDL bound test. Then, the program goes through following steps:

1. Check the variables to be time series.
2. Check the series to be stationary (This method (bound test) is applicable to time series which become stationary after taking maximum two differences.)
3. Based on the selected max lag, this add-in estimate an ECM with all lag combination possible. The equation is  $\Delta y_t = \beta_0 + \theta_0 y_{t-1} + \theta_1 x_{t-1} + \sum \beta_i \Delta y_{t-i} + \sum \alpha_i \Delta x_{t-j}$
4. Based on selected criterion, it highlights the "best" lag combination along with the F-value from Wald test (This F-value is required for comparison with tables in Pesaran et al (2001)).
5. At the end a table is presented. And the line that delivers satisfactory criterion is colored in Red. Also, the other criterion that might be satisfactory becomes orange.

## THE EMPIRICAL RESULTS

### UNIT ROOT

Unit root's Concept is if the root unit (non-stationary state) would be the difference, until the stationary state so far and we take advantage of Augmented Dickey-Fuller test. ADF unit root test had three models, as shown table 1, and ADF test was the T statistic, figures in brackets are through AIC to select the best lagged difference.

TABLE 1: AUGMENTED DICKEY-FULLER EQUATIONS

Model	Equation
Individual intercept and trend	$\Delta y_t = \alpha_0 + \alpha_2 t + \gamma_{t-1} + \sum_{i=1} \beta_i \Delta y_{t-i} + \varepsilon_t$ (1)
Individual intercept	$\Delta y_t = \alpha_0 + \gamma_{t-1} + \sum_{i=1} \beta_i \Delta y_{t-i} + \varepsilon_t$ (2)
None	$\Delta y_t = \gamma_{t-1} + \sum_{i=1} \beta_i \Delta y_{t-i} + \varepsilon_t$ (3)

Table 2 exhibits that individual intercept and trend has 4 significant (R, CA, IA, LA); Individual intercept has 2 significant (CA, MB); none has 2 significant (MB, LA). As a result, as Dickey-Fuller test statistic cannot reject unit root null hypothesis, therefore, make a further order differential test.

TABLE 2: AUGMENTED DICKEY-FULLER LEVEL

Level	Individual intercept and trend	Individual intercept	None
R	-3.88994 ** (4)	-0.305324 (6)	2.190375 (6)
CA	-3.251994 * (0)	-2.980502 ** (0)	0.342361 (2)
PA	-1.536309 (0)	-1.590768 (0)	-0.764772 (0)
TA	-3.137485 (4)	-1.027872 (2)	0.592828 (2)
MB	-3.239094 (5)	-4.815285 *** (5)	-1.649433 * (2)
MC	-1.870175 (0)	-1.622825 (0)	0.167285 (0)
SB	-2.964479 (0)	-1.420633 (0)	0.048298 (0)
IA	-5.394028 *** (0)	-1.933162 (1)	0.927804 (2)
LA	-4.277384 ** (5)	-2.355575 (2)	-3.066371 *** (6)

Noted 1. \*, \*\*, \*\*\* connote 10%, 5% and 1% significant level.

Noted 2. () connotes numbers of Lags.

Noted 3. R: operating revenue, CA: BB ratio, PA: EPI, TA: Export order, MB: Rediscount Rate, MC: exchange rate, SB: Taiwan weighed stock index, IA: foreign direct investment, LA: unemployment rate.

Table 3 illustrates that nine variables in this study make a first-order differential test. After the first-order differential, known statistic can reject the null hypothesis of unit root, p-value is very small, evinces R, CA, PA, MB, MC, SB, IA, LA variables stationary state (No unit root). Moreover, TA variables in this study need to make a further order differential test, due to no significant in Individual intercept and trend, in a similar way, make a second-order differential test. After the second-order differential, known statistic can reject the null hypothesis of unit root, p-value is very small, announces TA variables stationary state (No unit root).

**TABLE 3: AUGMENTED DICKEY-FULLER 1ND DIFFERENCE AND 2ND DIFFERENCE**

1nd difference	Individual intercept and trend	Individual intercept	None
R	-3.299288 * (5)	-3.471455 ** (5)	-2.041303 ** (4)
CA	-5.867735 *** (2)	-5.955995 *** (2)	-6.015400 *** (2)
PA	-3.760454 ** (0)	-3.843555 *** (0)	-3.798749 *** (0)
TA	-3.038648 (3)	-2.767210 * (3)	-2.202692 ** (3)
MB	-3.555573 * (1)	-3.422259 ** (1)	-3.387417 *** (0)
MC	-5.219539 *** (3)	-4.599221 *** (0)	-4.680939 *** (0)
SB	-3.587608 * (0)	-3.660048 ** (0)	-3.698514 *** (0)
IA	-6.967955 *** (1)	-6.528111 *** (1)	-6.455502 *** (1)
LA	-4.572182 *** (5)	-4.157576 *** (5)	-2.631251 ** (5)
2nd difference			
TA	-6.569387 *** (2)	-6.435239 *** (2)	-6.682825 *** (2)

Noted 1. \*, \*\*, \*\*\* reveal 10%, 5% and 1% significant level.

Noted 2. () externalizes numbers of Lags.

Noted 3. R: operating revenue, CA: BB ratio, PA: EPI, TA: Export order, MB: Rediscount Rate, MC: exchange rate, SB: Taiwan weighed stock index, IA: foreign direct investment, LA: unemployment rate.

#### CO-INTEGRATION TEST

Using EViews software, the nine variables as group, then make equation and make residual series. We took residual series, view the unit root test, that pick out ADF, level and none, we gain reject the null hypothesis of no Cointegration. In cointegration of the analysis results, if there is cointegration relations between nine variables, that is to say nine variable had a long-term and stable relationship, declares as table 4.

**TABLE 4: RESID01**

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.77659	0.0077 ***
Test critical values:	1% level	-2.66936
	5% level	-1.95641
	10% level	-1.6085

Noted 1. \*, \*\*, \*\*\* present 10%, 5% and 1% significant level.

#### GRANGER CAUSAL

Table 5 acquires the results as bellow.

1. We rejected Null Hypothesis at the 10% significant level, the results are one-way causal relationship as follows. CA: BB ratio will affect R: operating revenue. PA: EPI will affect CA: BB ratio, TA: Export order.
2. We reject Null Hypothesis at the 5% significant level, the results are one-way causal relationship as follows. SB: Taiwan weighed stock index, IA: foreign direct investment will affect R: operating revenue. TA: Export order, LA: unemployment rate will affect CA: BB ratio. MC: exchange rate will affect PA: EPI, and then PA: EPI will affect LA: unemployment rate. MB: Rediscount Rate, MC: exchange rate, SB: Taiwan weighed stock index will affect TA: Export order. MB: Rediscount Rate will affect SB: Taiwan weighed stock index.
3. We know Null Hypothesis result, there is one-way causal relationship at the 1% significant level, TA: Export order will affect R: operating revenue, LA: unemployment rate. MB: Rediscount Rate will affect CA: BB ratio, PA: EPI, LA: unemployment rate. SB: Taiwan weighed stock index will affect LA: unemployment rate.
4. Furthermore, SB: Taiwan weighed stock index and PA: EPI are bidirectional causality at the 10% significant level. MC: exchange rate and MB: Rediscount Rate are bidirectional causality, but MC: exchange rate will affect MB: Rediscount Rate at the 10% significant level, MB: Rediscount Rate will affect MC: exchange rate at the 5% significant level. No significant causal relationship between other variables.

**TABLE 5: PAIRWISE GRANGER CAUSALITY, LAG (2)**

F-Statistic	R	CA	PA	TA	MB	MC	SB	IA	LA
R		3.32369*	0.89154	6.08850***	1.37127	1.90991	3.67269**	5.06124**	1.98716
CA	1.31093		2.99775*	5.19529**	6.93053***	0.1746	2.23766	0.15518	3.87616**
PA	0.29112	0.24595		2.086	8.92029***	5.04355**	2.90651*	1.17081	1.79821
TA	0.5551	2.01472	3.34256*		4.40814**	3.44561***	4.51661**	0.24391	0.49961
MB	0.22022	0.11431	1.96702	0.68545		3.03813*	2.1541	0.30033	2.31868
MC	0.77773	0.9425	0.86199	0.91344	5.35279**		1.8453	0.58204	1.58307
SB	1.60203	0.55311	4.86728*	1.91271	5.03136**	1.2983		2.3072	0.15054
IA	0.13134	1.45805	0.26573	0.59858	0.36907	0.62775	1.97463		0.955
LA	1.4508	1.08871	3.96513**	13.6612***	17.7698***	1.81415	8.40717***	0.82823	

Noted 1. \*\*\* represents rejected the null hypothesis at 1% significant level; \*\* expresses rejected the null hypothesis at 5% significant level; \* presents rejected the null hypothesis at 10% significant level.

Noted 2. R: operating revenue, CA: BB ratio, PA: EPI, TA: Export order, MB: Rediscount Rate, MC: exchange rate, SB: Taiwan weighed stock index, IA: foreign direct investment, LA: unemployment rate.

#### AUTOREGRESSIVE DISTRIBUTED LAG MODEL

If the sample size is too small, then the results will not be reliable and one should engrain Auto Regressive Distributed Lags (ARDL). Often, all possible combinations are considered and we select the one that results in the lowest AIC/SC value. These criteria are in the light of the high likelihood value. Wald test statistic is asymptotically chi-square, we choose significant. Due to foreign direct investment only affect operating revenue via Granger Causality test, we remove it and elect operating revenue, BB ratio, EPI, Export order, Rediscount Rate, exchange rate, Taiwan weighed stock index, unemployment rate to do ARDL.

Therefore, ARDL Model ran a total of 256 combinations, which ARDL (2,2,2,2,2,2,2) was best, due to AIC of 17.35122, SC of 18.56093, was among the smallest; and Log likelihood of -200.5659 was among the largest, demonstrates as table 6. Anyway, Wald test F value of 19,841.38 was significant at the 1% level.



TABLE 6: ARDL MODEL

ARDL Model	AIC	SC	Log likelihood	F Wald test	P of Wald test
ARDL(1,2,2,2,2,1,2)	23.62486	24.73779	-284.1232	243.4913	0.0004 ***
ARDL(1,2,2,2,2,2,2)	23.3236	24.48492	-279.2068	236.5653	0.0042 ***
ARDL(2,1,1,2,2,1,2)	22.21219	23.27673	-266.7585	1312.503	0.0000 ***
ARDL(2,1,1,2,2,2,1,2)	23.17304	24.23758	-279.2495	410.3672	0.0000 ***
ARDL(2,1,1,2,2,2,2)	22.04817	23.1611	-263.6262	1024.382	0.0000 ***
ARDL(2,1,2,2,2,1,2)	22.28708	23.40001	-266.732	806.3831	0.0001 ***
ARDL(2,1,2,2,2,2,1,2)	23.12639	24.23933	-277.6431	310.9409	0.0003 ***
ARDL(2,1,2,2,2,2,2)	22.03898	23.2003	-262.5068	663.8777	0.0015 ***
ARDL(2,2,1,2,2,1,1,2)	23.8531	24.91764	-288.0902	253.3836	0.0000 ***
ARDL(2,2,1,2,2,1,2,2)	22.24199	23.35492	-266.1459	957.395	0.0001 ***
ARDL(2,2,1,2,2,2,1,2)	22.88726	24.00019	-274.5344	315.6313	0.0003 ***
ARDL(2,2,1,2,2,2,2)	21.89288	23.0542	-260.6074	603.1198	0.0017 ***
ARDL(2,2,2,1,2,1,1,2)	23.84525	24.9098	-287.9883	230.2176	0.0000 ***
ARDL(2,2,2,1,2,1,2,2)	23.73683	24.84977	-285.5788	206.5773	0.0005 ***
ARDL(2,2,2,1,2,2,1,2)	23.88182	24.99476	-287.4637	150.725	0.0008 ***
ARDL(2,2,2,1,2,2,2)	23.05454	24.21586	-275.709	247.1207	0.0040 ***
ARDL(2,2,2,2,2,1,1,2)	23.6093	24.72223	-283.9209	181.1255	0.0006 ***
ARDL(2,2,2,2,2,1,2,2)	22.22046	23.38178	-264.866	457.1046	0.0022 ***
ARDL(2,2,2,2,2,2,1,2)	19.88539	21.04671	-234.51	3104.059	0.0003 ***
ARDL(2,2,2,2,2,2,2,1)	23.41004	24.57136	-280.3306	131.9465	0.0075 ***
ARDL(2,2,2,2,2,2,2,2)	17.35122	18.56093	-200.5659	19841.38	0.0055 ***

Noted 1. \*\*\* at 1% significant level; \*\* at 5% significant level; \* at 10% significant level.

## CONCLUSIONS

Through empirical analysis, and then summarized the following conclusions:

1. Augmented Dickey-Fuller test, finding that operating revenue, North American semiconductor book-to-bill ratio, Export Price Index, Export order, Rediscount Rate, exchange rate, Taiwan weighed stock index, foreign direct investment, unemployment rate, 8 variables stationary state (No unit root) at first-order differential; Export order variables stationary state (No unit root) at first-order differential.
2. Nine variables carry out co-integration, we bring to light that reject the null hypothesis, clarify nine variable had a long-term and stable relationship.
3. Granger Causal results are Bidirectional causality, which are Taiwan weighed stock index vs EPI and exchange rate vs Rediscount Rate.
4. Granger Causal result is one-way causal relationship as follows. BB ratio will affect operating revenue. EPI will affect BB ratio and Export order. Taiwan weighed stock index, foreign direct investment will affect operating revenue. Export order and unemployment rate will affect BB ratio. Exchange rate will affect EPI, then EPI will affect unemployment rate. Rediscount Rate, exchange rate, Taiwan weighed stock index will affect Export order. Rediscount Rate will affect Taiwan weighed stock index. Export order will affect operating revenue, unemployment rate. Rediscount Rate will affect BB ratio, EPI, unemployment rate. Taiwan weighed stock index will affect unemployment rate.
5. ARDL Model ran a total of 256 combinations, which ARDL (2,2,2,2,2,2,2) was best.

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# ASSESSMENT OF THE PARTICIPATION OF WOMEN IN AGRICULTURAL COOPERATIVE SOCIETIES IN ANAMBRA STATE, NIGERIA

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## ABSTRACT

*This study examined the participation of Women in Agricultural Cooperative Societies in Anambra State, Nigeria. Data for the study were derived from the four agricultural zones (Aguata, Awka, Anambra and Onitsha) of the state. Three hundred and fifty-six respondents were randomly selected from the zones. Descriptive analytical methods were extensively used. These include frequency distribution tables, percentages and average mean. To determine the extent to which women are involved in the leadership of the cooperatives and also the women's involvement in deciding goals, five points likert scale analysis were employed. For the hypotheses posed, inferential statistics were used to analyse the formulated hypotheses. Hypotheses one and two were tested with paired t-test model. The result revealed that women participate significantly in agricultural cooperative goal setting and decision making process. Finally, the result showed that women were involved significantly in the implementation of activities of the agricultural cooperative societies. Optimal realizations of these objectives were hindered by gender discrimination, poor access to extension services, cultural hindrances; illiteracy and weak educational background e.t.c. In order to overcome these challenges, proper education, skill acquisition and training should be given to women. Again, there should be no discrimination on whom to assume the executive positions, everyone should be given equal opportunity to democratically participate in the management of cooperative business. This will encourage the women and motivate them to superior performance.*

## KEYWORDS

women cooperatives, women participation, agricultural cooperatives, cooperative leadership and decision making.

## INTRODUCTION

The term participation connotes with different meaning at different context. Literally for some to participate means to take part in or to be involved in participation is enabling people to realise their rights to participate in and access information relating to the decision making process which affect their lives (Chambers, 2005).

Participation could also be defined as a direct involvement of marginalised groups in a development process, which aims to build people's capabilities to have access to and control of resources, benefits and opportunities towards self reliance and an improved quality of life (Mellouli; 2003). Participation in extension is the process of communicating among men, women farmers and extension workers during which the farmers take the leading role to analyse their situation, to plan, implement and evaluate development activities. It is a way of helping the disadvantaged people and women to gain access to and control over resources or services such as training farmers tour, inputs, information etc. needed to sustain and improve their livelihood (Rabindra, 2008).

Participation in this study context is the involvement of women farmers in various process and activities (eg training) and decision making and with collaboration and interaction with extension workers. Indicators of participation are just listening active discussion (free communication between extension workers and farmers), bringing in new topics in training, partial discussion (means something talking with extension worker and other group members but hesitant to interact) (Rabindra, 2008).

Furthermore, participation in training aims to bring desirable changes in knowledge and skill of farmers. Training is also believed to bring positive change in farmer's attitudes. Women participation in training means providing women equitable access to opportunities, benefits and resources available in the society. It can be an essential ingredients of women's empowerment. Ensuring women's participation is essential to achieve gender equity in access and control over resources (Mellouli, 2003).

(Gertler, 2010) also explained that participation in cooperative societies are practical vehicles for cooperation and collective action as well as building up and reinforcing community which are crucial to sustainable development.

In addition, rural women participation in all aspects of cultivation including weeding, thinning, applying fertilizers, harvesting and sales of farm produce (Sabo, 2003). (Okunade, 2007) opined that women have been found to be responsible for the production of the agricultural products to sustain the population. She maintained that women are producers of agricultural produce and also actively involved in rural and agricultural development-projects, carrying out different activities women farmers play important roles as producers of foods, managers of natural resources, income earners and caretakers of household food and nutrition security (Lily and Sheryl, 2001). They are responsible for ensuring that adequate food supply are available and their families have access to enough income to purchase food if they do not grow it themselves. It has been assessed that 50% of the food in the country is produced by rural women (Auta, Abubakar and Hassan, 2000).

(Rahman, 2008) opined that women in agriculture (WIA) in Nigeria were developed in an attempt to address the gender – related deficiencies within the existing extension programmes. This was launched to improve the accessibility of women to agricultural extension services. This was done within the existing state of agricultural extension programme.

However, (Bill and Melinda, 2008) argued that women comprise the vast majority of small holders and in most sub-Saharan African and South Asia. Women are afforded less status than men, have less access to resources and have greater responsibilities given their dual reproductive and productive roles in rural households. In Anambra State, there are many cooperative societies. But to date, no known research work on their participatory attributes of women in agricultural cooperatives is available. Hence, it is the intention of this study to close this gap.

## STATEMENT OF THE PROBLEM

Women bear the brunt of domestic responsibilities including the nurture and care of children and the elderly. Women are solely responsible and face great pressure on all sides; violence and abuse in many forms are part of the daily experience of many women (Friedrick, 2010).

Women play a vital role in advancing agricultural development and food security. They participate in many aspects of rural life in paid employment, trade and marketing, as well as many unpaid activities, such as tending to crops and animals, collecting water and wood for fuel, and caring for family members (FAO, 2011). Women also manage household consumption and food preparation. But women face many constraints in the multiple activities they pursue, less land ownership, access to credit, extension and other service and ability to hire labour (Doss, Cherly, Caren and Camen, 2008). Too often these constraints as well as women's current and potential contributions to agricultural production go unrecognised.

Survival of the agricultural cooperatives depend on efficient management and organisational leadership which is very vital or the realisation of their goal. Some women have the traits for effective leadership which include, intelligence, courage, initiative and self confidence. But studies have shown that in agricultural cooperatives women have limited opportunities to participate in leadership positions (Aregawi et al, 2013). Moreso gender discrimination within agricultural cooperative and other societal structures tend to privilege male farmers interest. Evidence has shown that greater attention is being paid to ensure that agricultural policy is gender sensitive and address barriers to women's equal participation in leadership and also benefit in rural producer group and agricultural cooperative societies (FAO 2011, World Bank 2009, USAID 2012).

Pakrash (2003) reports that women participation in agricultural cooperatives is very low even when they have strong influence on them through the heads of the household. Certain obvious barrier restricts their direct and formal entry and participation in agricultural cooperative activities. Moreso, only very few serve as board of directors. According to him their simple and clear perception is that the administrative and decision making domain rests with the menard (women do not wish to over burden themselves with financial responsibilities in case something goes wrong with the cooperative society. They of course contributed significantly in farm operations.

However, (Emily, 1999) opined that though women take active role in agricultural production, processing and marketing of food products, their identity as farmers is highly contested within the agricultural development framework, yet (they are not recognised in farm decision making. In addition, women's access to land, technology and decision making power is critically impeded (Emily, 1999). Unless these structural and cultural barriers are actively addressed, agricultural development in the rural area will not be fully achieved. In Anambra State there are many cooperatives where women full participate in activities of cooperatives and also occupy reasonable positions. But to date, there is no documented work on the participatory attributes of women in the state. as such, there is necessity to determine the level of implementation in activities of the cooperatives especially their extent of their involvement in goal setting and decision making process in agricultural cooperative in Anambra State, Nigeria. Thus, the intention of this study is to close this gap, as the study focuses on the participation of women members of agricultural cooperatives in Anambra State, Nigeria.

## OBJECTIVE OF THE STUDY

The broad objective of the study is to assess the participation of women in agricultural cooperative societies in Anambra State.

The specific objectives are to

- (i) determine whether women are involved in the leadership of the cooperatives.
- (ii) assess the depth of involvement of the women in deciding the goals of the cooperatives.
- (iii) determine the degree of participation of women in implementing the activities of the cooperatives.
- (iv) examine challenges women do face towards effective participation in the cooperatives.

## HYPOTHESES OF THE STUDY

H<sub>01</sub>: Women do not significantly participate in goal setting and decision making in agricultural cooperatives in Anambra State.

H<sub>02</sub>: Women do not significantly participate in implementation of activities in agricultural cooperatives in Anambra State.

## REVIEW OF RELATED LITERATURES

The term participation connotes with different meaning at different context.

Literally, for some to participate means to take part in or to be involved i, participation is enabling people to realise the rights to participate in and access information relating to, the decision making process which affect their lives (Chambers, 2005). Participation could also mean a direct involvement of marginalised groups in a development process, which aims to build people's capabilities to have access to and control of resources, benefits and opportunities towards self reliance and an improved quality of life (Mellouli, 2003). But participation in this study context is the involvement of women farmers in various process and activities (eg training) and decision making and with collaboration and interaction with extension workers.

## WHY PARTICIPATION

In view of (Woidegebiel, 2009), he stated that participation in agricultural cooperatives ensures sustainable food security and contributes growth and development endeavour of the region. Veerakumaran (2005) said that participation can serve as fundamental tool for sustainable food security at household level. Further posited that participation in agricultural cooperatives is the best institutional intervention for attaining food security in any country.

There are other reasons for participation according to Naika and Siddaramaiah (2006). They are: for management of skills, mobilization of community, conflict resolution and institution building among extension personnel.

- People's participation increases the actual benefit to the beneficiaries.
- It decreases the dependence of people on government to make the public self-sustaining.
- It makes possible for the mobilization of local sources.
- Implementation of projection at micro level

## COOPERATIVE GOVERNANCE

Cooperative governance is defined as a set of internal and external mechanisms and controls enabling the members to define and ensure attainment of cooperative objectives, securing their continuity and cooperative principles (Brasilia, 2008).

Good governance is now accessed as vital to achieving Millennium Development goals and as a pre-condition for sustainable economic growth. Ensuring better governance of cooperative, financial institutions and markets are increasingly recognised for developing countries despite the limited number of firms there with widely traded shares (Oman and Bieme, 2005). However, until now little attention has been paid to the governance needs of other institutional form of business such as cooperatives despite their considerable presence in many developing countries. The cooperative sector as a whole remains poorly understood and its specific governance challenges remain as yet largely unexplored (Shaw, 2006).

Brasilia (2008) stated that the main function of cooperative governance practices is to ensure that executive pursue the goals determined either by owners or by those responsible for strategic decisions and not their own goals. More, individuals in charge of preparing and conducting strategic issues shall monitor the behaviour of those who carry it out, exemplified by a board of administration, monitoring the management and acquiring transparency in information and accountability.

Ijamn (2003) opined that there are some conditions that are necessary for successful agricultural governance.

- Cooperatives are member-driven, member controlled and member responsive organisation.
- Cooperatives are efficiently managed by experienced, trained and professionally qualified staff under the supervision and control of democratically elected boards of directors.
- Principles of accountability and answerability role model, ethical behaviour and good governance are employed.
- Adherence to the @joint use@ concept eg joint marketing, joint purchasing, joint use of capital, joint use of facilities if cooperatives have integrated their operations with the needs of their member-households.

## DECISION MAKING IN AGRICULTURAL COOPERATIVES

Arigbo and Ifenkwe (2000) opined that taking adequate and timely decision by a farmer or group of farmers is a good farm management practice necessary for increased food production. This ensures that the right things are done in the farm at the right time. Women have been the major food producers in rural communities especially in the African regions (Arigboant Ifenkwe (2003) quoting African farmer, 1994). Consequently, they (women) are required to be at the forefront in taking various farm decisions. Despite women's key role in agriculture and development, pressure must still be mounted to ensure that government, economic planners and donor institutions place a high priority on bolstering women farmers.

Jibowo (2000) posited that in Nigeria, and most developing part of the world, the father is the key actor in the agricultural decision making process, but the mother influences approves or at least agrees with these choices before it could be pursued with cooperation of other members of the family.

Akinwuni (2006) and Dada (2004), in research in Osun State, found out that the women participated more in household decision making and in communities where women were denied participation, they would eventually participate as they get older, though this is inversely related to farm size.

## PARTICIPATION OF WOMEN IN AGRICULTURAL COOPERATIVES

Rural women participate in all aspects of cultivation including planting, weeding, thinning, apply in fertilizer, harvesting and sales of farm produce (Sabo 2003). In Nigeria, many programmes have brought about remarkable changes in the lives of the rural women. Programmes like Better life for Rural Women which was initiated in 1987. The programme succeeded in having the attention of the authorities and the society in general to the plight of rural women and sort out measures to bring about favourable changes in their lives. The programme made a giant stride in different sectors such as health, education, social welfare, agriculture and cooperatives. However, the programme was terminated in 1993 (Sabo, 2007).

In furtherance, family support programme encourages agricultural pursuit in the family which will improve small scale household production and development of cottage industries. The programme focused on specific areas as social needs of the society and how best this could be addressed through social welfare programme especially in the areas of health, education and income generation were the core focus of this programme (Nasiru, 2004). However, women farmers play important role as producers of food, managers of natural resources, income earners and care takers of household food and nutrition security were also accommodated by the programme (Quinsubing et al; 2004). The programme had the responsibility of ensuring that adequate food supplies are available and their families have access to enough income to purchase food if they do not grow it themselves (Lawal, 2004). It is estimate that 50% of the food in Nigeria is produced by rural women. The women in agriculture (WIA) programme in Nigeria was developed in an attempt to address the gender related deficiencies within the existing extension programme. This was launched to improve the accessibility of women to agricultural extension services (World bank, 2000). This was done within the existing state agricultural extension programme. They were intended to provide practical insight on how to change extension services to meet the need of women farmers in rural areas.

Women participation in agricultural cooperative societies play important roles in agricultural activities both at the on-farm and off-farm levels (Oguoma, 1994).

## METHODOLOGY

This study was carried out in Anambra State, Nigeria. It covered the agricultural cooperative societies in the state. the state derives its name from the River, the largest most southerly, left bank tributary of the River Niger. The state capital is Awka. The economic activities in the state are mostly agriculture. The administrative structures of agricultural development in the state are four agricultural zones. They are Aguata, Anambra, Awka and Onitsha agricultural zones. The total number of registered and active agricultural cooperatives as confirmed by the authority in the zones is 1204 with total membership strength of 15990 which constitute the population. Multistage sampling technique was adopted. Then, in order to have optimum representation of the population, Taro Yamane formula was used to get the manageable sample size which is 356 respondents. Therefore 356 questionnaires were designed and randomly distributed but only 287 were duly filled and returned.

Data gotten from the respondents were analysed with both descriptive and inferential statistics model. The descriptive statistics used include, percentages, frequency distribution table, average mean and five point likert scale measured with conventional threshold of 3. The hypotheses were tested with paired T-test model. As such the results were presented as follows

## DATA ANALYSIS AND PRESENTATION

### WOMEN INVOLVEMENT IN LEADERSHIP

TABLE 1: DISTRIBUTION OF RESPONSES ON WOMEN INVOLVEMENT IN COOPERATIVE LEADERSHIP

S/No	Cooperative Leadership Position	Mean ( $\bar{X}$ )	Decision
i.	President	2.42	Not Involved
ii.	Vice President	3.78	Involved
iii.	Secretary	3.06	Involved
iv.	Management Committee Member	4.31	Involved
v.	Treasurer	3.68	Involved
vi.	Provost	2.65	Not Involved
vii.	Subcommittee member	3.39	Involved
viii.	Welfare committee member	3.17	Involved
ix.	Financial Secretary	3.20	Involved
	<b>Grand Mean (<math>\bar{X}</math>)</b>	<b>3.296</b>	<b>Regular</b>

Source: Field Survey, September, 2015

From the table 1 above with threshold of 3.0 (i.e variable > 3.0 is negative while  $\leq 3.0$  is positive) from 5 point scale analysis. The grand mean ( $\bar{x} = 3.296$ ) indicated that women are regularly involved in the majority of the leadership position available in the cooperative society. But, they are not regularly involved in president position of leadership. The table also shows that the women of the area are empowered enough to occupy majority of the executive position in the cooperative, since women occupy most of the executive seats, they are likely to participate actively in the business of the cooperatives.

TABLE 2: RESPONSES DISTRIBUTION ON THE INVOLVEMENT OF WOMEN IN DECISION MAKING PROCESS OF THEIR COOPERATIVE SOCIETIES

S/No	Expected Goals	Mean ( $\bar{X}$ )	Decision
i.	Cooperative meetings e.g AGMs	4.46	Involved
ii.	Decision on how to improve cooperative income	3.82	Involved
iii.	Decision on where to obtain low interest loan	3.74	Involved
iv.	On how to access training of members	3.62	Involved
v.	To improve access to inputs	3.25	Involved
vi.	To access extension agents service	3.47	Involved
vii.	Conflict resolution	3.06	Involved
viii.	Access government and NGOs aids and agents	2.38	Not involved
ix.	Network with other organizations	2.71	Not involved
x.	Discipline and sanction of default members	3.35	Involved
	<b>Grand Mean (<math>\bar{X}</math>)</b>	<b>3.386</b>	<b>Involved</b>

Source: Field Survey, September, 2015

The result of table 5 above access the depth of women involvement in decision making process (deciding goals) of the cooperatives; with 5 point scale analysis using standard mean ( $\bar{x} = 3.0$ ). Then, the decision rule is that, any expected goal that is less than the standard mean of 3.0 is considered weak and women are not involve in such decision while any expected goal that is greater or equal 3.0 is strong; implies that women are involved in taking such decision in cooperatives. Generally, the grand mean ( $\bar{x} = 3.386$ ) indicates that women are involved in decision making process of their cooperatives societies, except in the aspect of access to government and NGO aids and grants (2.38) and network with other organization (2.71).

**Test of Hypothesis One ( $H_{01}$ )**

Women do not significantly participate in cooperative goal setting and decision making process.

TABLE 3: TO TEST THIS HYPOTHESIS, PARAMETRIC STATISTICS PAIRED T-TEST WAS USED AND THE SUMMARY WAS PRESENTED IN THE BELOW TABLE

	N	Mean ( $\bar{X}$ )	St. Dev	SE. Mean
Strongly involved	9	201.6	39.0	13.8
Not involved (weak)	9	85.4	39.0	13.8
Difference	9	116.3	11.9	27.5

95% lower bound for mean difference = 64.1  
 T-test of mean difference = 0  
 T-value = 0  
 P-value = 0.002

**DECISION**

Since the P-value (0.002) is significant at 5% level of significance. That is, the P-value is less than 0.05. Thus, the null hypothesis was rejected while the alternate was affirmed. This implies that women participate significantly in cooperative goal setting and decision making process.

Therefore, this further strengthened the result of descriptive statistics in table 5 and the researcher concluded that women are involved in the decision making process of their cooperative societies. This result is also in line with the result of Idrisa, Sulumbe and Mohammed (2007); Okafor (2008); and Awotide (2012), as they studied women participation in decision making process of cooperative society.

**WOMEN PARTICIPATION IN IMPLEMENTATION OF COOPERATIVE ACTIVITIES**

TABLE 4: DISTRIBUTION OF RESPONSES THE WOMEN PARTICIPATION IN IMPLEMENTATION OF COOPERATIVE ACTIVITIES

S/No	Cooperative Activities	Mean ( $\bar{X}$ )	Decision
i.	Farm crop production	4.36	Participated
ii.	Processing of farm crops (e.g garri, oil palm)	3.71	Participated
iii.	Credit facilities administration	3.95	Participated
iv.	Harvesting and packaging of farm produce	2.68	Not participated
v.	Monitoring and supervision of cooperative activities	2.83	Not participated
vi.	Regular attendance to cooperative meetings	4.65	Participated
vii.	Patronizing cooperative business	4.37	Participated
viii.	Participation in voting and election	4.59	Participated
ix.	Adoption of technology through extension services	3.06	Participated
x.	Access cooperative education and training	3.21	Participated
xi.	Capital contribution (equity)	4.53	Participated
xii.	Payment of fines and dues	3.38	Participated
xiii.	Regular savings	4.26	Participated
xiv.	Repayment of loan	3.84	Participated
	<b>Grand Mean (<math>\bar{X}</math>)</b>	<b>3.8157</b>	<b>Participated</b>

Source: Field Survey, September, 2015

**Test Hypothesis ( $H_{02}$ )**

$H_{02}$ : Women do not significantly participate in the implementation of activities in agricultural cooperatives.

To test the above statement of hypothesis. The result of descriptive statistics in table 4 above was subjected to test of normality of the data and the result revealed that;

Not participated = 0.237 (normally distributed)  
 Participated = 0.369 (normally distributed)

Therefore, since the set of data is normally distributed parametric statistics was used. As such, the hypothesis two was tested with T-test and was presented table 5 below.

TABLE 5: PAIRED T-TEST AND CI (SUMMARY TABLE)

	N	Mean	St. Dev.	SE Mean
Not participate	14	182.95	38.70	8.44
Participate	14	104.05	38.70	8.44
Difference	14	78.9	77.4	16.9

95% lower bound for mean difference	=	49.8
T-test of mean different	=	(0 VS > 0)
T-value	=	4.67
P-value	=	-0.000

**DECISION**

The T-test result revealed that T-value (4.67) is significant at 5% level of significance, Since the P-value (0.000) is less than 0.05. Therefore, the null hypothesis was rejected while the alternate was accepted, this implies that, women do significantly participate in the implementation of cooperative activities.

Moreso, the outcome of this analysis correlate with the result of Rabindra (2008) and Ekesionye and Okolo (2012) where they affirmed the participation of women in activities of cooperatives.

**CHALLENGES AFFECTING WOMEN PARTICIPATION****TABLE 6: DISTRIBUTION OF RESPONSES ON THE CHALLENGES THAT LIMIT WOMEN PARTICIPATION IN COOPERATIVE ACTIVITIES**

S/No	Challenges Affecting Women Participation In Agricultural Cooperatives	Mean ( $\bar{X}$ )	Decision
i.	Poor access to extension services	4.26	Challenge
ii.	Gender inequality (discrimination)	4.58	Challenge
iii.	Cultural hindrances	3.74	Challenge
iv.	Illiteracy and weak educational exposure	3.19	Challenge
v.	Discrimination on taking leadership position	3.82	Challenge
vi.	Wrong timing of meetings	3.41	Challenge
vii.	Lack of productive resources	3.25	Challenge
viii.	Long distance of cooperative meeting venue	3.08	Challenge
ix.	Household responsibilities	3.76	Challenge
x.	Lack of adequate support from husband	3.91	Challenge
xi.	Misconception on domestic and traditional role of women (sex stereotype)	4.08	Challenge
xii.	Economic responsibilities	3.29	Challenge
xiii.	Lack of technological diffusion (production and processing)	3.14	Challenge
xiv.	Poor marketing skills among women	2.38	Not at all
	<b>Grand Mean (<math>\bar{X}</math>)</b>	<b>3.565</b>	<b>Challenged</b>

Source: Field Survey, September, 2015

The 5 point scale analysis result table 9 with the standard mean of 3.0, indicating that any variable equal or greater than 3.0 is a challenge while variable less than 3.0 is otherwise. Therefore, the grand mean ( $\bar{X} = 3.565$ ) revealed that women participation in cooperative activities are being challenged by various factors. These include, poor access to extension services (4.26); gender inequality (4.58); cultural hindrances (3.74); illiteracy and weak educational exposure (3.19); discrimination in taking leadership position (3.82); household responsibilities (3.76), lack of adequate support from their husband (3.93); misconception on domestic and traditional role of women (sex stereotype) (4.08).

**SUMMARY OF FINDINGS AND CONCLUSION**

- (i) The research revealed that women participate significantly in the implementation of agricultural cooperative activities ( $\bar{X} = 3.815$ ).
- (ii) The involvement of women in deciding goals for agricultural production was very high, as the majority of them were part and parcel of formulating expected goals for the cooperatives. As such, this finding from the correlate with the result of other researchers, Idrisa et al (2007). Okafor (2008) and Awotide (2012) as they affirmed that women really participate in cooperative goal setting.
- (iii) Findings also revealed that women participation in cooperative activities were being challenged by ( $\bar{X} = 3.565$ ) various factors which range from poor extension services, sex stereotype, access to productive resources, traditional and cultural hindrances etc.

**RECOMMENDATIONS**

- (i) There is need to give them proper education as this will help to remove some of the barriers to effective participation.
- (ii) Women was not be able to attain their full potentials if they are not given opportunity to occupy the highest position (president) in the cooperative society. Therefore, cooperative leaders and members should not discriminate on whom should be the president of the society, thus everyone should be given equal playing ground to democratically participate in the management of cooperative business enterprise. This would boost the morale of the women and motivate them to superior performance which will be beneficial to the agricultural and cooperative movement.
- (iii) On the part of the women co-operators, they should not relax on their achievement in participating in deciding goals of their society. They should at all times provide ideas that will bring about growth and development to their society. By so doing, their opinion will always be sought, their fellow members and societies will recognise their presence and impacts.

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**OPTIMAL EFFICIENCY OF INNOVATIVE DESIGN FOR PRODUCT DEVELOPMENT****CHENG-WEN LEE****PROFESSOR****DEPARTMENT OF INTERNATIONAL BUSINESS****CHUNG YUAN CHRISTIAN UNIVERSITY****TAIWAN****BING-YI LIN****RESEARCH SCHOLAR****COLLEGE OF BUSINESS****CHUNG YUAN CHRISTIAN UNIVERSITY****TAIWAN****ABSTRACT**

*Due to help enterprises today dealing with multi purposes in the market, we need to create a design, that would break the stereotype of traditional design process. So that modification of organization in product strategy is needed. Namely observe the trend of market and the demand of quality, the designer should apply the customer satisfaction questionnaires, and analyze them with various experimental processes. These methodologies would help designers to have better understanding of their customers and judge the market size and clustering validity, by diverse product strategies for dealing with today's rapid changing. Taking innovative design on telephone as an experimental case, can investigate how to lead the product to market-oriented and customized management concepts, which creative design ability is utilized for a product. Accompanied with an innovative product value, the product can animate the progress of the development of the enterprise management, which has become the main issue on the social and economical development in every developed country.*

**KEYWORDS**

fuzzy theory, innovation design, multi criteria decision making (mcdm), optimal efficiency.

**1. INTRODUCTION**

When facing this competitive era on product and globalization, it is important to create a design that will break the stereotype of traditional design process. This situation leads the team into innovation. The enterprises now face many management dilemmas and must take the team into internationalization, which means the application of creative product design to produce the varieties, functions, appearance, user, market compartment, price diversity, etc. in order to satisfy the demand of consumers. Basically, the process from taking the mode into practice to reveal the good fortune and convenience can precisely predict the technique development, demand, and service time (Tseng., 2002).

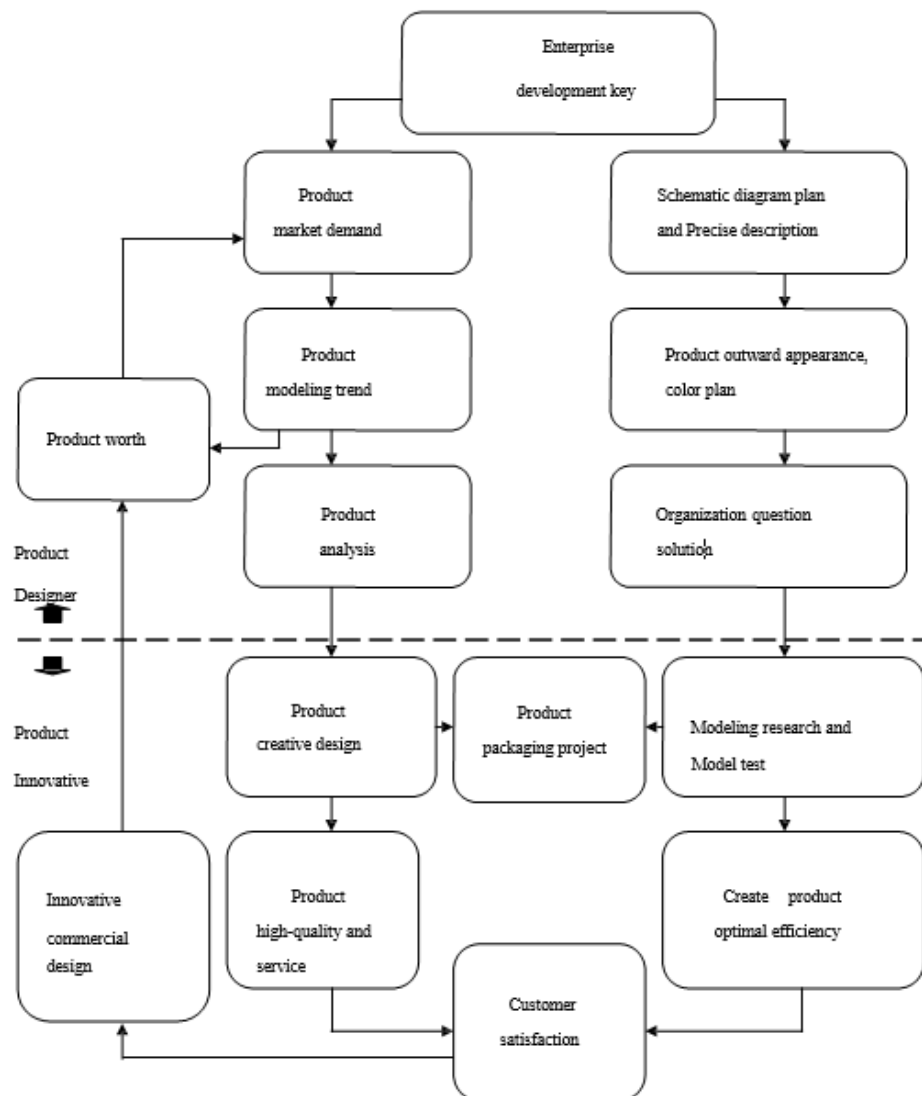
In order to help enterprises today dealing with multi purposes in the market, the modification of organization in product strategy is needed. The product design not only requires expansion on dimensions, but also the extent in different development levels. Pursuit of high productivity is a crucial step for an enterprise. Whether the enterprise can be sustainable depends on the transformation of innovative product design which plays an important role in this period. However, due to the limit on time and resources, the enterpriser cannot completely consider the problems of decision making.

The research model on traditional product design process is based on an optimization mechanism of choice. In substance, the calculation is based on a sequence of product design establishment. However, the strategy makers cannot understand the essence of the problem while facing a structural strategy problem, whether or not the optimization could calculate the result of product design. Whereas multi criteria decision making (MCDM) analyses tend to focus on the arrangement and distribution of purposes, especially under the situation that few coherent strategies were made (Carlos, 2004).

Previous researchers have developed various approaches to address this problem. For example, in the recent years, self-learning and material exploring have become two of effective studying tools. These focus on the qualification course of strategy making, and the unpredictable environmental change instead of changing of time. Therefore, material exploring changes the way of knowledge acquisition, which has become an important way in work (Hirota, 2005).

Next, according to Analytical Hierarchy Process, this study set up a product decision making system, Fuzzy set theory, and the Multi criteria decision making analysis in order to produce the best quality and best service for consumers, to establish the marketing predominance in the market, and to create the best benefit in product, show in Figure 1.

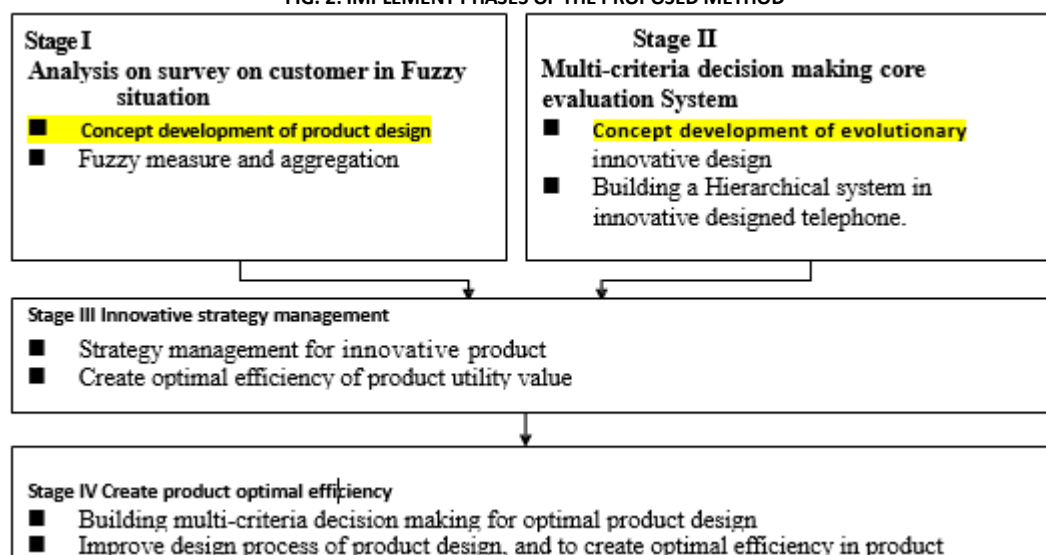
FIG. 1: FLOW DIAGRAM OF THE PROPOSED SYSTEM



## 2. PROPOSED METHOD

This research obtains valid questionnaires to be the research target samples. The researchers mainly focus on evaluating the preference of values among users. So the goal is to create a feasible progress chart in the shortest time to deal with problems encountered. Divide the research methods into four stages in this article, show in Figure 2.

FIG. 2: IMPLEMENT PHASES OF THE PROPOSED METHOD



## 2.1 METHOD

Adequate information and data are needed while strategy makers' face the problems during the procedure of product design. However, the data or information may contain multi-uncertainty or Fuzzy situations; hence, they have to adapt Fuzzy theory and MCDM theory analysis, that is, one kind of programs and techniques of designing plan to solve the problems in product designing. These methods depend on good knowledge models and expansion ability, which focus on limited, but effective sustainable learning (Peter I., 2003).

## 2.2 FUZZY MEASURE AND AGGREGATION

The purpose of Fuzzy theory is to assist strategy makers in realizing the product quality for consumers' demands including safety, usability, price, function, material, main faculty, and etc., and also in simplifying the product. In addition, the product designers can know the demand model of consumers with using various design techniques and methodologies to complete the synthetic drilled by analyzing the appearance and color in nowadays in various products. Therefore, the designers can solve the existing problems for product users; moreover, these processes can promote the design of product creation.

## 2.3 CONCEPT DEVELOPMENT

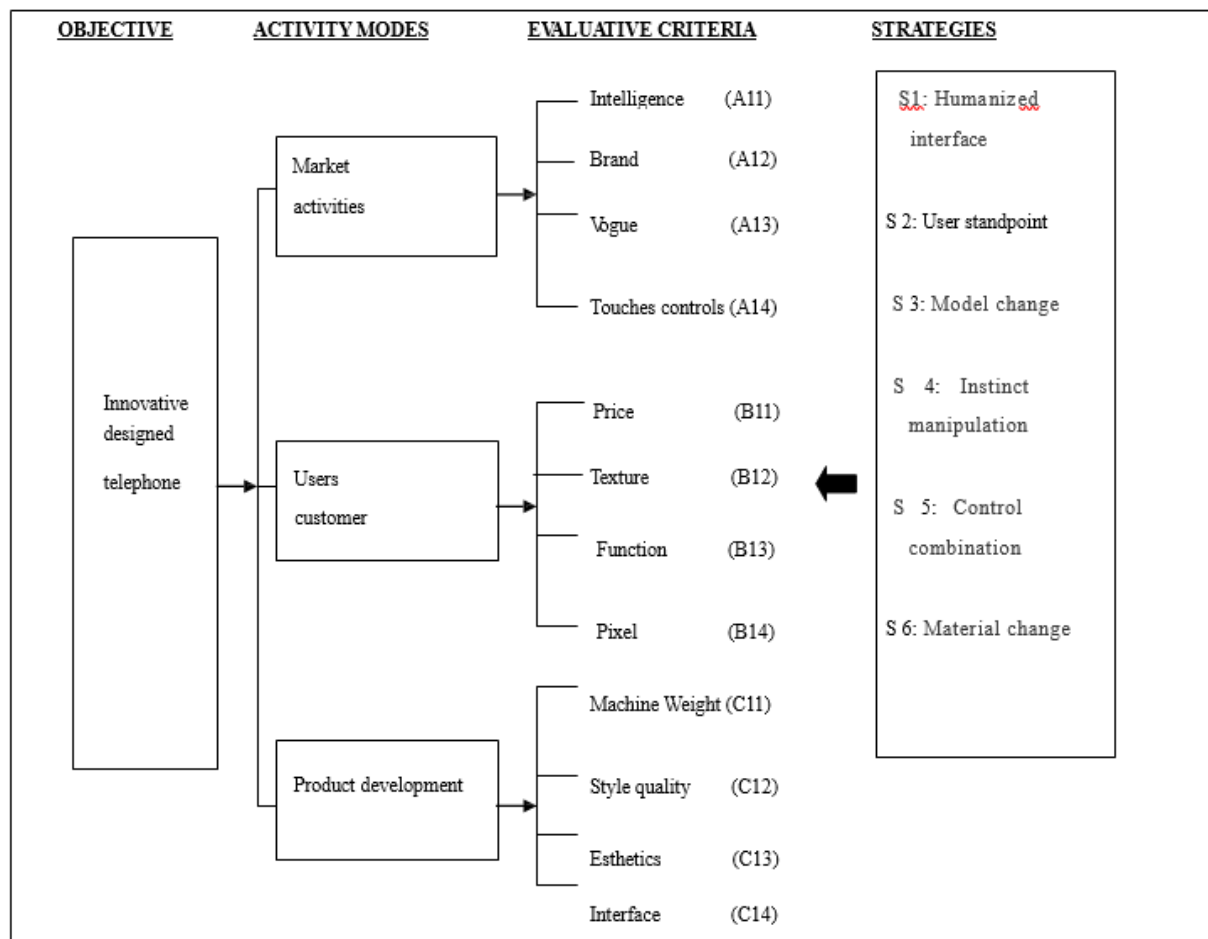
During the process of development of evolutionary innovative in designing high quality products, the designers must understand the oral-required qualities of demands and take those elements into consideration for the experimental samples. These elements include quality, usability, material, price, battery, and etc. The strategy makers enable to evaluate product designs by calculating these elements.

## 2.4 BUILDING INNOVATIVE TELEPHONE

A hierarchy system for Innovative designed telephone research focuses on a modeling approach and a set of mathematical tools that were derived from research on intelligence systems, namely, modeling. For each decision problem, a competence set is necessary and consists of ideas, knowledge, information, and skills for successfully solving the problem (Hu Yi-chung., 2003).

Evaluation methods not only are taken as a solution to the traditional product design, but also to modify the efficiency of the design itself. Therefore, strategy makers can get the division by dividing the available questionnaire replies according to their features, show in Figure 3.

FIG. 3: BUILDING A HIERARCHICAL SYSTEM IN INNOVATIVE DESIGNED TELEPHONE



## 2.5 STRATEGY MANAGEMENT

After collecting the questionnaires, the researchers are going to quantify the product designing on the beginning of the experiment. We use Hierarchical Clustering to design a series of virtual creative products and services. Comparing with similar desire and demand, we have to divide various customers into groups. We can realize the demand intensity and propose so the overall product makes it convenient and practical to use for customers. Moreover, we can realize the demand of customers and achieve the required service.

## 2.6 CREATE PRODUCT DESIGN

The application of innovative design can stimulate the product design. Therefore, how to efficiently apply the innovative interface, to explore new usages, and to facilitate the users to use the interface intuitively have become the mainstream of design.

## 2.7 BUILDING MULTI-CRITERIA DECISION MAKING

Multi-criteria decision making (MCDM) involves determining the optimal alternative among multiple, conflicting, and interactive criteria. Many methods are based on multiple attribute utility theory. For example, goal programming is an analytical approach devised to address decision making problems where targets have been assigned to all the attributes and where the decision maker is interested in minimizing the non-achievement of the corresponding goals (Hirota, 2005).

## 2.8 IMPROVE DESIGN PROCESS

Techniques for machine learning have been extensively studied in recent years as effective tools in data mining. Although there have been several approaches to machine learning, we focus on the mathematical programming approaches in this paper. The environment of decision making changes over time. Therefore, we have to revise knowledge obtained from data mining according to the change of environment. To this end, additional learning becomes an important task in machine learning (Hu Yi-chung., 2003).

### 3. CASE STUDIES 1: DATA ANALYSIS AND RESULTS

#### 3.1 PROBLEM DESCRIPTION

Analyze the demand of telephones according to Fuzzy situation. With the technological design, the product must be friendly designed in its HCI. It will be more popular in the screen of analysis. Innovative design telephone products can strongly accelerate the product design to new trend.

The esthetic value is highly praised in the innovative designed. With the combination of wisdom, fashion, and various materials, it can definitely get out of the stereotype of traditional ones to create a classic one made in high quality and humanized. Form inferring the innovative designed phone, we can list the rankings as Intelligence, Brand, Vogue, Touches controls, Price, Texture, Function, Pixel, Weight, Style, Esthetics, Interface, and etc.

According to Figure 2, the analysis task comprised of four stages:

- (1) Analysis on survey on customer in Fuzzy situation
- (2) Multi-Criteria Decision Making core evaluation System
- (3) Innovative strategy management
- (4) Create product optimal efficiency

It is observed that the least number of descriptions used is 60. The majority of the subjects were utilized between 60 descriptions. In usage of 60 descriptions, the choice of purchasing telephones was made most frequently for telephone ages/3 years, in Figure 4.

FIG. 4: FREQUENCY DISTRIBUTION AND PURCHASE TELEPHONE AGES/3 YEARS

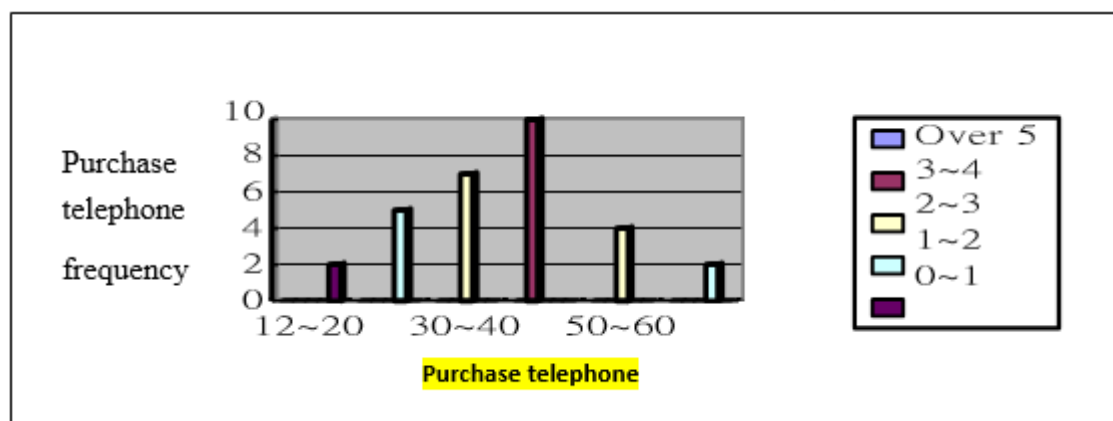
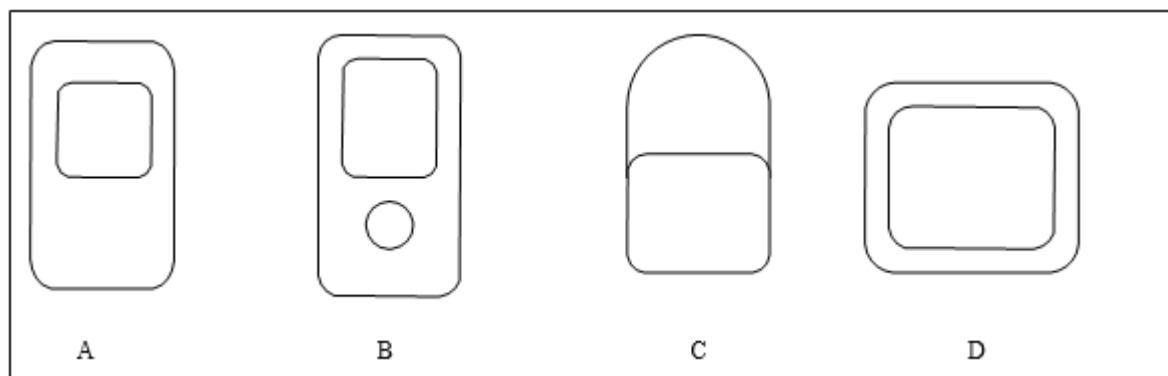


FIG. 5: EXPRESSION TELEPHONE ACTIVITY BRANDS



#### 3.2 EXPRESSION TELEPHONE OF ACTIVITY MODES

Regarding to 60 descriptions, Figure 4 displays that the frequency distribution of descriptions are listed as purchases telephone brands, features in Market activities, Users' customs, Product developments, and expression support numbers. For example, innovative designed telephone screen and the features of innovative designed telephone play two of critical factors in the experimental outcome. This shows that the solution lies in the combination of feature design brand, A, B, C, and D.

The outstanding performance of innovative designed telephone brand in the competitive market is accomplished within the promising R&D and design according to the market.

#### 3.3 TELEPHONE BRAND AND FEATURE

The outstanding performance of innovative designed telephone brand in the competitive market is accomplished within the promising R&D and design according to the market and customer demands. Therefore, it is important to specifically realize the demand of customers according to their various demands, and to satisfy individual demands among all sorts of consumers. The 60 descriptions were mingled randomly and then provided to each expert, show in Table 1.

TABLE 1: TELEPHONE BRAND AND FEATURE

Telephone Feature			
Brand	Market activities	Users customer	Product development
A	34	32	30
B	13	10	11
C	2	1	1
E	6	6	7

The combination of designed feature in innovative designed telephone brand (A) gets the optimal efficiency in product design. It contains a completely profound function and system.

#### 3.4 DETERMINING OF EVALUATING CRITERIA

The researchers set up telephone brand decision system by decomposing the problem into a hierarchy of interrelated elements.

These 60 descriptions were evaluating criteria of designed telephone provided to each element, show in Table 2.



TABLE 2: INNOVATIVE DESIGNED TELEPHONE FOR EVALUATING CRITERIA

Telephone feature evaluating criteria		
Elements	Frequency	Percentage
Market activities	6	10%
Users customer	23	44%
Product development	24	46%

To combine of designed feature in innovative designed telephone for evaluating criteria Product development, 46% of the 60 descriptions reach the optimal Evaluating criteria frequency in product design.

### 3.5 EVALUATING CRITERIA OF DESIGNED TELEPHONE

This stage generates input telephone data consisting of pairwise comparative judge of decision elements. The plan tested individually on Mode 1 Market activities: Intelligence A(11), Brand A(12), Vogue A(13), Touches controls A(14), Mode 2 Users customer: Price B(11), Texture B(12), Function B(13), Pixel B(14), Mode 3 product development: Weight C(11), Style C(12), Esthetics C(13), Interface C(14), and etc., show in Table 3.

TABLE 3: EVALUATING CRITERIA OF DESIGNED TELEPHONE

Evaluating criteria of users customer (0.1~1.0)

Evaluating criteria elements	20~30Ages	30~40Ages	40~50 Ages	Mean
1. Market activities				
Intelligence	0.8	0.7	1.0	0.83
Brand	0.9	0.9	0.7	0.83
Vogue	1.0	0.8	0.6	0.8
Touches controls	0.7	0.7	0.7	0.7
2. Users customer				
Price	0.9	1.0	0.8	0.9
Texture	0.8	0.9	0.8	0.83
Animation Function	1.0	0.8	0.7	0.83
Pixel	0.5	1.0	0.6	0.7
3. Productdevelopment				
Machine Weight	0.4	0.4	0.5	0.43
Style quality	0.8	1.0	0.9	0.9
Interface	0.7	0.8	0.6	0.7
Total	9.1	9.8	8.5	0.76

To combine of designed feature in evaluating criteria of designed telephone for evaluating criteria 30~40 ages, 9.8 from all descriptions get the optimal evaluating criteria of user's customer in product design.

### 3.6 CALCULATING SYNTHETIC UTILITIES

Depending on 60 descriptions, the discrimination is 6 customer groups, and mode 4 product developments: Machine weight, Style quality, Esthetics, and Interface. Using the decision system of more than targets decides the preference of product. The first group emphasizes interactive benefit; the second emphasizes quality, and the third emphasizes functions. Their preferences are style quality and esthetics. So a chart is made to show the group preferences, show in Table 4.

TABLE 4: CONSUMERS PREFERENCE OF PRODUCTS

Group user hobby	User values
First group mode	Machine weight
Second group mode	Style quality
Third group mode	Price
Four group mode	Function

Calculating data from 60 descriptions, 6 customer groups demonstrate five main means which are 0.06, 0.15, 0.21, and 0.58 as their preference values. In addition, Machine weight is 0.06, Style quality 0.15, Price 0.21, and Function 0.58, show in Table 5.

TABLE 5: NUMBER OF DESCRIPTIONS SUPPLIED IN EACH CUSTOMER GROUP

Customer groups	1	2	3	4	5	6	Mean
Third group mode	1	2	3	4	5	6	Mean
Machine weight	0.08	0.05	0.07	0.05	0.05	0.06	0.06
Style quality	0.16	0.14	0.15	0.14	0.15	0.14	0.15
Price	0.21	0.18	0.24	0.21	0.19	0.23	0.21
Function	0.54	0.59	0.63	0.58	0.57	0.57	0.58

In Table 5, in order to get the final question point and then to solve the problem in Function, the researchers design the research method to achieve customer purchase product satisfaction.

### 3.7 INNOVATIVE STRATEGY MANAGEMENT

According to Table 5, using data from 60 descriptions, this analysis discloses on the elements of innovative designed telephones: Mode 1 Market activities: Intelligence(A11), Brand A(12), Vogue A(13), Touches controls(A14), Mode 2 User's custom: Price B(11), Texture B(12), Function B(13), Pixel B(14), Mode 3 Product innovative development: Weight C(11), Style C(12), Esthetics C(13), and Interface C(14).

Depending on the development of telephone industry, the necessity of low cost, high flexibility in the superiority of production, and the demand of humanized product should be controlled to influence the concept of design and the development of crucial modules enormously, show in Table 6.

TABLE 6: ESTABLISH THE USER'S TELEPHONE OF PERFORMANCE MATRIX

Evaluation Strategy	Criteria Matrix											
	A11	A12	A13	A14	B11	B12	B13	B14	C11	C12	C13	C14
S1: Humanized Interface	(0.8,0.6)	(0.8,0.7)	(0.7,0.7)	(0.8,0.8)	(0.9,0.9)	(0.6,0.6)	(0.9,0.9)	(0.6,0.6)	(0.5,0.5)	(0.9,0.9)	(0.8,0.8)	(0.7,0.7)
S 2: User standpoint	(0.8,0.8)	(0.7,0.9)	(0.8,0.8)	(0.8,0.8)	(1,0.9)	(0.5,0.6)	(0.8,0.8)	(0.7,0.7)	(0.6,0.7)	(0.9,0.9)	(0.7,0.7)	(0.8,0.8)
S 3: Model change	(0.6,0.6)	(0.6,0.9)	(0.8,0.8)	(0.7,0.7)	(0.9,0.9)	(0.7,0.8)	(0.9,1)	(0.6,0.6)	(0.7,0.7)	(1,1)	(0.8,0.8)	(0.6,0.6)
S 4: Instinct Manipulation	(0.8,0.7)	(0.8,0.7)	(0.6,0.7)	(0.7,0.7)	(0.8,0.8)	(0.8,0.7)	(0.8,0.9)	(0.8,0.7)	(0.7,0.7)	(0.9,0.8)	(0.7,0.7)	(0.7,0.7)
S 5: Control combination	(0.8,0.5)	(0.7,0.8)	(0.5,0.6)	(0.8,0.7)	(0.9,0.9)	(0.7,0.7)	(1,0.9)	(0.7,0.7)	(0.7,0.8)	(0.9,0.9)	(0.8,0.9)	(0.7,0.6)
S 6: Material change	(0.7,0.8)	(0.8,0.6)	(0.5,0.5)	(0.7,0.7)	(0.9,0.9)	(0.7,0.7)	(0.9,0.9)	(0.8,0.8)	(0.9,0.8)	(0.9,0.8)	(0.7,0.5)	(0.7,0.7)

The results in Table 6 establish the user's telephone of performance matrix. Fuzzy sets are adapted in the strategy of business administration. Take telephones for an example, there are creative designs to choose in the establishment of production, all of which point to the division in Humanized interface, User standpoint, Model change, Instinct manipulation, Control combination, Material change, and etc.

Hence, according to the criteria quantification, it chooses the innovative plan as the optimal plan. It is optimal production. Considering the elements of price, benefit, and usage, it has more chances to choose the most appropriate plan. Therefore, in the actual design process, this study adapts the membership functions in Fuzzy Theory for searching the relevance between each feature and obtains the best result in quantification, show in Table 7.

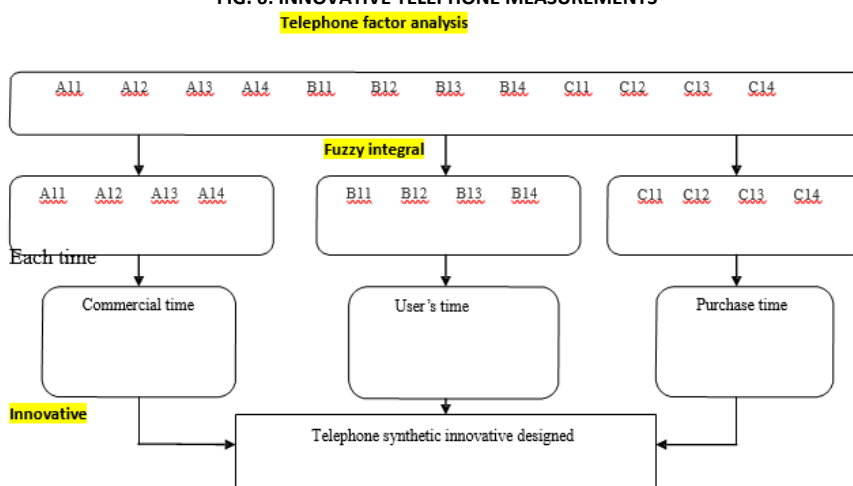
TABLE 7: CALCULATING TELEPHONE SYNTHETIC UTILITIES

Evaluation Strategy	Telephone values of criteria												Mean
	A11	A12	A13	A14	B11	B12	B13	B14	C11	C12	C13	C14	
S1: Humanized Interface	0.8	0.8	0.7	0.8	0.9	0.6	0.9	0.6	0.5	0.9	0.8	0.7	0.7
S 2: User standpoint	0.8	0.9	0.8	0.8	1	0.6	0.8	0.7	0.6	0.9	0.7	0.8	0.8
S 3: Model change	0.6	0.9	0.8	0.7	0.9	0.8	0.9	0.6	0.7	1	0.8	0.6	0.77
S 4: Instinct Manipulation	0.8	0.8	0.7	0.7	0.8	0.8	0.9	0.8	0.7	0.9	0.7	0.7	0.78
S 5: Control													
Combination	0.8	0.8	0.6	0.8	0.9	0.7	1	0.7	0.8	0.9	0.9	0.7	0.8
S 6: Material													

### 3.8 CREATE OPTIMAL VALUES

According to Table 7, calculating telephone synthetic utilities results, Fuzzy synthetic utilities to innovative product design, and telephone values strategies, the strategy establishes good collecting telephone values of criteria. This is the best strategy when telephone customer and enterprise would like to engage in Mode 1 Market activities: Intelligence (A11)4.6, Brand A (12)5.0, Mode 2 User's custom: Price B (11)5.4, Function B (13)5.4, and Mode 3 Product innovative development: Style C (12)5.5 and Esthetics C (13)4.6, if the criteria are substitutive and independent, show in Figure 6.

FIG. 6: INNOVATIVE TELEPHONE MEASUREMENTS



## 4. CASE STUDIES 2: PRODUCT DECISION MAKING SYSTEM

### 4.1 PRODUCT OBJECTIVE

According to Figure 3, the product design model is adapted for stimulating the proper solution to satisfy consumers with various points of views. However, multi decision making theory would be widely adapted in the long term, uncertain environment. With this strategy, the decision maker can realize the optimal mode of the solutions to problems. So the designer must realize and analyze the features of product before making design drawing, including striking a balance between the relationship of cost and user satisfaction, which is highly emphasized in this research.

### 4.2 ACTIVITY MODES

According to the telephone industry market and the coming Innovative management trend, the competition in the innovative telephone market will be for sure in the future. This activity mode includes product design position and market strategy, product management, creation of R&D value, design of organization structure of R&D, performance management and development mechanism. So the decision maker must set the industry goal and strategy to reflect market competition.

### 4.3 EVALUATIVE CRITERIA

Through using 60 descriptions and data from the user questionnaire survey form, in order to analyze innovative designed telephone, the product market can be divided into Market activities: value chain(A1), wise financial management(A2), product quality(A3), and research & development(A4); for User's custom: product management(B1), customized service(B2), marketing(B3); and for Product innovative development: R&D structure technique(C1), service quality(C2), management model(C3), and market environment(C4).

Telephone enterprise management ranks into 5 points. Which include: not important for 1 point, normal for 2 points, important for 3 points, and very important for 4 points. Then the result reveals that important and very important are optimal in innovative designed telephone, show in Table 8.

TABLE 8: INNOVATIVE DESIGNED MANAGEMENT

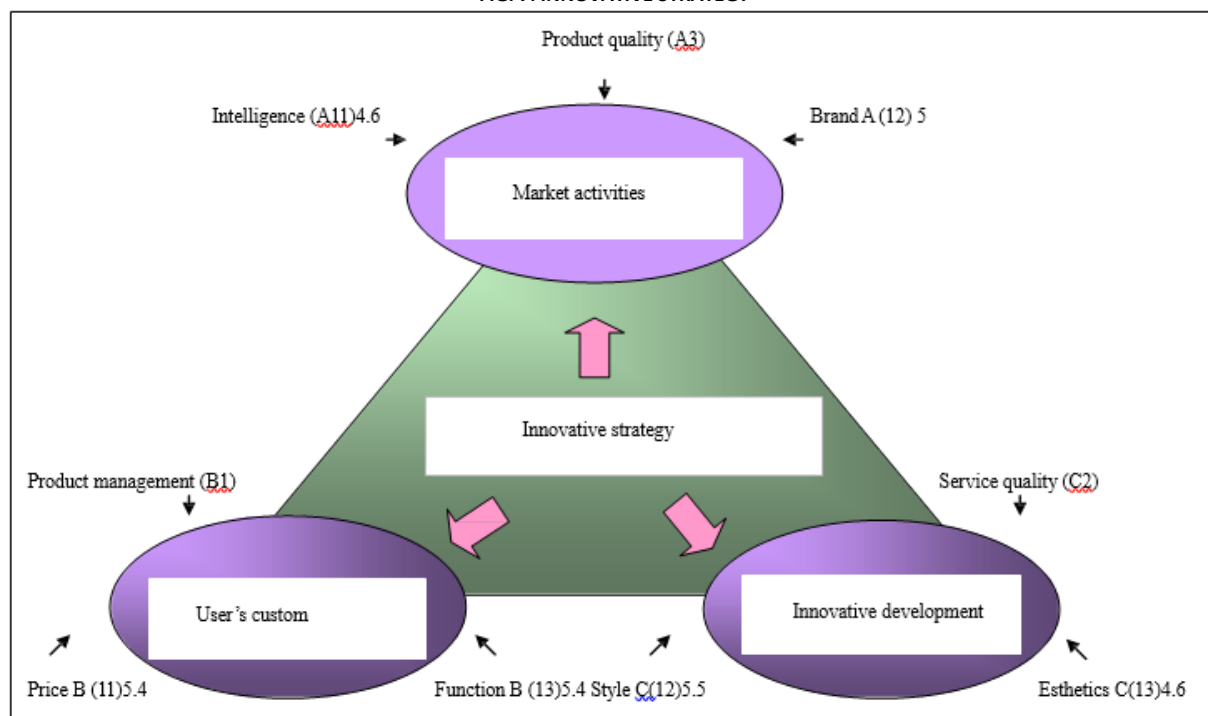
Innovative designed management												
Item	Market activities (A1~A4)				User's custom (B1~B3)				Innovative development: (C1~C4)			
	A1	A2	A3	A4	B1	B2	B3	C1	C2	C3	C4	Total
Not important	4	0	0	0	0	4	4	4	0	4	0	20
Normal	18	6	9	6	54	0	9	18	45	9	12	340
Important	48	76	80	88	72	80	76	76	60	76	96	2268
Very important	25	45	35	30	50	40	30	15	50	30	15	1460
Sum	284	420	480	396	524	404	370	242	410	370	372	4088
Average	71	105	120	99	131	101	92.5	60.5	102.5	92.5	93	1068

The combination of Innovative strategy management of designed telephone for Market activities: Product quality (A3), User's custom: Product management (B1) and Product innovative development: Service quality (C2) gets the optimal innovative designed management in product design.

### 4.4 INNOVATIVE STRATEGY

Create product optimal efficiency, according to Table 7 and 8, the evaluation of products requires the intent combination of design techniques and user's, complete understanding of industry dynamic, application of management of innovative designed telephone management to users, integration of the interior and exterior resource, and establishment of organization construction. Therefore, it is necessary to create optimal product and customer value during enterprise transformation, show in Figure 7.

FIG. 7: INNOVATIVE STRATEGY



## 5. DISCUSSION

As discussed, with the change of consumer's usage, the design trend of innovative designed telephone s changes as well. Hence, the newly touch screen technologies have shown up. In the present study, we wish to improve the human-computer interaction benefit from the innovative screen. Therefore, how to explore the potential function demand of consumers providing innovative solutions and integrate the systems has become the challenge of designers.

In Figure 3, Hierarchical system in innovative designed telephone, discusses the confirmation of demand items first by the method of evolution of innovative designed telephone, including making the demand items of users, collecting the demand widely, selecting the demand items, categorizing the demand item, and etc. Depending on these procedures, this study successfully creates the design value of production through technological innovation and creation of competitive advantages in strategy. Then the researchers observed the customer demands and propose the solution. Meanwhile, this study also applied diversity analysis to provide optimized efficiency by initiation of product efficiency and value.

The results of Figure 5, innovative telephone synthetic innovative measurements, had shown telephone values of Fuzzy performance score with respect to criteria. This study explains that why the evolution of innovative designed telephone becomes the highest amongst the satisfaction of consumers. Known that the priority is the price and the second is the function.

In Table 4, the preference of product consumers has shown the subject used at least four expression modes through deep analysis to understand the crucial customer demand of innovative telephone. Then with the relative analysis of combination of exterior demand and interior quality production, the key and imply the variables were controlled to improve the quality to these crucial points, like web phone, which has been highly emphasized in its vocal quality and delicate simple style.

Therefore, in Figure 6 and Figure 7, the research of innovative design telephone is in Fuzzy field in the beginning. MCDM system is mainly applied in using strategy to make product design and in setting the product standard. First, we systematically transform customer demand into product feature, and then expand to every part, and to plan the production process, controlling the manage points in each stage. Hence the designer can be suitable to customer demand and can be promoted with the optimal product design.

## 6. CONCLUSION

Taking the case study of innovative designed telephone, this study has adapted the quantification solution like Fuzzy Theory, Hierarchical Analytical Process, MCDM theory, and product competition. Also, we emphasize customer demand to solve the problem, to design the optimal solution, to create the diversity to competitors, and to pursue the max sum.

Since this is a theoretical study, the results cannot be applied directly in the field of practical product design. However, in studies, the results of the present study are expected to provide a useful foundation with which to develop practical tools for innovative design in telephone form. In the design process of innovative designed telephone, some problems wait to be solved. And we must create innovative value, and get out of the dilemma, and to promote the strategy of new development of enterprise. With the promising thinking of wise financial management and customized management, we can promote ourselves by the creative ability through the process in the market, programming, and marketing, explore, and design, and make value chain become the most valuable factor in the design.

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# AN ECONOMIC ANALYSIS OF COIR CO-OPERATIVE SOCIETIES: A CASE STUDY EAST AND WEST GODAVARI DISTRICTS OF ANDHRA PRADESH

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## ABSTRACT

*Co-operativisation in coir sector was an important step to contribute to the steadily growth of the coir industry. The Present study is mainly focused on performance of Coir co-operative societies in East and West Godavari Districts of Andhra Pradesh. The Government of Andhra Pradesh is making earnest efforts to uplift the industry by providing all assistance, including finance, to the public sector and co-operative units in the industry. A number of high power committees have been formed for conducting studies and for making recommendations to the Government. In addition to it a number of research studies have also been done in this field. But all these studies are partial ones., dealing only with the processing sides of the industry under the co-operative fold. Hence an attempt is made to evaluate the performance of CCSS. The performance is evaluated with respect to financial performance and adherence to their objectives of Co-operativisation. Further the study was focused on level of participation of members in affairs of Coir Co-operative societies. Major findings of the study show that 70 per cent of Coir Co-operative societies surveyed were incurring losses.*

## KEYWORDS

coir co-operative societies, co-operativisation, gross profit ratio, working capital, direct and indirect marketing channels.

## I. INTRODUCTION

Coir industry is one of the most traditional cottage and agro based industry with high employment potential and export prospects. Historically, the coir industry started and flourished in Kerala which has a long coast line, lakes, lagoons and backwaters providing natural conditions required for retting. Development of coir industry depends on a largest extent of the availability of basic raw materials, which is derived from the coconut. Co-operativisation in coir sector was an important step to contribute to the steadily growth of the coir industry. Coir industry functioned in Andhra Pradesh on the initiative, enterprise and financial strength of individuals. A long chain of middlemen is also engaged in providing different services at various stages of production and distribution. The workers and small producers fully engaged in this industry, neither have adequate capital, nor any organisation to support their common cause. So they were left to the mercy of capitalists and middlemen. The actual workers were denied regular work and a living wage. It was to solve the problems of the actual workers and small producers, Co-operativisation was recommended by the various High Level Expert Committees appointed by governments. However, Co-operativisation Scheme for the development of Coir Industry at the national level was started by Central Government from 1982 onwards only.

## II. REVIEW OF LITERATURE

V.O. Varkey's (1980)<sup>1</sup> Doctoral thesis was a detailed study of the Coir Co-operatives with special reference to Primary Coir Vyavasaya Co-operatives. The study made an attempt to analyse the organization and development of Coir co-operatives, the working of coir co-operatives operating at different stages, the role played by different developmental agencies, besides studying in particular the problems and working of primary Coir Vyavasaya Co-operatives. The socio-economic profile of the coir workers in both co-operative and private sector were also analysed in his study.

Shah.(1983)<sup>2</sup>, Ojha.(1988)<sup>3</sup>, UM Shah. (1988)<sup>4</sup>, Anjaneyulu and Deshinamurthy (1990)<sup>5</sup>, Sarngadharan (1990)<sup>6</sup>, Thondarson (1990)<sup>7</sup> have categorically stated that for the multi-dimensional development of co-operatives, professionalism is to be brought in all the functional areas of co-operatives. They have emphasised that co-operatives should develop their own cadre of personnel who are not only professionally competent but also are dedicated to the cooperative values and have stake in the co-operative organisation.

Kulandaiswamy (1986)<sup>8</sup>, Co-operative Fortnightly [Editor] (1987)<sup>9</sup>, Taimni (1988)<sup>10</sup> Hynniewta (1989)<sup>11</sup>, have in their writings expressed concern over the undue influence of bureaucracy in co-operative management. They have viewed that the statutory power granted to the Registrar of co-operative societies enables him to step into the shoes of the Board of Directors of the societies and wield virtual monopoly power which is against the cherished role of a friend, philosopher and guide to the Co-operative Movement. Since continuous progress of co-operatives should be based on local initiative, democratic leadership and managerial competence, it was suggested that deliberate and concerted efforts are called for to de-officialise and de-bureaucratise the co-operative movement.

Gopalan Nair (1987)<sup>12</sup>, while explaining the relevance of coir industry and coir co-operatives in Kerala finds out that the traditional decentralised nature of the coir industry was the major factor that retarded effective quality control. He also has given a brief picture of the technology improvement attempted by the Coir Board and observes that it was essential for reducing human drudgery to a great extent. He identifies that co-operatives are the best agency for effective transformation of results of research to the industry.

Malik (1988)<sup>13</sup>, examined the historical background of coir co-operatives in Kerala. According to him until the starting of coir development scheme during 1950-51, there were no organised attempts made to stabilise and strengthen the industry. The industry was depending on the initiative, enterprise and financial resources of the private industrialists. He found out that the weaknesses of central coir societies (not existing now) were due to the shortage of working capital and concluded with a suggestion that coir co-operatives should be strengthened in order to protect foreign exchange earnings and to prevent the throwing of workers out of employment.

Rajendran (1998)<sup>14</sup> in his article stresses the importance of the export of coir products and the necessity of getting direct financial assistance to coir vyavasaya societies from Coir Board for the revival of sick coir vyavasaya co-operatives. He also suggests that for boosting domestic market for coir goods the rebate details must be published through the media.

Viswambharan (1998)<sup>15</sup>, in his brief account of history of co-operativisation claims that, under this scheme the exploitation and monopoly practice of private traders and manufactures could be curbed to some extent. Even then he admits that in coir co-operatives several drawbacks have surfaced including malpractice of money, resulting in several societies running at a loss and some remaining dormant which are to be eliminated. He is against blaming coir co-operatives alone for this state of affairs, who carries 2.5 lakh worker members with 50 years of working, in a country like India where one individual alone committed a robbery of 100 crores of rupees from Govt. treasury.

Bavakutty (1998)<sup>16</sup> expresses his anxiety in an article, on decreasing the labour days provided by Coir Co-operative sector year by year even with very poor wages. While concentrating his observation in Thrissur District, he feels that this grim situation was due to the lack of availability of raw husk. He demands the involvement of local body Government for ensuring the supply of husk to the CVCs that belong to their respective areas.

S.J. Pandi (2005)<sup>17</sup> in his article on "Problems and Challenges of Industrial Co-operatives with special reference to Coir Co-operative Units in Tamil Nadu" pointed out that the causes for losses of the co-operative coir units were the problems of production, labour, marketing, finance and supervision. He identified the high cost of production. AS the main problem of power and fuel supply were the main reason for the high cost of production.



**III. OBJECTIVES OF STUDY**

1. To evaluate the Overall performance of coir co-operative societies in East and West Godavari districts of Andhra Pradesh.
2. To examine the extent of member's participation in coir co-operative societies.

**IV. METHODOLOGY**

This study is based on primary data collected from the 1000 member coir workers of 20 coir co-operative societies (Three Category societies A, B & C) in East and West Godavari districts. Each district 500 member coir worker selected for the study. The questionnaire mainly included self-designed questions and the survey instrument was developed to suit the targeted respondents in the present study. The present study covers a period of 5 years starting from 2010-11 to 2014-15 for the collection of Primary data.

**V. RESULT AND DISCUSSION****SHARE CAPITAL STRUCTURE****TABLE 1: SHARE CAPITAL OF A, B AND C CLASSES OF CCSs [Rs. in Lakhs]**

Classification of Coir Co-operative Societies	Total	Average per Society	Government contribution	Government contribution as percentage Total
A	10.58	5.68	7.98	75.42
B	25.47	3.54	15.26	59.91
C	21.69	2.54	13.58	62.60
Total	57.74	11.6	36.82	63.76

Source: Compiled from the records of A, B and C classes of CCSs.

Note: Average per society is obtained by dividing the total with the number of CCSs in each category.

Table 1 shows that the total share capital of the 20 Coir Co-operative societies amounts to Rs 57.74 Lakhs. Of this Government contributed Rs. 36.82 Lakhs (63.76%). This means that members' contribution is only 36.24 per cent. The average share capital of a society was Rs. 11.6 Lakhs. Government's contribution was 75.42 per cent in 'A' category, 59.91 per cent in 'B' category and 62.61 per cent in 'C' category. Category-wise analysis shows that is not much variation in the share capital structure of these societies. It is seen that members' contribution towards share capital of the societies is only a quarter of the total share capital. That is not a healthy situation. The low contribution of members to the Share Capital of the societies keep them off in taking interest to run the society on profitable lines. Now the attitude of the members is that even if the society is wound up their loss will be minimum. In other words, high share contribution by Government is only reducing the enthusiasm of the members to see their societies work profitably.

**STOCK TO WORKING CAPITAL RATIO [Closing stock /Gross working capital]**

This ratio analyses the structure of current assets and indicates the proportion of stock to gross working capital as on a given date. The ideal level of stock to gross working capital ratio should be 0.5:1 i.e., the percentage share Stock of working trade to total current assets should be around 50 per cent.

**TABLE 2: STOCK TO WORKING CAPITAL RATIO**

Year	A	B	C
2010-11	20.63	15.5	11.0
2011-12	21.65	12.4	11.4
2012-13	30.45	14.6	10.6
2013-14	35.64	13.8	10.1
2014-15	31.64	12.5	9.14

Source: Primary Data.

It can be observed that the working capital ratio is poor in all the three Categories of societies throughout the study period excepting 2010-11 and 2014-15, (Table 2). A category societies shows improving trend when B and C category societies respectively showed signs declining trend is noticed in this ratio. Thus the urgency of stock clearance through sales promotion is necessary to attain at least the required minimum working capital ratio.

**COST OF GOODS SOLD RATIO. (Cost of goods sold/Net sales x 100)**

This ratio indicates the portion of net sales revenue which is consumed by the cost of goods sold. A higher ratio is unfavourable since it will leave only a small amount of operating income to meet fixed charges, indirect and fixed expenses, interest payment etc.

**TABLE 3: A CATEGORY SOCIETIES-COST OF GOODS SOLD RATIO FOR THE YEARS 2010-11 TO 2014-15 (Rs. in Lakhs)**

Year	Cost of goods sold(Rs.)	Net sales(Rs.)	Ratio
2010-11	102	103.5	98.55
2011-12	98.5	99.45	99.04
2012-13	100.5	104.58	96.06
2013-14	95.15	98.65	96.45
2014-15	98.45	101.25	97.23

Source: Survey data.

The cost of goods sold ratio of A category societies stood at a higher level. All though much variation cannot be noticed in this regard during the period under reference, the urgency of cost reduction cannot be rejected. From table 3, it can be seen that even the minimum ratio of cost of goods sold to net sales stood at 97.23 which itself is extremely high.

**TABLE 4: B CATEGORY SOCIETIES- COST OF GOODS SOLD RATIO FOR THE YEARS 1994-95 TO 1998-99 (Rs. in Lakhs)**

Year	Cost of goods sold(Rs.)	Net sales(Rs.)	Ratio
2010-11	42	43.25	97.10
2011-12	43	42.59	100.96
2012-13	41.58	41.05	101.29
2013-14	47.25	47.1	100.31
2014-15	42.25	41.47	101.88

Source: Survey data.

Table 4 presents a very dismal picture. The ratio of cost of goods sold to net sales was steadily increasing from 91.10 during 2010-11 and touched 101.88 in 2014-15. It emphasises the poor performance of societies falling under this category.

**TABLE 5: C CATEGORY SOCIETIES COST OF GOODS SOLD RATIO FOR THE YEARS 2010-11 TO 2014-15 (Rs. in Lakhs)**

Year	Cost of goods sold(Rs.)	Net sales(Rs.)	Ratio
2010-11	29.24	30.27	95.59
2011-12	32.69	31.47	103.87
2012-13	39.47	38.90	101.46
2013-14	40.25	41.98	95.87
2014-15	45.25	44.99	100.57

Source: Survey data.

Table 5 depicts that the ratio of cost of goods sold to net sales ranged Between 95.29 and 100.57 per cent in the case of C category societies. This shows the urgency in resorting to cost reduction measures.

The combined position of the ratio of Cost of Goods Sold to net sales of the three categories of societies is depicted in table 6

**TABLE 6: COST OF GOODS SOLD RATIO**

Year	A Category	B Category	C Category
2010-11	98.55	97.10	95.59
2011-12	99.04	100.96	103.87
2012-13	96.06	101.29	101.46
2013-14	96.45	100.31	95.87
2014-15	97.23	101.88	100.57

Source: Survey data.

The four tables Viz. 3 to 5 exhibit the pathetic situations of societies viz; they are producing yarn at costs above the sales price. Even though A category societies make some margin, the margin is too low that it can be wiped out at any moment of time. All these warrant the urgency of producing cost reduction methods in all categories of societies.

**GROSS PROFIT RATIO (Gross profit/sales X 100)**

Efficiency in trading activities is judged mostly on the basis of the gross profit ratio. The ratio is considered to be a reliable guide as regards adequacy of selling price. Higher the gross profit margin, lesser the cost of goods sold and therefore, greater the efficiency and profitability of the concern.

**TABLE 7: GROSS PROFIT RATIO**

Year	A Category	B Category	C Category
2010-11	0.98	0.57	4.36
2011-12	0.25	0.72	0.38
2012-13	2.11	3.84	0.92
2013-14	1.56	0.65	0.33
2014-15	2.28	0.94	0.62

Source: Survey data.

The table 7 shows that the gross profit ratio analysis for the study period conveys that, All three category i.e., A, B and C, CCSs are generating marginal gross profit, but fluctuation from most of the B and C Category CCSs were incurring loss only. The loss is as high as 17.83 2010-11 to 2014-15. Since profit is an essential ingredient for survival, the societies, especially under B and C categories need restructuring.

**NET PROFIT /NET LOSS RATIO (Net profit/loss/Net sales X 100)**

Net profit ratio is an overall measure of a firm's ability to turn each rupee of sales into net profit. It establishes the relationship between net profit and sales and indicates the overall managerial efficiency in manufacturing, administering, selling as well as financing the operations. Higher the ratio, better is the efficiency of the concern. However, the CCS of the three categories collectively was not making any net profit during any of the years under the study. Therefore, the ratio between net loss to sales is worked in order to measure the velocity of ineffectiveness of CCSs.

**TABLE 8: NET LOSS RATIOS**

Year	A Category	B Category	C Category
2010-11	0.99	1.96	1.48
2011-12	9.30	8.14	6.29
2012-13	9.78	20.85	6.81
2013-14	8.26	9.70	9.48
2014-15	9.85	7.83	8.91

Source: Survey data.

It is seen from tables 8 in A category societies the net loss rate was 0.99 per cent during 2010-11 and thereafter it gradually increased and reached 9.85 during 2014-15. The situation in B category societies is more adverse, as it reached 7.83 per cent during 2014-15. However, in C category societies even though the trend is same, it depicts a hopeful signal that it began to decline and reached 8.91 during 2014-15.

**TABLE 9: NO OF CCSs MAKING IN PROFIT OR LOSS**

Year	Total Number of Societies (20) in		Number of societies in profit or loss					
	Profit	Loss	A[10 Nos.]		B[6 Nos.]		C[4Nos.]	
			In profit	In loss	In profit	In loss	In profit	In loss
2010-11	10(50)	10(50)	6	4(40)	2	4(66.66)	2	2(50)
2011-12	11(55)	9(45)	6	4(40)	3	3(50)	2	2(50)
2012-13	11(55)	9(45)	5	5(50)	4	2(33.33)	2	2(50)
2013-14	6(30)	14(70)	3	7(70)	2	4(66.66)	1	3(75)
2014-15	6(30)	14(70)	3	7(70)	2	4(66.66)	1	3(75)

Source: Survey data.

Number of societies on the basis of their operational result is displayed in table 9. The table shows that out of a total of 20 societies 14(70 per cent) were incurring net loss. Category-wise position shows that is seen that during 2014-15, more societies in C category (75 per cent) incurred loss. This was followed by A and B: category among whom the number of loss making societies were 70 and 66.66 per cent respectively. With respect to amount of loss, C category societies rank first and they are followed by A and B category societies.

**TABLE 10: NUMBER OF MAN DAYS ENGAGED BY COIR WORKERS IN A YEAR**

Types of Occupation	Category of societies and the man days of work			Total
	A	B	C	
1A	8595	7585	6598	22778
1B	-	-	105	105
1C	1415	3024	2058	6497
Total(X)	10010	10609	8761	29380 (61.69)
1D	435	415	450	1300
1E	1958	995	410	1405
1F	2587	7950	5010	15547
Total(Y)	4980	9360	5870	18252 (38.31)
Grand Total(X+Y)	14990	19969	14631	47632 (100.00)

Source: Survey Data

1) Work is divided into coir work from 1.A to 1.B and Non - coir work is from 1D to 1F

1A = Coir work in coir society, 1B = Coir work by themselves [own], 1C = Coir work in other private firms, 1D = Agriculture labour 1E = Service 1F = Other occupations.

The coir sector provided 61.69 per cent of the total man-days to the coir workers (Table 10) and the coir co-operatives could offer only 38.31 per cent of that. It is clear from this that the workers have to depend on occupations, in non- coir sector for their livelihood. The private coir sector also played a very significant role in providing employment. The study also clarifies that there was not much difference among the man-days of work available in A, B and C category of Coir Co-operatives Societies.

**TABLE 11: NUMBER OF SOCIETIES WHICH MARKET THEIR PRODUCT THROUGH DIRECT CHANNELS AND INDIRECT CHANNEL**

Category wise Coir co-operative societies	Marketing Channels		Total
	Direct Channel	Indirect Channel (through Middlemen)	
A	7 (63.63)	4 (36.37)	11 (55)
B	3 (50)	3 (50)	6 (30)
C	2 (66.66)	1 (33.34)	3 (15)
Total	12 (60)	8 (40)	20 (100)

Source: Primary Data.

Note: Figures in parentheses indicate percentage to row total

Table 11 shows that on an average 60% of the societies used to market a part of their finished products to Direct channels. Category-wise analyses show that, 50 percent of 'B' and 66.66 percent of 'C' Category societies sell their products through direct channel, remaining 36.37 percent of A Category, 50 per cent of B and 33.34 percent of C Category societies are sell their products through middlemen. Out of 20 societies, 12 coir co-operative societies of their products sell through direct and 8 societies sell products through indirect channel.

**MEMBER PARTICIPATION LEVEL IN COIR CO-OPERATIVE SOCIETIES**

In the hierarchy of planned economic development, people's participation in the growth process is an essential condition. No doubt, co-operatives are no exception to this rule. There also member's participation in the various affairs of the coir societies is very crucial for their success. This particularly true where 5/7<sup>th</sup> of Board members are ordinary coir workers. So it is desirable to examine the extent of participation of worker members in the important areas of the working of the CCS.

**REASONS FOR TAKING MEMBERSHIP IN COIR SOCIETIES****TABLE 12: MODE OF TAKING MEMBERSHIP IN COIR SOCIETIES**

Districts	Total Households	Mode of taking membership [Nos.]			
		A	B	C	D
East Godavari	500	405 (81)	40 (8)	35 (7)	20 (4)
West Godavari	500	415 (83)	32 (6.4)	35 (7)	18 (3.6)
Total	1000	815 (81.5)	72 (7.2)	70 (7.0)	38 (3.8)

Source: Survey Data

Note

1] Figures in Parentheses denote percentage to row total

2] A, denotes Voluntary, B denotes Persuasion of friends C, denotes Persuasion of union leaders, D, denotes Persuasion by Board Members.

Table 12 shows that 81.5 per cent of the respondents took membership voluntarily and 7.2 per cent because of persuasion of friends. There was no significant variation noticed in this aspect in the between two district coir societies.

**TABLE 13: MEMBERSHIP IN COIR CO-OPERATIVE SOCIETIES**

Districts	Total Households	Period of membership in coir society (Years)					
		<5	5-10	10-15	15-20	20-25	25>
East Godavari	500	71 (14.2)	108 (21.6)	84 (16.8)	105 (21)	95 (19)	37 (7.4)
West Godavari	500	56 (11.2)	103 (20.6)	85 (17)	125 (25)	73 (14.6)	58 (11.6)
Total	1000	127 (12.7)	211 (21.1)	169 (16.9)	230 (23.0)	168 (16.8)	95 (9.5)

Source: Survey Data

Table 13 depicts that 23 per cent of the members took membership long Ago i.e. 15-20 years ago and of which 21.1 per cent became members 5-10 years ago. Only 9.5 per cent became members 25 years ago. This shows that new people are not attracted to become members in coir societies. But in West Godavari district coir co-operative societies, 12.50 per cent took membership in the last Five years.

**EMPLOYEES AND THEIR AVERAGE SALARY**

The Secretary manages the day-to-day activities of CCSs. There may be one Business Manager and a peon for assisting secretary in business matters. In rare cases a clerk and a peon may also be there. But in most of the surveyed societies (20 out of 30) had a secretary and a peon only as permanent employees. In 16 societies only one employee, the secretary, was found. Only in one society there were 5 permanent employees.

**TABLE 14: AVERAGE NUMBER OF EMPLOYEES AND THEIR PAY IN A, B AND C CLASSES OF CCS**

Classes of CCS	Average Number of Employees	Average Monthly Pay
A	2.24	2591
B	1.64	1958
C	1.5	2150
average	1.79	2233

Source: Data compiled from A, B and C classes of CCSs.

Table 14 shows that the average number of permanent employees in a society was only less than 2 [1.79]. In A category societies the average strength was 2.24 and it was less than 2 in B and C categories. The average monthly salary of the employees was Rs. 2233 and it was Rs. 2591 in A category, Rs. 1958 in B, and Rs. 2150, in C category. But during the field survey it was revealed that secretaries of three societies were drawing a salary of less than Rs. 1000 per month. The survey further revealed that secretaries of three A category societies were drawing salary above Rs. 4500 per month. Most of the secretaries of the CCSs were women's.

#### MEMBER PARTICIPATION LEVEL IN CCSs

In the hierarchy of planned economic development, people's participation in the growth process is an essential condition. No doubt, co-operatives are no exception to this rule. There also member's participation in the various affairs of the coir societies is very crucial for their success. This particularly true where 5/7<sup>th</sup> of Board members are ordinary coir workers. So it is desirable to examine the extent of participation of worker members in the important areas of the working of the CCSs.

#### REASONS FOR TAKING MEMBERSHIP IN COIR SOCIETIES

**TABLE 15: MODE OF TAKING MEMBERSHIP IN COIR SOCIETIES**

Districts	Total Households	Mode of taking membership [Nos.]			
		A	B	C	D
East Godavari	500	405 (81)	40 (8)	35 (7)	20 (4)
West Godavari	500	415 (83)	32 (6.4)	35 (7)	18 (3.6)
Total	1000	815 (81.5)	72 (7.2)	70 (7.0)	38 (3.8)

Source: Survey Data

#### Note

1) Figures in Parentheses denote percentage to row total

2) A, denotes Voluntary, B denotes Persuasion of friends C, denotes Persuasion of union leaders, D, denotes Persuasion by Board Members.

Table 15 shows that 81.5 per cent of the respondents took membership voluntarily and 7.2 per cent because of persuasion of friends. There was no significant variation noticed in this aspect in the between two district coir societies.

**TABLE 16: MEMBERSHIP IN COIR CO-OPERATIVE SOCIETIES**

Districts	Total Households	Period of membership in coir society (Years)					
		<5	5-10	10-15	15-20	20-25	25>
East Godavari	500	71 (14.2)	108 (21.6)	84 (16.8)	105 (21)	95 (19)	37 (7.4)
West Godavari	500	56 (11.2)	103 (20.6)	85 (17)	125 (25)	73 (14.6)	58 (11.6)
Total	1000	127 (12.7)	211 (21.1)	169 (16.9)	230 (23.0)	168 (16.8)	95 (9.5)

Source: Survey Data

Table 16 depicts that 23 per cent of the members took membership long Ago i.e. 15-20 years ago and of which 21.1 per cent became members 5-10 years ago. Only 9.5 per cent became members 25 years ago. This shows that new people are not attracted to become members in coir societies. But in West Godavari district coir co-operative societies, 12.50 per cent took membership in the last Five years.

#### PARTICIPATION IN DEMOCRATIC PROCESS

Participation of members in the democratic process of the society is a vital requirement. General body is the supreme authority and an important forum in which members can express their views freely and frankly with respect to improving the society's business. While electing the managing committee/Board of Directors, they should be cautious to elect persons who are honest and capable of managing the business of the society in an efficient manner. Are they really doing this? To know this one must have some idea regarding the extent of the participation of worker members in the democratic process of CCSs.

**TABLE 17: RESPONDENTS AND THEIR PERIODICITY OF ATTENDANCE IN GENERAL BODY**

Districts (wise Societies)	Total Households	Periodicity of attendance [Nos.]				
		Always	Occasionally	Some times	Rarely	Never
East Godavari	500	265	82	85	43	25
West Godavari	500	250	75	70	40	65
Total	1000	515 (51.5)	157 (15.7)	155 (15.5)	83 (8.3)	90 (9.0)

Source: Survey Data.

Table 17 reveals that only 51.5 per cent of the members used to attend general Body meetings regularly. 15.7 per cent attend the meeting occasionally, 15.5 per cent sometimes and 8.3 per cent rarely. Nine per cent never attend the general body meetings. This reflects the pathetic situation with respect of participation of coir workers in the policy making body of coir co-operatives.

#### SUPERVISION DURING IMPLEMENTATION

To ensure implementation of programmes as planned, participation of members is highly essential, particularly in societies where supervision of experienced worker members is essential.

**TABLE 18: SUPERVISION DURING IMPLEMENTATION**

District	Total Respondents	Respondents Participation
East Godavari	500	260(52)
West Godavari	500	240(48)
Total	1000	500(50)

Source: Survey Data

Note: Figures in Brackets indicate percentage to row total.

Table 18 shows that the level of supervision very low, viz; around 50 per cent. Not much difference in the level of supervision is noted among the three categories of societies.

#### RECEIPTS OF BENEFITS

The level of participation of members in receiving benefits from eves is given in Table

TABLE 19: RECEIPTS OF BENEFITS

District	Total Respondents	Respondents Participation
East Godavari	500	420(84)
West Godavari	500	430(86)
Total	1000	850(85)

Source: Survey data

Note: Figures in brackets indicate percentage to row total.

Table 19 shows that members are eager to exploit the benefits from the societies rather than contributing their might for the benefit of the societies. This is evident from the higher participation of members [84 to 86 percent] in receiving benefits from societies.

**SHARING OF COST**

TABLE 20: SHARING OF COST

District	Total Respondents	Respondents Participation
East Godavari	500	30 (6)
West Godavari	500	39 (7.8)
Total	1000	69(6.9)

Source: Survey data

Note: Figures in brackets indicate percentage to row total.

Table 20 shows that the Sharing of cost by worker members is good for the long run working of CCSs, the members are not prepared to share the cost. It is natural as the workers are getting only very low wages.

**INVOLVEMENT IN EVALUATION**

Involvement of workers in the evaluation process of the working of CCSs is important for ensuring efficiency in operation.

TABLE 21: INVOLVEMENT IN EVALUATION

District	Total Respondents	Respondents Participation
East Godavari	500	54(10.8)
West Godavari	500	48(9.6)
Total	1000	102(10.2)

Source: Survey data

Note: Figures in brackets indicate percentage to row total.

Table 21 shows that the number of respondent worker members who participated in the evaluation process is only 10.2 per cent. In East Godavari district coir societies. This rate is higher than in the other.

**VI. FINDINGS**

1. Majority of the societies were not utilising the production capacity due to shortage of working capital, raw material and non-availability of labour at the right time.
2. The analysis shows that working capital status in A category societies shows improving trend when B and C category societies respectively showed signs declining trend is noticed in this ratio.
3. The cost of goods sold ratio of A category societies stood at a higher level. All though much variation cannot be noticed in this regard during the period under reference, the urgency of cost reduction cannot be rejected.
4. The coir sector provided 61.69 per cent of the total man-days to the coir workers and the coir co-operatives could offer only 38.31 per cent.
5. It is found that the 51.5 per cent of the members used to attend general Body meetings regularly. 15.7 per cent attend the meeting occasionally, 15.5 per cent sometimes and 8.3 per cent rarely. Nine per cent never attend the general body meetings.
6. The analysis showed that the majority (70 per cent) of Coir Co-operative Societies were incurring net loss.
7. It is found that all three categories i.e., A, B and C, CCSs are generating marginal gross profit, but fluctuation from most of the B and C Category CCSs were incurring loss only. The loss is as high as 17.83 2010-11 to 2014-15.
8. It is found that 23 per cent of the members took membership of CCSs long ago i.e. 15-20 years ago and of which 21.1 per cent became members 5-10 years ago. Only 9.5 per cent became members 25 years ago. This shows that new people are not attracted to become members in coir societies. But in West Godavari district coir co-operative societies, 12.50 per cent took membership in the last five years.

**VII. SUGGESTIONS**

1. Necessary amendments shall be made in the by-laws of societies to enable this process.
2. Co-operative credit institutions and commercial banks should extend timely working capital assistance for procurement of raw husk during the months of January- April as during this season husks yield maximum fibre. Efforts should also be made to extend credit facilities on the security of coir products.
3. Government assistance need to be channelised to CCSs directly.
4. Genuine coir workers shall only be admitted as members of Coir Co-operative societies and any future assistance to societies be restricted on the basis of number of active coir workers.
5. Flexibility in the operation of CCSs for producing variety of yarn suiting the requirements of local markets be introduced.
6. Governmental subsidy and other assistance to CCSs are be linked with volume of production and days of employment days generated and not on the basis of sales to COIRFED.

**VIII. CONCLUSION**

Co-operative societies are playing vital role in growth of Coir Industry India. Most of the societies were having own infrastructure facilities. Majority of the Share Capital of the societies was contributed by Government and the government continues to extend various forms of assistance. Yet these societies are running at losses. Majority of the societies could not utilise a substantial portion of their production capacity owing to lack of working capital, raw material shortage and non-availability of labour. On the basis of the above analysis it is inferred that the performance of the CCSs is far from satisfactory. They failed to realise the objectives for which the Societies were brought under the co-operative fold. Central and State Governments are should provide assistance to channelised to CCSs directly.

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## GENDER PREFERENCES IN BRAND COMMITMENT, IMPULSE AND HEDONIC BUYING IN THE PERSONAL CARE SECTOR IN PUNE

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### ABSTRACT

*The purpose of this study was to understand the differences in behaviour of male and female buyers and thus their consumption pattern in an industry which has a lot of unisex products. The study measured the gender preferences in the Personal care segment in terms of Brand Commitment, Impulse and Hedonic Buying in Pune. Primary data was collected for this purpose. The paper attempts, on the basis of the primary data, to draw an analysis of the above mentioned parameters for better understanding of the retail market in general. The study was limited to people who visited departmental stores and supermarkets. The researchers have tried their best to record inputs from various strata of society so as to keep the study unbiased and thereby made sure that the inference so achieved is useful for further study of the retail market, especially in Pune. The benefit of such a study is an endeavour to improve the customer service and make better products by understanding the consumer buying behaviour in personal care segment.*

### KEYWORDS

personal care, buying behaviour, consumption pattern.

### INTRODUCTION

#### RETAIL IN INDIA

Retail in India is still said to be in the nascent stages and needs booster doses to improve its health. With an expected Compound Annual Growth Rate (CAGR) of 16% during the tenure from FY' 2015 to FY' 2020, retail industry is set to outpace other Indian industrial sectors by a whopping margin (India Brand Equity Foundation, Jan 2016). Retail in our country is largely an unorganized sector and contributes 10 percent towards the Gross Domestic Product (GDP) standing over US\$ 2066.90 billion for the FY'2014. This exponential growth rides on numerous factors among which changing demographics, urbanization, increasing disposable incomes, and gradual change in consumer preferences & behavior, stand out vehemently. Largely dominated by the "Mom & Pop" stores, otherwise known as Kirana or general stores, Indian retail industry is slowly inching towards organized retail (KSA Technopak: Consumer outlook for 2010).

#### INDIAN RETAIL CUSTOMERS

India is a country of great demographic dividend. The sheer diversity observed is humongous but when it comes to the median age of Indian population it stands at 27, which is great for retail business (Dawson, Sandy, Kim, Minjeong, 2009). In a demographically young country like ours, it becomes imperative for the retail industry to cater to their needs with great care and value addition (McKinsey & Company, 2005).

We are in the "Age of customers", which signifies that the customer is indeed the king (Park Jihye & Lennon, Sharron J. 2006). By the year 2020, the average age of an Indian customer is expected to be 29 years.

#### PERSONAL CARE IN INDIA

The personal care products industry is worth over Rs. 5000 Crores. The personal care companies with a very wide product basket constitute an industry, which is highly progressive amidst all actions (Barnes, Liz and Gaynor Lea-Greenwood, 2010). Liberalization of Indian economy in early 1990's has changed the face of many industries, and the personal care industry was no exception (Maya Swedowsky 2009 Nielsen Report). The global giants aware of the fact, that a revolution in the personal care product industry is yet to knock the doors of Indian economy, left no stones unturned to make their company a bigger name.

Personal care industry comprises of sectors which cater to the needs of the customers which are related to personal hygiene and cosmetics. These are products which are usually the 'wants' of the customers rather than being 'needs', but are portrayed as 'needs'. Personal care products can be broadly classified on the basis of their use as Hair care, Skin care, Oral care, Fragrances, Body care, etc.

Industry's revenue split from these different sectors is approximately as follows: cosmetics (35%), hair care products (25 %), and skin care (20 %), fragrances (10 %) and Oral care (5 %).

## REVIEW OF LITERATURE

Amanda Coley and Brigitte Burgess in 2003 conducted a study on "Gender differences in cognitive and affective impulse buying. The study revealed that the majority of women consumers tend to make more frequent impulsive purchase than men. The study also revealed that the nature of the product purchased too is an influential factor for the frequency of purchase by both genders. The study found out that an urge to buy a particular brand is influenced by the liking towards a product and availability of browsed choices while selecting the product. The study also found that the ambience of store including décor and music is a major factor influencing both genders' impulsive buying behaviour elongating their stay. From the study it could be suggested that retailers should take care of merchandising and hence create a pleasant stay for consumers.

Sigal Tifferet and Ram Herstein in 2012 conducted a study on "Gender differences in brand commitment, impulse buying, and hedonic consumption in Israel". The objective of the study was to determine the influence of gender on various purchase decisions measured by brand commitment, impulse buying, and hedonic consumption. The research is exploratory in nature and used the survey method to collect data in Israel. Israeli students were asked to provide their basic demographic data and were interviewed with respect to brands under three product categories namely breakfast cereal, paper towels and daily newspapers. The study found out that women use more loyalty cards than men; they like to experience the products tactilely; and enjoy shopping as recreational pastime more than men. While men prefer the job to be done; women look for appropriate atmosphere to choose the right product. From their study, it is evident that gender is an important aspect for marketers to promote their high quality products to women and wide variety of product portfolio to men. In the study, women showed more inclination towards brand commitment, impulse buying, and hedonic consumption of products than men.

Christina Ester Tulungen in 2013 conducted a study on "Comparative analysis of impulse buying based on gender differences." The objective of the study was to determine the differences between male and female choices while making impulse purchase. The study revealed that there is a significant difference between genders choices in impulse buying. The research is comparative in nature and used the survey method to collect data in Manado by way of random sampling. The study found that women are more influenced by emotions while men are more influenced by features of the product. The study also discovered that women would like to spend their money on latest trends whether it is good quality or not while men looked for comfort factor irrespective of trend. Their study indicated that clothing business should take into consideration other factors along with emotional and lifestyle factors of both the genders as they positively relate to impulse purchase.

Geetha Mohan and Bharadhwaj Sivakumaran Piyush Sharma in 2013 conducted a study on "Impact of store environment on impulse buying behavior." The study revealed that among all the factors influencing impulse buying in a store; the most influential one is the layout of the store. From the study it could be suggested that retailers shall enhance the visual appeal of their in-store elements such as organized layouts, properly lit shelves which indirectly influences them in making impulse purchases.

Burcu Candan, Sevtap Unal, Aysel Ercis in 2013 conducted a study on personal care products "Analyzing the relationship between consumption values and brand loyalty of young people." The objective of the study was to determine the motivation behind choosing a particular brand by young consumers which is influenced by their consumption values and brand loyalty. The study revealed that there is positive relationship between brand loyalty and consumption values. The research is exploratory in nature and used the survey method to collect data in Turkey by way of random sampling. The students from Kocaeli University have been asked to give data about the personal care products used with the frequency of usage. The study found out that the young consumers prefer those personal care products that demonstrate an emotional value with the frequency of a month or less. The study also discovered that the young consumers like to follow a new personal care product even if the regular one is available. The study showed that businesses will profit if they promote their products by creating an emotional appeal along with fulfilment of social need.

Hulya Bakirtas and Sevilay Uslu Divanoglu in 2013 conducted a study on "The effect of hedonic shopping motivation on consumer satisfaction and consumer loyalty." The objective of the study was to understand the effect of various types of shopping motivation on consumer satisfaction and consumer loyalty. The study revealed that experimentation shopping motivation positively influence customer satisfaction and loyalty. The study found that shopping motivation is influenced by retail attributes which results in increased consumer satisfaction and loyalty. The study also discovered that better store atmosphere increases total number of hedonist consumers. The study shows that businesses should manage their hedonistic customer database in a manner that will fulfil the shopping motivation.

Cherng G. Ding and Timmy H. Tseng in 2015 conducted a study "On the relationships among brand experience, hedonic emotions, and brand equity". The objective of the study was to determine the effect on brand loyalty and building brand experience based on the hedonic consumption by consumers. The study revealed that along with the cognitive features of a brand, hedonic emotions play an important role in building brand loyalty. The study also revealed that the hedonic emotions are felt in lower cost products along with luxury products. The research is exploratory in nature and used an onsite interview survey method to collect data in Taiwan by random sampling of four renowned service brands. An equal proportion of students and non-students were asked to provide data on the frequency and satisfaction towards the brand. The study found out that consumers are more inclined towards the emotional appeal rather than the features of the brand leading to positive brand experiences. The study showed that consumers can relate more towards a brand which uses favourable physical setting to soothe their mood and create a happy environment. From the study it could be suggested that marketers should focus on experiential marketing rather than product focused marketing.

## RESEARCH METHODOLOGY

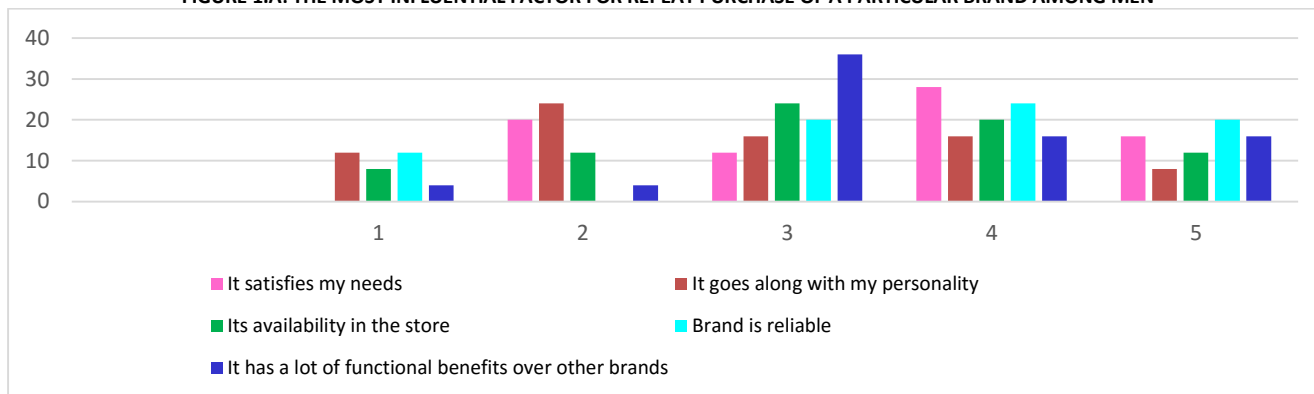
- Primary research was conducted. A sample size of 162 consumers was chosen across various income groups who visited the Retailers, Hypermarts and Super marts for buying Personal Care products. The reason to choose a Sample size of 162 is supported by the theory which points out crucial factors such as demographic, geographic and psychographic behaviour of the surveyed customers living in Pune.
- To test the feasibility of the research topic, a pilot study was conducted with 30 customers which helped in formulating the hypotheses. From the results obtained, certain alterations and modifications were made and final questionnaires were prepared. 86 of the female and 76 of male respondents were interviewed in the survey through the questionnaire collected personally. The consumers were surveyed to analyse the factors which influence their buying behaviour measured in terms of Brand commitment, Impulse and Hedonic buying.
- Secondary data was collected from annual reports, articles, web sites, and journals.

## RESULTS

**TABLE 1.A: THE MOST INFLUENTIAL FACTOR FOR REPEAT PURCHASE OF A PARTICULAR BRAND AMONG MALE RESPONDENTS**

Ratings given	It satisfies my needs	It goes along with my personality	Its availability in the store	Brand is reliable	It has a lot of functional benefits over other brands
1	0	12	8	12	4
2	20	24	12	0	4
3	12	16	24	20	36
4	28	16	20	24	16
5	16	8	12	20	16

FIGURE 1.A: THE MOST INFLUENTIAL FACTOR FOR REPEAT PURCHASE OF A PARTICULAR BRAND AMONG MEN

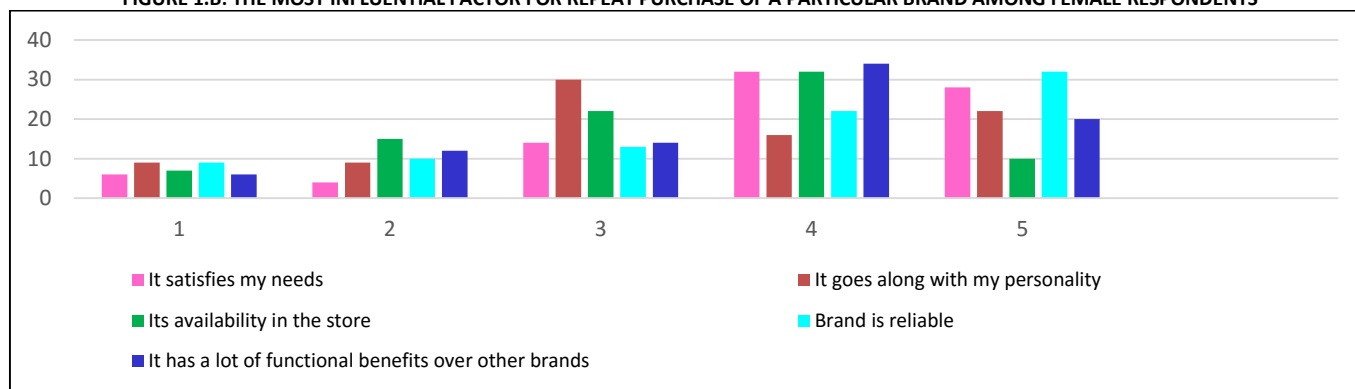


**Result:** Most men prefer functional attributes over any other factor.

TABLE 1.B: THE MOST INFLUENTIAL FACTOR FOR REPEAT PURCHASE OF A PARTICULAR BRAND AMONG FEMALE RESPONDENTS

Ratings given	It satisfies my needs	It goes along with my personality	Its availability in the store	Brand is reliable	It has a lot of functional benefits over other brands
1	6	9	7	9	6
2	4	9	15	10	12
3	14	30	22	13	14
4	32	16	32	22	34
5	28	22	10	32	20

FIGURE 1.B: THE MOST INFLUENTIAL FACTOR FOR REPEAT PURCHASE OF A PARTICULAR BRAND AMONG FEMALE RESPONDENTS



**Result:** Functional benefits closely followed by brand reliability are of prime concern with female respondents who prove to be a little more brand committed.

## DISCUSSION

From the data in Table 1 it is inferred that majority of female consumers are more brand committed than male consumers as they go for more brand appeal over functional benefits and thus null hypothesis of hypothesis 3 which states that "Brand Commitment among women consumers is less than men" is **rejected**. Hence the alternate hypothesis of hypothesis 3 which states that "Brand Commitment among women consumers is more than men" is **accepted**.

## FACTORS AFFECTING THE CHOICE OF PRODUCT AMONG RESPONDENTS

TABLE 2.A: FACTORS AFFECTING THE CHOICE OF PRODUCT AMONG FEMALE RESPONDENTS (with 1 being strongly disagree and 5 being strongly agree)

Ratings	Brand Personality	Emotional Appeal	Quality of the product	Features and Functionality	Offers and Discount
1	4	8	6	6	2
2	14	6	2	0	6
3	22	28	4	6	10
4	32	34	28	40	40
5	12	8	46	34	28
No response	2	2	0	0	0

FIGURE 2.A: FACTORS AFFECTING THE CHOICE OF PRODUCT AMONG FEMALE RESPONDENTS (with 1 being strongly disagree and 5 being strongly agree)

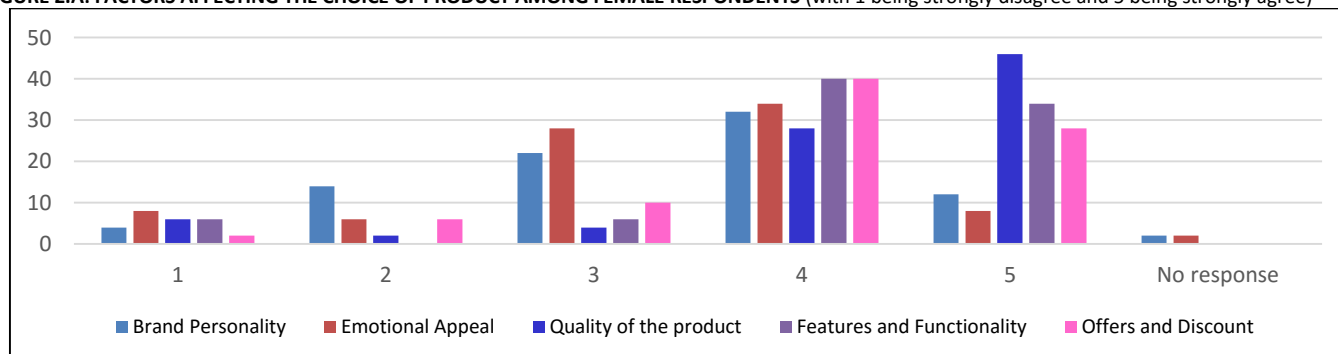
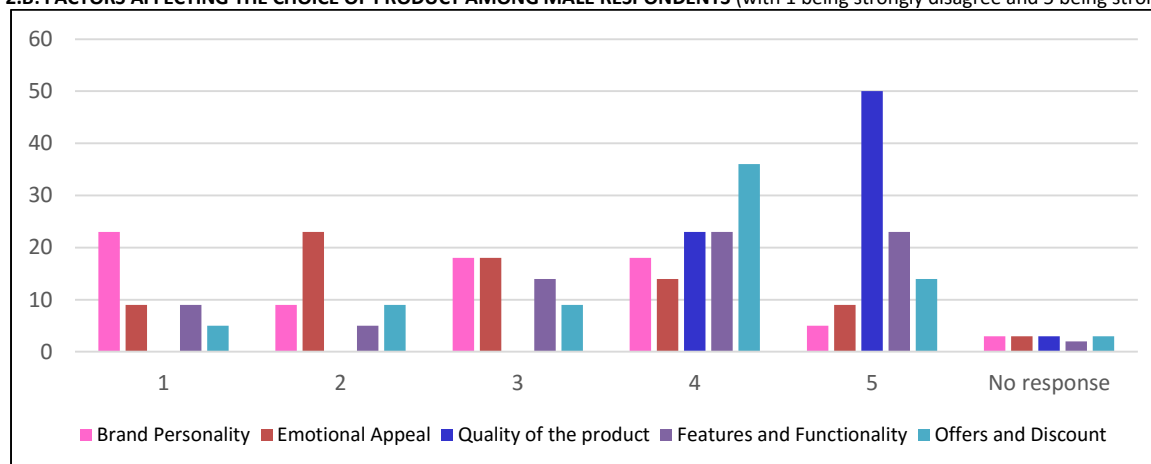


TABLE 2.B: FACTORS AFFECTING THE CHOICE OF PRODUCT AMONG MALE RESPONDENTS (with 1 being strongly disagree and 5 being strongly agree)

Ratings	Brand Personality	Emotional Appeal	Quality of the product	Features and Functionality	Offers and Discount
1	23	9	0	9	5
2	9	23	0	5	9
3	18	18	0	14	9
4	18	14	23	23	36
5	5	9	50	23	14
No response	3	3	3	2	3

FIGURE 2.B: FACTORS AFFECTING THE CHOICE OF PRODUCT AMONG MALE RESPONDENTS (with 1 being strongly disagree and 5 being strongly agree)



## RESULTS

It can be observed that Brand personality affects the choice of the product for Females as 51.1% of female respondents either Agreed or Strongly Agreed with the statement, as compared to 30.26% of Male respondents.

The same observation can be made for Emotional Appeal wherein 48.8% of female respondents either agreed or Strongly Agreed with the statement as compared to 30.26% of Male respondents.

Choice of female respondents was more affected by Offers and Discount wherein 79.1% of Female respondents either agreed or Strongly Agreed with the statement as compared to 65.8% of Male respondents.

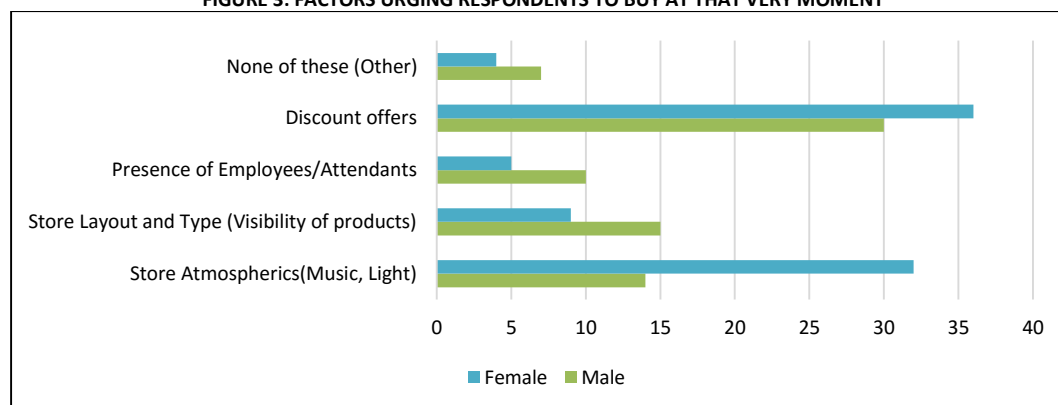
## DISCUSSION

From the data in Table 2 it is inferred that majority of female consumers are prone to make impulse buying as they are more affected by "Offers and Discount" than male consumers and thus null hypothesis of hypothesis 2 which states that "Number of women consumers are less among Impact buyers than number of male consumers" is **rejected**. Hence the alternate hypothesis of hypothesis 2 which states that "Number of women consumers are more among Impact buyers than number of male consumers" is **accepted**.

TABLE 3: FACTORS URGING RESPONDENTS TO BUY AT THAT VERY MOMENT

S no.	Factors	Male	Female
1	Store Atmospherics(Music, Light)	14	32
2	Store Layout and Type (Visibility of products)	15	9
3	Presence of Employees/Attendants	10	5
4	Discount offers	30	36
5	None of these (Other)	7	4

FIGURE 3: FACTORS URGING RESPONDENTS TO BUY AT THAT VERY MOMENT



## DISCUSSION

It can be observed that Female consumers tend to make more hedonic purchase represented by choosing Store Atmospherics as one of the factor urging them to buy than their male counterparts.

Therefore, the null hypothesis of Hypothesis 1 which states that "Women consumers are less influenced by hedonic consumption while men are highly influenced by hedonic consumption" is **rejected**. Hence the alternate hypothesis of Hypothesis 1 which states that "Women consumers are more influenced by hedonic consumption while men are less influenced by hedonic consumption" is **accepted**.

## RECOMMENDATIONS & CONCLUSION

This research project aimed at getting a clear cut picture with respect to the pattern of buying behavior closely resembling stereotypical faces of Indian society.



Usually Indian men are considered more assertive and the decision makers when it comes to shopping. But the data obtained did not support this theory and it was found that more of women were assertive and brand specific. Women are more of a brand loyalist than their male counterparts and very specific and detail oriented as compared to men. The choice of their purchase was very specific and particularized as compared to male customers.

As per our study it was observed that more number of women were house wives (slightly over 34% of a total of 53% women). If this is the case in a metropolitan like Pune, then the scene is likely to follow the suit of orthodox Indian demographics in rural or suburban areas. Education however is changing the scenario and a greater number of women are taking up jobs and are becoming self-reliant. In the sample collected, majority of this category of female exhibited inclination towards Brand commitment, Impulse and Hedonic buying as compared to the other segment who are house wives and peruse a programmed purchase behaviour. Men however are more aggressive buyers if and only they are not constrained by budget. The characteristic of hedonic and impulse buying is more common among men than women.

There are various other aspects that can be taken into consideration for taking the research further; but the main objective of taking gender preferences was fully satisfied. A deep dive in to the data obtained will further segregate and classify the buyers among respective sexes based on their incomes, age, profession and other demographic parameters. However, these will require further assessment and collection of specific data.

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**FINANCIAL ANALYSIS OF PAPER INDUSTRY IN TAMILNADU: AN EMPIRICAL STUDY****DR. P. RAJANGAM****HEAD****PG & RESEARCH DEPARTMENT OF COMMERCE****GOVERNMENT ARTS COLLEGE (GRADE-1)****ARIYALUR****DR. P. SUBRAMANIAN****ASST. PROFESSOR****DEPARTMENT OF COMMERCE****NATIONAL COLLEGE****TIRUCHIRAPPALLI****ABSTRACT**

*The study was basically restricted to companies listed in Bombay Stock Exchange. A random sample of two large size (TNPL) Tamil Nadu Government owned paper manufacture company and private owned (SPBL) paper companies have been taken for the present study. The study has covering a period of ten years from the financial year 2005-06 to 2014-15. A very high positive correlation between sales and PAT observed in TNPL and negative correlation evidenced in SPBL. The alternative hypothesis is accepted in TNPL. the null hypothesis is accepted in SPBL, which means that there is no relationship between sales and profit after tax. Capacity utilisation and production performance is very low in SPBL when compare to TNPL.*

**KEYWORDS**

capacity utilisation, sales, PAT, dividend, EPS.

**INTRODUCTION**

India holds 15th rank among paper producing countries in the world. Total installed capacity is approximately 12.75 million tonnes. The per capita consumption of paper is around 11 Kgs. against the global average of 56 Kgs. and Asian average of 40 Kgs. The industry is fragmented with over 750 paper mills, of which only 50 mills have a capacity of 50000 tpa or more. The industry is working at 89% capacity utilization. India's share in world paper production is about 2.6%. The current demand is estimated at 13.10 million tonnes with domestic production of 11.38 million tons, export of 0.53 million tones and import of 2.25 million tons. The demand is projected to increase to 23.50 million tonnes by 2024-25. India is the fastest growing market for paper in the world with a growth rate of about 6% per year. Increase of per capita paper consumption by 1 kg will increase the demand by about 1.25 million tonnes per annum. TNPL's operational and financial performance is one of the best in the Indian Paper Industry. consistency performance wise SPBL is good. TNPL's success is largely related to the following strategies: 1. Sustainable growth, 2. Efficient cost management, 3. Financial re-engineering 4. Customer centric, 5. Innovation and 6. Management of Human Resources

**SCOPE OF THE STUDY**

The study was basically restricted to companies listed in Bombay Stock Exchange. Physical and market performance of the companies were not paid any attention because good performance in them would ultimately be reflected in the financial variables which is taken for consideration. A random sample of two large size (TNPL) Tamil Nadu Government owned paper manufacture company and private owned (SPBL) paper companies has been taken up for the study. The study has taken financial, accounting and data covering a period of ten years from the financial year 2005-06 to 2014-15. By identify the important key variables namely capacity utilization, production and sales which influences more attention to improve their performance.

**OBJECTIVES OF THE STUDY**

The following are the main objectives of the study.

1. To examine out the growth and progress of the TNPL and SPBL.
2. To evaluate the trend of efficiency of the TNPL and SPBL
3. To analyze the sales and profitability performance of the TNPL and SPBL

**METHODOLOGY****SOURCES OF DATA**

The data required for the study have been obtained from secondary sources. The data have been collected from the Centre for Monitoring Indian Economy (CMIE) prowess data base and capital line data base. Information has also been collected from published Annual Reports, Annual Survey of Industries, The Stock Exchange Official Directory, Centre for Industrial and Economic Research (CIER's) Industrial Data Book, Publications of the Indian Pulp and Paper Technical Associations of the Indian (IPPTA) and from official websites of selected companies.

**SELECTION OF THE SAMPLE**

The Study is Base Secondary Sources of Data. The study is confined to the paper industry. A random sample of two leading large size Paper Manufacturing Companies in Tamil Nadu that is Tamil Nadu News Print and Papers Limited (TNPL) and Seshasayee Paper and Board Limited (SPBL) listed in Bombay Stock Exchange, in India was taken up. The study covers a period of ten years from 2005-06 to 2014-15.

**STATISTICAL TOOLS USED**

To analyses the performance of large-scale paper companies, various techniques have been applied. Techniques like ratio analysis, mean, standard deviation, and co-efficient of variation, **t-test** and spearman's rank correlation have been used to test the data.

**TESTING OF HYPOTHESIS**

1. There is no relationship between Sales and Profit After Tax of TNPL.
2. There is no relationship between Sales and Profit After Tax of SPBL.

**LIMITATIONS OF THE STUDY**

The present study is subjected to the following limitations.

1. The financial performance of small-scale and medium scale companies has not been considered in the present study.
2. The present study has analyzed the comparative performance evaluation of TNPL and SPBL.
3. The effect of inflation has not been considered.

**PROFILE OF PAPER INDUSTRY IN TAMILNADU****PROFILE OF TNPL**

Tamil Nadu Newsprint and Papers Limited (TNPL) was promoted by the Government of Tamil Nadu in the year 1979 to produce Newsprint and Printing & Writing Paper (PWP) using bagasse as the primary raw material. The factory is located at Pugalur in Karur District. The plant was commissioned in 1984 with an initial capacity of 90,000 tons per annum. Since then, the company has enhanced the capacity to 4,00,000 tonnes per annum in four phases. In tandem, the pulping capacity has been increased from 300 tonnes per day (tpd) in 1984 to 1,180 tonnes per day as of date. Over the years, the production capacity has been increased to 2,45,000 tpa and the Company has emerged as the largest bagasse based Paper Mill in the world consuming about one million tonnes of bagasse every year.

The Company completed a Mill Expansion Plan during December 2010 to increase the mill capacity to 4,00,000 tpa. TNPL exports about 1/5th of its production to more than 50 countries. Manufacturing of quality paper for the past two and half decades from bagasse is an index of the company's technological competence. A strong record in adopting minimum impact best process technology, responsible waste management, reduced pollution load and commitment to the corporate social responsibility make the company one of the most environmentally compliant paper mills in the world.

**TECHNOLOGY - NURTURING NEW HORIZONS**

TNPL is an acknowledged leader in the technology of manufacture of paper from bagasse – the sugar cane residue. Started with an initial capacity of 90,000 MT per annum on a single Paper Machine, the Mill doubled the capacity to 1,80,000 tonnes per annum in the year 1995 by addition of one more Paper Machine. Both the paper machines were upgraded in 2002 to enhance the capacity to 2,30,000 tonnes per annum. Under the Mill Development Plan (MDP) completed during May 2008, the pulp production capacity was increased from 520 tpd to 720 tpd with Elemental Chlorine Free (ECF) bleaching. Along with this, the Paper Machines capacity was increased to 2,45,000 tonnes.

In 2011, TNPL installed a new state-of-the-art paper machine with an annual capacity of 1,55,000 MT, raising the mill's production capacity to 4,00,000 MT per annum. Subsequent to increase in the production capacity to 4,00,000 tonnes per annum, TNPL has set up a 300tpd deinked pulp plant, revamped the steam and power system, increased the captive power plant capacity to 103.62 MW and set up a 600 tpd cement plant to produce high grade cement using mill waste materials namely Lime sludge & Fly ash. Currently the cement plant capacity is being enhanced to 900 tpd. The project will be completed by December 2015.

**PROFILE OF SPBL**

Seshasayee Paper and Boards Limited (SPB), the flagship company belonging to 'ESVIN GROUP', operates an integrated pulp, paper and paper board Mill at Pallipalayam, Erode-638 007, District Namakkal, Tamilnadu, India. SPBL was incorporated in June 1960, and promoted by Seshasayee Brothers (Pvt) Limited in association with a foreign collaborator M/s Parsons and Whittemore, South East Asia Inc., USA. After commencement of commercial production, having fulfilled their performance guarantee obligations, the foreign collaborators withdrew in 1969. Main promoters of the Company as on date are a group of companies belonging to the ESVIN group headed by Mr. N Gopalratnam.

**Modernization Project:** The SPBL embarked on an expansion to enhance its production capacity from 60000 tonnes per annum to 115000 tonnes per annum and to upgrade some of the existing facilities at an estimated cost of Rs.1890 million. The said expansion project was completed in December 2000. The export is nearly 20% of its production and is a significant exporter in the Indian paper industry. Due to its excellent export performance, SPBL has been awarded "golden export house" status. (<http://www.spbltd.com/profile.htm>)

**REVIEW OF LITERATURE**

The relevant reviews are collected from the published articles in the reputed journal, research studies. Reviews are related to financial performance like, working capital, short-term and long-term financial results of public and private companies.

Several studies have documented the results between working capital and profitability. **Lazaridis et.al.(2006)** investigated the relationship between corporate profitability and working capital management using listed companies on the Athens Stock Exchange. they discovered that a statically significant relationship existed between profitability and cash conversion cycle. they concluded that business can create profits for their companies by correctly handling the cash conversion cycle and keeping each component of the cash conversion cycle (that is accounts receivable, accounts payable, and inventory) to an optimum level. **Deloof (2003)** also found that the way working capital is managed has a significant impact on the profitability of businesses. **Gitman (1982)** further stated that especially, in small firms, working capital management may be the factor that decides success or failure; in larger firms, efficient working capital management can significantly affect the firm's risk, return and share.

**Sathya Moorthy et.al, (2008)** revealed that working capital management is also important from the perspective of sources and uses of funds, working capital is a spontaneous source of funds as it arises from trading activities based on a significant number of business transactions, in many companies, the amount of funds committed to current assets can and often exceed that of fixed assets. **Smith (1997)** revealed that profitability and liquidity comprise the salient and all too often conflicting goals of working capital management. The conflict arises because the maximization of the firm's returns could seriously threaten liquidity, and on the other hand, the pursuit of liquidity has a tendency to dilute returns. over the years, analysts have employed traditional ratio analysis as a primary instrument in the measurement of corporate illiquidity in the firms with well-established ratios such as current and quick ratio. In this study examined the researcher

**Rajangam and Selvaraj (2013)** Analysis of profitability of Seshasayee Paper and Board (SPBL): A Case Study for the period of ten years from 2001-02 to 2010-11 and they investigate that the sales performance was good but the operating profit performance was very low. The EPS shows results during the study period were not commendable. The study concludes that controlling cost of goods sold and reduces its expenses to avoid facing difficult financial conditions in the future.

**DATA ANALYSIS****TABLE 1: CAPACITY UTILIZATION OF PAPER INDUSTRY IN TAMILNADU (Tpa)**

Year	Capacity Utilization of TNPL	Percentage	Year	Capacity Utilization SPBL	Percentage
1984	90000	100.00	1960	20000	100.00
1996	180000	200.00	1967	35000	175.00
2002	230000	255.56	1976	55000	275.00
2009	245000	272.22	1992	60000	300.00
2011	400000	444.44	2000	115000	575.00

Source: Annual Report

Table 1 show that the capacity of paper production per annum; the plant was commissioned in 1984 with an initial capacity of 90,000 tons per annum in the year 1984. Since then, the company has enhanced the capacity to 4,00,000 tonnes per annum in (2011) four phases. In tandem, the pulping capacity has been increased from 300 tonnes per day (tpd) in 1984 to 1,180 tonnes per day as of date. Installed capacity is very low in SPBL. The minimum production is observed in TNPL about 90000 tpa and maximum 400000 tpa whereas SPBL capacity utilization ranged between 20000 and 115000 tpa.

It is evidenced from the table 2 EPS ranged between Rs. 11.66 and Rs. 24.09. The EPS value of TNPL is fluctuated during the period 2005-06 to 2014-15 and very low standards deviation valued is observed.

The percentage of dividend is ranged between 30 % in 2005-06 and 60% in 2014-15 and it is also observed that dividend performance shows an increasing trend, which implies that; the TNPL's earning capacity is commendable.

TABLE 2: SALES AND PROFITABILITY PERFORMANCE OF TNPL

YEAR	SALES (Rs.in Lakhs)	PBIDT (Rs.in Lakhs)	PAT (Rs.in Lakhs)	EPS (Rs.)	Dividend (%)
2005-06	80141	18768	8055	11.66	30
2006-07	88040	21455	8606	12.43	40
2007-08	96965	26266	11283	16.30	45
2008-09	110030	30792	10738	15.52	45
2009-10	107362	31980	12606	18.21	45
2010-11	122504	36274	14899	21.53	50
2011-12	153899	43543	10894	15.74	50
2012-13	188118	42207	91894	13.22	50
2013-14	230195	52320	16118	23.29	60
2014-15	215237	52236	16673	24.09	60
MEAN	139249.10	35584.10	20176.60	17.20	47.50
SD	51675.07	11270.55	24067.53	4.24	8.44
CV(%)	37.11	31.67	119.28	24.63	17.77

Source: Annual Report of TNPL

Table 2 shows that the revenue results of TNPL from the year 2005-06 to 2014-15, the sales performance shows increasing trend during the study period. It is observed that the mean value of sales Rs.139249.10 lakhs and it attained the above average in the second half of the study period. The co-efficient of variation is 37.11% it shows the consistency in sales performance. The sales revenue ranged between Rs.80141 lakhs in 2005-06 and maximum in 2013-14 about Rs.230195 lakhs.

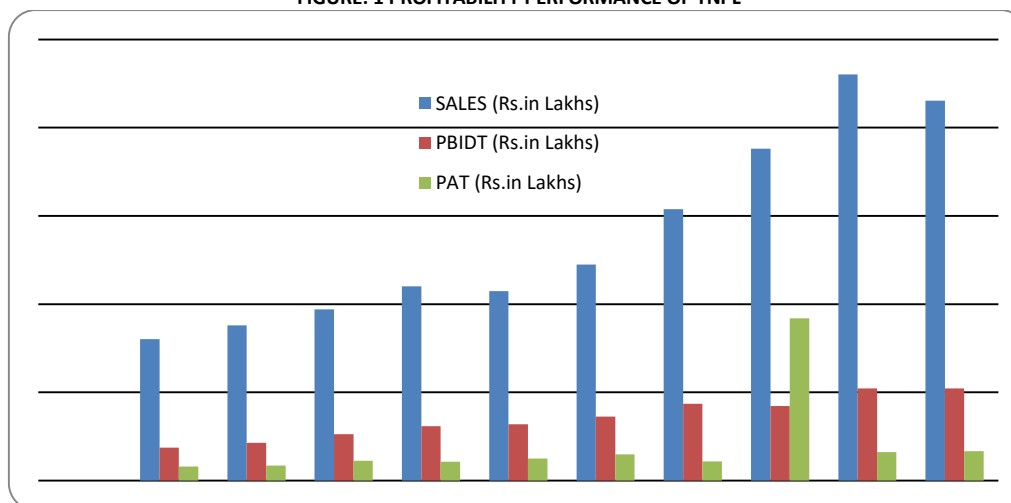
The Gross Margin (PBIDT) performance of TNPL is ranged between Rs.18768 lakhs in 2005-06 and Rs.52320 lakhs in 2013-14. The average PBIDT is Rs.35584.10 lakhs. It achieved the above average in the second half of the study period from 2009-10 to 2014-15.

It is evidenced from the table 2 NET margin of TNPL. PAT is varied between Rs.8055 lakhs in 2005-06 and Rs.91894 lakhs in 2012-14. The mean value of PAT is observed as about Rs.20176.60 Lakhs. And the co-efficient of variation of PAT is 119.28 percent.

Table 3 Shows that the profitability positions of Seshsayee Paper and Board Limited (SPBL). The Total sales ranged from Rs. 47019 lakhs and Rs. 107405 minimum and maximum respectively. The mean value of Total Revenue is Rs. 68907.5 lakhs during the study period. The Total Revenue during the period shows that the increasing trend. The total expenditure value shows the fluctuating trend. The co-efficient of variation of Total Revenue is 31.83%

The PBIDT of SPBL emphasis the profitability position is fluctuating during the study period. The minimum PBIDT value is Rs. 4800 lakhs and maximum value is Rs. 12892 lakhs. The Co-efficient of variation is 27.68 percent. The value of the PBIDT is higher than the mean value in the years 2009-10 to 2014-15.

FIGURE: 1 PROFITABILITY PERFORMANCE OF TNPL



Source: Computed

The Profit After Tax of SPBL shows the fluctuating trend during the study period which implies that there is no constant profitability during the years 2009-10 to 2011-12. Show the above the mean value of Rs. 3238 lakhs. The PAT ranged between Rs. 1503 lakhs to Rs. 6500 lakhs.

The Earning Per Share of SPBL shows a fluctuating Trend during 10 years period. The mean EPS value is Rs. 58.713 lakhs. The minimum EPS is observed in 2005-06 and the minimum value of EPS is evidenced in 2010-11. The Co-efficient of variation is 26.89%. It is not a consistency performance.

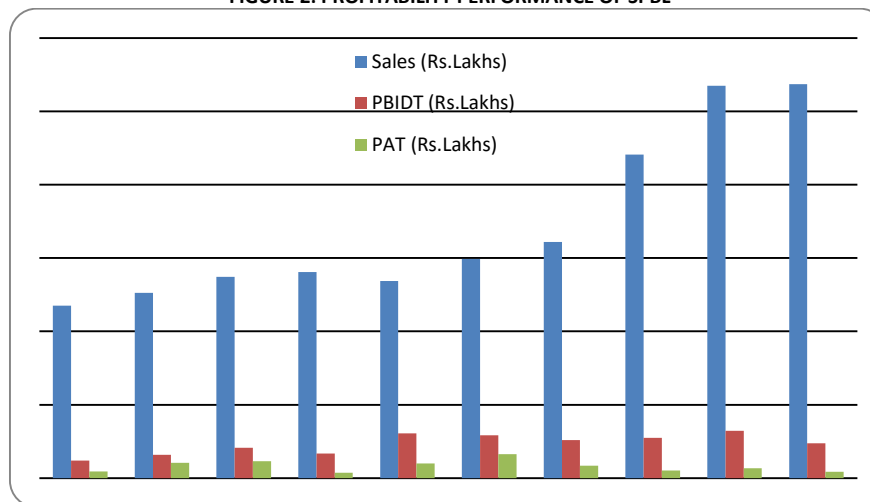
Dividend distribution OF SPBL shows a fluctuating trend during the study period. The average Dividend is 41.5% and the minimum dividend distributed in the year 2005-06 (25%) and maximum dividend distributed in 2009-10 (60%) During 2012-13 to 2014-2015 observed as 40% in each years.

TABLE 3: PROFITABILITY POSITION OF SESHASAYEE PAPER AND BOARD LIMITED

Year	Sales (Rs. Lakhs)	PBIDT (Rs. Lakhs)	PAT (Rs. Lakhs)	EPS (Rs.)	Dividend (%)
2005-06	47019	4800	1791	36.1	25
2006-07	50553	6346	4140	46.77	35
2007-08	54860	8290	4579	63.21	40
2008-09	56199	6720	1503	44.36	35
2009-10	53770	12172	3993	82.95	60
2010-11	59721	11642	6500	84.24	50
2011-12	64375	10354	3410	60.04	50
2012-13	88223	11007	2051	52.02	40
2013-14	106950	12892	2679	71.52	40
2014-15	107405	9513	1735	45.92	40
Mean	68907.5	9373.6	3238.1	58.713	41.5
SD	21934.65	2594.31	1514.48	15.79	9.23
CV(%)	31.83	27.68	46.77	26.89	22.25

Source: Annual Report of SPBL

FIGURE 2: PROFITABILITY PERFORMANCE OF SPBL



Source: Computed

**TESTING OF HYPOTHESIS**

1.  $H_0$ : there is no relationship between Sales and (PAT) Profit After Tax of TNPL
2.  $H_0$ : There is no relationship between Sales and (PAT) Profit After Tax of SPBL

TABLE 4: CORRELATION AND T-DISTRIBUTION RESULTS OF TNPL AND SPBL

Sample units	Correlation Results	Calculated t-test	Table value of t-distribution	Results
TNPL	0.818	4.017	2.306 *	$H_0$ : Rejected
SPBL	-0.273	-0.801	2.306*	$H_0$ : Accepted

Source: Computed \*significant level 5%

Table:4 represents Spearman's rank correlation between sales and profit after tax results shows ( $r = 0.818$ ) a high positive correlation relationship of the TNPL, which means that there is a higher profitability. whereas SPBL results shows a negative ( $r = -0.273$ ) and very low relationship which implies that low profitability. Calculated t-value of TNPL is higher than the table value i.e.,  $4.017 > 2.306$ . Hence, the null hypothesis is rejected and alternative hypothesis is accepted. Therefore, there is a relationship between sales and profit after tax at 5% level of significant. Whereas the calculated t-value of SPBL is lower than the table value i.e.,  $-0.801 < 2.306$ . hence, the null hypothesis is accepted. Which means that there is no relationship between sales and profit after tax.

**FINDINGS AND SUGGESTIONS**

1. It is observed that the mean value of TNPL'S sales Rs.139249.10 lakhs and it attained the above average in the second half of the study period. The co-efficient of variation is 37.11% it shows the consistency performance in sales. The Sales during the period shows that the increasing trend.
2. The TNPL'S average PBIDT is Rs.35584.10 lakhs. PBIDT achieved the above average in the second half of the study period from 2009-10 to 2014-15. Whereas, The PBIDT results of SPBL emphasis the profitability position is fluctuating during the study period. The Co-efficient of variation is 27.68 percent, which implies that consistency in performance.
3. The TNPL'S PAT is varied between Rs.8055 lakhs in 2005-06 and Rs.91894 lakhs in 2012-14. The mean value of PAT is observed as about Rs. 20176.60 Lakhs, and the co-efficient of variation of PAT is 119.28 percent. Whereas, The Profit After Tax of SPBL shows the fluctuating trend during the study period which implies that profitability is varying during the study period.
4. The EPS is ranged between Rs.11.66 and Rs.24.09. The EPS value of TNPL is fluctuated during the period 2005-06 to 2014-15 and also a very low standards deviation valued is observed which means that there is a close difference in EPS. Whereas, The Earning Per Shares of SPBL shows a fluctuating Trend during 10 years period. The mean EPS value is Rs. 58.713 lakhs. The Co-efficient of variation is 26.89%. It is not a consistency performance.
5. The TNPL'S percentage of dividend is ranged between 30 % in 2005-06 and 60% in 2014-15 and it is also observed that dividend performance shows an increasing trend, which implies that; the TNPLS's earning capacity is commendable. In SPBL the dividend distribution performance shows a fluctuating trend during the study period. The minimum dividend distributed in the year 2005-06 (25%) and maximum dividend distributed in 2009-10 (60%) During 2012-13 to 2014-2015 observed as 40% in each year.
6. It is evidenced from the analysis a very strange correlation relationship between sales and profitability performance in TNPL, where as a negative correlation between sales and profit after tax.
7. The study suggested that SPBL'S capacity utilization has to be increased and paper manufacturing in Tamilnadu a major source of raw material is from sugar industry. When sugar industry increases or developed the paper manufacturing industry can get a cheap raw material (molasses i.e., sugarcane waste) from sugar industry and it can minimize production cost and earn higher profit.
8. TNPL is a government owned and technologically well-equipped large size paper manufacturing industry in Tamilnadu. It gets raw material from sugar industry the installed capacity is 400000 tons per annum. Hence, this paper mill earns huge amount of profit year by year. It has to concentrate on profitability the battement of the company. The government has to take necessary steps to boost-up sugar industry.
9. Spearman's rank correlation between sales and profit after tax results shows ( $r = 0.818$ ) a high positive correlation relationship of the TNPL, which means that there is a higher profitability. Whereas SPBL results shows a negative ( $r = -0.273$ ) and very low relationship which implies that low profitability.
10. The null hypothesis is rejected and alternative hypothesis is accepted in TNPL. the null hypothesis is accepted in SPBL. Which means that there is no relationship between sales and profit after tax.

**CONCLUSION**

There are only two large size paper manufacturing unit in Tamilnadu. The sample unit of the study is TNPL, it was commissioned in 1984. It is a Government of Tamil Nadu undertaking, bagasse based and eco-friendly material procuring and paper manufacturing company, in 1984 the installed capacity was 90000 tpa and it was grown up to 400000 tons per annum installed capacity at present with adaptation of latest technology. It has got several awards from the Government. The TNPL'S, sales and profitability position is commendable. Hence, the study concludes that financial position of the TNPL is good during the study period. This study concludes that the performance of Seshasayee Paper and Board Limited's financial and profitability position is said to be satisfactory but it has to be increase the installed capacity to increase production. The study concludes that government owed TNPL'S installed capacity and profitability position is commendable than Seshasayee Paper and Board Limited. A very high positive correlation between sales and PAT observed in TNPL and negative correlation evidenced in SPBL. The null hypothesis is rejected and alternative hypothesis is accepted in TNPL. the null hypothesis is accepted in SPBL. Which means that there is no relationship between sales and profit after tax.

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# GREEN CSR PRACTICES: HR AND SCM - A STRATEGIC PERSPECTIVE: A CASE STUDY BASED REVIEW OF COGNIZANT

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## ABSTRACT

*This paper aims at exploring the Green CSR practices of one of the leading IT companies, Cognizant. It also analyses how Cognizant has challenged itself in the area of sustainability to solve society's issues and concerns. This case analysis includes Green HR and Green SCM practices implemented by the company. It includes both internal and external initiatives conducted by Cognizant. The information collected for the case analysis is from secondary research. Cognizant has chosen three key areas for implementing sustainability initiatives which according to them create significant impact on both internal and external environments. The three key areas are Educational opportunity, Environmental stewardship, and Employee development. This paper analyses CSR practices of a specific company; those can't be generalized to other companies. The study however demonstrates how the actual implementation of CSR practices is done in the organization.*

## KEYWORDS

green csr, sustainability, supply chain management.

## INTRODUCTION

Corporate Social Responsibility (CSR) is about businesses considering the interests of society by taking responsibility for the impact of their activities on everything and everyone they touch, including the environment. Green is a philosophy and social concern for the conservation and improvement of the environment. If this philosophy is implemented constructively, these initiatives can drive business performance improvements in many areas. Today, the need to find new green efficiencies is being driven by a number of factors, including a weak economy, the growing cost and limited supply of energy, the insatiable demand for more processing power and storage, and pressure to reduce environmental impact from shareholders, customers and employees.

All the businesses which focus on future are giving due importance to Green Management initiatives. According to researches done in this domain, all the employers as well as employees need to be aware, motivated and inspired of green practices and their impact. These initiative not only affect the business but also all the stakeholders involved in the business. Top management should be enthusiastic to come up with innovative ideas and suggestions to emphasize of green management. The driver of the initiatives can be HR department. If leaders are motivated to implement these practices, then only followers will follow the same. The main purpose of this research is to explore how organizations use their green HR and SCM practices for their strategic advantage.

According to Jacob Cherian & Jolly Jacob (2012), there is a need of development of strong environmental management system whose goals would incorporate within overall strategic goals of the organization. Green HR refers to the policies and practices designed by keeping the focus on Green philosophy. The aim is to reduce each employee's carbon footprint. It is used as a tool for attracting prospective employees and retention of employees. Nowadays, employees give due importance to employer's sustainable practices. This green talent pool also gives solutions to business problems by keeping green angle in mind. This perspective gives edge to the employer in the industry. On the other hand, Green SCM is all about delivering products and services through the chain of suppliers, manufacturers and customers by considering the environmental concerns and impact in mind. Green SCM follows green practices at every stage of supply chain to reduce the adverse impact on environment. This also reduces cost and gives operational efficiency to the employer.

## RESEARCH OBJECTIVES

The main purpose of this paper is to analyse Green CSR practices in companies from two perspectives-HR and SCM. This paper attempts to answer the following research questions:

- What are the driving forces behind implementation of Green CSR?
- What is the framework followed by companies in implementing Green CSR practices?
- How IT can help in implementation of Green CSR practices?

## RESEARCH METHODOLOGY

Online databases were used for their large collection of research papers and articles. Internet was used as a source mainly because of its huge network of resources. The research papers were mainly selected based on the following criteria:

- How current is the research paper?
- How the topic of the research paper is aligned with our chosen topic?
- If the research paper is published or not?

Mainly those research papers which were published in the recent years were chosen. Some of the research papers published in the previous decade was also chosen to study the history and evolution of the concepts.

In order to understand how Green CSR practices are adopted in companies, a case study approach is adopted.

The case study of the company, Cognizant, was chosen because Cognizant is one of the top IT services provider in the world. It has successfully implemented Green CSR practices across its offices because of which it has been able to reduce its carbon footprint by 32% through implementation of telepresence systems. It has

also been successful in reducing its per capita energy consumption by 47% and per capita paper usage by 60%. It thus serves as a role model for other companies in its industry.

#### DATA COLLECTION

Secondary research methodology was used to study the Green CSR practices in Cognizant. The researchers referred to Cognizant's white paper on the topic, "Creating a Green Supply Chain-Information Technology as an Enabler for a Green Supply Chain" and created inferences based on that. The CSR practices of Cognizant were analyzed from two perspectives: HR and SCM.

#### LITERATURE REVIEW

Green HRM is all about creating policies and procedures to promote use of sustainable business practices and to create awareness among employees. It mainly focuses on employees' environmental behaviour both in working and private life stated by Viola Muster and Ulf Schrader (2011).

Green HRM and sustainability are the words which go hand in hand and there is strong linkage between these two words. Organizations are focusing on both the concepts in today's market scenario. Ultimately HR department has to come up with strategies for Green HRM and sustainability. For organizations, adopting **Green Culture** is becoming need of the hour to gain competitive advantage in the market place. Meily Margaretha & Susanti Saragih (2013) gave two important reasons for the need of Green HR:

1. Global environmental concerns
2. To match international environmental standards.

Sustainability means providing long lasting solutions which will help in betterment of both social and economic conditions. Here you as an organization try to match the present needs of your employees while not compromising their future needs. Sustainability and Corporate social responsibility are the terms which are used interchangeably.

Sustainability involves the following three things (Prof. Shakti Marhatta & Mr. Sandeep Adhikari, 2013):

- i. Protecting environment
- ii. Contributing to the society
- iii. Economic growth of organization

HR department needs to strategize sustainable practices by evaluating current culture of organization and its green goals, eliminating the waste by cutting costs, illuminating employees to use eco-friendly products, and then implementing the strategies at every phase based on the above three steps. The area of GHRM that we have the least knowledge on is the motivation of employees to become involved in EM via PA and reward-management practices (Govindarajulu and Daily 2004). The integration of strategic HRM and environmental sustainability scholarship offers an opportunity to break away from the narrow economic interpretation of what "strategic HRM" means (Mirchandani & Ikerd, 2008).

Nowadays, customers are increasingly becoming aware of sustainability practices and shifting their loyalties towards environment friendly products. The focus on sustainability has led many organizations to invest in Green Supply chain practices.

According to Singh *et al.* (2013) Green Supply Chains consider the environmental effects of all processes of supply chain from the extraction of raw materials to the final disposal of finished goods. Within the Green Supply Chain each player motivates other players to go green and provides the necessary information, support, and guidance through supplier's development programs or customer support.

IT can play an important role in implementation of Green SCM within organizations. Role of IT in Green SCM can be seen from two perspectives:

1. Hardware: IT can help in optimizing resources and developing more energy efficient solutions to reduce impact on environment.
2. Software: IT can help in supply chain planning, route optimization and warehouse operations to reduce resource requirements.

In fact, through IT, companies can reduce their environmental footprint in a multitude of ways — through reduced energy consumption of infrastructure and cooling equipment, smarter purchasing and supply chain strategies, facilities optimization and reduced corporate travel.

Green SCOR (**Supply Chain Operations Reference Model**) framework can be used to help organizations in their green initiatives. It helps in identifying opportunities for making supply chains greener along every node of the supply chain.

Collaborative Transport Management (CTM) goes hand-in-hand with GSCM. IT solutions for facilitating the involvement of all partners in the supply chain can help organizations achieve better utilization of transportation assets and reduce overall energy requirements. Cognizant pioneered this concept of collaboration which led to a lot of innovation.

#### GREEN CSR PRACTICES AT COGNIZANT

Cognizant Technology Solutions is a U. S. - based multinational provider of business, technology and consulting services headquartered in Teaneck, New Jersey, United States. Cognizant has been named in the 2010 Fortune 100 Fastest-Growing Companies List for the eighth consecutive year. Cognizant has also been named in the Fortune 1000 and Forbes Global 2000 lists. It has consistently ranked among the fastest growing companies including the 2010 Business Week 50 list of the top - performing U. S. companies, the Business Week Hottest Tech Companies 2010 and the Forbes Fast Tech 2010 list of 25 Fastest Growing Technology Companies in America.

Cognizant has worked a lot in the area of sustainability under CSR. Its focus is on three key areas: Educational opportunity, Environmental stewardship, and Employee development.

**Educational opportunity-** All the current and emerging businesses are knowledge based. Cognizant is focusing on building this intellectual capital from base itself through an initiative 'Making the Future'. It provides educational opportunities to students to encourage them to pursue studies in STEM (Science, Technology, Engineering, and Math). In India and other countries, it provides opportunities to girls, rural population, and underprivileged students. Cognizant employees themselves volunteer for teaching, mentoring, and career guidance related activities. This STEM initiative will reduce the talent gap globally in the STEM field. In US the company also conducts after-school and summer programs for students to indulge in innovative programs. Cognizant awards college scholarship to students pursuing studies under STEM initiative. The initiative involves so many programs mentioned below.

- a) After school and summer programs- Company funds these programs which are conducted by various organizations, clubs, schools, and museums etc. These programs encourage students for robotics, maker-oriented activities, computer proficiency, do-it-yourself activities etc. programs.
- b) Maker Corps Host sites- Cognizant sponsors this initiative where volunteers and company employees come together with their families and children to participate in creative projects. These projects help children to improve their problem solving skills. These host sites could be anything from museums, schools, science centres to any similar organizations.
- c) US 2020- This is an initiative whose many leading technology companies are part. Cognizant is the founding member of this program. Under this these companies will recruit one million STEM mentors annually by 2020. Aim is to create STEM expert's workforce from kindergarten itself.
- d) College scholarships- Under this program Cognizant provides scholarship to students pursuing STEM studies. To apply for this scholarship students, have to submit a 3 minute video showing their creativity in these fields.
- e) Citizen schools- Citizen Schools is a national non-profit organization which recruits appropriate people to become citizen teachers and work in low-income areas. Cognizant supports this initiative and encourage employees to become Citizen Teachers.

**Project Outreach-** Under this initiative Cognizant employee's volunteers for many activities like mentoring, teaching, career counselling, inter-school competition guidance, and conducting educational trips. The aim of this initiative is to increase quality of life of students and to cover maximum region of the country. It includes initiatives like,

- a) Be a teacher- Under this program the volunteers visit local schools and conduct classes in English, Math, Science, and extra-curricular activities etc. These volunteers try to increase scores of students in these subjects. These volunteers conduct weekly classroom session for these students.

- b) Outreach scholarships- In this program, scholarships are provided to students who are unable to complete their post-high school studies. Here Cognizant employees also provide technical coaching to these scholarship holders like software testing, coding, personality development etc.
- c) Junior achievement- Here Cognizant volunteers participate in the program and prepare the student of class 9<sup>th</sup> and above for functional roles based on their interest areas.
- d) TALHUNT- Here volunteers help children to participate in interschool cultural competitions. In this winning school gets financial reward to improve their facilities. Cognizant also focuses on grooming winners of this competition.
- e) Programs for special children- Under this Cognizant volunteers arrange activities like swimming competitions, cricket tournament etc. for special children.
- f) Vision 2018- Striving for 100- Cognizant has seen this vision in 2013 to achieve 100% passing rate, graduation rate, and employability to graduates in 100 schools of our country. For that work has already started. It has made partnership with 100 schools and with the help of NGOs, local governments and company volunteers they are reaching near to achieving their vision. Company is also investing in train the trainer and faculty development programs. Overall a learning atmosphere is created by Cognizant in many schools.
- g) Outreach around the world- Cognizant is also expanding its wings in international activities under which top 6 leaders of different countries are going to participate in spreading awareness on homelessness. They will raise funds for homeless and underprivileged children for providing meals and educational resources.

**Cognizant Foundation-** Company set up this foundation in 2005 to conduct philanthropic activities in India. Their main focus is in the area of education and healthcare. Under this they are reaching out to cover maximum area of India to make lives of economically disadvantaged people better.

**Environmental Stewardship-** Cognizant is continuously taking efforts to reduce their impact on environment to protect the vital resources. They also realized the significant opportunity for cost saving by efficiently utilizing energy and reducing waste.

**Ambitious goals-** Cognizant has set ambitious goals for reducing emissions and energy. For example, their one goal was to reduce the carbon emissions by 43% by 2015. However, they achieved it by 2008 itself. They have also succeeded in reducing energy utilizations by 53% in KWH/person/month from 2008 through 2013.

**Commitment to renewable energy-** Under this company started purchasing renewable energy for its Tamil Nadu campus. There they procured 7.2 million units from biomass, 20 million units from wind and avoided burning more than 500,000 gallons of diesel fuel in a year. They are also planning to expand this to other campuses.

**Go Green-** Under this program all the Cognizant employees work towards conserving energy and reducing waste. Here HR department has come up with green management practices, improved infrastructure, and reengineered processes.

- a) Carbon Footprint Calculator- The Eco-check app of cognizant helps employees to keep track of their own carbon emissions. The app also suggests green actions that can be taken to balance their footprint.
- b) Carpooling app- Company launched Share-A-Drive app for employees to participate in carpooling.
- c) Teaming up and greening up- Here team of employees from every campus goes out and cleans up public places in the city.
- d) Back to school- Company employees participate in Green School program where they have to teach environmental studies to children. This helps in increasing awareness among children.
- e) Environmental management- Recycle bins are placed in all the Cognizant facilities to collect e-waste. Greenathon is a month long celebration that happens every year in all the facilities which includes awareness campaigns, workshops, video screening and other activities.

#### EMPLOYEE DEVELOPMENT, WELLNESS AND SAFETY

**Nurturing talent and leadership-** Cognizant Academy learning and development (L&D) arm conducts training program for its employees and associates. The programs are designed by considering client's requirements, company's growth and employees' interests.

Systematic stages of learning- 4 stage learning program

1. Engage and explore- Skill development program for campus hires.
2. Specialize and grow- Up skilling programs based on client's requirements
3. Manage and evolve- For first time managers to develop managerial capabilities
4. Succeed and lead- Leadership development programs for emerging leaders.

**Diversity and inclusion-** Cognizant focuses on bringing diversity in all respects such as culture, technology, perspectives, business and ways of working.

- a) Completely Cognizant- This is Cognizant's trademark initiative which is based on four strategic principles- People, culture, clients and community.
- b) Women empowered- This program is specially designed to increase number of qualified women employees. It is based on five strategic pillars of Attract, retain, develop, communicate and network.
- c) Emerging affinity groups- Cognizant is also establishing several affinity groups for development of groups like Asian-Pacific, Hispanic-Latino, LGBT communities etc

**Occupational health and safety-** Cognizant has started many wellness initiatives for its employees especially for preventing occupational health issues.

- a) Fully Cognizant- This was the largest health screening and awareness program in 2013.
- b) Wellness first- A campaign which spread awareness about issues like stress management, wrist issues (for computer professionals), arthritis, diets etc.
- c) Stepathlon-A global team based challenge where every team has to take 10,000 steps a day. Pedometers were used to conduct this event.

#### GREEN SCM PRACTICES AT COGNIZANT

**Employees:** Since Cognizant is a services based company, people form an integral part of the company's supply chain. Cognizant cares for the wellbeing of its nearly 1,71,400 employees. Though the company does not deal with raw materials or manufacture any product, it makes sure that it provides safe and proper working conditions for its employees. Cognizant has introduced a program called Outreach to utilize its employee resources to create a positive impact on the society. Cognizant teaches its employees best practices to conserve energy and reduce carbon footprint to achieve sustainable growth.

**Human Rights:** Cognizant is deeply committed to the cause of Human Rights protection. It ensures that there is no discrimination, child labor or forced labor or any other form of human rights violation in any part of the supply chain. Supply chain has the highest risk potential for human rights violation, particularly the sub-contractor labor base such as facilities maintenance, food suppliers, security, and transportation vendors. Cognizant requires its suppliers to adhere to Supplier Code of conduct, and it monitors its suppliers closely especially the high risk ones for any human rights infringement.

**Environment:** Since Cognizant is a service-based business, there is no significant usage of water across its supply chain. Water is mainly used for drinking, personal hygiene, cleaning, landscaping and in cafeteria. However, Cognizant compiles and studies data regarding water usage across its offices and looks for opportunities for conserving water. Initiatives such as rainwater harvesting and recycling and reusing water are employed across all its offices.

Since Cognizant is a global company, travel forms a major part of its operations. Initiatives such as video conferencing and telepresence facilities are used extensively to reduce the environmental footprint. Cognizant has deployed over 1,596 telepresence and video-conferencing facilities till date to reduce air travel and achieved work-life balance for its employees in the process. It has also undertaken initiatives such as establishing bicycle bays for its employees across all the offices and has launched share-a-ride app to help its employees in carpooling.

**Paperless office:** Following are the five main initiatives implemented at Cognizant for paper reduction:

- **Inbound communication:** Much of inbound communication is digital by efficient integration of computer telephony, optical character recognition (OCR) and scanning.
- **Workflow:** Document management systems are used for management and archiving of documents. BPM workflow is used for workflow assignment and escalation.
- **Analysis:** For analysis and review of documents, business rules are configured with BPM to distribute work and embed reviews.
- **Document Archival:** Physical documents are archived and stored periodically. Digital documents can be retrieved using a Document Management solution.

- **Outbound communication:** BPM solution can be used for generating reports, notifications and status reports. BPM dashboards provide valuable data for decision making eliminating need for reports used only for quick review.

**Green Supply chain expertise:** Cognizant has helped its clients in reducing costs, increasing efficiencies and improving ROI. Some of Cognizant's green strategies include:

- Cognizant continuously works with design and R&D team to find opportunities to reduce costs and design products which are energy efficient and eco-friendly.
- Cognizant works with manufacturers and suppliers to reduce packaging costs and increase shipping efficiency.
- Cognizant identifies software and performance metrics to measure carbon footprint of each of the process in the supply chain.
- Cognizant also helps in managing shipping methods and transportation of goods in LTL or TL quantities, ensuring that they arrive safely at their destination.
- Cognizant uses its partnerships for network analysis and modelling in order to achieve cost reductions and operations efficiency.

## CONCLUSION

**Green HR-** As we have seen CSR is the responsibility taken by organization towards environment protection, community growth and sustainability. Cognizant also thinks on the same line and it keeps challenging itself to be part of the solutions to these vital issues. For that it uses its talent, expertise, passion and strategies to gain competitive advantage in the market.

Ms Shakti Marhatta & Mr Sandeep Adhikari have given the following constituents of sustainability namely, Environment, Society and Economic Growth. Cognizant's sustainability strategies also revolve around these three which are Environmental stewardship, Educational opportunity and Employee development. It strategizes in order to provide long lasting solutions in these important areas.

Under environmental stewardship, the company is working hard towards efficient energy utilization and waste reduction. Company has also adopted various green HR practices to reduce their carbon footprint. So this program is helping the company to strategize effectively how to spread awareness among employees and cut cost drastically.

To work towards Society, Company is providing educational opportunities to emerging talents. It is trying to make the foundation itself strong so that it can take advantage in future. The intellectual capital developed over the period will be absorbed in the company in future. This is the long term strategy developed by company for both putting efforts towards society and sustainability.

For achieving economic growth company is working on its employee's development, wellness and safety. It is working on nurturing the talent by developing strong L&D strategies and using the same platform to spread awareness regarding Green CSR. Cognizant also working hard towards their employees' health and safety to sustain and preserve the knowledge available in the company. So the sustainability strategy is based on retention of talent.

**Green SCM-** Recently the focus of supply chain has moved from operational to strategic, which focusses on long-term relationships with the suppliers and other stakeholders. In this paper, we have mainly focused on Green CSR practices in supply chains and HR functions respectively. We have especially focused on how Green CSR is implemented in a multinational corporation like Cognizant. The reason we have chosen Cognizant is that it has successfully implemented Green CSR practices in all of its offices across the globe. The practices followed by Cognizant cannot be generalized for all the companies within the IT industry, but it does serve as an inspiration for other companies in its sector.

Since in a services organization, the main resources are people, its supply chain focuses on providing a safe working environment for employees and ensuring that there is minimal environmental impact due to their daily activities. Cognizant also makes efficient use of IT infrastructure to minimize energy consumption and reduce its carbon footprint. Initiatives such as video conferencing and telepresence systems help reduce business travel and also ensure work-life balance for its employees. Cognizant also helps manufacturing organizations in supply chain planning, route optimization and design of innovative packaging. Cognizant helps the manufacturers in analyzing every stage in supply chain and identifying opportunities for reducing environmental impacts in those stages.

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# IMPACT OF MACROECONOMIC VARIABLES ON PROFITABILITY OF LISTED GOLD LOAN COMPANIES IN INDIA

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## ABSTRACT

Gold loan is very old financial product in India and previously it was used by only unorganized private players. Varied interest rates, multiple repayment options, low disbursal time, secured and multipurpose features attracted Non-Banking Financial Companies (NBFCs) to this business. Organized players significantly gain the market share and provide transparent mechanism to the customers. Financial performance of companies can be affected by various determinants. It can be fairly classified in two categories such as; internal determinants and external determinants. Gold loan business of NBFCs is also exposed to these determinants. The objective of this paper is to explore and analyze the impact of external determinants on the financial performance of selected listed gold loan NBFCs in India. Period of the study will be considered 2009-2010 to 2013-2014. By using Correlation and Multiple Regression Analysis, the study will reveal the impact of external determinants on financial performance of selected listed gold loan NBFCs.

## KEYWORDS

external determinants, gold loan companies, ROA, ROE.

## INTRODUCTION

Gold has a special relation to the Indian mentality. While the world looks at it as protection against inflation, Indians have made it a must-own commodity that serves a family in distress, and for its ornamental appeal. But now-a-days gold is also considered as an investment asset in India. Gold is having a feature of high liquidity and also accepted as a universal currency. Gold loans are secured loans where the person seeking to borrow money has to pledge gold in any form such as; ornaments, coins or other gold assets as security. Purity is one of the important aspects for providing loan, the asset is tested for their purity and on the basis of such examination the loan is provided. The gold, which usually lies idle and earns no money, is utilized towards obtaining loans for other material products. Gold loan business in India is very old, but previously it was unorganized and mainly controlled by pawnbroker and moneylender. Higher interest rates, liquid collateral asset (Gold), easy disbursement, low level of concentration of loan exposure, lower correlation among defaults and higher margin of safety are few attractive features of this industry, due to which organized sector has entered in this segment. NBFCs are growing very fast in last couple of years and their profit also increased at very high pace. It is anticipated that the organized gold loan market will grow at a compound annual rate of 25.5% during FY 2012 to FY 2015. (<http://www.rncos.com/Market-Analysis-Reports/Gold-Loan-Market-in-India-IM423.htm>)

The key players in the Indian gold loan market include the unorganized sector, banks- public/ private/cooperatives and Non-Banking Financial Companies (NBFCs). Unorganized sector traditionally dominated the gold loan market for many decades and still commands major portion of the market, the organized sector, led by NBFCs, is catching up fast. Borrowers are also gaining due to the entry of organized sector because lower interest rate as compare to interest rates charged by unorganized sector, higher level of safety for their collateral, higher loan to value ratio, easy disbursement etc. Recently major structural and macroeconomic changes occurred due to which entire landscape of Indian gold loan market have changed. In 2012 RBI introduced Loan to value (LTV) ratio not to exceed 60 percent for loans granted against the gold jewellery, percentage of gold loans to total assets to be disclosed in balance sheets, Tier I capital requirement raised to (previously 10 percent) 12 percent by April 1, 2014. Gross Domestic Product (GDP) growth rate in India also slow down in recent past and various other external factors impacting the gold loan market and also negatively affecting financial performance and growth rate of gold loan companies.

NBFCs should be able to absorb the negative shocks and contribute to the stability of the economy. Financial performance of NBFCs is affected by various determinants and it can classify into two categories internal factors and external factors.

## EXTERNAL FACTORS

External factors identified and employed in a study are as follows but not limited to these factors only: Gross Domestic Product, Inflation, and Real Interest Rate (Kanwal and Nadeem, 2013). In another study, Gross Domestic Product (GDP), Market Concentration and Inflation were identified as external factors (Rao and Lakew, 2012). Gross Domestic Product and Consumer Price Inflation were found to be affecting financial performance (Ali, Akhtar and Ahmed, 2011).

## REVIEW OF LITERATURE

(Ali, Akhtar, and Ahmed, 2011) examined the profitability indicators of public and private commercial banks of Pakistan. The study employed sample of 22 public and private sector commercial banks of Pakistan and study period covers 2006-2009. The Return on Assets (ROA) and Return on Equity (ROE) were used as dependent profitability measures to determine the affect of bank-specific and macroeconomic indicators on profitability. The descriptive, correlation and regression analysis statistical tools used for the data analyses purpose, For model I, capital, Credit Risk, Asset Management, Economic Growth and Consumer Inflation Price found to be significantly affecting the profitability of commercial banks measured by Return on Assets (ROA). The bank specific variables (Capital, Credit Risk and Asset Management) were found to be significantly affecting at 1% level of significance, whereas the relation of macroeconomic variables (Gross Domestic Product and Consumer Inflation Price) were significant at 5% level of significance. In model II, where profitability is measure by Return on Equity (ROE); Operating Efficiency,



Asset Management and Economic Growth established to have significant affect the profitability. Whereas the Operating Efficiency and Economic Growth significant at 5% level of significance and the Asset Management significant at 1% level of significance.

(Rao and Lakew, 2012) carried out a research work to explore and analyze the impact of internal factors and external factors on profitability of commercial banks in Ethiopia Study period considered for the study was 1999-2000 to 2008-2009. Return on Average Assets (ROAA) was used as a profitability measure, and bank's capital structure, liquidity, credit risk, loan portfolio, asset quality, and expense management variables were considered as internal factors. External factors were considered such as; gross domestic product, inflation and market concentration. Fixed effects model were used to data analysis. Results found that internal factors most important determinants of bank profitability. External factors are found to be statistically insignificant.

(Kanwal and Nadeem, 2013) investigated the impact of external variables on profitability of public limited commercial banks in Pakistan for years 2001- 2011. The pooled Ordinary Least Square (OLS) tool was used to analyze the effect of 3 major macroeconomic factors; inflation rate, real gross domestic product (GDP) and real interest rate on profitability indicators; return on assets (ROA), return on equity (ROE) and equity multiplier (EM) ratios in 3 separate models. The study revealed that strong positive relationship of real interest rate with return on assets (ROA), return on equity (ROE) and equity multiplier (EM). Secondly, real GDP is found to have an insignificant positive effect on return on assets ROA, but an insignificant negative impact on return on equity ROE and equity multiplier (EM). Inflation rate on the other hand, had a negative link with all 3 profitability measures. Overall, the selected macroeconomic factors are found to have a negligible impact on earnings of commercial banks.

(Roy, 2013) conducted a study to analyze the financial performance of gold loan non-banking financial companies and factors influencing the financial performance. Camel rating method was considered to analyze the performance and period of the study was 6 years i.e., 2007 to 2012. Muthoot Finance, Manappuram Finance Limited and Muthoot Fincorp were taken as the sample of the study. Multiple regression models were also applied for determining the influential factors with regard to the overall financial performance of the gold loan NBFCs. The study revealed that the companies have heavier debt in their capital structure, aggressive lending policy, lower liquidity, decreasing net NPA ratio and higher trend of capital adequacy ratio. Results also found that advances to assets, liquid assets to total assets and G-Secs to Total Assets have a significant positive relation with profitability, Ratios of advances to assets, liquid assets to total assets and G-Secs to total assets have a positive relation with the net worth, Advances to Assets and G-Secs to Total Assets have a significant positive relation with the dependent variable Return on Assets (ROA). Total Investments to Total Assets has exhibited a positive relation with the dependent variable ROA.

## NEED OF THE STUDY

Gold loan business model was very old in India but in an unorganized way. Last couple of years witnessed the entry of corporates and market share of organized players are growing very rapidly. Therefore, its health is very critical to the wellbeing of the general economy at large. Health of gold loan companies can be judged in terms of financial performance, which is affected by some internal and external factors. Internal factors remaining under the control of management their impact can be obtained in desired manner by strategically planning for them. External factors are not under the control of management rather they have to change their strategy according to the external environment in which they operate. Knowledge of the external factors that influence the financial performance is therefore, essential not only for the management of the companies, but also for numerous stakeholders. Understanding the role of these external factors and their finding impact on profitability would be helpful for the regulators and gold loan companies' management to improve their future course of action.

## RESEARCH OBJECTIVES

- To explore the external determinants affecting the financial performance of selected listed gold loan companies in India.
- To evaluate the impact of external determinants on the financial performance of selected listed gold loan companies in India.

## RESEARCH METHODOLOGY

### THE STUDY

The study is exploratory and empirical in nature. The study relates to analysis of the impact of external determinants or external factors on profitability of selected listed gold loan companies in India. Impact of external factors determinants i.e., Gross Domestic Product (GDP), Inflation and Real Interest Rate (RIL) was judged on profitability.

### KEY VARIABLES

#### DEPENDENT VARIABLE

A dependent variable is a variable which is measured in the experiment and which is affected during the experiment. The dependent variable responds to the independent variable. It is called dependent because it 'depends' on the independent variable. The study applies one dependent variable which is Profitability. Two measures of profitability were undertaken namely, Return on Equity (ROE) and Return on Assets (ROA).

#### INDEPENDENT VARIABLE

A manipulated variable in an experiment or study whose presence or degree determines the change in the dependent variable is called as independent variable. The study employed following three external determinants: Gross Domestic Product (GDP); Inflation and Real Interest Rate (RIL).

### STUDY SAMPLE

Muthoot Finance Ltd. and Manappuram Finance Ltd. both the listed were considered as sample gold loan companies to represent gold loan non-banking financial companies (NBFCs). The period of the study was 5 years (2009-2010 to 2013-2014). Thus it had 5 observations for each measure.

### DATA COLLECTION

The data and necessary information was gathered from secondary sources such as financial statements and balance sheets of the selected banks for the study period. In addition, the data was also collected from Annual Reports, Books, research papers, articles, journals, Internet, etc.

### STATISTICAL TOOLS

Statistical tools such as Correlation and Multiple Linear Regression were used to derive the relationship and find significant effect of bank specific determinants on profitability. The Breusch Pagan / Cook-Weisberg test, Volatility Index Factor (VIF) and Durbin-Watson Tests were applied to deal with the problems of Heteroscedasticity, Multicollinearity and Autocorrelation respectively. SPSS 21 and Stata 14 software was used for data analysis. The details of them are as follows:

### CORRELATION

The degree to which two or more attributes or measurement on the same group of elements show tendency to vary together. (<http://dictionary.reference.com/browse/correlation>)

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

### MULTIPLE LINEAR REGRESSIONS

Following 2 models of multiple regression analysis were used to analyze the impact of bank specific determinants on the ROE and ROA.

**Model 1** ROA =  $\beta_0 + \beta_1 \text{GDP} + \beta_2 \text{Inflation} + \beta_3 \text{RIL} + \text{ut}$

**Model 2** ROE =  $\beta_0 + \beta_1 \text{GDP} + \beta_2 \text{Inflation} + \beta_3 \text{RIL} + \text{ut}$



Where;

ROE = Return on Equity  
 ROA = Return on Assets  
 $\beta_0$  = Intercept  
 GDP = Gross Domestic Product  
 Inflation = Inflation  
 RII = Real Interest Rate  
 ut = Error term.

The above mentioned terms are measured as follows:

ROA = Net Profit / Total Assets  
 ROE = Net profit / Stockholders' Equity.  
 GDP = Annual Growth Rate of Gross Domestic Product  
 Inflation = Annual Change in Wholesale Price Index  
 RII = Real Interest Rate

#### HYPOTHESIS

In developing hypothesis, main goal was to find whether the three independent variables namely Asset Quality, Liquidity and Deposit had significant impact on the dependent variable namely, Profitability. For hypothesis formation taking their measures independently, the respective Null and Alternative Hypotheses are as follows:

**H01:** There exists an insignificant impact of Gross Domestic Product (GDP), Inflation and Real Interest Rate (RII) on Return on Asset (ROA).

**H11:** There exists a significant impact of Gross Domestic Product (GDP), Inflation and Real Interest Rate (RII) on Return on Asset (ROA).

**H02:** There exists an insignificant impact of Gross Domestic Product (GDP), Inflation and Real Interest Rate (RII) on Return on Equity (ROE)

**H12:** There exists a significant impact of Gross Domestic Product (GDP), Inflation and Real Interest Rate (RII) on Return on Equity (ROE).

## RESULTS AND INTERPRETATION

TABLE 1: CORRELATION MATRIX REGARDING ROA

		ROA	GDP	Inflation	RII
ROA	Pearson Correlation	1	.878	.334	-.541
	Sig. (2-tailed)		.050	.583	.346
	N	5	5	5	5
GDP	Pearson Correlation	.878	1	.018	-.491
	Sig. (2-tailed)	.050		.978	.401
	N	5	5	5	5
Inflation	Pearson Correlation	.334	.018	1	-.765
	Sig. (2-tailed)	.583	.978		.132
	N	5	5	5	5
RII	Pearson Correlation	-.541	-.491	-.765	1
	Sig. (2-tailed)	.346	.401	.132	
	N	5	5	5	5

#### MODEL 1

##### CORRELATION

Referring to the Table 1 Correlation Matrix Regarding ROA, it was found that there was an insignificant positive correlation (0.878 at 5% level of significance) between: yearly growth rate of Gross Domestic Product (GDP) and ROA. It showed that if GDP increases then ROA will also increase and, vice versa. It seems very rationale too; if GDP increases then more capital required for business expansion and gold work as collateral asset, which ultimately increase the business of gold loan companies and turnout to be greater profitability for companies. There was an insignificant positive correlation (0.334 at 5% level of significance) between: yearly growth rate of Wholesale Price Index (Inflation) and ROA. It revealed that if inflation increases then ROA will also increase and vice versa. If inflation increases then interest rate also increases due to which lending rates are also on higher side which ultimately enhances the profitability of companies. There was an insignificant negative correlation (-0.747 at 1% level of significance) between: yearly Real Interest Rate and ROA. It implied that if real interest rate increases then ROA will decrease and vice versa. Results revealed that cost of funds increases if real interest rate increases which ultimately deprive profitability measure i.e. ROA.

##### REGRESSION MODEL

TABLE 2: HETEROSKEDASTICITY TEST FOR ROA MODEL

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of ROA
chi2 (1) = 1.28
Prob > chi2 = 0.2572

TABLE 3: REGRESSION MODEL SUMMARY<sup>a</sup> OF ROA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.981 <sup>a</sup>	.963	.851	.4359829	.963	8.641	3	1	.244	2.199

a. Predictors: (Constant), RII, GDP, Inflation

b. Dependent Variable: ROA

TABLE 4: ANALYSIS OF VARIANCE (ANOVA) FOR ROA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.928	3	1.643	8.641	.244 <sup>b</sup>
	Residual	.190	1	.190		
	Total	5.118	4			

a. Dependent Variable: ROA

b. Predictors: (Constant), RII, GDP, Inflation

TABLE 5: COEFFICIENT OF REGRESSION MODEL OF ROA

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	-4.805		-1.592	.357	-43.143	33.534		
	GDP	.656	.156	4.198	.149	-1.329	2.640	.451	2.217
	Inflation	.399	.183	2.178	.274	-1.927	2.724	.247	4.051
	RII	.482	.308	1.563	.362	-3.436	4.400	.187	5.335

As per Table 5 Coefficients of Regression Model of ROA, the values of Volatility Index Factor (VIF) (Collinearity Statistics) is greater than .10 and less than 10, for GDP (2.217), Inflation (4.051) and RII (5.335). It implied that the problem of multicollinearity did not exist among the independent variables. Hence, their selection as independent variables stood justified and moreover they worked independently without being affected by each other. As per Table 3 Regression Model Summary of ROA, (Annexed herewith), value of Durbin Watson Test was 2.199. The calculated value was approximately closer to the standard value 2; it implied that the problem of autocorrelation did not exist. According to Table 2 p-value of Breusch-Pagan / Cook-Weisberg test was .2572. As the p-value > 0.05, null hypothesis is not rejected. Hence, it can be concluded that there is no heteroskedasticity in dataset. As per Table 3, Regression Model Summary of ROA (Annexed herewith), the adjusted R-square (.851 or 85.1%), so 85.1% of the variation in the dependent variable (ROA) was explained by the independent variables (GDP, Inflation, and RII). This implied that the model so applied was good fit. As per Table 4 Analysis of Variance (ANOVA) for ROA (Annexed herewith), calculated Probability Value was .244 (at 5% level of significance) which was greater than .05; hence was insignificant. So, Null Hypothesis **H01**: There exists an insignificant impact of Gross Domestic Product (GDP), Inflation and Real Interest Rate (RII) on Return on Asset (ROA) was accepted and Alternative Hypothesis **H11**: There exists a significant impact of Gross Domestic Product (GDP), Inflation and Real Interest Rate (RII) on Return on Asset (ROA) was rejected.

The Regression Model (1) was as follows:

$$ROA = -4.805 + .656 \text{ GDP} + .399 \text{ Inflation} + .482 \text{ RII} + ut$$

As per Table 9 Coefficients of Regression Model of ROA, (Annexed herewith) analysis showed that Gross Domestic Product (GDP) (.656), Inflation (.399), and Real Interest Rate (RII) (+.482) were positively affecting ROA with Constant -4.805 and ut. If GDP increases than overall credit requirement in the economy also increases and business of gold loan companies enhances, which ultimately increases ROA. Inflation and Real Interest Rate directly affect the lending rates, if it increases than margin of companies also increases and improves the profitability.

TABLE 6: CORRELATION MATRIX REGARDING ROE

		ROE	GDP	Inflation	RII
ROE	Pearson Correlation	1	.920*	.294	-.591
	Sig. (2-tailed)		.027	.632	.294
	N	5	5	5	5
GDP	Pearson Correlation	.920*	1	.018	-.491
	Sig. (2-tailed)	.027		.978	.401
	N	5	5	5	5
Inflation	Pearson Correlation	.294	.018	1	-.765
	Sig. (2-tailed)	.632	.978		.132
	N	5	5	5	5
RII	Pearson Correlation	-.591	-.491	-.765	1
	Sig. (2-tailed)	.294	.401	.132	
	N	5	5	5	5

\*. Correlation is significant at the 0.05 level (2-tailed).

## MODEL 2

### CORRELATION

Referring to the Table 6 Correlation Matrix Regarding ROE, it was found that there was a significant positive correlation (0.920 at 5% level of significance) between: yearly growth rate of Gross Domestic Product (GDP) and ROE. It showed that if GDP increases than ROE will also increase and, vice versa. It seems very rationale too; if GDP increases than more capital required for business expansion and gold work as collateral asset, which ultimately increase the business of gold loan companies and turn out to be greater profitability for companies. There was an insignificant positive correlation (0.294 at 5% level of significance) between: yearly growth rate of Wholesale Price Index (Inflation) and ROE. It revealed that if inflation increases than ROE will also increase and vice versa. If inflation increases than interest rate also increases due to which lending rates are also on higher side which ultimately enhances the profitability of companies. There was an insignificant negative correlation (-0.591 at 5% level of significance) between: yearly Real Interest Rate and ROE. It implied that if real interest rate increases than ROE will decrease and vice versa. Results revealed that cost of funds increases if real interest rate increases which ultimately deprive profitability measure i.e. ROE.

### REGRESSION MODEL

TABLE 7: HETEROSKEDASTICITY TEST FOR ROE MODEL

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity	
Ho: Constant variance	
Variables: fitted values of ROA	
chi2 (1) = 1.28	
Prob > chi2 = 0.2501	

TABLE 8: REGRESSION MODEL SUMMARY<sup>B</sup> OF ROE

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
2	.974 <sup>a</sup>	.949	.797	4.8222499	.949	6.224	3	1	.285	2.199

a. Predictors: (Constant), RII, GDP, Inflation

b. Dependent Variable: ROE

TABLE 9: ANALYSIS OF VARIANCE (ANOVA) FOR ROE

Model		Sum of Squares	df	Mean Square	F	Sig.
2	Regression	434.219	3	144.740	6.224	.285 <sup>b</sup>
	Residual	23.254	1	23.254		
	Total	457.474	4			

a. Dependent Variable: ROE

b. Predictors: (Constant), RII, GDP, Inflation

TABLE 10: COEFFICIENT OF REGRESSION MODEL OF ROE

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
2	(Constant)	-34.926	33.374	-1.047	.486	-458.978	389.126		
	GDP	5.630	1.728	1.094	3.259	-16.323	27.583	.451	2.217
	Inflation	2.503	2.024	.561	1.236	-.23.218	28.224	.247	4.051
	RII	2.456	3.410	.375	.720	-40.876	45.788	.187	5.335

As per Table 10 Coefficients of Regression Model of ROE (Annexed herewith), the values of Volatility Index Factor (VIF) (Collinearity Statistics) is greater than .10 and less than 10, for GDP (2.217), Inflation (4.051) and RII (5.335). It implied that the problem of multicollinearity did not exist among the independent variables. Hence, their selection as independent variables stood justified and moreover they worked independently without being affected by each other. As per Table 8 Regression Model Summary of ROE, (Annexed herewith), value of Durbin Watson Test was 2.199. The calculated value was approximately closer to the standard value 2; it implied that the problem of autocorrelation did not exist. According to Table 7 p-value of Breusch-Pagan / Cook-Weisberg test was .2501. As the p-value > 0.05, null hypothesis is not rejected. Hence, it can be concluded that there is no heteroskedasticity in dataset. As per Table 8, Regression Model Summary of ROE (Annexed herewith), the adjusted R-square (.797 or 79.7%), so 79.7% of the variation in the dependent variable (ROE) was explained by the independent variables (GDP, Inflation, and RII). This implied that the model so applied was good fit. As per Table 9 Analysis of Variance (ANOVA) for ROE (Annexed herewith), calculated Probability Value was .285 (at 5% level of significance) which was greater than .05; hence was insignificant. So, Null Hypothesis **H02**: There exists an insignificant impact of Gross Domestic Product (GDP), Inflation and Real Interest Rate (RII) on Return on Equity (ROE) was accepted and Alternative Hypothesis **H12**: There exists a significant impact of Gross Domestic Product (GDP), Inflation and Real Interest Rate (RII) on Return on Equity (ROE) was rejected.

The Regression Model (2) was as follows:

$$ROA = -34.926 + 5.630GDP + 2.503 \text{ Inflation} + 2.456 \text{ RII} + ut$$

As per Table 10 Coefficients of Regression Model of ROA, (Annexed herewith) analysis showed that Gross Domestic Product (GDP) (5.630), Inflation (2.503), and Real Interest Rate (RII) (2.456) were positively affecting ROA with Constant -34.926 and ut. If GDP increases than overall credit requirement in the economy also increases and business of gold loan companies enhances, which ultimately increases ROA. Inflation and Real Interest Rate directly affect the lending rates, if it increases than margin of companies also increases and improves the profitability.

## DISCUSSION

Two regression models i.e., ROA and ROE were employed. ROA Model explained variation upto 96.3% and 85.1% according to R Square and Adjusted R Square respectively. ROE Model explained variation upto 94.9% and 79.7% according to R Square and Adjusted R Square respectively. It showed that both models were good fit. On comparison of the two models, based on the higher Explanatory Power (R Square and Adjusted R Square), ROA Model was more appropriate than ROE Model. Hence for judging internal factors affecting profitability of gold loan companies, ROA appeared as more appropriate and preferable model.

## SUGGESTIONS

Gold loan companies' financial performance had positive relationship with GDP, but companies should take adequate margin while lending against gold as collateral assets. Adequate margin will provide cushion against volatility of gold prices. Gold is considered as an inflation hedging asset and here inflation had positive relationship with financial performance. Companies should lend conservatively if inflation is decreasing, because if inflation decreases than demand for gold also decreases and price of gold assets cools down, which ultimately decreases the margin of safety. Firms need to manage risks related to possible sharp decreases in gold prices and also need to ensure that physical assets are properly valued and loan to value ratio have appropriate cushion for negative shocks. Firms need to invest in technology to enhance the risk management techniques.

## CONCLUSION

ROA had insignificant positive Correlation with Gross Domestic Product and Inflation. ROA had no positive significant Correlation with any variable. At the same time ROE had significant positive Correlation with Gross Domestic Product. ROE had insignificant negative Correlation with Real Interest Rate and insignificant positive correlation with ROE.

In case of Regression Model regarding predicting ROA, it was concluded that independent variable viz., Gross Domestic Product (GDP), Inflation and Real Interest Rate (RII) had positive impact on ROA. Regression model regarding predicting ROE, it was concluded that independent variable viz.; Gross Domestic Product (GDP), Inflation and Real Interest Rate (RII) had positive impact on ROE. Both Regression Models (ROE and ROA) are good fit to predict impact of external factors on profitability of gold loan companies. More over the two models employed i.e., ROE and ROA, revealed that ROA had better explanatory power and better fit model based on R Square and Adjusted R Square parameters.

## IMPLICATIONS

The research employs that ROE and ROA may be taken as dependent variable which can be predicted through taking different independent variables. Different financial performance measure may be considered for determining profitability. Comparatively Regression Model (ROA) has better predictability profitability.

## LIMITATIONS OF THE STUDY

Five years (2009-2010 to 2013-2014) data were considered for the research. 3 external factors were considered as sample for the study and internal factors were out of preview.

## FUTURE SCOPE OF THE STUDY

Larger time period may be considered as sample for more comprehensive results. More external factors can be considered for the future study purpose and to improve the models. Internal factors can also be incorporated for future research work. These models may also be useful to study the gold loan companies of different countries. The validation may be checked by applying the models for another period and another sample banks.

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# THE REASONS FOR FACULTY ATTRITION IN HIGHER EDUCATION INSTITUTIONS PROVIDING UG COURSES AND THEIR RETENTION STRATEGIES (WITH SPECIAL REFERENCE TO SELF-FINANCING COLLEGES IN THE CITY OF BANGALORE)

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## ABSTRACT

Attrition is reduction in the number of employees through retirement, resignation or death. There can be many reasons for an employee to leave an organisation: he may be getting higher job position in some other company or he may want to change his profession or he may leave an organisation for higher studies, dissatisfied work environment, lack of support and motivation, work stress and pressures etc. In the current scenario of high economic growth and rapid globalization, the fight for talent is becoming increasingly intense. An organisation/institution invest high amount of money for their recruitment, selection & training and if employees leave the job in short while seeking new opportunities it will lead to the loss of resources and time for the institution. This paper examines the reasons for the employee attrition with regard to the self-financing colleges in the city of Bangalore. This paper seeks to identify reasons that facilitate the attrition and suggest some of the retention strategies to reduce the turnover of faculties in higher education institutions.

## KEYWORDS

attrition, retention, self-financing colleges, turn-over, investment.

## INTRODUCTION

The Higher Education Institutions play an important role in the development of manpower required for the social, economic and technological advancement of any nation. By their unique nature Higher Educational Institutions are expected to be an inventory of the most specialized and skilled intellectuals. They serve as storehouses of knowledge for nurturing the manpower needs of the nation and hence for satisfying the aspirations of the people for a good and humane society. In this regard, the role faculties are crucial and their quality and effectiveness is very important for disseminating knowledge to the student community. No academic institution can really ensure sustainability and quality in the long run without a well-qualified and committed academic staff. Higher education institutions are therefore very much dependent on the intellectual and creative abilities and commitment of the academic staff than most other organizations.

Retention of employees in higher education institutions (HEIs) is a serious concern; the high turnover rate of academic staff poses a major challenge to these institutions. High employee turnover has grave implications for the quality, consistency, and stability of academic enterprises. Turnover can have detrimental effects on students and remaining academic staff members, who struggle to give and receive quality services, when positions are vacated and then filled by inexperienced personnel. This therefore makes it critically important to retain the Intellectual faculties.

## STATEMENT OF PROBLEM

In higher education institutions, which are considered the hub of knowledge, the retention of intellectual workers, commonly referred to as faculties has become a crucial issue. Increase in opportunities and global demands makes retaining scarce skills more difficult. The main drawback of this to the institution is that, it not only loses efficient faculties, but also may have to bear the replacement costs. Thus, it is necessary for the institution to identify why efficient faculties leave the job and retain them to achieve long term productivity and total quality.

## SCOPE OF THE STUDY

The Scope of the study is to identify the reasons for faculty attrition with special reference to self-financing colleges in the city of Bangalore. The study will be able to throw light on the retention strategies for retaining efficient and competitive intellectuals in the higher education institutions.

## OBJECTIVES OF THE STUDY

1. To study the reasons for faculty attrition.
2. To know the opinions of faculties about job satisfaction, support from management etc. that influence their stay in the institution.
3. To study the satisfaction of faculties about the opportunities provided by the institutions for research and professional growth, flexibility of work timings etc.
4. To offer suggestions for retaining the efficient and highly intellectual faculties.

## RESEARCH METHODOLOGY

### SAMPLING DESIGN

The technique that is used is questionnaire method.

The survey is done on faculties of around five self-financing colleges in the city of Bangalore.

The sample size for the proposed study = 50

### PERIOD OF THE STUDY

6 MONTHS

### SOURCES OF DATA COLLECTION

Both primary and secondary data has-been collected for the study.

**Primary data:** Primary data for the study is collected from the faculties through questionnaires.

**Secondary data:** The secondary data is the collected from various books, through internet from different search engines such as yahoo, Google etc.

### TOOLS AND TECHNIQUES APPLIED FOR THE JUSTIFICATION OF THE STUDY

The tools used for the purpose of collecting the primary data are questionnaires with about 6+22 questions. Chi-Square tests are applied to draw inferences about job security, flexible timings, work stress and pressures, health issues leading to faculty attrition in higher education institutions.

### LIMITATIONS OF THE STUDY

1. Since the study is limited to only few self-financing colleges in the city of Bangalore, it cannot be generalized to all higher education institutions.
2. It is not possible to cover all the self-financing colleges in the city of Bangalore.
3. There is further scope for study.

**DATA ANALYSIS**

The questionnaires containing about 6+22 questions were issued for 50 faculties from around five self-financing colleges in the city of Bangalore. The data was collected and analyzed with the help of tabular representation of facts.

**TABLE 1.1: TABLE SHOWING THE AGE DETAILS OF RESPONDENTS**

Age (in years)	No. Of Respondents	Percentage
20-30	23	46
30-40	20	40
40-50	06	12
50-60	01	02

**INFERENCE**

From the sample of 50 respondents, majority of the faculties are in the age group of 20-30 years i.e., around 46% of the faculties (respondents) are below 30 years of age.

**TABLE 1.2: TABLE SHOWING THE GENDER DETAILS OF RESPONDENTS**

Gender	No. Of Respondents	Percentage
Male	09	18
Female	41	82

**INFERENCE**

From the sample of 50 respondents, majority of the faculties i.e., around 82% are females.

**TABLE 1.3: TABLE SHOWING THE NO. OF YEARS OF WORK EXPERIENCE OF RESPONDENTS**

Experience (in years)	No. Of Respondents	Percentage
0-10	34	68
10-20	13	26
20-30	02	04
30-40	01	02

**INFERENCE**

From the sample of 50 respondents, majority of the faculties have an experience of 0-10 years i.e., around 68% of the faculties (respondents) have below 10 years of experience.

**TABLE 1.4: TABLE SHOWING THE DETAILS OF INCOME LEVEL OF RESPONDENTS**

Income Level (in Rupees)	No. Of Respondents	Percentage
Less than 2,00,000	08	16
2,00,000-3,00,000	14	28
3,00,000-4,00,000	26	52
Above 4,00,000	02	04

**INFERENCE**

From the sample of 50 respondents, income level of majority of the faculties is between Rs. 3,00,000 – Rs. 4,00,000 per annum. i.e., around 52% of the respondents have an income of Rs. 3,00,000 – Rs. 4,00,000 per annum

**TABLE 1.5: TABLE SHOWING THE DETAILS OF ACADEMIC DESIGNATION OF FACULTIES**

Academic Designation	No. Of Respondents	Percentage
Asst. Professor	29	58
Professor	02	04
Lecturer	19	38

**INFERENCE**

From the sample of 50 respondents, majority i.e., 58% of the faculties are Assistant Professors.

**TABLE 1.6: TABLE SHOWING THE DETAILS OF ACADEMIC DEPARTMENT OF RESPONDENTS**

Academic Departments	No. Of Respondents	Percentage
Commerce	20	40
Management	13	26
Social Sciences/Humanities	07	14
Science	10	20

**INFERENCE**

From the sample of 50 respondents, majority i.e., 40% of the faculties belong to the Commerce Department.

**TABLE 1.7: TABLE SHOWING THE REASONS FOR CHOOSING TEACHING PROFESSION BY THE RESPONDENTS**

Reason	No. Of Respondents	Percentage
Choice	37	74
Chance	06	12
Family	04	08
Others	03	06

**INFERENCE**

From the sample of 50 respondents, majority i.e., 74% of the faculties are in the teaching profession by choice.

**TABLE 1.8: TABLE SHOWING THE REASONS FOR CHOOSING THE INSTITUTION IN WHICH THE RESPONDENTS ARE CURRENTLY EMPLOYED**

Reason	No. Of Respondents	Percentage
Distance from residence	14	28
Opportunity for professional growth	21	42
Monetary benefits	06	12
Work environment and Culture	06	12
Others	03	06



## INFERENCE

From the above table it is inferred that majority i.e., of the respondents have chosen teaching profession for the reason that there is opportunity for professional growth.

**TABLE 1.9: TABLE SHOWING THE OPINION OF RESPONDENTS REGARDING MOTIVATING WORK ENVIRONMENT**

Opinion	No. Of Respondents	Percentage
Strongly Agree	15	30
Agree	28	56
Disagree	05	10
Strongly Disagree	02	04

## INFERENCE

Majority of the faculties have responded positively about the motivating work environment in the currently employed institution. The above analysis shows that 28 respondents i.e., 56% of respondents agree that the work environment prevailing in the institution is motivating them to work efficiently.

**TABLE 1.10: TABLE SHOWING THE OPINION OF RESPONDENTS REGARDING ENCOURAGEMENT AND SUPPORT RECEIVED FROM HOD, SENIORS AND MANAGEMENT**

Opinion	No. Of Respondents	Percentage
Strongly Agree	14	28
Agree	32	64
Disagree	02	04
Strongly Disagree	02	04

## INFERENCE

Majority of the faculties have responded positively about the encouragement and support from HOD, seniors and Management in the currently employed institution. The above analysis shows that 32 respondents i.e., 64% of respondents agree that the HOD, seniors and Management support is encouraging them to pursue employment in the institution in which they are presently employed.

**TABLE 1.11: TABLE SHOWING THE OPINION OF RESPONDENTS REGARDING MOTIVATING MONETARY BENEFITS AND REWARD SYSTEM IN THE CURRENTLY EMPLOYED INSTITUTION**

Opinion	No. Of Respondents	Percentage
Strongly Agree	06	12
Agree	33	66
Disagree	10	20
Strongly Disagree	01	02

## INFERENCE

Majority of the faculties have responded positively about the motivating monetary benefits and reward system in the currently employed institution. The above analysis shows that 33 respondents i.e., 66% of respondents agree that the monetary benefits and the reward system is the reason for them to pursue work in the institution in which they are presently employed.

**TABLE 1.12: TABLE SHOWING THE OPINION OF RESPONDENTS REGARDING EFFICIENT TRAINING AND DEVELOPMENT PROGRAMMES CONDUCTED IN THE CURRENTLY EMPLOYED INSTITUTION**

Opinion	No. Of Respondents	Percentage
Strongly Agree	10	20
Agree	33	66
Disagree	06	12
Strongly Disagree	01	02

## INFERENCE

Majority of the faculties have responded positively about the efficient training and development programmes conducted in the currently employed institution. The above analysis shows that 33 respondents i.e., 66% of respondents agree that the training and development programmes provided by the institution is enhancing skills to meet the challenges in the present education system.

**TABLE 1.13: TABLE SHOWING THE OPINION OF RESPONDENTS REGARDING FAIR AND IMPARTIAL CONSIDERATION TO FACULTIES IN THE CURRENTLY EMPLOYED INSTITUTION**

Opinion	No. Of Respondents	Percentage
Strongly Agree	12	24
Agree	26	52
Disagree	13	26
Strongly Disagree	04	08

## INFERENCE

Majority of the faculties have responded positively about the fair and impartial consideration to them in the currently employed institution. The above analysis shows that 26 respondents i.e., 52% of respondents agree that they are fairly and impartially treated by the management.

**TABLE 1.14: TABLE SHOWING THE OPINION OF RESPONDENTS REGARDING SATISFACTION ABOUT THE JOB IN THE CURRENTLY EMPLOYED INSTITUTION**

Opinion	No. Of Respondents	Percentage
Strongly Agree	18	36
Agree	21	42
Disagree	11	22
Strongly Disagree	00	00

## INFERENCE

The faculties have responded positively about the job satisfaction in the currently employed institution. The above analysis shows that 21 respondents i.e., 42% of respondents agree that they are happy and satisfied with the job in the institution in which they are presently employed.

**TABLE 1.15: TABLE SHOWING THE OPINION OF RESPONDENTS REGARDING GOOD OPPORTUNITY PROVIDED BY THE INSTITUTION FOR THE PROFESSIONAL GROWTH AND DEVELOPMENT**

Opinion	No. Of Respondents	Percentage
Strongly Agree	16	32
Agree	22	44
Disagree	11	22
Strongly Disagree	01	02

**INFERENCE**

The faculties have responded positively about the opportunity provided by the currently employed institution for the professional growth. The above analysis shows that 22 respondents i.e., 44% of respondents agree that the institution in which they are employed provides them good opportunity for their professional growth.

**TABLE 1.16: TABLE SHOWING THE OPINION OF RESPONDENTS REGARDING THE CONSIDERATION FOR SUGGESTIONS OF FACULTIES BY THE INSTITUTION**

Opinion	No. Of Respondents	Percentage
Strongly Agree	06	12
Agree	28	56
Disagree	15	30
Strongly Disagree	01	02

**INFERENCE**

Majority of the faculties have responded positively about the consideration for their suggestions by the currently employed institution. The above analysis shows that 28 respondents i.e., 56% of respondents agree that their suggestions are valued and considered.

**TABLE 1.17: TABLE SHOWING THE OPINION OF RESPONDENTS REGARDING SUFFICIENT OPPORTUNITIES PROVIDED BY THE INSTITUTION TO PROVE THEIR SKILLS, KNOWLEDGE AND TALENT**

Opinion	No. Of Respondents	Percentage
Strongly Agree	16	32
Agree	28	56
Disagree	06	12
Strongly Disagree	00	00

**INFERENCE**

Majority of the faculties have responded positively about the opportunities provided by the institution to prove their skills, knowledge and talent. The above analysis shows that 28 respondents i.e., 56% of respondents agree that they are provided with sufficient opportunities to prove their skills, talent and knowledge.

**TABLE 1.18: TABLE SHOWING THE OPINION OF RESPONDENTS WITH REGARD TO ACHIEVEMENT OF WORK LIFE BALANCE**

Opinion	No. Of Respondents	Percentage
Strongly Agree	07	14
Agree	26	52
Disagree	18	36
Strongly Disagree	04	08

**INFERENCE**

Majority of the faculties have responded positively about work life balance. The above analysis shows that 26 respondents i.e., 52% of respondents agree that they are able to achieve work life balance.

**TABLE 1.19: TABLE SHOWING THE OPINION OF RESPONDENTS REGARDING OPTIMUM MOTIVATION AND SUPPORT RECEIVED FROM THE WORK ENVIRONMENT**

Opinion	No. Of Respondents	Percentage
Strongly Agree	04	08
Agree	29	58
Disagree	15	30
Strongly Disagree	02	04

**INFERENCE**

Majority of the faculties have responded positively about the motivation and support received from the work environment. The above analysis shows that 29 respondents i.e., 58% of respondents agree that they receive optimum motivation and support from the work environment prevailing in the currently employed institution.

**TABLE 1.20: TABLE SHOWING THE OPINION OF RESPONDENTS REGARDING JOB SECURITY IN THE INSTITUTION**

Opinion	No. Of Respondents	Percentage
Strongly Agree	05	10
Agree	17	34
Disagree	18	36
Strongly Disagree	10	20

**INFERENCE**

The faculties have responded negatively about the job security provided by the institution. The above analysis shows that 18 respondents i.e., 36% of respondents are under the opinion that the institution in which they are currently employed does not ensure job security.

**TABLE 1.21: TABLE SHOWING THE OPINION OF RESPONDENTS REGARDING SUFFICIENT TEACHING RESOURCES AND RESEARCH OPPORTUNITIES PROVIDED BY THE INSTITUTION TO ENHANCE PROFESSIONAL GROWTH**

Opinion	No. Of Respondents	Percentage
Strongly Agree	07	14
Agree	32	64
Disagree	09	18
Strongly Disagree	02	04

**INFERENCE**

Majority of the faculties have responded positively about the teaching resources and research opportunities provided by the institution. The above analysis shows that 32 respondents i.e., 64% of respondents agree that the institution provides them with sufficient teaching resources and research opportunities to enhance professional growth.

TABLE 1.22: TABLE SHOWING THE OPINION OF RESPONDENTS REGARDING FLEXIBILITY OF WORK TIMINGS

Opinion	No. Of Respondents	Percentage
Strongly Agree	05	10
Agree	16	32
Disagree	12	24
Strongly Disagree	17	34

## INFERENCE

The faculties have responded negatively about flexibility of work timings in the institution in which they are currently employed. The above analysis shows that 17 respondents i.e., 34% of respondents strongly agree and 12 respondents i.e., 24% of respondents agree that their institution does not provide flexibility of work timings.

TABLE 1.23: TABLE SHOWING THE OPINION OF RESPONDENTS REGARDING CHALLENGING AND MOTIVATING WORK IN THE CURRENTLY EMPLOYED INSTITUTION

Opinion	No. Of Respondents	Percentage
Strongly Agree	13	26
Agree	29	58
Disagree	08	16
Strongly Disagree	00	00

## INFERENCE

Majority of the faculties have responded positively about the challenging and motivating work in the institution in which they are currently employed. The above analysis shows that 29 respondents i.e., 58% of respondents agree that the work in the institution is challenging and motivating.

TABLE 1.24: TABLE SHOWING THE OPINION OF RESPONDENTS REGARDING CO-OPERATION AND INTEREST IN LEARNING SHOWED BY THE STUDENTS

Opinion	No. Of Respondents	Percentage
Strongly Agree	04	08
Agree	28	56
Disagree	13	26
Strongly Disagree	05	10

## INFERENCE

Majority of the faculties have responded positively about the co-operation and interest in learning showed by students. The above analysis shows that 28 respondents i.e., 56% of respondents agree that the students co-operate and show great interest in learning.

TABLE 1.25: TABLE SHOWING THE OPINION OF RESPONDENTS REGARDING EQUALITY IN DISTRIBUTION OF WORKLOAD

Opinion	No. Of Respondents	Percentage
Strongly Agree	09	18
Agree	27	54
Disagree	11	22
Strongly Disagree	03	06

## INFERENCE

Majority of the faculties have responded positively about equal distribution of work load. The above analysis shows that 27 respondents i.e., 54% of respondents agree that the work load is equally distributed.

TABLE 1.26: TABLE SHOWING THE OPINION OF RESPONDENTS REGARDING MOTIVATING TEACHING STANDARDS IN THE CURRENT EDUCATION SYSTEM

Opinion	No. Of Respondents	Percentage
Strongly Agree	10	20
Agree	27	54
Disagree	09	18
Strongly Disagree	04	08

## INFERENCE

Majority of the faculties have responded positively about teaching standards prevailing in the current education system. The above analysis shows that 27 respondents i.e., 54% of respondents agree that the teaching standards present in the current education system is motivating them to pursue teaching.

TABLE 1.27: TABLE SHOWING THE OPINION OF RESPONDENTS REGARDING STRESS AND WORK PRESSURES IN THE CURRENTLY EMPLOYED INSTITUTION

Opinion	No. Of Respondents	Percentage
Strongly Agree	09	18
Agree	20	40
Disagree	12	24
Strongly Disagree	09	18

## INFERENCE

The faculties have responded that they feel over stressed because of workload and work pressures. The above analysis shows that 20 respondents i.e., 40% of respondents agree that the workload and work pressures in the institution is causing stress.

TABLE 1.28: TABLE SHOWING THE OPINION OF RESPONDENTS REGARDING HEALTH ISSUES DUE TO STRESS AND WORK PRESSURES IN THE CURRENTLY EMPLOYED INSTITUTION

Opinion	No. Of Respondents	Percentage
Strongly Agree	09	18
Agree	17	34
Disagree	13	26
Strongly Disagree	11	22

## INFERENCE

The faculties have responded that the stress level and the work pressures are leading to health issues. The above analysis shows that 17 respondents i.e., 34% of respondents agree that the workload and work pressures in the institution is causing health issues.

The following Chi-Square test represents relationship between Faculty Attrition and Job Security

TABLE 1.29: TABLE SHOWING THE DETAILS OF OBSERVED COUNT AND EXPECTED COUNT OF OPINION OF FACULTIES REGARDING JOB SECURITY PROVIDED BY THE INSTITUTION

Opinion	Observed Count (%)	Expected Count (%)
Strongly Agree	10	25
Agree	34	25
Disagree	36	25
Strongly Disagree	20	25

**Hypothesis**

The null hypothesis is,

Ho: There is no relationship between faculty attrition and job security.

The alternative hypothesis is,

H1: There is relationship between faculty attrition and job security.

TABLE 1.30: TABLE SHOWING THE CALCULATION OF CHI-SQUARE TEST STATISTIC REGARDING JOB SECURITY

O	E	2 (O-E)	2 (O-E) / E
10	25	225	9.00
34	25	081	3.24
36	25	121	4.84
20	25	025	1.00
Total			18.08

The Chi-Square test statistic

$\chi^2 = \sum \frac{(O-E)^2}{E} = 18.08$

The degrees of freedom = (n-c)

= 4-1

= 3.

Tabulated value of 4 degrees of freedom at 5% level of significance = 7.81 (critical value)

The test statistic 18.08 is > 7.81.

Hence Ho is rejected and H1 is accepted

**INFERENCE**

There is relationship between faculty attrition and job security.

The following Chi-Square test represents relationship between Faculty Attrition and Flexibility of Work Timings

TABLE 1.31: TABLE SHOWING THE DETAILS OF OBSERVED COUNT AND EXPECTED COUNT OF OPINION OF FACULTIES REGARDING FLEXIBILITY OF WORK TIMINGS PROVIDED BY THE INSTITUTION

Opinion	Observed Count (%)	Expected Count (%)
Strongly Agree	10	25
Agree	32	25
Disagree	24	25
Strongly Disagree	34	25

**Hypothesis**

The null hypothesis is,

Ho: There is no relationship between faculty attrition and flexibility of work timings.

The alternative hypothesis is,

H1: There is relationship between faculty attrition and flexibility of work timings.

TABLE 1.32: TABLE SHOWING THE CALCULATION OF CHI-SQUARE TEST STATISTIC REGARDING FLEXIBILITY OF WORK TIMINGS

O	E	2 (O-E)	2 (O-E) / E
10	25	225	9.00
32	25	049	1.96
24	25	001	0.04
34	25	081	3.24
Total			14.24

The Chi-Square test statistic

$\chi^2 = \sum \frac{(O-E)^2}{E} = 14.24$

The degrees of freedom = (n-c)

= 4-1

= 3.

Tabulated value of 4 degrees of freedom at 5% level of significance = 7.81 (critical value)

The test statistic 14.24 is > 7.81.

Hence Ho is rejected and H1 is accepted

**INFERENCE**

There is relationship between faculty attrition and flexibility of work timings.

The following Chi-Square test represents relationship between Faculty Attrition and Work Stress and Pressures

TABLE 1.33: TABLE SHOWING THE DETAILS OF OBSERVED COUNT AND EXPECTED COUNT OF OPINION OF FACULTIES REGARDING WORK STRESS AND PRESSURES IN THE INSTITUTION

Opinion	Observed Count (%)	Expected Count (%)
Strongly Agree	18	25
Agree	40	25
Disagree	24	25
Strongly Disagree	18	25

#### Hypothesis

The null hypothesis is,

Ho: There is no relationship between faculty attrition and work stress and pressures.

The alternative hypothesis is,

H1: There is relationship between faculty attrition and work stress and pressures.

TABLE 1.34: TABLE SHOWING THE CALCULATION OF CHI-SQUARE TEST STATISTIC REGARDING WORK STRESS AND PRESSURES

O	E	2 (O-E)	2 (O-E) / E
18	25	049	1.96
40	25	225	9.00
24	25	001	0.04
18	25	049	1.96
Total			12.96

The Chi-Square test statistic

$\chi^2$

$$\chi^2 = \sum (O-E)^2 / E = 12.96$$

The degrees of freedom = (n-c)

= 4-1

= 3.

Tabulated value of 4 degrees of freedom at 5% level of significance = 7.81 (critical value)

The test statistic 12.96 is > 7.81.

Hence Ho is rejected and H1 is accepted

#### INFERENCE

There is relationship between faculty attrition and work stress and pressures.

The following Chi-Square test represents relationship between Faculty Attrition and Health Issues due to Work Stress

TABLE 1.35: TABLE SHOWING THE DETAILS OF OBSERVED COUNT AND EXPECTED COUNT OF OPINION OF FACULTIES REGARDING HEALTH ISSUES DUE TO WORK STRESS

Opinion	Observed Count (%)	Expected Count (%)
Strongly Agree	18	25
Agree	34	25
Disagree	26	25
Strongly Disagree	22	25

#### Hypothesis

The null hypothesis is,

Ho: There is no relationship between faculty attrition and health issues due to work stress

The alternative hypothesis is,

H1: There is relationship between faculty attrition and health issues due to work stress

TABLE 1.22: TABLE SHOWING THE CALCULATION OF CHI-SQUARE TEST STATISTIC REGARDING HEALTH ISSUES

O	E	2 (O-E)	2 (O-E) / E
18	25	049	1.96
34	25	081	3.24
26	25	001	0.04
22	25	009	0.36
Total			5.60

The Chi-Square test statistic

$\chi^2$

$$\chi^2 = \sum (O-E)^2 / E = 5.60$$

The degrees of freedom = (n-c)

= 4-1

= 3.

Tabulated value of 4 degrees of freedom at 5% level of significance = 7.81 (critical value)

The test statistic 5.60 is < 7.81.

Hence Ho is accepted and H1 is rejected.

#### INFERENCE

There is no relationship between faculty attrition and health issues.

#### FINDINGS

1. Majority of the respondents are in the age group of 20-30 years and are female faculties
2. Majority (68%) of the faculties have an experience of less than 10 years.
3. The income level of 52% of the respondents is between Rs. 3,00,000 to Rs. 4,00,000 per annum.
4. Majority of the respondents are assistant professors.
5. Majority of the respondents are commerce faculties.

6. Majority (74%) of the respondents are in the teaching profession by choice and for the reason that there is opportunity for professional growth.
7. Majority of the faculties have responded positively about the work environment and support from HOD, seniors and management.
8. Majority of the faculties have responded positively about the monetary benefits and training and development programmes provided by the institution.
9. Majority of the faculties have responded positively about the fair and impartial treatment in the institution.
10. Majority of the respondents are happy and satisfied with their job and also have responded positively about the opportunity for professional growth provided by the institution in which they are currently employed.
11. Majority of the faculty have responded positively about the considerations for their suggestions, skills, talents and knowledge.
12. Majority of the respondents are able to achieve work-life balance.
13. Majority of the faculties have responded positively about the sufficient teaching resources and research opportunities in the institution.
14. Majority of the faculties have responded that the work in the currently employed institution is challenging and motivating
15. Majority of the faculties have positively responded about the interest for learning and co-operation from students.
16. Majority of the faculties have positively responded about the equal distribution of workload in the currently employed institution and teaching standards in the present education system.
17. Majority of the respondents are under the opinion that the institution in which they are currently employed does not ensure job security.
18. Majority of the faculties have responded that the workload and work pressures in the institution is causing stress.
19. Majority of the respondents are under the opinion that the institution in which they are currently employed does not provide flexibility of work timings.
20. Majority of the faculties have responded that the workload and work pressures in the institution is causing health issues.
21. The Chi-Square test reveals that there is relationship between faculty attrition and
  - (a) Job security
  - (b) Flexibility of work timings
  - (c) Work pressures and stress.
22. The Chi-Square test also reveals that, there is no relationship between health issues and faculty attrition.

### SUGGESTIONS / RETENTION STRATEGY

1. The educational institutions may organise one/two-day trip to faculties to relieve them from work stress/work pressures.
2. The educational institutions should ensure job security to the faculties.
3. The educational institutions should provide at least little flexibility in work timings.
4. Faculties may be motivated to participate in sports and cultural activities exclusively conducted for them in the campus.
5. Working environment may be improved to retain the faculties.
6. The institutions may initiate such programmes and education for faculties that builds confidence and motivates them for excellent performance.
7. Management should implement a democratic management style in order to reduce the job attrition.
8. Repeated Work should be avoided.
9. Provide opportunities for career development.
10. Ensure support and encouragement in all professional respects.
11. Provide adequate monetary benefits and devise a reward system for motivating efficient faculties.
12. Encourage research and development activities.
13. Encourage technology oriented teaching-learning process in the institution which may motivate faculties to continue teaching.
14. The institutions should organise faculty development programmes to boost the faculties with enhanced teaching methodology.

### CONCLUSION

Attrition is an issue that can be found in many self-financed educational institutions today, but escaping this issue is not a concept that is unattainable. From research, and as reflected in this paper, Attrition can be drastically reduced by simply gaining the commitment and dedication from faculties.

In this study, we have examined the reasons for faculty attrition and their retention strategies. The study revealed that, no assurance from the institutions about the job security, inflexible work timings, work stress and pressures are the main reasons for the faculty attrition in the self-financing colleges at Bangalore.

Therefore, the educational institutions must pay attention on reducing stress, ensuring job security, providing flexibility of work timings and do such other things to make the faculties feel committed and dedicated, which reduces attrition level. And retention of highly intellectual faculties helps an institution to achieve overall productivity and total quality.

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**A PROFILE OF THE GIRL CHILD IN INDIA**

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**ABSTRACT**

*The girl child is a valuable asset of a nation. She is our future. She is to be protected against discrimination in education, skill development and training so that she is able to lead a life free from all forms of discrimination. She has been facing many problems in her life such as early marriage, malnutrition, child abuse, trafficking, physical assault, kidnapping etc. These have been distorting the demographic, health, education and social status of the girl child. She has the potential to become leaders. All the present forms of discrimination against her has to be curtailed by taking stringent action by the government and the mindset of the people should change for the good. A girl child today is a tomorrows woman. So protect her and uplift her in all walks of life.*

**KEYWORDS**

girl child, economic distortions, discrimination.

**INTRODUCTION**

India with 1.21 billion is ranked second most populous country in the world. Its child population represents 39% of the total population of the country. The total population of the girl child between 0-14 years constitutes 19% and 40% of the entire woman in the country. The girl child is a valuable asset of the nation. She is to be protected against discrimination in education, skill development and training so that she is able to lead a life free from all forms of discrimination. She has been facing many problems in her life such as early marriage, malnutrition, child abuse, trafficking, physical assault, kidnapping etc. These have been distorting the demographic, health, education and social status of the girl child. She has the potential to become leaders.

India celebrates 24<sup>th</sup> January of every year as the National Girl child's Day. The idea is to create awareness among people for the need to support and provide opportunities for the girl child as she is the unit of reproduction and family whose well-being strengthens the social and economic fabric of our country. With this background the current study focuses on the following objectives.

**OBJECTIVES OF THE STUDY**

1. To sketch the demographic factors that distorts her status.
2. To portray the distortions in health factors.
3. To point out the disparities in education
4. To examine the distortions in the social front.

**METHODOLOGY**

The study is descriptive in nature and it is based on the secondary source of data published by various Census Reports, ILO Reports and Statistics published by UN. The findings of the study are discussed as follows.

**DEMOGRAPHIC DISTORTIONS**

With India's population at 1.21 billion of whom 19% represents the total population of the girl child between 0-14 years of age. According to Census 1991-2011 child sex ratio declined from 945 females per 1000 males to 914 females per 1000 males. The drop in the child sex ratio has been largely due to sex selective abortion.

Up to 50 million girls are "missing" from India's population. Another factor contributing to low child sex ratio is the high under 5 mortality rates of girls in India. According to NFHS III girls have 61 % higher mortality than boys at the age of 1-4 years of age. Female foeticide is a critical concern in India. It has increased over the past few decades. There have been a total of 132 cases of foeticide reported in 2011. The highest number was registered in Madhya Pradesh followed by Chhattisgarh and Punjab which together reported 56% of the total foeticide in the past 20 years in the accounted for 10 million females tutors termination female mortality is higher 224 out of 400 districts in India.

**HEALTH DISTORTIONS**

Maternal mortality is the long term fall out of the neglect and deprivations undergone by the girl child. Out of 12 million girls born in India, 1 million die before their first birthday. Death rate among girls below the age of four years is higher than that of boys. Malnutrition begins with under nourish mothers giving birth to low weight girl child. The girl child grows stunted and underweight. Gender discrimination is the main reason for the persistent low levels of nutrition in India. One in every two girls in India is malnourished. Seventy four percent of India's children below the age of three months are anemic. Malnutrition has been the main reason for various deaths and diseases. Healthy and prosperous women hood depend on the health and nutrition status of girl child.

**DISPARITIES IN EDUCATION**

Education is an important tool for social empowerment. On the one hand it is a fundamental right of children on the other hand is the diminish prospects that girls have in education. This is mainly due to gender discrimination. Nearly 65 percent of the 121 million children of the world who are not in schools are girls. 53% of girls in age group of 5-9 years are illiterate in India. In India 37% of girls age 7-14 years of age belonged to the tribes do not attend school compared to 26% of the majority girls of the same age. Nearly 43 million girls are enrolled in schools, many others complete fewer than 6 years of schooling so the gap between boys and girls has widened. The school attendance of tribal girls is 9% points below that of tribal boys.

According to a recent independent study by majority of HRD an estimated 3.7% children in 6-10 years of age and 5.2% in 11-13 year of age were out of school. In terms of numbers about 8 million children in the age group of 6-13 years were out of school, about 6-7 million in rural and 1.3 million in urban areas. Even in the case of secondary school attendance there has been a sharp drop in attendance among girls. Early marriage, distance to school, lack of transport, attend household chores, lack of separate toilets for girls, no female teacher, lack of safety, had to take care of siblings were some of the reasons for the drop out stated by 1/3<sup>rd</sup> girls. As per Census 2011, the effective literacy rate is 63.07%. The literacy for males being 69.76% while 55.97% constitutes female literacy so the male-female gap is 13.79%. In spite of great progress in education over the years there still persist inequalities in terms of accessibility. As per the Annual State of Educational Report (2014) the trends in enrolment reflects a decline from 72.9% to 63.5% in rural areas. School dropout rates among adolescent girls are as high as 63.5% (MOSPI 2012). One out of 6<sup>th</sup> girl child dies due to greater discrimination.

**DISTORTIONS IN THE SOCIAL STATUS**

There is a pervasive human rights violation in the World. Violence within and outside the family shape their attitudes towards life. Discrimination starts from their birth. The girl child is treated as a liability and is unwelcome in the family.

One out of four girls is abused before the age of four. The girl child is often ill-treated and abused at home either verbally or physically. Nearly one half (44%) of the adolescent girls worldwide aged 15-19 years think a husband or partner is justified in beating his wife or partner under certain circumstances.

In the community the girl child is always vulnerable because of her sex. She is subject to physical assault, rape, kidnapping etc. According to Child info. Org (UNICEF June 2011) study reported that in India 5% of the girls aged between 15-19 years were victims of sexual violence. The Trafficking in persons Report (2014) has reported that over 90% of the trafficking is done within the borders and 10% in from overseas women and young girls (9-14 years) have been trafficked from Nepal and Bangladesh into India for sexual exploitation. Most of them were sold to brothels, kidnapped or forced out of their homes and sold by parents and relatives in order to get out of abject poverty. Every 10 minutes somewhere in the world adolescent girl dies as a result of violence. In emergencies, they are vulnerable to sexual violence and adducted exploited for sexual purposes.

Another serious crime against the girl child is the child labour. The ILO estimates for 2012 suggests that out of 47.5 million adolescents aged 15-17 years 13% were in hazardous work composed of 8.8 million girls and 38.7 million boys. The number of adolescents in hazardous work is greatest in India (2.4 millions). 2 out of 5 employed adolescents globally are in hazardous work. One in every 11 children in India is working as child labour. 80% of the working children are based in rural areas and 3 out of 4 of them work in agriculture as cultivators or household industries. More than half of the 5.5 million working children in India are concentrated in Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan and Maharashtra.

Dowry harassment and child marriages are having been legally prohibited yet worldwide more than 700 million women were married as children (below 18 years of age). One in 3 or some 250 million were married before 15 years. Amongst married woman in India today, 75% were under aged at the time of their marriage, according to the UN Statistics on girl child in India. Dowry harassments reported are in the form of accidental burns and suicide deaths.

**CONCLUSION**

Mindsets of people have to change if the girl child is to live a life of dignity and respect. All present forms of discrimination against the girl child can be put an end if stringent action is taken by the government. As the girl child today is a tomorrow's woman who has all the potentialities to serve the nation at large.

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## WOMEN'S PARTICIPATION IN MGNREGA IN INDIA

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## ABSTRACT

Despite the dramatic reduction of poverty in India over the past 7 years, poverty has not been fully eradicated in rural areas and, in the context of growing inequalities, it remains a national concern. Although 109.8 million rural poor are come out from poverty and Poverty ratio is dropped up to 25.7% from 41.8% during 2004-05 to 2011-12 in rural areas. The changing socio-economic space in India has given immense reason to locate the women's work position in MGNREGA after its inception in India. This paper examines the women participation in MGNREGA work program launched in several states of India in February 2006, with a view to understanding both the challenges and achievements of this pro-poor programme in India. Using secondary data, we first highlight the current key indicator of MGNREGA at national level, demonstrating mix performance of the program towards the poor. Second, participation of women work force in MGNREGA work program provide evidence of increasing participation at national level and at a disaggregated state level, women's participation varies across states. The states having high sex ratios have high women's participation rates and in poor states vice-versa. Finally, to examine the women work force in all states under MGNREGA scheme in India, and evaluation of women work force in MGNREGA scheme.

## KEYWORDS

MGNREGA, work demand, social audit, commitment, capacity, social protection.

## INTRODUCTION

MGNREGA is one of the milestones in social protection measures in the world. It is also one of the pioneering rights based legislation and largest workforce programme in the world. The Indian Parliament legislated on this turning point Act, with a strong consensus across the political spectrum. This Act, therefore, reflects the will of the citizens of India and their fellowship with the most vulnerable and marginalized. The aims of this Act is to enhance livelihood security of households in rural areas of the country through providing at least 100 days of guarantee wage payment in financial year to every household whose adult members volunteer to do unskilled manual work. The philosophy and strategy embedded in the scheme has many far reaching socio-economic consequences. The consequences are, however, for the betterment of the society in general and rural workers in particular. The scheme has three important dimensions - one dimension is the creation of assets in rural areas; second dimension is the social protection of the vulnerable sections of the society; and the third dimension is the guaranteed provision for employment, the mother of all social securities.

In the present paper, I have indicated some current highlights. Along with this, I have provided some analytical facts which are emerged from the study in lights of the objectives. It is remarkable that, as the implementation of the MGNREGA completed its journey of a decade. The Act came in to force on February 2, 2006 and was implemented in a phased manner. In first phase (since 2Feb.2006) in 200 districts; Second phase (from 2007-2008) in 130 districts and in third phase (from 1 April2008) comprised 330 for implementation. MGNREGA programme is operating in 32 states out of 35 states of India. No data are available pertain to Chandigarh, Dadra & Nagar Haveli and Daman & Diu. Some of the current variables are presented as under:

TABLE 1: CURRENT KEY HIGHLIGHTS OF MGNREGA AT NATIONAL LEVEL (FINANCIAL YEAR 2015-16)

Total No. of Districts	660
Total No. of Blocks	6,852
Total No. of GPs	2,57,688
I Job Card	
Total No. of Job Cards [In Cr]	13.16
Total No. of Workers [In Cr]	27.66
(i)SC worker % as of total Workers	19.56
(ii)ST worker % as of total Workers	15.19
Total No. of Active Job Cards [In Cr]	6.37
Total No. of Active Workers [In Cr]	9.89
(i)SC worker % as of total Active Workers	20.85
(ii)ST worker % as of total Active Workers	16.67
II General Progress	FY 2015-2016
Total Households Worked[In Cr]	4.0674
Total Individuals Worked[In Cr]	5.9403
% of Men Worked	48.5
% of Women Worked	51.5
% of SC Worked	22.69
% of ST Worked	18.57
% of Disabled Persons Worked	0.65
Approved Labour Budget[In Cr]	239.112
Person days Generated so far[In Cr]	165.3433
% of Total LB	69.15
% as per Proportionate LB	77.2
SC person days % as of total person days	22.85
ST person days % as of total person days	17.56
Women Person days out of Total (%)	56.09
III Financial Progress	
Total Exp[In Cr]	35,101.97
Material(%)	23.35
Admin Exp(%)	5
Average Cost Per Day Per Person (In Rs.)	202.56
Wages[In Cr]	25,559.13
Liability (Wages) [In Cr]	3,409.93

Source: NIC, Department of Rural Development, Ministry of Rural Development, Govt. of India.

It is obvious from the above table that in financial year 2015-16, 13.16 crore job card holders or 27.66 crore workers in India under MGNREGA programme in which SC and ST workers participation consists in 19.56% and 15.19% respectively. In concerning financial year, the performance of women is improved on an average corresponding previous year. In 2015-16, Women Person days generated 56.09% out of total Person days 165.3433 crore occurred in the year. In addition, total working individuals are 5.9403 crore having share of men, women, SC, ST, Disabled Persons are 48.5%, 51.5%, 22.69%, 18.57%, and 0.65% consecutively.

## REVIEW OF THE LITERATURE

Several empirical studies are conducted in India, regard to the role of MGNREGA in different field. Pattanaik (2007), which examining equity and efficiency aspect of NREGS observed that NREGS has been promoting gender equality in employment along with checking migration. The NREGS also contributing significantly to raise the household income of the beneficiaries. Institute of Applied Manpower Research, Delhi (2009), "All India Report on Evaluation of NREGA, A Survey of Twenty Districts". This study reveals that in many districts, affixing of photograph on job cards is not followed and in some places the beneficiary paid money for getting it. Job card was not designed to have sufficient space for all the entries in detail. Many households did not get the work within the stipulated 15 days time of demand for work, neither were they paid any unemployment allowance. On the utility of maximum number of days of works, only small fractions of households could utilize more than 35 days of work, remaining still lagging behind.

MGNREGA Scheme is that it has been playing a very important role providing employment to the most vulnerable sections of workers in the country. However, there are several problems which have emerged in course of its implementation process (see Ambasta, Shankar and Shah, 2008; Jha, Gaiha and Shankar, 2008). They point out that the quality of the asset was poor. Mathur (2007) thinks that a system of regular and continuous flow of authoritative information is essential. There is room for the government to take up concurrent evaluations, more effective monitoring, time-series studies, and focused reports on critical aspects like minimum wages, muster rolls. To improve implementation, the government needs to solve problems, modify policy directives, and issue operational guidelines for the district, block and village levels. The government must take the lead, be proactive, mobilize institutions and groups, and use the media effectively.

Dreze (2007) looks at the corruption in rural employment programs in Orissa and how this has continued in a NREGS as well. However, he believes that there is tremendous potential of NREGA in the survey areas. In most of the worksites, there is lack of facilities like shed, drinking water, etc. Thus, mix results are obtained from several studies regard to implementation of MGNREGA. It is worth mentioning that there is great lack of literature of women study in this scheme.

## OBJECTIVES OF THE STUDY

Mainly the purpose of the study is to examine the participation of women work force in MGNREGA scheme in India and suggest measures for more participation. The specific objectives are:

1. To study of aggregate women work force working under MGNREGA scheme in India,
2. To examine the women work force in all states under MGNREGA scheme in India, and evaluation of women work force in MGNREGA scheme.

## RESEARCH METHODOLOGY

In the present study, secondary data and information were used. **Secondary** data and information were collected from the web site of Department of Rural Development, Ministry of Rural Development, Government of India and from selected State Governments and also from various annual reports of MORD, Government of India. In addition, books, articles, etc. were also consulted for collecting information.

## WOMEN PARTICIPATION IN WORK UNDER MGNREGA

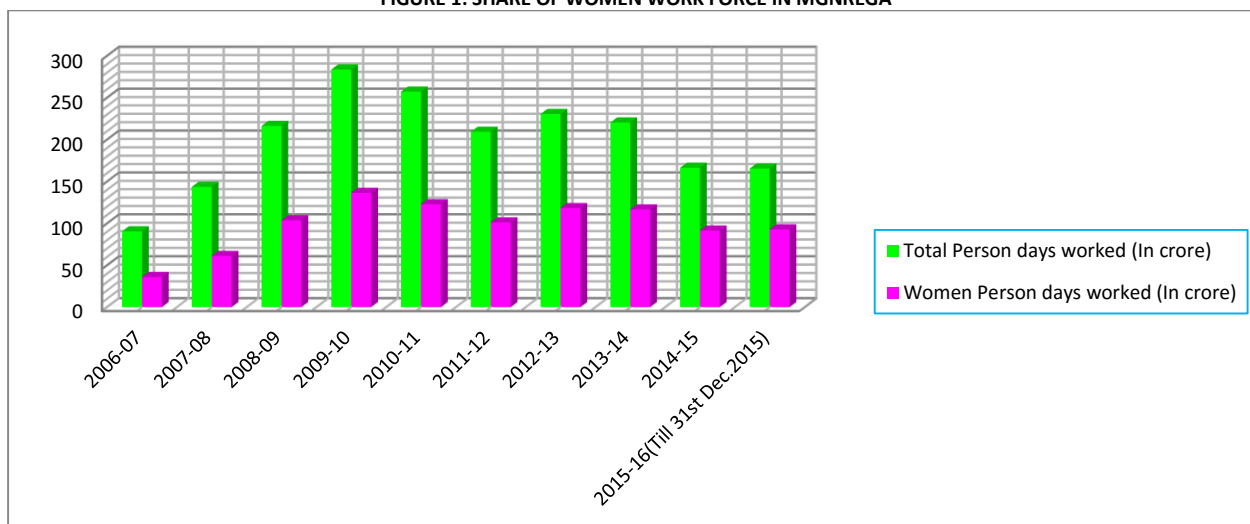
In MGNREGA, several guidelines and provisions are given to ensure that women have equal and easy access to work. Working conditions for women should be decent, even payment of wages and participation in decision-making process. Since the inception of this programme from February 2, 2006 of financial year 2006-07 up to 2015-16 till 31<sup>st</sup> December 2015, 96823 crore Person days have been generated for women. The trends on the participation of women in the MGNREGA scheme highlights in the following table:

TABLE 2: PARTICIPATION OF WOMEN IN THE MGNREGA

Year	Total Person days worked (In crore)	Women Person days worked (In crore)
2006-07	90.5	36
2007-08	143.59	61
2008-09	216.3	103.6
2009-10	283.6	136.4
2010-11	257.2	122.7
2011-12	209.3	101.1
2012-13	230.46	118.23
2013-14	220.37	116.53
2014-15	166.36	91.3
2015-16(Till 31 <sup>st</sup> Dec.2015)	165.3433	92.74

Source: NIC, Department of Rural Development, Ministry of Rural Development, Govt. of India.

FIGURE 1: SHARE OF WOMEN WORK FORCE IN MGNREGA



It is clear due to analysis of table 2 and figure 1 that during the study period of 10 years from 2006-07 to 31<sup>st</sup> December 2015 of 2015-2016 total person days worked on an average 198.3023 crore and in the same period women participation in work remained average 92.74 crore person days which is more than 45% of entire work done. At an aggregated level, women's participation in the scheme is higher than the mandatory 33 per cent; it was 54.86 per cent till 31<sup>st</sup> December 2015. Since the commencement of this scheme, it has been exerted that women participation in work should be more and more by that they should be economically strong and come into mainstream of the society.

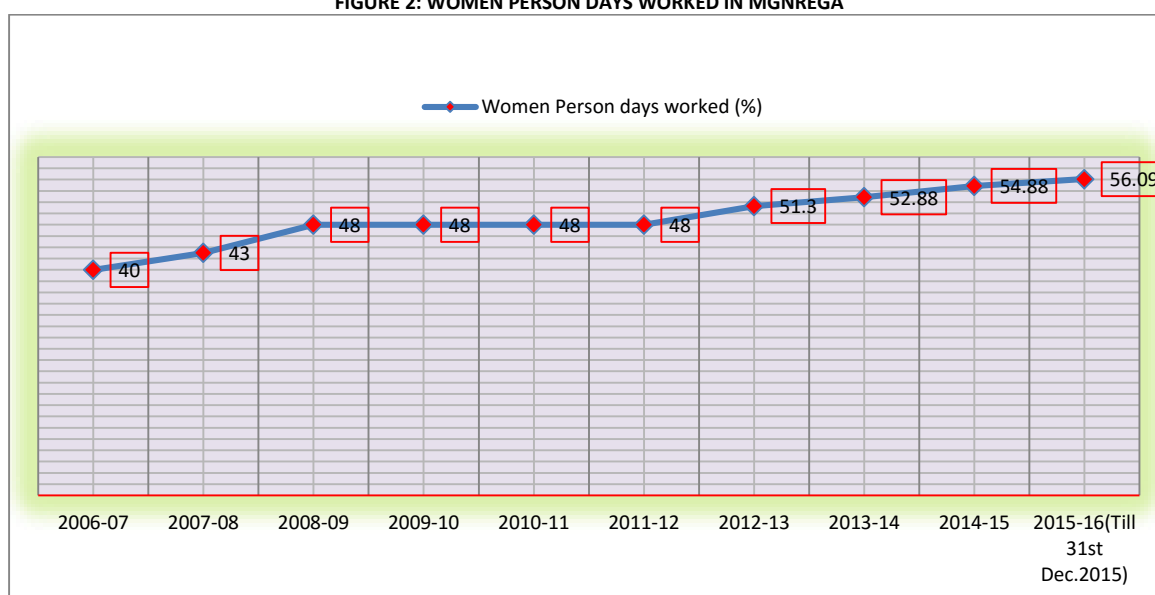
At an aggregated level, share of women in work in term of person days in total work percentage is given under in the table---which are as follows:

**TABLE 3: WOMEN WORK FORCE PERSON DAYS WORKED UNDER MGNREGA SCHEME IN INDIA**

Year	Women Person days worked (%)
2006-07	40
2007-08	43
2008-09	48
2009-10	48
2010-11	48
2011-12	48
2012-13	51.3
2013-14	52.88
2014-15	54.88
2015-16(Till 31 <sup>st</sup> Dec. 2015)	56.09

Source: NIC, Department of Rural Development, Ministry of Rural Development, Govt. of India.

**FIGURE 2: WOMEN PERSON DAYS WORKED IN MGNREGA**



It is obvious from aforesaid table 3 and figure 2 that increasing rate of participation of women in Person days worked during the span from 2006-07 to 2015-16 till 31<sup>st</sup> December 2015. In the FY 2006-07, women participation in Person days worked was 40% which increase up to 56.09% in period of 9 years. Women's participation in the scheme is higher than the mandatory 33 per cent since its inception.

With an increase rate of participation and equal wages for women, studies and field evidence suggest a positive impact of the scheme on the economic well-being of women and children. Access to economic resources has also had a positive impact on the social status of women, for example women have a greater say in the way the money is spent within households. A large percentage of women workers report spending their money to avoid hunger, repay small debts, paying for their child's schooling, etc. Independent research notes that the way forward for the project of women's empowerment is their larger inclusion in planning of work. Some the states like Uttar Pradesh, Jammu and Kashmir and Odisha depict lower than statutory participation of women which is a cause of concern.

### WOMEN WORK FORCE PARTICIPATION IN INDIAN STATES UNDER MGNREGA

How do we know that higher women's participation is reflective of changing power relations? One quick preliminary check would be to cross – validate the sex ratios in the states with high women's participation rates. According to Census 2011, the top five states with healthy sex ratios are Kerala (1,084 per 1,000 males), Puducherry (1,038 per 1,000 males), Tamil Nadu (995 per 1,000 males), Andhra Pradesh (992 females per 1,000 males) and Chhattisgarh (991 females per 1,000 males). It is seen that Goa, Kerala, Tamil Nadu and Puducherry compare well in terms of their sex ratios (Census 2011) and participation of women. At the lower level, the situation is more complex with some of the states with low women's participation rates concurrently being states with lower women's literacy rates like Uttar Pradesh and skewed sex ratio's like in Haryana. These states show a coherent picture of the challenges that women face including participating in MGNREGA works.

It has been come in to observation that high women's participation rates in MGNREGS, women's literacy rates and sex ratios are concurrent in the high performing states, while this may not be so equivocal and linear in other states. A detailed analysis is beyond the scope of this paper, yet clearly this brief attempt implies two things: one that some states may show a higher coherence on several gender empowerment related parameters and high women's participation in MGNREGA is certainly one of the important parameters in this assessment. In other states the complexities of negotiation and confrontation for gender empowerment may show differential effects. At a disaggregated state level, women's participation varies across states with those like Kerala, Goa and Tamil Nadu showing higher women's participation. Andhra Pradesh and Himachal also show high participation. States like Uttar Pradesh show very low women's participation as do the North Eastern states and Jammu and Kashmir.

In state-wise study of women's participation in MGNREGA, facts are come out that in entire states (excepting Dadra & Nagar Haveli, Daman & Diu, and Chandigarh) during the financial year 2012-13, 2013-14 and 2014-15 (till 05/05/2015) that women average Person days work in total Person days work remained 44.84%, 46% and 58.56% respectively.

TABLE 4: STATE DISAGGREGATED WOMEN'S PARTICIPATION UNDER MGNREGA SCHEME IN INDIA

S. No.	State	% age of Women Person days		
		2012-13	2013-14	2014-15 (till 05/05/2015)
1	Andhra Pradesh	58.34	58.68	58.72
2	Arunachal Pradesh	30.27	30.35	30.21
3	Assam	26.01	24.75	28.19
4	Bihar	30.63	34.97	37.17
5	Chhattisgarh	46.93	48.53	49.87
6	Gujarat	42.86	43.96	43.24
7	Haryana	39.86	41.71	41.66
8	Himachal Pradesh	60.69	62.52	61.04
9	Jammu And Kashmir	19.88	23.15	25.38
10	Jharkhand	32.71	31.89	32.06
11	Karnataka	46.25	46.59	46.86
12	Kerala	92.99	93.37	92.17
13	Madhya Pradesh	42.42	42.65	43.22
14	Maharashtra	44.55	43.69	43.37
15	Manipur	34.01	35.25	38.27
16	Meghalaya	41.07	41.62	42.57
17	Mizoram	26.15	30.20	40.27
18	Nagaland	26.01	28.93	31.28
19	Odisha	35.95	33.57	33.79
20	Punjab	46.36	52.74	57.43
21	Rajasthan	68.95	67.76	68.26
22	Sikkim	43.71	44.85	48.18
23	Tamil Nadu	74.15	83.94	85.42
24	Telangana	-	-	61.07
25	Tripura	41.08	47.11	49.36
26	Uttar Pradesh	19.70	22.17	24.75
27	Uttarakhand	46.93	44.88	50.56
28	West Bengal	33.71	35.55	41.37
29	Andaman And Nicobar	45.11	47.18	50.44
30	Dadra & Nagar Haveli	-	-	-
31	Daman & Diu	-	-	-
32	Goa	79.13	75.30	74.88
33	Lakshadweep	29.55	22.50	36.59
34	Puducherry	84.05	85.65	86.29
35	Chandigarh	-	-	-
	Total	51.30	52.80	54.86

Source: United Nations Development Programme: MGNREGA Sameeksha II p.86, New Delhi (India).

FIGURE 3 (A): WOMEN PERSON DAYS WORKED IN STATES IN MGNREGA SCHEME

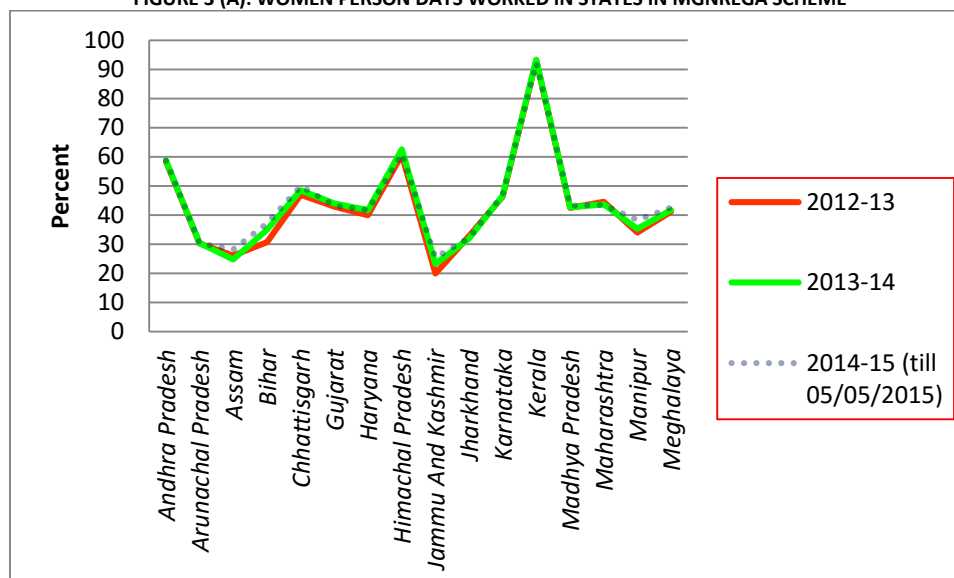




FIGURE 3 (B): WOMEN WORK FORCE PERSON DAYS WORKED IN STATES IN MGNREGA SCHEME

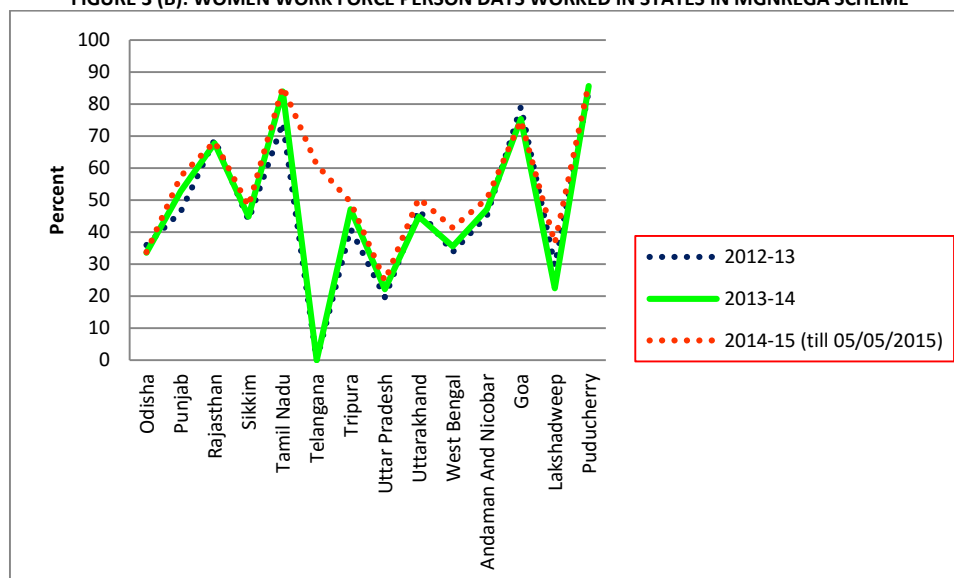


Table 4, figure 3(A) and 3(B) depicts women's participation in MGNREGA work programme in various states of India in the financial year 2012-13, 2013-14 and 2014-15. Kerala is a state in which highest work person days occurred in study period as 92.99 person days, 93.37 person days, and 92.17 person days respectively and Uttar Pradesh having lowest person days work by women which are 19.70 person days, 22.17 person days, and 24.75 person days respectively. In nine states, women participation is less than mandatory requirements. These are poor states with greater casual labour potential, like Uttar Pradesh, Jammu And Kashmir, Nagaland, Mizoram, Lakshadweep, Assam, Jharkhand, Arunachal Pradesh, and Bihar. This is contradictory to the assumption that poverty forces women to take up casual jobs. It is believed that states with labour-intensive farming like paddy cultivation pull more women into workforce. The MGNREGA data shows the opposite in paddy-intensive Odisha and West Bengal. It is clear that in total out of 35 states as Kerala, Puducherry, Goa, Tamil Nadu, Rajasthan, and Himachal Pradesh, women's participation is 70% and above and data of three states are not available.

It revealed from some empirical studies that women take up this opportunity as economic freedom. More than wage parity the Act focuses on water conservation. It allows members belonging to the Scheduled Caste and Scheduled Tribe communities to take up work in their own fields and get paid for that. Women participating in the programme are reviving their degraded farms or making provision for water through other works. In Tamil Nadu this trend is pronounced as several local studies have pointed out. In the drought-hit Bundelkhand districts of Uttar Pradesh and Madhya Pradesh, many households have adopted this strategy. In Andhra Pradesh and Maharashtra, More than 90 per cent of woman workers are farm labourers or cultivators. A substantial part of their work is unpaid because they work in their farms. MGNREGA has changed this. Now parts of women's non-paid jobs, like land levelling and digging a pond in their farms, are paid for. In drought-prone districts, like Warangal in Andhra Pradesh and Ahmednagar in Maharashtra, community members say this has attracted women to the programme. It is find some studies that In Kerala, management of work sites and other logistics for implementation is placed in the hands of women self-help groups under the poverty eradication mission Kudumbashree. So, most members of self-help groups have joined the MGNREGA programme. Increasing women's participation in MGNREGA can be used for effective delivery of its core objective: local ecological revival. It is now mandatory to have 50 per cent woman panchayat representatives who have nodal roles in the programme's implementation, including preparing the village development plan. So if the supervisory roles in panchayats and the dominant presence as workers converge, it will be a win-win situation for the programme as well as villages.

## CONCLUSION

It is concluded that, there is no single route to better inclusion of women work force in MGNREGA; different states have emphasised different dimensions of capacity and commitment. Clearly, a state with high capacity – in terms of its economic, organisational and human resources, as well as its ability to reach out to needy and potential beneficiaries – is better positioned for inclusion of women work force than a state with low capacity. The same applies to its commitment, in terms of initiative, preparation, mobilisation, sanctions, and continuity of effort. Capacity and commitment are interlinked and, by playing to its strengths, a state may be able to overcome weaknesses in other areas.

Therefore, state-specific capacity and commitment and stakeholder dynamics within states govern how much work is available, rather than the demand for it from rural households. The high women employment outcomes obtained from the states where high women sex ratio as Kerala, Puducherry, Tamil Nadu, Andhra Pradesh and Chhattisgarh, may suggest that a technocratic model is sufficient. But the poor employment outcomes are demonstrated by nine states in which women participation is less than mandatory requirements, are Uttar Pradesh, Jammu and Kashmir, Nagaland, Mizoram, Lakshadweep, Assam, Jharkhand, Arunachal Pradesh, and Bihar. These are poor states having greater casual labour potential. These states have used their capacity to provide more autonomy to bureaucrats, which has led to better employment outcomes.

## RECOMMENDATIONS

1. Women employment outcomes are lower in states with higher poverty levels. These states have used their capacity to provide more autonomy to bureaucrats, which has led to better employment outcomes.
2. There should be continuous efforts towards creating adequate awareness on different provisions of MGNREGS amongst the women.
3. Emerging awareness is necessary not only to motivate the women to work under the scheme but also to encourage them to participate in its planning and implementation process.
4. Utilization of resources under the scheme requires bringing in transparency and accountability. Provision for social audit at the panchayat level on a regular basis can play a significant role in this regard.
5. There should be the ability and willingness of local Govt. and Panchayats to plan works and run the programmes effectively.
6. A proper monitoring mechanism should be developed that can have assured correct procedure in job card.

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# A STUDY ON THE INFLUENCE OF BRAND AMBASSADOR ON BUYING BEHAVIOR OF CONSUMERS OF CYCLE PURE AGARBATHIES: WITH SPECIAL REFERENCE TO MYSURU CITY

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## ABSTRACT

*In the present times 'celebrity endorsement' has mesmerized the business world and has led to massive debate on whether it really contributes to the brand building process or whether it is just another lazy and costly tool to make the brand more visible in the minds of the consumer. The companies invest huge amounts as advertising expenditure for hiring the right celebrity. The consumer perceives the brand as having superior quality because it has been endorsed by a credible source. To understand the reasons for the influences of the brand ambassador and their impact on consumer's buying behavior, this researcher has done the field study on consumers of cycle pure Agarbathies in Mysuru city. It has been observed that the presence of a well-known personality helps in solving the problem of over communication that is becoming more prominent in these days; there are a few undesirable impacts of this practice on the brand. This paper concentrates on the apparent benefit that whether consumers buy a product just because it is endorsed by his favorite personality or it is just that they have the need to buy the product.*

## KEYWORDS

brand ambassador, consumer buying behavior, advertisement, brand image.

## INTRODUCTION

In the 21<sup>st</sup> century, many business houses are formulating different strategies in order to retain existing customers and to attract new customers. To communicate about the product offering to the customers, marketer always uses unique tools and techniques when compared to his competitors. Creating a very different strategy by using the right marketing mix is one of the major challenges in the present scenario. In the modern market, without brand ambassador it is somewhat difficult to market the product. Since the brand ambassador will explain the process of the usage of the product and the benefits derived out of it and why the customers have to buy that product.

There is confusion among the marketers regarding the impact of celebrity endorsement on the buying behavior of agarbathies. There are different agarbathies manufacturing companies in the Indian market and all most all brands are using brand ambassador for their brands but the question is whether these ambassadors are really influencing on the consumers decision of buying the products?

## BRAND AMBASSADOR

A Brand Ambassador, as the name suggests is an endorser of a brand. An ambassador is a representative of the brand. In our childhood days, when there were less number of brands we had very few brand ambassadors. There is a management saying that, 'when the product is good, you no longer have to be a very good marketer'. But the saying is soon becoming outdated. There are many product categories and many brands flopped in the market in each category. There has to be an effective media to make the product reach the customers. The media here can be termed as the celebrity who endorses the product. When a product is being endorsed by a famous celebrity then it will result in better brand recall and better brand awareness. This is the reason why companies shell out millions to promote the product with the celebrities.

## OBJECTIVES OF THE STUDY

1. To find out whether celebrity endorsement constitutes for brand recall and brand awareness.
2. To identify whether celebrity endorsement has any impact in the purchase behavior of a product

## SAMPLE SIZE AND DATA COLLECTION

For this research, the researcher has collected data from 200 consumers of cycle pure agarbathies. A closed ended questionnaire was framed and administrated to the consumers for collecting primary data.

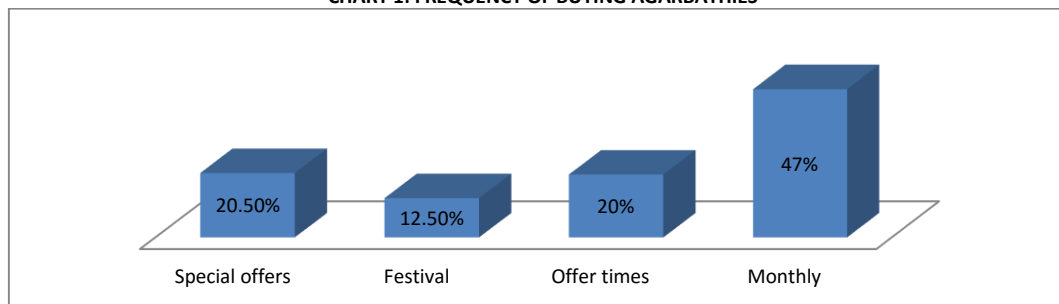
Secondary data is collected by the referring to several journals, books, internet, magazines, etc.

## CYCLE PURE AGARBATTI PRODUCT INDUSTRY

"Cycle Pure Agarbathies" was started by Sri. N. Ranga Rao in the name of "Mysore Products and General Trading Company" in 1948, afterwards the group's illustrious founder and philanthropist put this humble agarbatti on the commercial map of India. The journey has seen the brand grow from a fledgling cottage industry into a global enterprise; cycle brand has the largest market share in India and has established itself as a major incense product exporter. The brand growth has its base in the founder's guiding principles on integrity, quality, customer responsiveness, financial discipline and most importantly, honoring commitments and genuine concern for social causes.

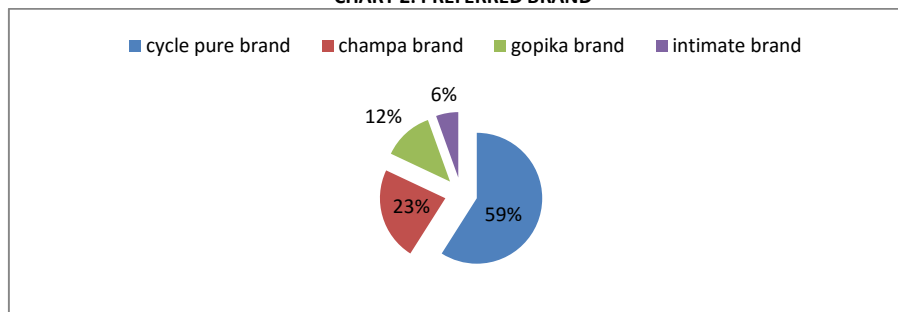
It is initially, a family enterprise but the group companies now have independent corporate set up, currently managed by the 3<sup>rd</sup> generation overseeing its operations as CEO's. It also caters to the domestic market. All fragrances are blended in-house and the export division exports the related products to more than 50 countries in Asia, Africa, Europe, Latin America, The Middle East and North America. Now it is headed by Mr. Arjun Ranga. At present Mr. Amitabh Bachchan, the veteran hero of Hindi movies is the Brand Ambassador of Cycle Pure Agarbathies.

CHART 1: FREQUENCY OF BUYING AGARBATHIES



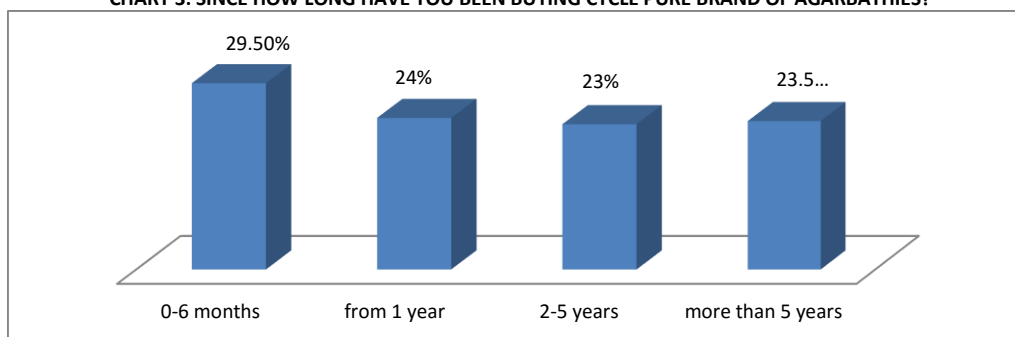
**Inference:** From this graph it can be concluded that majority of the respondents [ i.e 47% ] buy Agarbathi on a monthly basis.

CHART 2: PREFERRED BRAND



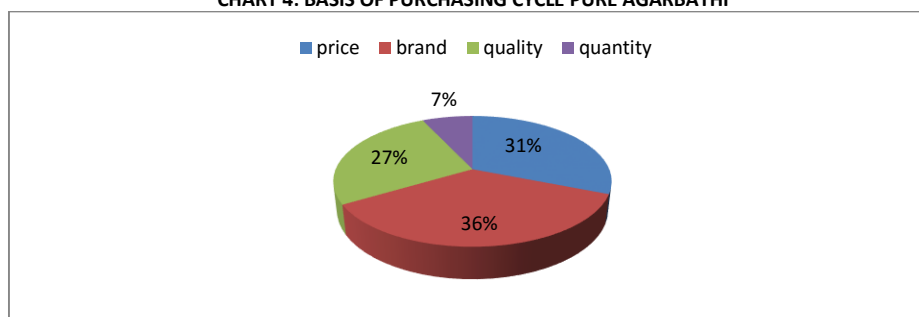
**Inference:** This graph indicates that majority of the respondents have preferred cycle pure brand [ i.e 59%] compared to other brands.

CHART 3: SINCE HOW LONG HAVE YOU BEEN BUYING CYCLE PURE BRAND OF AGARBATHIES?



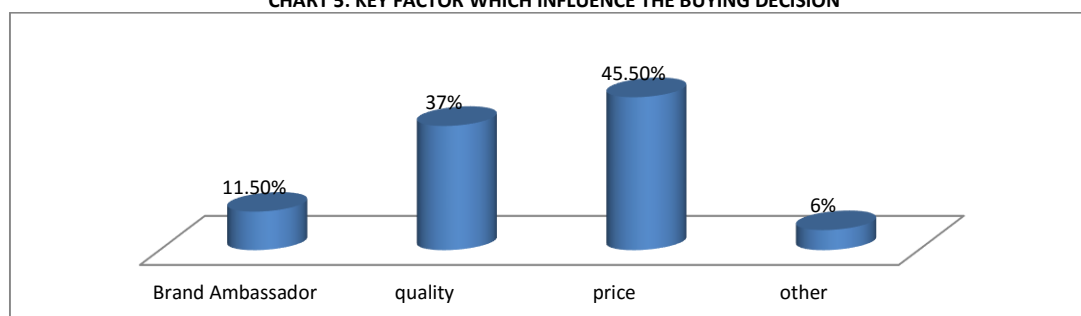
**Inference:** From the above graph we find that 29.5% of respondents are using cycle pure Agarbathi from 0-6 months and 24% of respondents are using cycle pure Agarbathi since 1 year and the remaining respondents are using it from 2 years or more.

CHART 4: BASIS OF PURCHASING CYCLE PURE AGARBATHI



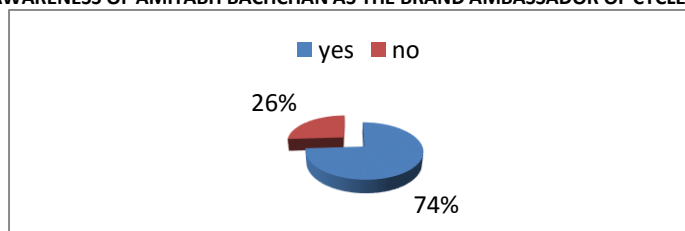
**Inference:** From this graph we can interpret that 36% of the respondents purchase cycle pure Agarbathi on the basis of brand and 31% of respondents purchase it on the basis of price and remaining 34% of respondents purchase it on the basis of quality and quantity.

CHART 5: KEY FACTOR WHICH INFLUENCE THE BUYING DECISION



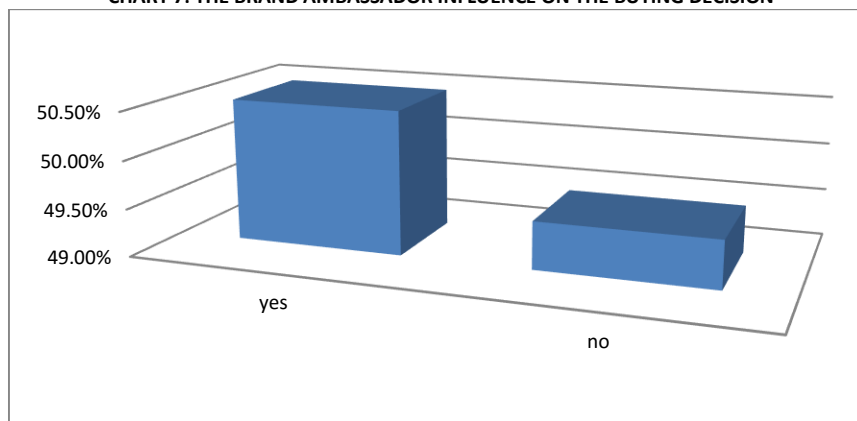
**Inference:** From this graph we find that 45.5% of respondents have opinioned that price is the key factor which influence their buying decision where as 37% of respondents said that quantity is the key factor which influence their buying decision and only 11.5% respondents said that brand ambassador is the key factor which influence their buying decision.

**CHART 6: AWARENESS OF AMITABH BACHCHAN AS THE BRAND AMBASSADOR OF CYCLE PURE BRAND**



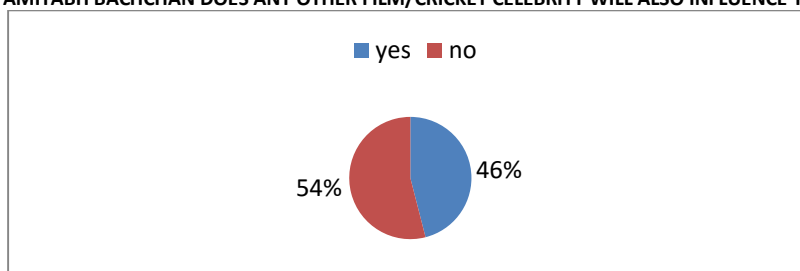
**Inference:** From the above analysis of the data collected it can be concluded that majority of the respondents are aware that Amitabh Bachchan is the brand ambassador of cycle pure Agarbathi brand.

**CHART 7: THE BRAND AMBASSADOR INFLUENCE ON THE BUYING DECISION**



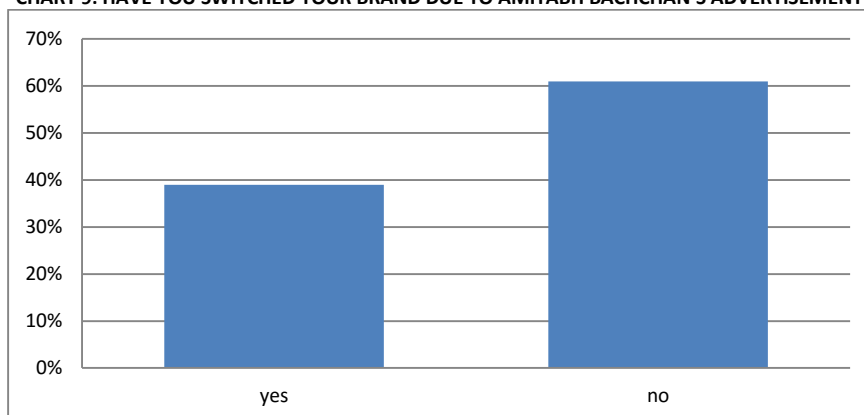
**Inference:** From the above graph we can conclude that 50.5% of the respondents are of the opinion that the brand ambassador influenced their buying decision and remaining 49.5% of the respondents said that brand ambassador does not influence their buying decision.

**CHART 8: INSTEAD OF AMITABH BACHCHAN DOES ANY OTHER FILM/CRICKET CELEBRITY WILL ALSO INFLUENCE YOUR BUYING DECISION?**



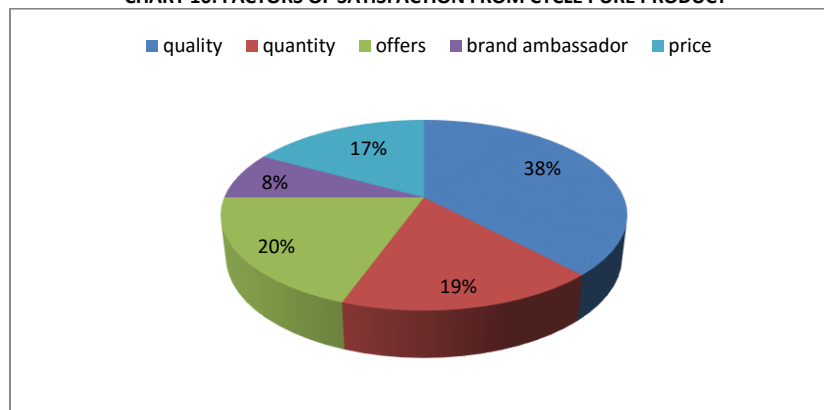
**Inference:** From this graph we can find that 46% of respondents said that instead of Amitabh Bachchan, any other film/cricket celebrity will also influence their buying decision and 54% said that no one will influence their buying decision other than Amitabh Bachchan.

**CHART 9: HAVE YOU SWITCHED YOUR BRAND DUE TO AMITABH BACHCHAN'S ADVERTISEMENT?**



**Inference:** From this graph we can conclude that 39% of respondent said that they switched brand due to Amitabh Bachchan's advertisement and remaining 61% of respondents have said no.

CHART 10: FACTORS OF SATISFACTION FROM CYCLE PURE PRODUCT



**Inference:** From this graph the data can be interpreted as - it can be stated that 38% of respondents are satisfied on the basis of quality of the brand and 19% of respondents on the basis of quantity and 20% of the respondents are satisfied with offers and 8% of the respondents are satisfied on the basis of brand ambassador and remaining 17% of the respondents are satisfied with price.

### STATISTICAL ANALYSIS

**H0:** There is a positive relationship between the brand used and the period of usage.

**Correlation Analysis:** Correlation between Preferred Brand and Period of Usage.

TABLE 1

X: Preferred Brand	Y: Period of usage	X <sup>2</sup>	Y <sup>2</sup>	XY
118	59	13924	3481	6962
46	48	2116	2304	2208
25	46	625	2116	1150
11	47	121	2209	517
200	200	16,786	10,110	10,577

TABLE 2

Dependent variable (X)	Independent variable (Y)	R = Correlation	Result
Preferred Brand	Period of usage	0.8119	Positive Correlation

Hence there is a high degree of positive correlation ( $R = 0.8119$ ) between the dependent variable (Preferred Brand) and the independent variable (Period of Usage).

Therefore, the Null hypothesis (H0) is duly accepted.

### FINDINGS FROM THE ANALYSIS

- 47% of the respondents are buying agarbathies on a monthly basis.
- 59% of the respondents buy cycle pure brand.
- Only 23.5% of the respondents are buying cycle pure brand since 5 years and more.
- 36% of the respondents purchase agarbathies on the basis of the brand.
- 45.5% of the respondents said that the key factor for purchasing the agarbathies is price.
- 74% of the respondents are aware that Amitabh Bachchan is the brand ambassador of Cycle pure agarbathies.
- 50.5% of the respondents are of the opinion that the brand ambassador influences their buying decision.
- 54% of the respondents have said no to the influence of any other celebrity in their buying decision.
- 61% of the respondents have said that they have not switched their brand due to the brand ambassador.
- 38% of the respondents are of the opinion that major factor of satisfaction in cycle pure agarbathies is **Quality**.

### SUGGESTIONS

- Most people buy agarbathies on a monthly basis and Price is the key factor, Therefore Cycle Pure Brand must give discounts of its loyal customers
- Since people have said that they are aware of the brand ambassador and he has influenced their buying decision, the brand must continue to use Amitabh Bachchan as the brand ambassador
- Most people buy agarbathies due to quality, therefore the brand must continue to innovative and improve its quality to sustain in the competitive market.

### CONCLUSIONS

There is an old advertising adage which says, "In almost all the industries in the advertisement field there has been a sea change and of late there is embarrassment of celebrity endorsement". The cycle pure agarbathies segment is no exception to it. There are many brands in the market and celebrity endorsement can be effectively used to establish a good brand recall and brand awareness.

Finally, it can be concluded that brand ambassador or celebrity endorsement is the order of the day, and it depends on the company or a brand how effectively to use it and establish brand recall brand awareness.

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**INVESTORS PERCEPTIONS TOWARDS MUTUAL FUND INVESTMENTS IN TRUCHIRAPPALLI DISTRICT****R. KATHIRVEL****STUDENT****DEPARTMENT OF MANAGEMENT STUDIES****ANNA UNIVERSITY (BIT CAMPUS)****TRICHY****DR. S. P. DHANDAYUTHAPANI****ASST. PROFESSOR****DEPARTMENT OF MANAGEMENT STUDIES****ANNA UNIVERSITY (BIT CAMPUS)****TRICHY****ABSTRACT**

The research carried out the study with the purpose to analyze the "Investors Perception towards various types of Mutual Funds' Investments in Tiruchirappalli district". It monitors to attention towards the possibilities of measuring the prospects and fulfillment level of more mutual fund schemes. It also aims to advise methods to improve the present level of perception. The study will help the secure in understanding the expectations, future needs and requirements and complaints of the investors. The study required been dedicated mainly towards the promotion of schemes or concept in the Trichy mutual fund intermediaries. The research can be used the Descriptive type of research design. The research used the Primary data collection method by framing a structured Questionnaire. The research went with suitable type of sampling method in his study. The sample is taken as 250 by the researcher. For the purpose of Analysis, the data and Interpretation the researcher used the following statistical tools viz. simple statistical tools like mean, standard deviation, correlation. To measure internal reliability (consistency) of the data Cronbach Alpha test has been employed. The study further employs Kaiser-Meyer-Olkin calculation of sampling adequacy, Bartlett's Test of Sphericity and factor analysis as a tool of dimension decreasing.

**KEYWORDS**

investors, perception, mutual funds.

**INTRODUCTION**

**M**utual fund is the swimming pool of the money, It is based on the trust who invests the savings of a number of investors who shares a common financial goal, like the capital appreciation and dividend receiving. The money therefore collect is then invested in capital market instruments such as shares, debenture, and foreign market. The investors invest money and grow the units as per the piece worth which we called as Net Assets Value (NAV). Mutual fund is the maximum proper investment for the common man as it suggestions a chance to invest in expanded portfolio management, good research team, professionally managed Indian stock as well as the foreign market, the core aim of the fund manager is to taking the scrip that have under value and future will increasing, after the fund manager sell out the stock. Fund manager awareness on risk – return trade off, where minimize the risk and maximize the return through variation of the portfolio. The most common features of the mutual fund unit are low cost. Mutual fund industry has seen a lot of deviations in the past decades with worldwide companies coming into the country; take in their expert knowledge in managing funds international.

**GROWTH OF MUTUAL FUNDS IN INDIA**

By the year 1970, the industry had 361 Funds with united total assets of 47.6 billion dollars in 10.7 million shareholder's account. However, from 1970 and on regions rising interest rates, stock market stagnation, increase and investors some other issues about the profitability of Mutual Funds, unfavorably affected the growth of mutual funds. Hereafter Mutual Funds realized the need to announce different kinds of Mutual Funds, which remained in adjust with changing requirements and interests of the investors. The 1970's saying a new kind of fund innovation; Funds with no transactions charges called "no load" funds. The major and most successful no load household of funds is the Head Funds, formed by John Bogle in 1977. In the series of new creation, the Initially Money Market Mutual Fund (MMMMF)

**REVIEW OF LITERATURE**

(Sharma, (Aug 2012,)) The paper analyzed the 3 factors named as fund/scheme related attributes, monetary benefits and sponsor's related attributes which may be offered to investors for securing their investment. (Dr. V. Ramanujam. A. Bhuvanawari., (February 2015) In fact, post the international financial crisis of 2008 and 2009, the banking file delivered a return of 82% during May 2009 until October 2010, matched to a return of 40% delivered by the larger market. Investment in banking sector funds is one of the best way which guarantees even return with medium risk when compare to additional sectors. (Sundar, March-April 2014) As the Indian economy does well with over current times, banks tend to be one of the biggest recipients. In fact, post the global financial crisis of 2008 and 2009, the banking catalog delivered a return of 82% during May 2009 until October 2010, paralleled to a return of 40% delivered by the broader market. (V. Rathnamani, (Jan. - Feb. 2013)) Mutual fund is said to be the best channels for organizing the funds of the small investors and donate considerably to the capital markets. The study clarifies briefly about the mutual fund industry, The study also helps to realize the role of investment pattern and favorites of investors behindhand investing in mutual fund. (Kesavaraj, October 2013) The purpose of Analysis and Interpretation the research used the following statistical tools namely Simple Percentage Analysis, Chi-Square Test, Karl Pearson's Correlation and One way Anova. Based on the Analysis and Interpretation the research inwards out with the main findings in her study and Proposals are given in such a way so that the investors can attain the wealth maximization.

**OBJECTIVES OF THE STUDY**

1. To evaluate investors perspective investment in mutual fund
2. To analyze the growth of mutual fund industry in Trichy
3. To know the several factors that may affect variety of mutual fund schemes/ fund directly or indirectly
4. To present an abridged image of different qualitative aspects which are essential to secure investors patronage to mutual fund investment

**RESEARCH METHODOLOGY**

1) Research Design: Descriptive Research

2) Sample Design:

a) Population: Unknown

b) **Population Frame:** Various mutual funds investors.

c) **Research Method:** Convenience Sampling

d) **size of sample: 250**

3) **Data Collection Design:**

a) **Data Collection Method:**

1) **Primary data:** Primary data are first-hand information collected through various methods such as observation, interviewing, mailing etc.

2) **Secondary data:** This data collected through book publication, bibliographies and annual reports.

b) **Data Collection Instrument:** The data collection instrument structured questionnaire was used. They consist of open ended questions and close ended question.

c) **Statistical Tools used:** The data was analyzed through simple statistical tools like mean, S.D, correlation. To measure internal reliability (consistency) of the data Cronbach Alpha test has been employed. The study further employs Kaiser-Meyer-Olkin calculation of sampling adequacy, Bartlett's Test of Sphericity and factor analysis as a tool of dimension decreasing.

## FINDING AND RESULTS

### DESCRIPTIVE STATISTICS

Table 1 is the descriptive data of primary data collected done the study.

TABLE I: DESCRIPTIVE STATISTICS

Variable	Features	Mean	Standard Deviation	Number of Respondents
1	Return on Investment	4.5250	.50043	250
2	Safety of Investment	4.4740	.50022	250
3	Full Disclosure of Information regarding Scheme / Fund (like objective, periodicity of valuation, scheme's sale/ repurchase etc.)	4.4880	.50075	250
4	Capital Appreciation	4.4920	.50094	250
5	Reputation of Sponsor	4.4720	.50022	250
6	Sponsor's Expertise (in managing money)	4.4800	.50060	250
7	Favourable Credit Rating of Scheme / Fund	4.5120	.50086	250
8	Liquidity of investment	4.4520	.49869	250
9	Fringe Benefits (like Tax Benefits, Free Insurance, Free Credit Card, Loans on Collateral etc.)	4.4920	.50094	250
10	Regular Updates on every trading day (regarding investment, NAV etc.)	4.4680	.49998	250

Table 1 reveals that all the designated variables have been chosen good values by the investors. Further, the feature of return from the investment looks to be of topmost concern to the investors which is surveyed by the satisfactory rating by credit agency. These two required appearances also have smallest value of standard deviation in results.

### CRONBACH ALPHA

As normally accepted rules of scan the minimum acceptable score of alpha is 0.70 (George and Mallery 2003). In the study is found to be 0.8p61 which is sufficient enough to precede the study.

### Kaiser-Meyer-Olkin and Bartlett's Test

The KMO measure of sampling adequacy is a table for comparing the sizes of the observed correlation coefficients to the sizes of the limited correlation coefficients. Bartlett's test is practical to measure strength of relationship between population of variables correlation matrix i.e. whether they are uncorrelated otherwise not.

TABLE II: KAISER-MEYER-OLKIN MEASURE OF SAMPLING ADEQUACY AND BARTLETT'S TEST

KMO measure of sampling adequacy	Bartlett's Test of Sphericity	
0.853	Approx. Chi-Square	1496.682
	Degree of Freedom	91
	Significance	.000

The smallest acceptable value of KMO is 0.50. Usually the cut-off value of Bartlett's test is less than or equal to 0.05. In the current study KMO value is .853 and Bartlett's value is 0.000 (table 2) which documents the factor analysis to the data.

### CORRELATION ANALYSIS

The current paper studies the correlation different between variables to diagnose the difficult of multi-co linearity. The difficult of multi-co linearity is supposed if the correlation between two or more variables is more than 0.50.

TABLE III: CORRELATION

V	A1	A2	A3	A4	A5	A6	A6	A7	A8	A9	A10
A1	1	0.50	0.51	0.38	0.36	0.20	0.50	0.6	0.33	0.38	0.1
A2	0.50	1	0.90	0.0.39	0.41	0.32	0.80	0.32	0.0.39	0.77	0.20
A3	0.51	0.90	1	0.38	0.6	0.26	0.69	0.33	0.29	0.73	0.16
A4	0.38	0.0.39	0.38	1	0.22	0.32	0.29	0.22	0.29	0.5	0.22
A5	0.36	0.41	0.6	0.22	1	0.41	0.29	0.2	0.13	0.0.39	0.20
A6	0.20	0.32	0.26	0.32	0.41	1	0.29	0.09	0.13	0.22	0.32
A7	0.50	0.80	0.69	0.29	0.29	0.29	1	0.33	0.6	0.6	0.09
A8	0.6	0.32	0.33	0.22	0.2	0.09	0.33	1	0.36	0.20	0.12
A9	0.33	0.0.39	0.29	0.29	0.13	0.13	0.6	0.36	1	0.29	0.21
A10	0.38	0.77	0.73	0.5	0.0.39	0.22	0.6	0.20	0.29	1	0.19

Table three represents the correlation matrix. Correlation matrix discloses that correlation between some variables is more than 0.50. Hence, factor analyze is required to be done on the variables.

### FACTOR ANALYSIS

Factor analysis decrease the number of variables to such a small number which might be capable of explanation the observed variance in the large number of variables.

TABLE IV: COMMUNALITIES

No	Variables	Opening Amount	Withdrawal
1.	Safety	1.000	.492
2.	Return	1.000	.874
3.	Sponsor's Expertise	1.000	.839
4.	Capital Increase	1.000	.426
5.	Repute of Sponsor	1.000	.496
6.	Complete Expose of Information around Scheme / Fund	1.000	.658
7.	Satisfactory Credit Rating of Scheme / Fund	1.000	.710
8.	Liquidness	1.000	.424
9.	Fringe Benefits	1.000	.430
10.	Timekeeping in Service	1.000	.726

**Table 4** Represents the communalities of variables which is the amount of variation extracted from each variable. The abstraction of variable is done by major component analysis method. Variable with greater value is expected to be better one.

As shown from the above table the feature of security of money invested conveys extreme communalities and it is followed by full release of information regarding scheme / fund. All of these variables are added being considered through their Eigen values which represent the variances of the factors. Table 5 Represents the total variance clarified by different variables. The extraction has been done through prime component analysis method.

TABLE V: VARIANCE CLARIFIED THE DIFFERENT VARIABLES

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	% of Vari	Cum %	Total	% of Vari	Cum %	Total	% of Vari	Cum %	Total
1	5.30	37.12	37.12	5.30	37.12	37.12	3.45	24.64	24.64
2	1.71	11.52	48.64	1.71	11.52	48.64	2.68	19.13	43.78
3	1.35	8.93	57.57	1.35	8.93	57.57	1.93	13.79	57.57
4	1.04	6.72	64.2						
5	0.99	6.36	70.6						
6	0.81	5.06	75.7						
7	0.69	4.90	80.6						
8	0.63	4.53	85.1						
9	0.54	3.87	89.0						
10	0.50	3.28	92.2						

There are three variables which have more than 1.000 Eigen value. The cumulative variance explaining by these six components is 57.57%. The calculated values of Eigen values and related components can be studied over Cattell's Scree Plot (figure 2).

Table 6 Represents the rotated factor matrix which is matrix of the factor loadings for different variables onto each cause. In the current study the loadings having value less than 0.40 are being suppressed so as to identify substantive loadings. The matrix has been created on the basis of varimax criterion with Kaiser Normalization method. The entire rotation process has been joined in seven repetitions.

TABLE VI: ROTATED COMPONENT MATRIX

Variables	Components		
	1	2	3
Safety	.876		
Full Disclosure of Information regarding Scheme / Fund	.875		
Regular Informs	.836		
Satisfactory Credit Rating of Scheme / Fund	.763		
Early Bird Incentives		.672	
Liquidity		.622	
Fringe Benefits		.617	
Custodies (Expense Ratio, Entry Load and Exit Load)		.598	
Capital Appreciation	.475	.510	
Return		.453	.419

Table 6 Reveals that there are four variables load on two factors. These variables have been allocated to a factor on the basis of their maximum load. Factor analysis has made three factors. The element transformation matrix of the overhead swapped component matrix is given in table 7.

TABLE VII: COMPONENT TRANSFORMATION MATRIX

Components	B1	B2	B3
A1	.716	.579	.390
A2	-.695	.541	.473
A3	.063	-.610	.790

Constituent Transformation Matrix shows the correlations among different components prior to and after rotation. The abstraction has been done through Fore-most component analysis and rotation has been done on Varimax criterion with Kaiser Normalization.

The factors with equivalent variables are as follows:

#### FACTOR 1

It takes in four variables viz., Regular Updates on each & every trading day (regarding investment, NAV etc.), Safety of Investment, Full Revelation of Information regarding Scheme / Fund like objective, periodicity of valuation, scheme's sale/ repurchase etc., Satisfactory Credit Rating of Scheme. It might be named as Scheme / Fund related Attributes.

#### FACTOR 2

It includes 6 variables viz., Capital Appreciation, Charges (Expense Ratio, Entry Load and Exit Load), Regular Return on Investment, Early Bird Incentives, Fringe Benefits like Tax Benefits, Free Insurance, Free Credit Card, Loans on Collateral etc., Liquidity. It may be named as Monetary Benefits.

#### FACTOR 3

It includes 4 variables viz., Reputation of Sponsor, Sponsor's Expertise, Promptness in Service and Retaliation of Investor's Grievances. It could be labeled as Sponsor's Attributes.

**CONCLUSION**

The paper attempts to study the extent to which investors are satisfied (in terms of altered welfares offered by mutual fund companies to attract investment in mutual fund) and also to recognized factors essential for securing investor's penetration. The study creates that all the benefits which develop obtainable from the investment in mutual fund may be grouped into three types. The first type relates to the scheme/ fund related attributes. This contains safety of money invested in mutual funds, satisfactory credit rating of fund/ scheme by believed credit agencies, full revelation of all relevant information and regular updates on every trading day. The second type is related with the monetary benefits provided by fund/schemes in method of capital appreciation, liquidity, ROI (return on investment), early bird incentives, fringe benefits and relaxation in charges (expense ratio, entry load and exit load). The last type tells with the sponsor related attributes. This includes reputation of sponsor, sponsor's expertise, punctuality in service and retaliation of investor's grievances. The results expose that in order to secure the sponsorship of Tiruchirappalli investor mutual fund companies are likely to ensure full disclosure and regular updates of the related information end to end with the assurance of safety and monetary benefits.

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## IDENTIFY THE NEED FOR DEVELOPING A NEW SERVICE QUALITY MODEL IN TODAY'S SCENARIO: A REVIEW OF SERVICE QUALITY MODELS

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### ABSTRACT

*The service industries are mostly customer driven and their survival in the competitive environment largely depends on quality of the services provided by them. Due to the increasing competition in the service sector, customer service is an important part of the organizational growth. The key lies in improving the service selectively, paying attention to more critical attributes as a part of improved customer satisfaction. A large number of research studies for service quality take place in the context of developing countries. There are various models suggested by many authors in relation to service quality but no model take all attributes of service quality. The main objective of this paper is to critically appraise various service quality models and identify issues for future research based on the critical analysis of literature. This study aims at evaluating the different service quality models given by different authors and identifies the need for developing a new model in today's scenario. This study examines 19 models of service quality. Findings of the study explore new model and direction in service quality improvement for different sectors. Data for this study is collected from secondary sources. The empirical findings not only priorities different parameters of service quality but also provide guidelines to focus on the other parameters on which the marketer need to improve.*

### KEYWORDS

competitive environment, service industries, service quality models, India.

### INTRODUCTION

During the past few decades' service quality has become a major area of attention to practitioners, managers and researchers owing to its strong impact on business performance, lower costs, customer satisfaction, customer loyalty and profitability (Leonard and Sasser, 1982; Cronin and Taylor, 1992; Gamie, 1992; Hallowell, 1996; Chang and Chen, 1998; Gummeson, 1998; Lasseretai, 2000; Silvestro and Cross, 2000; Newman, 2001; Sureshchander et al, 2002; Guru, 2003 etc.). There has been a continued research on the definition, modeling, measurement, data collection procedure, data analysis etc., issues of service quality, leading to development of sound base for the researchers. This documented knowledge base through several studies on the subject can be of great use to researchers and practitioners in providing a direction on how to explore/modify the existing service quality concepts with the changing world scenario (shift from conventional personalized services to web enabled services). In this context model gains specific importance as it not only helps in learning the factors associated with it but also will provide a direction for improvements.

A conceptual model attempts to show the relationships that exist between silent variables (Ghobadian et al, 1994). It is a simplified description of the actual situations. It is said that conceptual models in service quality enable management to identify quality problems and thus help in planning for the launch of a quality improvement program thereby improving the efficiency, profitability and overall performance.

This paper makes an attempt to study various service quality models covering the aspects of conventional services to web interacted services. The primary aim of these models is to enable the management to understand and enhance the quality of the organization and its offering. Nineteen conceptual service quality models reported during the period (1984-2003) are reviewed in this paper. Each of them is representative of a different point of view about services.

### NEED OF THE STUDY

Today globalization and liberalization are affecting economies of not only developing but also developed countries. The focus areas for organizations are also changing from profit maximization to maximizing profits through increased customer satisfaction. The pressures of competition are forcing the organizations to not only look on the processes but also on the way they are delivered. During past two decades business scenario has changed drastically.

Some of the key changes that have taken place in the business are:

- Greater sharing of information with all connected links and customers.
- Greater emphasis on organizational and process flexibility.
- Necessity to coordinate processes across many sites.
- Competitive pressure to introduce new service / products more quickly.
- Integrated customer driven processes.
- Quick response to customers needs.
- Worldwide relationships between various trade partners, suppliers etc.
- Easily accessible information through internet.
- Flexible and efficient service/product customization.

Owing to the factors like opening up of markets, increase in use of IT, increased customer knowledge and awareness etc., it becomes a must to deliver' the services better than its competitor at agreed price. In this context, the subject of service quality needs a fresh understanding in the current business scenario. This study can help to identify the research gaps and thus attempts to provide benefits to practicing managers and researchers.

### FRAME WORK OF THE STUDY

The subject of service quality is very rich in context of definitions, models and measurement issue. The following factors seem to be suitable for comparative evaluations of the models:

- Identification of factors affecting service quality.
- Suitability for variety of services in consideration.
- Directions for improvement in service quality. -
- Suitability to develop a link for measurement of customer satisfaction.
- Flexible enough for modifications as per the changes in the environment/conditions.

- Suggests suitable measures for improvements of service quality both upstream and downstream the organization in focus.
- Identifies future needs (infrastructure, resources) and thus provide help in planning.

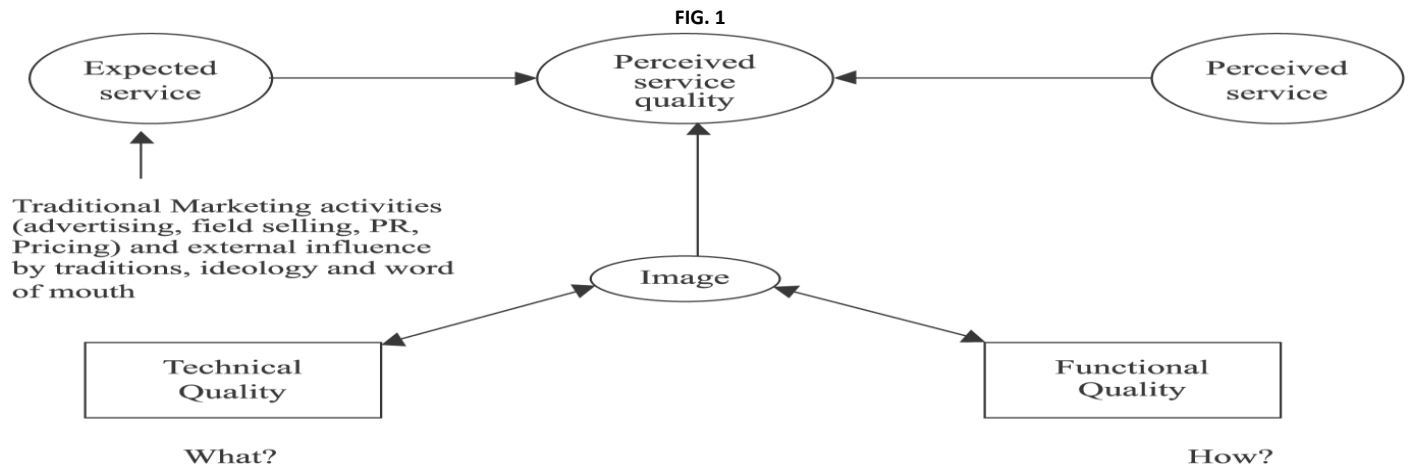
With these issues as focus this present study is undertaken to understand the service quality models in the above light.

### SERVICE QUALITY MODELS

The present study is an attempt to review 19 service models in the light of the changed business scenario and analyze the models for the suitability/need for modification in the current context. The models are presented using a standard structure, i.e. covering brief discussion and the major observations on the models. The next section covers the evaluation of these models for above parameters. The brief discussions on the models are as under: »

#### SQ1. Technical and functional quality model (Grönroos, 1984)

A firm in order to compete successfully must have an understanding of consumer perception of the quality and the way service quality is influenced. Managing perceived service quality means that the firm has to match the expected service and perceived service to each other so that consumer satisfaction is achieved. The researcher identified three components of service quality, namely: technical quality; functional quality; and image:



**Source:** Grönroos (1984)

1. Technical quality is the quality of what consumer actually receives as a result of his / her interaction with the service firm and is important to him/her and to his / her evaluation of the quality of service.
2. Functional quality is how he/she gets the technical outcome. This is important to him and to his/her views of service he/she has received.
3. Image is very important to service firms and this can be expected to build up mainly by technical and functional quality of service including the other factors (tradition, ideology, word of mouth, pricing and public relations).

#### SQ2: GAP model (Parasuraman et al., 1985)

Parasuraman et al (1985) proposed that service quality is a function of the differences between expectation and performance along the quality dimensions. They developed a service quality model based on gap analysis. The various gaps visualized in the model are:

**Gap 1:** Difference between consumers' expectation and management's perceptions of those expectations, i.e. not knowing what consumers expect.

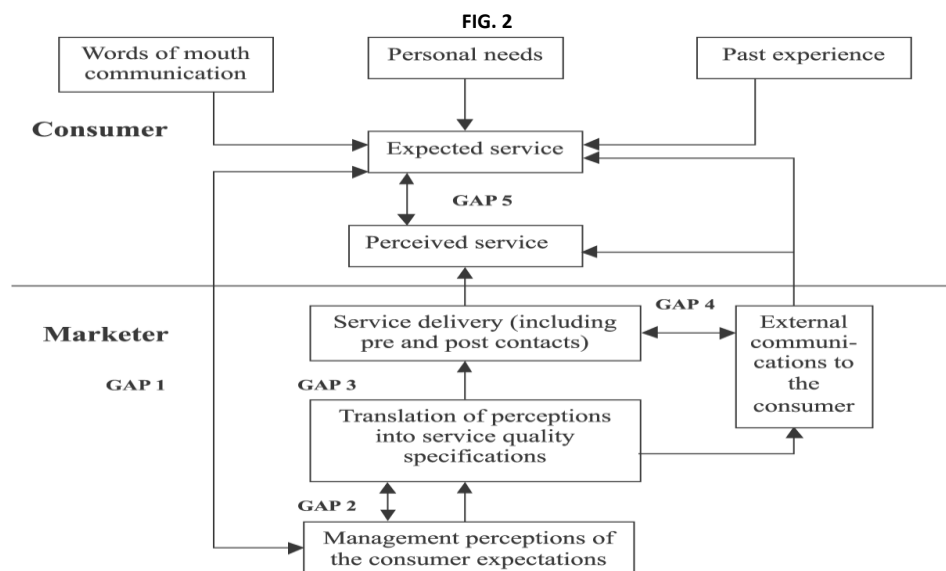
**Gap 2:** Difference between management's perceptions of consumer's expectations and service quality specifications, i.e. improper service-quality standards.

**Gap 3:** Difference between service quality specifications and service actually delivered i.e. the service performance gap.

**Gap 4:** Difference between service delivery and the communications to consumers about service delivery, i.e. whether promises match delivery.

**Gap 5:** Difference between consumer's expectation and perceived service. This gap depends on size and direction of the four gaps associated with the delivery of service quality on the marketers side.

According to this model, the service quality is a function of perception and expectations.



**Source:** Parasuraman et al. (1985)

#### SQ3. Attribute service quality model (Haywood-Farmer, 1988)

This model states that a service organization has "high quality" if it meets customer preferences and expectations consistently. According to this, the separation of attributes into various groups is the first step towards the development of a service quality model. In general, services have three basic attributes: physical



facilities and processes; people's behavior; and professional judgment. Each attribute consists of several factors. The researcher tried to map different type of service settings as per degree of contact and interaction, degree of labour intensity and degree of service customization in to this model.

#### **SQ4. Synthesized model of service quality (Brogowicz et al., 1990)**

A service quality gap may exist even when a customer has not yet experienced the service but learned through word of mouth, advertising or through other media communications. Thus there is a need to incorporate potential customers' perceptions of service quality offered as well as actual customers' perceptions of service quality experienced. This model attempts to integrate traditional managerial framework, service design and operations and marketing activities. The purpose of this model is to identify the dimensions associated with service quality in a traditional managerial framework of planning, implementation and control. The synthesized model of service quality considers three factors, viz. company image, external influences and traditional marketing activities as the factors influencing technical and functional quality expectations.

#### **SQ5. Performance only model (Cronin and Taylor, 1992)**

The researcher investigated the conceptualization and measurement of service quality and its relationship with consumer satisfaction and purchase intentions; they compared computed difference scores with perception to conclude that perceptions only are better predictor of service quality. They argued on the framework of Parasuraman et al (1985), with respect to conceptualization and measurement of service quality and developed performance only measurement of service quality called SERVPERF by illustrating that service quality is a form of consumer attitude and the performance only measure of service quality is an enhanced means of measuring service quality. They argued that SERVQUAL confounds satisfaction and attitude. They stated that service quality can be conceptualized as "similar to an attitude", and can be operationalized by the adequacy-importance model. In particular, they maintained that Performance instead of "Performance-Expectation" determines service quality.

#### **SQ6. Ideal value model of service quality (Mattsson, 1992)**

The model argues for value approach to service quality, modeling it as an outcome of satisfaction process. This value-based model of service quality suggests the use of a perceived ideal standard against which the experience is compared. It shows that implicit negative disconfirmation on a pre-conscious value level, is then hypothesized to determine satisfaction on a "higher" attitude level. This negative disconfirmation is the major determinant of consumer satisfaction, more attention should be given to cognitive processes by which consumers' service concepts are formed and changed.

#### **SQ7. Evaluated performance and normed quality model (Teas, 1993)**

According to the author the conventional disconfirmation model has conceptual, theoretical and measurement problems. He pointed out those following issues in the measurement of service quality, i.e. SERVQUAL (Parasuraman et al., 1988) as: conceptual definition ambiguity; theoretical justification of expectations in the measurement of service quality; the usefulness of the probability specification in the evaluated performance (EP) measurement; and link between service quality and consumer satisfaction/dissatisfaction.

#### **SQ8. IT alignment model (Berkley and Gupta, 1994)**

This model links the service and the information strategies of the organization. It describes the use of IT for improving service quality through a number of case studies from variety of sectors (banking, courier, and transportation, manufacturing and services industries). This model describes in detail where IT had been used or could be used to improve specific service quality dimensions including reliability, responsiveness, competence, access, communications, and security, understanding and knowing the customers. According to the model, it is important that service quality and information system (IS) strategies must be tightly coordinated and aligned. The model explains the process of aligning service and aligning strategies.

#### **SQ9. Attribute and overall affect model (Dabholkar, 1996)**

The attribute model is based on what consumers would expect from such option. It is based on cognitive approach to decision making, where consumers would use a compensatory process to evaluate attributes associated with the technology based self-service option in order to form expectations of service quality. The overall affect model is based on the consumers' feeling towards the use of technology. It is based on an effective approach to decision making where consumers would use overall predispositions to form expectation self service quality for a technology-based self-service option. In both the models expected service quality would influence intentions to use technology-based self-service option.

#### **SQ10. Model of perceived service quality and satisfaction (Spreng and Mackoy, 1996)**

This model attempts to enhance the understanding of the constructs perceived service quality and consumer satisfaction. This model is modification to Oliver's model. The model highlights the effect of expectations, perceived performance desires, desired congruency and expectation disconfirmation on overall service quality and customer satisfaction. These are measured through set of ten attributes of advising (convenience in making an appointment, friendliness of the staff, advisor listened to my questions, the advisor provided accurate information, the knowledge of the advisor, the advice was consistent, advisor helped in long-range planning, the advisor helped in choosing the right courses for career, advisor was interested in personal life, and the offices were professional).

#### **SQ11. PCP attribute model (Philip and Hazlett, 1997)**

The researcher proposes a model that takes the form of a hierarchical structure – based on three main classes of attributes – pivotal, core and peripheral. According to the model, every service consists of three, overlapping, areas where the vast majority of the dimensions and concepts which have thus far been used to define service quality. These ranked levels are defined as – pivotal (outputs), core and peripheral (jointly representing inputs and processes). The pivotal attributes, located at the core, are considered collectively to be the single most determining influence on why the consumer decided to approach a particular organization and exert the greatest influence on the satisfaction levels. They are defined as the "end product" or "output" from the service encounter; in other words, what the consumer expects to achieve and receive, perhaps even "take away, when the service process is duly completed.

Core attributes, centered on the pivotal attributes, can best be described as the amalgamation of the people, processes and the service organizational structure through which consumers must interact and/or negotiate so that they can achieve/receive the pivotal attribute. Peripheral attributes which can be defined as the "incidental extras" or frills designed to add "roundness" to the service encounter and make the whole experience for the consumer a complete delight. When a consumer makes an evaluation of any service encounter, he is satisfied if the pivotal attributes are achieved, but as the service is used more frequently the core and peripheral attributes may begin to gain importance.

#### **SQ12. Retail service quality and perceived value model (Sweeney et al., 1997)**

The influence of service quality on value and willingness to buy in a specific service encounters through two alternative models. Value can be defined as a comparison between what consumers get and what they give, suggesting that value is a comparison of benefits and sacrifices. (Zeithaml et al., 1988). Value construct used in this model is "value for money".

**Model 1:** this model highlights that in addition to product quality and price perceptions, functional service quality and technical service quality perceptions both directly influence value perceptions.

**Model 2:** this model highlights that in addition functional service quality perceptions directly influence consumers' willingness to buy. Functional service quality perceptions also influence technical service quality perceptions, which in turn influence product quality perceptions and neither of the two directly influence value perceptions.

On analysis, of modification indices for model 2 (being superior to model 1) it is possible to make significant improvement in this model by allowing technical service quality to influence perceived value directly.

#### **SQ13. Service quality, customer value and customer satisfaction model (Oh, 1999)**

The researcher proposed an integrative model of service quality, customer value and customer satisfaction. The proposed model focuses mainly on post purchase decision process. Arrows in the model indicate causal directions. The model incorporates key variables such as perceptions, service quality, consumer satisfaction, customer value and intentions to repurchase. The model provides evidence that customer value has a significant role in customer's post-purchase decision-making process.

**SQ14. Antecedents and mediator model (Dabholkar et al., 2000)**

A comprehensive model of service quality includes an examination of its antecedents, consequences, and mediators to provide a deeper understanding of conceptual issues related to service quality. This model examines some conceptual issues in service quality as: the relevant factors related to service quality better conceived as components or antecedents and the relationship of customer satisfaction with behavioral intentions.

**SQ15. Internal service quality model (Frost and Kumar, 2000)**

The researcher has developed an internal service quality model based on the concept of GAP model (Parasuraman et al., 1985). The model evaluated the dimensions, and their relationships, that determine service quality among internal customers (front-line staff) and internal suppliers (support staff) within a large service organization. The internal gap 1 shows the difference in support staff's perception (internal supplier) of front-line staff's expectation (internal customers). Internal gap 2 is the significant difference between service quality specifications and the service actually delivered resulting in an internal service performance gap. Internal gap 3 is the gap which focuses on the front-line staff (internal customers). The gap is based on the difference between front-line staff's expectations and perceptions of support staff's (internal supplier) service quality.

**SQ16. Internal service quality DEA model (Soteriou and Stavrinides, 2000)**

The researcher presented a service quality model that can be used to provide directions to a bank branch for optimal utilization of its resources. The model does not aim to develop the service quality measures, rather guides how such measures can be incorporated for service quality improvements. The model points out resources that are not properly utilized. The inputs to the model consist of two sets: consumable resources such as personnel, space, time etc. and the number of accounts in different categories. The output of the model is the level of service quality perceived by the personnel of the branch. The data envelope analysis (DEA) model compares branches on how well they transform these resources (inputs) to achieve their level of service quality (output) given the client base. The DEA model will identify under performers and suggest ways for their improvement. The **input minimization DEA** model will provide information on how much could the consumables resources be reduced while delivering the same level of service quality, while the **output maximization DEA** model will provide information on how much service quality can be improved using the same consumable resources.

**SQ17. Internet banking model (Broderick and Vachirapornpuk, 2002)**

One of the key challenges of the internet as a service delivery channel is how service firms can manage service quality as these remote formats bring significant change in customer interaction and behavior. This study proposes and tests a service quality model of internet banking. The research uses participant observation and narrative analysis of UK internet web site community to explore how internet banking customers perceive and elements of this model. In the context of internet, five key elements are treated as central influences on perceived service quality: They are: customer expectations of the service; the image and reputation of the service organization; aspects of the service setting; the actual service encounter; and customer participation.

**SQ18. IT-based model (Zhu et al., 2002)**

This model highlights the importance of information technology (IT)-based service options. Service providers are using IT to reduce costs and create value-added services for their customers. It proposes a service quality model that links customer perceived IT-based service options to traditional service dimensions. The model attempts to investigate the relationship between IT-based services and customers' perceptions of service quality. The model focuses on the linkages among the service dimensions as measured by SERVQUAL, the constructs representing the IT-based service quality, preferences towards traditional services, experiences in using IT-based services, and perceived IT policies.

**SQ19. Model of e-service quality (Santos, 2003)**

This study proposes a conceptual model of e-service quality with its determinants. It is proposed that e-service quality have incubative (proper design of a web site, how technology is used to provide consumers with easy access, understanding and attractions of a web site) and active dimensions (good support, fast speed, and attentive maintenance that a web site can provide to its customers) for increasing hit rates, stickiness, and customer retention.

**OBSERVATION & EVALUATION OF SERVICE QUALITY MODELS**

Owing to the importance of service quality, there has been a systematic development of a variety of concepts and models.

- Gronroos (1984) (SQ1) observed that word-of-mouth (WOM) has a more substantial impact on potential customers than traditional marketing activities, and also highlighted the need for service quality research based on consumers' views.
- Later Parasuraman et al. (1985) (SQ2) modeled service quality as a gap between consumer and marketer sides at different levels, using WOM as a key contributor to the expected service. Later Parasuraman et al. (1988; 1991) developed and revised service quality measurement tool, SERVQUAL. This gap model and SERVQUAL as a base was used (Frost and Kumar, 2000) (SQ15), for internal service quality modeling.

**The measurement of service quality through gap model and SERVQUAL was criticized by:**

- Cronin and Taylor (1992) (SQ5) and Teas (1993) (SQ7) and they proposed SERVPERF (a service quality tool for measuring perceptions only) and EP (Evaluated Performance) model respectively. This was again criticized by Parasuraman et al. (1994), and further counter-acted by Cronin and Taylor (1994) and Teas (1994).
- Cronin and Taylor (1992) pointed out that service quality is an antecedent of consumer satisfaction, which has a significant on purchase intentions. This led to the development of model of perceived service quality and satisfaction (Spreng and Mackoy, 1996) (SQ10).
- Cronin and Taylor (1992) pointed out that consumers don't always buy best quality service, they might instead purchase on the basis of their assessment of value of service. This highlighted the importance of "value" and thus acts as a motivating point for researchers to include/model value for improvement/understanding of service quality.
- In this liberalized economy, to remain competitive, service providers are increasingly offering their customers IT-based service options. Service providers are using IT to reduce costs and create value-added services for their customers. Furey (1991) suggests that IT can help enhance service quality by increasing convenience, providing extra services, and collecting service performance information for management use.
- This led the related developments of models by Berkley and Gupta (1994) (SQ8); Dabholkar (1996) (SQ9); Broderick and Vachirapornpuk (2002) (SQ17); Zhu et al. (2002) (SQ18) and Santos (2003) (SQ19).
- It seems that practitioners required an approach to maximize service quality with available inputs, and this led to the development of DEA-based model (Soteriou and Stavrinides (2000) (SQ16).

From the review, it is clear that there does not seem to be a well-accepted conceptual definition and model of service quality nor there is any generally accepted operational definition of how to measure service quality. However, majority of models and definitions support the view of evaluating service quality by comparing their service quality expectation with their perceptions of service quality they have experienced.

**Category A. Gap model / SERVQUAL-based**

The models under this category are those models, which are developed either using gap model or its modification as base or scale using SERVQUAL items or its modification for measurement of service quality.

The evaluation of the models as identifying their findings and weaknesses are presented:

TABLE 1

Model No. / Type	Key Findings / Applications	Weaknesses / Limitations
<b>SQ1. Technical and functional quality model</b>	<ol style="list-style-type: none"> <li>1. Service quality depends on technical quality, functional quality and corporate image of the organization in consideration.</li> <li>2. Functional quality is more important than the technical quality.</li> </ol>	<ol style="list-style-type: none"> <li>1. The model does not offer an explanation on how to measure functional and technical quality.</li> </ol>
<b>SQ2. Gap model</b>	<ol style="list-style-type: none"> <li>1. The model is an analytical tool. It enables the management to identify systematically service quality gaps between a numbers of variables affecting the quality of the offering.</li> <li>2. This model is externally focused. It is capable of assisting the management to identify the relevant service quality factors from the viewpoint of the consumer.</li> </ol>	<ol style="list-style-type: none"> <li>1. The model does not explain the clear measurement procedure For the measurement of gaps at different levels.</li> </ol>
<b>SQ3. Attribute service quality model</b>	<ol style="list-style-type: none"> <li>1. This model provides a base of segregating service organization on three dimensions for better management of quality.</li> <li>2. The model has the potential to enhance understanding of the Concepts of service quality and help to guide about targeting towards the right customer segment.</li> <li>3. This model is useful both in the design stage and periodically as the service and possibly customer taste evolve.</li> </ol>	<ol style="list-style-type: none"> <li>1. It does not offer the measurement of service quality.</li> <li>2. It does not offer a practical procedure capable of helping management to identify service quality problems or practical means of improving service quality.</li> </ol>
<b>SQ4. Synthesized model of service quality</b>	<ol style="list-style-type: none"> <li>1. This model identifies variables that require systematic mgt. attention in planning &amp; implementation controlling service–marketing strategies that minimize service quality gap.</li> </ol>	<ol style="list-style-type: none"> <li>1. Needs empirical validation.</li> <li>2. Need to be reviewed for different type of service settings.</li> </ol>
<b>SQ5. Performance only model</b>	<ol style="list-style-type: none"> <li>1. Service quality should be conceptualized and measured as an attitude.</li> <li>2. The performance-based SERVPERF is efficient in comparison with SERVQUAL, as it directly reduces the number of items by 50 per cent and the results are better.</li> <li>3. Service quality is an antecedent of consumer satisfaction and may have a better effect on purchase intentions than service quality.</li> </ol>	<ol style="list-style-type: none"> <li>1. Need to be generalized for all types of service settings.</li> <li>2. Quantitative relationship between consumer satisfaction and Service quality need to be established.</li> </ol>
<b>SQ6. Ideal value model of service quality</b>	<ol style="list-style-type: none"> <li>1. This model provides a new learning perspective on how an ideal standard can be formed and how it can be sustained mentally.</li> <li>2. The model highlights attention to the importance of negative disconfirmation experience as a determinant for satisfaction outcome.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fewer number of items used for value and customer satisfaction Needs to be defined for all types of service settings.</li> </ol>
<b>SQ7. EP and NQ model</b>	<ol style="list-style-type: none"> <li>1. The model raised a number of issues pertaining to conceptual and operational definitions of expectation and revised expectation.</li> <li>2. The criterion and construct validity of the EP model was higher than both the SERVQUAL and NQ model.</li> </ol>	<ol style="list-style-type: none"> <li>1. This model was tested for limited sample size and for narrow service setting.</li> </ol>
<b>SQ8. IT alignment model</b>	<ol style="list-style-type: none"> <li>1. This model describes how IT can be used to improve customer service along key service quality dimensions including reliability, responsiveness, competence, access, communication, security and understanding the customer.</li> <li>2. Allows managers to understand the commonly used technologies in their industry and determine appropriate technology suiting their requirements.</li> </ol>	<ol style="list-style-type: none"> <li>1. It only highlights the impact of IT on service quality. The model Does not offer a way to measure and monitor service quality.</li> <li>2. The model is silent about the level of IT use for particular Service settings.</li> </ol>
<b>SQ9. Attribute and overall affect model</b>	<ol style="list-style-type: none"> <li>1. The attribute-based model is favored in forming the evaluations Of service quality for technology-based self-service options.</li> <li>2. The overall affect model is also supported but it does not add further explanatory power to the attribute-based model.</li> </ol>	<ol style="list-style-type: none"> <li>1. Needs to be generalized for different self-service options.</li> <li>2. Effect of demographic variables, price, physical environment etc. is not considered.</li> </ol>
<b>SQ10. Model of perceived quality and satisfaction</b>	<ol style="list-style-type: none"> <li>1. This model shows that service quality and satisfaction are distinct and desires congruency does influence satisfaction.</li> <li>2. A key determinant of service quality and customer satisfaction is meeting customer desires. Rising expectations have a positive effect on customer satisfaction perceptions of performance, but they also have a negative effect on satisfaction through disconfirmation.</li> </ol>	<ol style="list-style-type: none"> <li>1. The model does not highlight how the service quality is achieved and operationalized.</li> <li>2. The model is weak in providing directions for improvements in service quality.</li> </ol>
<b>SQ11. PCP attribute model</b>	<ol style="list-style-type: none"> <li>1. Provides a simple, effective and general framework of assessing Service quality for any service sector.</li> <li>2. Highlights the area of improvements for service quality Depending on the frequency of encounter.</li> <li>3. The dimensions to these three levels of attributes are individual sector-dependent and with reference to consumer.</li> </ol>	<ol style="list-style-type: none"> <li>1. The model is lacking in providing general dimensions to three levels of attributes (Lacks empirical validation).</li> </ol>
<b>SQ12. Retail service quality and perceived value</b>	<ol style="list-style-type: none"> <li>1. The technical service quality is an important contributor to product quality and value perceptions and hence influences willingness to buy.</li> <li>2. Functional service quality has indirect influence on willingness to buy through product quality and value perception; however, it has influence on willingness to buy that is independent of product assessment (poor staff manners).</li> </ol>	<ol style="list-style-type: none"> <li>1. The model considers only one value construct, i.e. value for Money.</li> <li>2. Fewer number of items per construct is taken in this study.</li> </ol>
<b>SQ13. Service quality, customer value and customer satisfaction model</b>	<ol style="list-style-type: none"> <li>1. The model can be used as a framework for understanding consumer decision process as well as evaluating company performance.</li> <li>2. This model provides directions and targets for customer-oriented company efforts.</li> </ol>	<ol style="list-style-type: none"> <li>1. Model needs to be generalized for different types of service Settings.</li> <li>2. Model variables are measured through relatively fewer items.</li> </ol>

<b>SQ14. Antecedents and mediator model</b>	<ol style="list-style-type: none"> <li>1. Consumers evaluate different factors related to the service but Also form a separate overall evaluation of the service quality.</li> <li>2. The antecedent's model can provide complete understanding of Service quality and how these evaluations are formed.</li> <li>3. Customer satisfaction is a better predictor of behavioral intentions.</li> <li>4. A strong mediating role was found, confirming that it is important to measure customer satisfaction separately from service quality when trying to determine customer evaluations of service.</li> </ol>	<ol style="list-style-type: none"> <li>1. Antecedents of customer satisfaction have not been explored.</li> <li>2. The model measures behavioral intention rather than actual behavior.</li> <li>3. Needs to be generalized for different service settings.</li> </ol>
<b>SQ15. Internal service quality model</b>	<ol style="list-style-type: none"> <li>1. The perceptions and expectations of internal customers and internal suppliers play a major role in recognizing the level of internal service quality perceived.</li> </ol>	<ol style="list-style-type: none"> <li>1. Need to be generalized for all types of internal environments.</li> <li>2. Effect of changes in external environment on model is not Considered.</li> </ol>
<b>SQ16. Internal service quality DEA model</b>	<ol style="list-style-type: none"> <li>1. Indicates the resources, which can be better utilized to produce higher service quality levels.</li> </ol>	<ol style="list-style-type: none"> <li>1. Does not provide the measurement of service quality.</li> <li>2. Model ignores other bank performance measures.</li> </ol>
<b>SQ17. Internet banking model</b>	<ol style="list-style-type: none"> <li>1. Implication for the management of quality in internet banking service arises in two areas <b>a)</b> within the service interface and <b>b)</b> with the management of increased customer role.</li> <li>2. The level and nature of customer participation had the greatest impact on the quality of service experience and issues such as customers' "zone of tolerance" and the degree of role understanding by customers and perceived service quality.</li> </ol>	<ol style="list-style-type: none"> <li>1. Not much empirical work carried out.</li> <li>2. The model is based on the experience of one web site only, needs to be validated with other experiences.</li> </ol>
<b>SQ18. IT-based model</b>	<ol style="list-style-type: none"> <li>1. IT-based services have a direct impact on the reliability, responsiveness and assurance dimensions and an indirect impact on customer satisfaction and perceived service quality.</li> <li>2. IT can help service providers achieve higher level of customer Satisfaction.</li> <li>3. The customer evaluation of IT-based services is affected by preference towards traditional services, past experience in IT-based services and perceived IT policies.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fewer number of items chosen to measure the feeling of self-control and comfort in using IT-based services.</li> <li>2. Does not provide a measure of service quality of IT-based Transactions.</li> </ol>
<b>SQ19. Model of e-service quality</b>	<ol style="list-style-type: none"> <li>1. It provides a better understanding of e-service quality and, therefore, to achieve high customer retention, customer satisfaction, and profitability.</li> <li>2. This e-service quality model can be of assistance to all companies that engage e-commerce or plan to do so.</li> </ol>	<ol style="list-style-type: none"> <li>1. Model did not provide specific measurement scales.</li> <li>2. No statistical analysis carried out.</li> </ol>

#### Category B. Other models

The other models which are different from the gap model. Following tables summarizes categorization of the earlier discussed models along with the salient features of each of these models. These tables also present an attempt to map the models based on the factors given in the earlier section "Frameworks for study". It is clear from the review that none of the models caters to the factors highlighted in that section, and so this demands research in this direction. Another issue emerging from the review is the identification of internal and external customers. From service delivery point of view, one needs to clearly understand distinction between these two classes of customers. This issue further gains strength, as it is expected that the key to the success of any organization depends on the dedicated employee base represented by the internal customers. Unless internal customers are satisfied, it may be difficult to visualize good quality service for the external customers. The role and commitment of top management in delivering quality service to its customer also gains importance in the light of growing competitive pressure and globalization of services.

#### RESEARCH ISSUES

Based on the survey of literature, some research issues are identified which require attention from researchers and practitioners. These research issues may be categorized into the following categories for better understanding of the subject:

**Category I:** Relation between various attributes of service.

**Category II:** Role of technology such as IT.

**Category III:** Measurement issues.

Following tables attempts to highlight these issues with reference to 19 models surveyed. A brief account of these issues is given below.

#### Category I: Relation between Various Attributes of Service

Quality of service is affected by and affects a number of variables such as value, attitude, expectations and aspirations etc. These variables may also guide purchasing behavior, financial performance etc. In this regard it may be interesting to develop a theoretical framework to establish clear linkages between various variables. Similarly, it needs to be explored if various attributes of service quality are independent.

#### Category II: Role of Technology Such as IT

Technology plays an important role in improving quality of service. IT initiatives such as EDI (electronic data interchange), POS (point of sales) information systems and systems such as ERP (enterprise resource planning) may act as an enabler for value enhancement. The following issues may need further attention:

- What type of information system architecture is needed for effective delivery of quality service?

#### Category C: Measurement Issues

It is interesting to study measurement-related issues. Often, the behavior and outcomes may be guided by the way quality of service is being measured. The following issues are important in this regard:

- How to quantify and measure quality of service?
- How to link quality of service and business performance? Is there any evidence to say that improved quality of service has enhanced financial performance of the organization?
- How does one benchmark on various dimensions of services?

TABLE 2

Model no./type	Category	Select research issues
SQ1. Technical and functional quality model	I	How technical and function quality influences a service delivered and how the customer perceives these dimensions?
SQ2. GAP model	III	How to measure the gaps at different levels using a standard measurement tool? What are the factors affecting? Whether these gaps differ from industry to industry?
SQ3. Attribute service quality model	III	How to measure service quality in a particular service encounter using this model. On what attributes it depends and how to determine relative importance of attributes for a service encounter?
SQ4. Synthesized model of service quality	I	What factors contribute to the information and feedback, design, implementation and communication gaps? How service managers can minimize the gaps through the performance of planning, implementation and control tasks?
SQ5. Performance only model	I	What is the role of value in the determination of a service? How value affects the purchase decision
SQ6. Ideal value model	I	What is the cognitive process by which consumer service are formed and changed?
SQ7. EP and NQ model	I	How to generalize the EP model results for all types of service settings, whether change in the type of service needs re-examination of model?
SQ8. IT alignment model	II	How IT can enhance customer satisfaction. Whether the investment in IT depends on competition, market growth and other similar factors. How much to invest and up to what level IT should be used?
SQ9. Attribute and overall affect model	II	What is the role of attitude and behavior towards using a technology on expectations of service quality?
SQ10. Model of perceived quality and satisfaction	I	How to determine the balance between positive and negative effect of expectations?
SQ11. PCP attribute model	III	What should be weighing of these levels of attributes? On what factors it depends. Whether this changes with the type of service settings?
SQ12. Retail service quality and perceived value	I	What is the impact of functional value, emotional value and social value on product quality, service quality, perceived price, value for money and willingness to buy?
SQ13. Service quality, customer value and customer satisfaction model	III	What are the measurement issues associated with perceived value and customer satisfaction? Whether the determinants of perceived value and customer satisfaction change with type of service setting?
SQ14. Antecedents and mediator model	I	What is the role of actual behavior and actual repurchase on predictive power of service quality and customer satisfaction evaluation? What are the antecedents of customer satisfaction, whether these are correlated with antecedents of service quality?
SQ15. Internal service quality model	III	Which of the SERVQUAL dimensions is most important in measurement of internal service quality? Whether responsiveness plays a bigger role than reliability for all types of service settings?
SQ16. Internal service quality DEA model	I	Can data envelope analysis be used as a tool to derive the linkage between service quality, profitability and operating efficiency? What will be impact on model of other performance measures included as output?
SQ17. Internet banking model	II	Whether the model can be applied to other internet service encounters. Whether the interrelation of entities will change with the change in demographic variables?
SQ 18: IT-based model	II & III	How to measure service quality of IT-based transactions?
SQ19. Model of e-service quality	II & III	What are the items of the determinants considered in the model and how to measure e-service quality? Whether there will be change in the study with type of business (goods, different types of sites etc.)?

Notes: Category I: general relation between various attributes of service; Category II: role of technology such as IT; Category III: measurement issues

## CONTRIBUTIONS AND CONCLUDING REMARKS

An attempt is made in this paper to review various service quality models. The models are summarized in above Tables. The models cover the domain from conventional personalized services to the internet-enabled services including the organizational and behavioral aspects. These models provide a useful framework for quality of service. It is further observed that the service quality outcome and measurement is dependent on type of service setting, situation, time, need, etc. factors. This further adds to the complexity of the subject. In addition to this even the customer's expectations towards a particular service are also changing with respect to factors like time, increase in the number of encounters with a particular service, competitive environment, etc. These demands for a continuous effort to learn and validate, modify the existing concepts of service quality. The present paper is an attempt to enhance the understanding of the subject.

This review of models clearly highlighted the following research streams in this field:

- General Service quality model developed with different types of service encounters.
- Refinement of these models with the new situations.
- Modeling based on new concepts (derived out of weaknesses / leanings from the existing models).
- Considering new variables/situations with existing models and remodel / test the findings.

The review of these 19 service quality models highlighted various issues, debates, strengths and weaknesses pertaining to the models. It is noted that the models have a focus on only one link (i.e. either marketer to consumer or front-line staff to supporting staff). On other side, researchers (Caruana and Pitt, 1997; Reynoso and Moores, 1995 etc.) have continuously pointed out the positive correlation of internal service quality (considering all the processes and operations associated in delivery of product or service) with business performance and the service quality delivered to the customer (including the distribution, marketing and other support functions). From the study of these models, it appears that the key ingredients to service quality improvements are:

- Clear market and customer focus.
- Motivated staff.
- Clear understanding of concepts of service quality and factors affecting the same.
- Effective measurement and feedback system.
- Effective implementation system.
- Efficient customer care system.

Researchers and practitioners view the subject in the context of service under consideration. It is clear from the review that none of the models currently satisfies the set framework, this clearly highlights the need for further research. This review highlighted some of the research agenda from the review of service quality models.

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## IMPACT OF FDI IN SERVICE SECTOR ON ECONOMIC GROWTH OF INDIA

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### ABSTRACT

*In 1991, liberalization, privatization and globalization aimed at making the Indian economy a faster growing economy and globally competitive. This paper overviews the inflows of FDI in Indian service sector which impacted the growth of Indian economy positively. FDI is a tool of economic growth through its strengthening of domestic capital, productivity and employment. FDI also plays a vital role in the up gradation of technology, skill and managerial capabilities in various sector of the economy. The present Paper analyzes the significance of FDI inflow in Indian service sector. Service sector is the fastest growing sector in India, contributing significantly to GDP, GDP growth, investment, employment and trade. India is a major proponent of liberalizing service in both in WTO and its bilateral trade agreement share of service in India's GDP rose from 51 percent (2001-01) to 57 percent (2013-2014). This paper also features the inflow of FDI in various sub-sector of service sector like financial and banking services etc. The Paper also identifies a number of barriers faced by service sector and suggests policy measures which will enhance growth of Indian economy. In this research paper we have dealt with the effect of FDI inflows on the Indian economy over the period of 2002 to 2014. The statistical model was developed on economic data to investigate the relationship between FDI inflow in India, FDI inflow in service sector and GDP of Indian economy. This analysis has revealed that foreign direct investment has positive and significant impact in GDP.*

### KEYWORDS

FDI, service sector, economic growth, India.

### INTRODUCTION

Capital is the engine of economic development. Present day industrialized economies are assisted by foreign capital and it played an essential role in the early stage of industrialization of most of the advanced countries. It plays an important role in developing economy. In the initial stage of development, domestic saving is not sufficient to meet the capital requirement, foreign capital helps by providing much needed resources for the development of the developing economy. FDI has gain importance in Indian economy. FDI is a controlling ownership in business enterprises in one country by an entity based in another country. FDI provides mutual help to both home countries and host country. For the home country, it is an investment generating income and source of spreading business operating globally. For the host country, it is a source of capital for the development of infrastructure, which is essential for economic development. So FDI has assumed importance both in developing and developed economies.

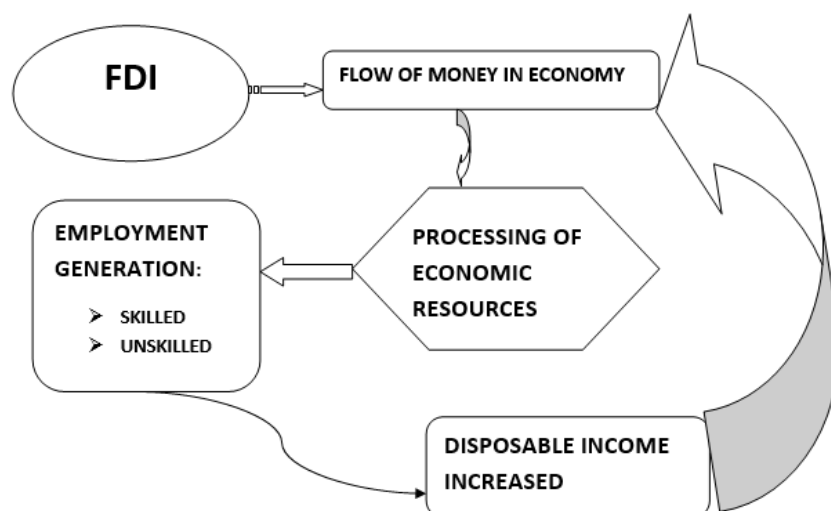
In post liberalization era, India is known to have attracted a large amount of foreign direct investment. India has been major recipient of FDI inflow in the majority of sectors. There has been an unnerving upsurge in the economic development of the country. FDI in India is allowed freely in most of the sectors, except a few, where specific guideline is given for FDI beyond a limit. India's capacity as host country in attracting FDI has been enhanced during the past reform period. Earlier the amount of FDI was low conforming to selected sectors, but now the inflow of FDI has grown tremendously and almost in all sector of the economy. Revision of FDI policy during 2005 opened the few sector for the foreign investor to start their business.

During 2000 to 2013, Indian sectors attracting highest FDI inflows are service sector, construction sector, telecommunication sector, computer hardware and software and chemical sector.

The service is a vital component of Indian economy. This sector in India comprises a wide range of activities, including social and personal services, transportation, communication, financial, real estate and business service and trading. Service sector account for around 60 percent of India's gross domestic product (GDP), has emerged as one of the largest and fastest growing sectors not just in the country but in the global landscape subsequently. Service sector contribution in global output and employment has been substantial for most countries amount the world and service sector is the largest part of their economy. The service sector in India received cumulative FDI equity of us\$39460 million during period 2000 to 2014, data released by department of industrial policy and promotion (DIPP). Here FDI equity refers to investors owns directly at least 10 percent of the share stock and no more than 50 percent of investment. Equity capital comprises equity in branches, all shares in subsidiaries and association (except none participating, preferred shares that are treated as debt securities and included under direct investment, debt instrument). Share of service sector in GDP has increase from 56.53 percent in 2000 to 64.84 percent in 2013. Moreover, GDP growth rate of the service sector has been 15.44 percent which reflect that there has been significant impact of FDI inflow on the growth of service sector and economic growth of economy.

### FDI AND ECONOMIC GROWTH LINKAGE MODEL

FIG. 1



**OBJECTIVE, HYPOTHESIS, RESEARCH METHODOLOGY AND SCOPE OF STUDY****OBJECTIVE OF THE STUDY**

The major objective of this paper is to analyze the impact of FDI inflows on the GDP growth in India especially in service sector. Objective on which this study is conducted are as follows:

1. To study the FDI inflow in Indian service sector from 2002-2014.
2. To analyze the relationship between service sector growth and Indian economy.

**HYPOTHESIS**

In this paper we have to find out the role and effect of FDI inflows has significant effect on Indian GDP (service sector). For that we set up a statistical hypothesis as:

**H0<sub>1</sub>:** it is hypothesized that there is no significant relationship between FDI equity inflow and growth of service sector.

**H1<sub>1</sub>:** it is hypothesized that there is significant relationship between FDI equity inflow and growth of service sector.

**H0<sub>2</sub>:** it is hypothesized that there is no significant relationship between GDP (service sector) and overall GDP.

**H1<sub>2</sub>:** it is hypothesized that there is significant relationship between GDP (service sector).

**RESEARCH METHODOLOGY**

Regression analysis is one of the most commonly used statistical techniques used in almost all fields. Its main objective is to explore the relationship between a dependent variable and one independent variable (which are also called predictor or explanatory variable).

Correlation analysis we used the technique of correlation to test the statistical significance of the association between FDI and GDP (service sector). Correlation helps to measure the strength and direction of linear association between two variables.

**MODEL FORMULATION**

GDP (service sector) = f (FDI equity)

GDP (service sector) = a + b (FDI equity)

GDP = f (GDP (service sector))

GDP = a + b (SGDP)

Where,

FDI (foreign direct investment, India) is the explanatory variable in log form.

GDP (gross domestic product, India) is the dependent variable in log form.

GDP (service sector) which is service gross domestic product is dependent in first and independent in second model in form of log.

Regression coefficient (to be estimated) measure how much unit of GDP would be changed with unit change in FDI.

**DATA COLLECTION**

The data set consist of FDI equity inflow (us\$ million) in service sector of India and GDP (service sector, India) and GDP (India). The data set is secondary and covers the time period of 2002-2014. The data collected from the various sources like department of industrial policy and promotion (DIPP), RBI annual publication and journals.

**SCOPE OF THE STUDY**

The flow of FDI in Indian service sector is boosting the growth of Indian economy, this sector contributing the large share in the growing GDP of India. This sector attracting a significant position of total FDI in Indian economy and it has shown especially in the second decade (2000-2010) of economic reform in India. Is this contribution of FDI in this sector is stimulating the economic growth or not, this knowledge thrust of research scholar create the interest in conducting the study?

**INDIAN SERVICE SECTOR AND GDP OF INDIAN ECONOMY**

The service sector contributes the most of the Indian GDP. The service sector in India has largest share in the country's GDP for its account for around 60 percent in 2013. The service sector contributed only 15 percent to the Indian GDP in 1950. Further the Indian service sector share in country's GDP has increased from 43.65 in 1990-1991 to around 51.60 percent in 1998-1999. During the last decade from 2000 to 2013 it share increased from 56.33 in 2000 to 64.84 in 2013. This shows that the service sector in India accounts for more than half of the service sector in India.

The service is anything which is characterized by economic motive, intangibility, contractual nature of market transaction, heterogeneity of activities, storability, transportability and skill oriented.

The classification according to CSO of service sector in India:

- A. Construction includes trade, hotels and restaurant, trade (distribution service) and hotel and restaurant.
- B. Transport, storage and communication include railway, transport by other mean (road, water, air transport and service incidental to transport, storage, communication (postal, money order, telegram, telephone, overseas communication service).
- C. Financing insurance real estate and business service include banking, insurance, dwelling real estate, business service, legal service.
- D. Community, social and personal service includes public administration, defence, personal service, community service and other service.

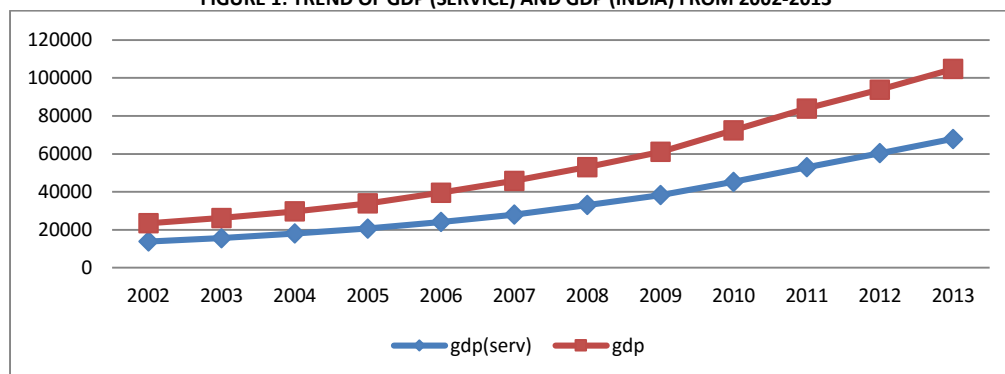
Trade point (according to GATS) of view the service trade has been classified as commercial service, transport, travel, insurance and financial service, computer, IT, communication and communication service.

**ANALYSIS OF INDIAN SERVICE SECTOR CONTRIBUTION TO INDIAN GROSS DOMESTIC PRODUCT (2002-20013)**

**TABLE 1: SHARE OF GDP (SERVICE) IN GDP (INDIA) (2002-2013)** Amount in rupee billion

YEAR	GDP(SERVICE)	GDP(INDIA)	% SHARE IN GDP
2002	13846.11	23438.64	59.07386
2003	15629.75	26258.64	59.52231
2004	18051.1	29714.16	60.74915
2005	20674.93	33905.03	60.97895
2006	24125.24	39532.76	61.02594
2007	28042.06	45820.86	61.19933
2008	33111.43	53035.67	62.43238
2009	38300.51	61089.03	62.69622
2010	45322.59	72488.6	62.52375
2011	52980.25	83916.91	63.13418
2012	60434.95	93888.76	64.36867
2013	67907.19	104728.1	64.84144

FIGURE 1: TREND OF GDP (SERVICE) AND GDP (INDIA) FROM 2002-2013



The trend in service sector has shown significant contribution to Indian GDP and its increasing rapidly. Many foreign consumers have shown interest in the country's service export, this is due to the fact that India has a large pool of skilled, low cost, and educated workers in country. Foreign companies outsourcing their work to India especially in the area of business service which include business process outsourcing and information technology service. This has given a major boost to the service sector in India which in turn has made the sector contribute more to Indian GDP.

Service means the tertiary sector, which is the largest of three constituent sectors in terms of contribution to gross domestic product (GDP) in India. The service sector comprises trade, hotel and restaurants, transport, storage, communication, training, insurance, real estate and business service, community service (public administration and defense) and other service. This sector provides service of final consumption nature as well as intermediate nature; latter accounting for major share. Substantial part of service such as transport and communication are in the form of intermediate input for production of the other good and service.

For deeper analysis of trend in service sector we have to look into the subsector of service sector. From 1991 onwards there were structural change made in the economy which include, opening of various sector reform, including banking, insurance, stock market etc. telecom sector reform which not only fueled the growth but also envisaged service oriented economy driver by technology and IT. The three subsector trade, hotels, transport and communication has continued to boost the service sector by growing at double digit rates. Impressive progress in information technology (IT) and IT enabled service both rail and road traffic and fast addition to existing stock of telephone connection particularly mobiles played key role in such growth. It is observed that Growth of financial service (banking, insurance, real estate and business service), after dipping 5.6 percent in 2003-2004 bounced back to 8.7 percent in 2004-2005 and 10.9 percent in 2005-2006. The momentum has been maintained with growth of 11.1 percent in 2006-2007 (economic survey 2006-2007) service contributed as much as 68.6 percent of the overall average growth in GDP in the last five year between 2002-03 and 2006-07. But if we look at the subsector growth within the service sector only few subsectors are performing well i.e. IT, communication, BPO and ITES. The answer is not far from reality as the reforms have already accelerated the Indian economy toward achieving a target of sustained and stable growth despite the global financial turmoil of us in 2008.

The modern services that are growing most rapidly are now large enough where their future performance could have a significant macroeconomic impact. The tourism industry is a potential one which has geared itself to make tourist enjoy the holiday in destination of their choice. Entertainment industry plays an equally important role.

#### TESTING OF HYPOTHESIS

$H_0$ : it is hypothesized that there is no significant relationship between GDP (Service sector) and overall GDP.

$H_1$ : it is hypothesized that there is a significant relationship between GDP (service sector) and overall GDP.

To test the hypothesis, we have used correlation analysis. Coefficient of correlation measure the association between two variables. In particular, correlation measures the degree of association between two variables. A correlation may be positive or negative and correlation coefficient can take any value between -1 and +1.

#### BY ANALYZING THROUGH CORRELATION CORRELATIONS

		VAR00001	VAR00002
GDP(INDIA)	Pearson Correlation	1	1.000(**)
	Sig. (2-tailed)		.000
	N	12	12
GDP(SERVICE)	Pearson Correlation	1.000(**)	1
	Sig. (2-tailed)	.000	
	N	12	12

\*\* Correlation is significant at the 0.01 level (2-tailed).

#### RESULT

The estimated result of correlation analysis tells us the association between GDP (India) and GDP (service) is 1 which is positive and significant at 0.01 level of significant. This shows that that GDP (service sector) has major impact on the growth of Indian economy.

#### FDI IN SERVICE SECTOR

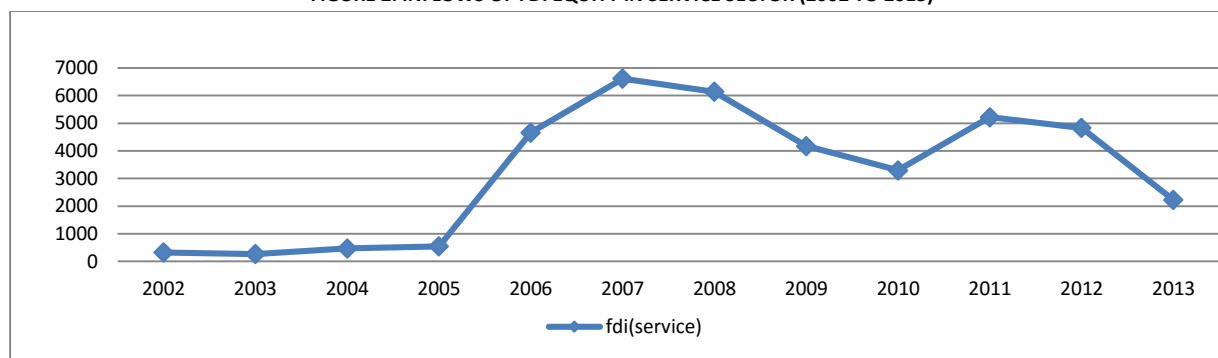
Capital formation is an important determination of economic growth. While domestic investments add to the capital stock in a economy. FDI plays a complementary role in overall capital formation and filling the gap between domestic saving and investment. At the macro level, FDI is a non debt creating source of additional external finance. At micro level, FDI is expected to boost output, technology, skill levels, employment and linkage with other sector and region of the host economy. FDI need to be analyzed for changes that might occur at sector level output, employment and forward and backward linkage with other sector of the economy. According to DIPP, the top FDI receiving sectors have strong backward and forward linkage with economy. Service sector is one of them. Service sector have strong forward linkage.

As per the classification of DIPP, the top five sector into which FDI inflows have major portion which are service sector, construction, telecommunication, computer software and hardware and chemical sector. Service sector top the chart as the FDI inflows in this sector is maximum during 2000 to 2013. It is around us\$ 38824 million. Service sector become the main driver of sustain economic growth of Indian economy.

TABLE-2

YEAR	FDI(EQUITY) us\$ million	GDP(SERVICE) us\$ million
2002	326	13846110
2003	269	15629750
2004	469	18051100
2005	543	20674930
2006	4664	24125240
2007	6615	28042060
2008	6138	33111430
2009	4176	38300510
2010	3296	45322590
2011	5216	52980250
2012	4833	60434950
2013	2225	67907190

FIGURE 2: INFLOWS OF FDI EQUITY IN SERVICE SECTOR (2002 TO 2013)



Service sector is among the main driver of sustain economic growth and development by contributing around 55 percent to GDP. Service sector include financial service, banking service, insurance, non-financial (service and business service), outsourcing, research and development, courier, technical testing and analysis, commodity exchange and other services. FDI inflows in the service sector has a continuous increasing trend from 2005 onward there is steep rise in inflow, this is because of new policy (SEZ ACT) introduce by government of India (FIGURE-III-IV). Cumulative amount of FDI equity inflows in service sector during 2000 to 2013 is us\$ 38824 million which is 19 percent of total FDI equity inflow. Route which are used for FDI equity inflow are SIA/FIPB, acquisition of shares and RBI automatic routes only. Sub sector of service sector which include financial service contributed 6.22 percent with total FDI inflow. Followed by banking service (1.65 percent), insurance (1.61 percent) and non-banking service (5.36 percent) respectively.

Two major cities Mumbai (49.67 percent) and New Delhi (16.35 percent) have high concentration of FDI inflows in India. Mauritius is at top of the chart by contributing 40.30 percent in service sector followed by Singapore (15.33 percent), United Kingdom (7.11 percent), U.S.A (6.88 percent) and Netherlands with 5.75 percent of total FDI inflow. It may be further mention that service sector in India has received major junk of FDI equity inflows during 2000 to 2013. During this period share of service sector in GDP as increase from 56.53 percent in 2000 to 64.84 percent in 2013. Moreover, GDP growth rate of the service sector has been 15.44 percent which reflect that there has been a significant impact of FDI equity inflow on the growth of service sector.

#### TESTING OF HYPOTHESIS

**H0:** it is hypothesized that there is no significant relationship between FDI equity inflow and growth of service sector.

**H1:** it is hypothesized that there is significant relationship between FDI equity inflow and growth of service sector.

Regression analysis is one of the most commonly used statistical techniques used in almost all fields. Its main objective is to explore the relationship between a dependent variable and one or more independent variables (which are also called predictor or explanatory variables). Linear regression explores relationships that can be readily described by straight lines or their generalization to many dimensions. In our case the link between Economic Growth (measured in terms of GDP growth in service sector) and foreign direct investment in India described by using Linear Regression Model.

#### DESCRIPTIVE STATISTICS

	Mean	Std. Deviation	N
GDP(SER)	10.3298	.53830	12
FDI(EQU)	7.5820	1.24389	12

#### MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.736(a)	.541	.495	.38237

a Predictors: (Constant), VAR00002

#### COEFFICIENTS (a)

Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.
		B	Std. Error	Beta		B	Std. Error
1	(Constant)	7.916	.711			11.128	.000
	FDI(EQU)	.318	.093	.736		3.435	.006

a Dependent Variable: VAR00001

#### RESULT

It is observed from the regression analysis that elasticity coefficient between FDI equity (service sector) and GDP (service sector) is 31.8 during (2002-2013) which implies that one percent increase in FDI equity (service sector) inflows causes 31.8 percent increase in GDP (service sector) in India. FDI (service sector) predict positive sign which shows FDI equity (service sector) have positive influence on GDP (service sector) in India. The coefficient of determination ( $R^2$ ) explain 54 percent level GDP (service sector) growth by FDI equity (service sector) in India.

#### CONCLUSION

The present paper makes an analysis of Indian services sector through examining its growth and contributions in the economy. The study confirms that services sector has grown at the significant rate in comparison to other sectors. Its growth rate is found to be higher than growth of overall GDP. Rising share of this sector

in GDP over covers the poor performance of agriculture sector. As a service sub-sector, trade is dominant all in terms of its contribution in Indian GDP. Further it is observed from the analysis that FDI is an important stimulus for the economic growth of India. FDI showed a tremendous growth in during (2000 -2013) that is three times then the first decade of FDI in services sector. Service Sector is one of the most dominating sectors of Indian economy in attracting highest FDI Equity inflows which account for 19 per cent of total FDI Equity inflows. Among the sub sectors of Service Sector, Financial Services stood at top place in attracting more FDI Equity inflows. Top countries that are investing in the form of FDI in Service Sector are Mauritius, Singapore and United Kingdom. Thus, service sector which is dominant in terms of its growth & shares serves as an engine of growth for Indian economy. Despite tremendous potential of service sector in India, there are some issues and challenges which need to be addressed. These are limit of FDI allowed, trade in services, issues related to taxation, foreign exchange, patents, skewed growth, requirement of skilled workforce, capacity building, employability in service sector vis. a vis. agriculture etc. It is important for a developing country like India with a large and young population to generate quality employment and move up the value chain. India needs private investments in key infrastructure services such as transport, energy and telecommunications.

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**FINANCIAL OBSTACLES AND DISPUTES FACED BY STEEL INDUSTRIES OF INDIA****PARAG RAY****STUDENT****SCHOOL OF MANAGEMENT****NATIONAL INSTITUTE OF TECHNOLOGY****WARANGAL****DURGAPRASAD NAVULLA****RESEARCH SCHOLAR****NATIONAL INSTITUTE OF TECHNOLOGY****WARANGAL****ABSTRACT**

Finance is the most important and essential pillar of a steel industry to make it stand strongly. For steel makers it is very important to meet the needs of the customers of the respective country is most important to earn more revenue. At the same time, it is again important to create new customer and new market for the industry to add more brand value and financial strength to it. During the establishing and running of the industry, the respective industry faces various financial problems which affect the revenue of that industry directly or indirectly. It is very much challenging for the industry to follow a competitive and effective manufacturing and operation process which must be cost effective. To attain the required profit and high revenue the financial problem must be identified and solved. In this view all the financial experts should put their efforts to diagnosis the respective problem and solutions with that. In this paper we are trying to identify and analyze the various financial aspects that create an opaque surface on the way of development of steel industries. Along with that we have tried to show some solutions and suggestions to overcome it.

**KEYWORDS**

profitability, tariffs, consumption, agglomeration, capital cost, sustainable, gross domestic product and gross national product.

**INTRODUCTION**

In this era of industrialization and globalization it is very much important to meet the demand of steel of certain country to earn financial growth and at the same time increase in rate of consumption of the steel defines the economic strength of a country. It increases with the increment of infrastructures, development of automobile sectors and enlargement of transportations throughout the country across the globe. But for the above things created financial challenges have more complexity. The steel industry is characterized by high capital intensity, high dependence on bulk raw materials, cyclical growth trends, perpetual over-capacity and relatively low profitability. This is the reason why the problems associated with the steel industry are generally complex requiring larger governmental and social interventions for its sustainable growth. Also, given their criticality to nation building, almost all nations with strong steel industry today had started their journey with steel industry in the state sector. Today, the industry is largely privatized and public owned with the government holding significantly reduced equity. The stability in strength and sustainability in nature can be maintained by protesting the economic difficulties and financial miseries with some remedies, initiatives and proper investments. In India raw material for steel i.e. Iron ore is vastly available in eastern zone (Odisha, Chhattisgarh, Jharkhand, and West Bengal) and in south zone (Telangana, Karnataka and Andrapradesh) also which contribute 80% of the total steel production. Even having such amount of resources still steel industries cannot stand due to financial problems. To overcome these problems a proper analysis of worth, analysis of problems, well capable investments, Supportive government policies, a good management process, and a perfect accountability is required for an enlightening future in global steel market. These steps should be planned and resulted by thinking out of the box removing the isolation.

The steel industry is the second biggest industry in the world after oil and gas with an estimated global turnover of 900 billion USD. China has taken 48% of market of the global steel market. So in the top 10 global steel company's china has 7 companies in this list. Except china Japan South Korea has made them to be placed in those top 10 lists. The below Table no. 1 contains the list of name of top 10 steel producers in global market having their revenue and Table no. 2 contains the Key Steel Players in India both private and public sectors.

**TABLE 1: TOP 10 FOREIGN STEEL KEY PLAYER**

COMPANY NAMES	COUNTRY(HEAD QUARTERS)	REVENUE
Arcelor Mittal	Luxembourg City, Luxembourg	US\$ 79.28 billion
Nippon Steel & Sumitomo Metal	Chiyoda-ku	US\$ 0.6135 trillion
Hebei Steel Group	Shijiazhuang, Hebei, China	US\$ 40,829.2 millions
Baosteel Group	Shanghai, China	US\$ 21.7 billion
POSCO	Pohang, South Korea	US\$ 60.87 billion
Shagang Group	China	US\$ 42.2 billion
Ansteel Group	Anshan, Liaoning, China	US\$ 24.089 billion
Wuhan Steel Group	Wuhan, China	US\$ 14.9055 billion
JFE Steel Corporation	Tokyo, Japan	US\$ 530.9703 billion
Shougang Group	Beijing, China	US\$ 65.4 million

**TABLE 2: KEY STEEL PLAYERS IN INDIA**

PUBLIC SECTOR	REVENUE	PRIVATE SECTOR	REVENUE
Steel Authority of India Ltd. (SAIL)	US\$ 7.6 billion	Jindal Steel & Power Ltd	US\$3.0 billion
Rastriya Ispat Nigam Ltd. (RINL)	US\$1.9 billion	JSW Steel Ltd	US\$7.2 billion
NMDC Ltd.	US\$ 2.075 billion	ESSAR Steel Ltd	US\$ 39 billion
KIOCL Ltd.	INR 3.637 billion	Tata Iron and Steel Company (TISCO)	US\$ 24.59 billion
MECON Ltd.		Bhushan Power & Steel Ltd. (BPSL)	US\$1.7 billion

For earning a profit, it is essential to diagnosis the value of demand before production and the rate of consumption after production. The demand of steel in India for 2016 has grown by 0.7% which is 31 million tonnes of steel in absolute term. And steel consumption is expected to grow by 7% in 2016. In long term by 2025 the demand of steel has increased to 300 million tonnes. Hence it is very essential to note all financial problematic points and causes for trying to solve these



problems to gain higher profit and earn much revenue which help in increasing Indian economy. The National Steel Policy 2005 is currently being reviewed keeping in mind the rapid developments in the domestic steel industry as well as the stable growth of the Indian economy since the release of the policy in 2005.

## LITERATURE REVIEW

Indian steel industry is among the upcoming industries of the world. It has a number of iron ores, which means that it has plenty of resources from which to draw its raw material (**The Indian Steel Sector: Development and Potential** by Dr. Suresh Vadde and G. Srinivas).

A vast income will grow and the global steel market will ask for Indian high quality steel. Indian steel industry has a great future (**Boom in India's Iron and steel industry** by B.P Radhakrishna, 2007).

Indian steel industry faces many serious problems particularly inefficient functioning public sector units, sickness among mini-steel plants, utilization of Capacity and metallurgical coal (**An Analysis of Indian Steel Industry**, by Dr. P. Surya Kumar and Dr. Prof. V. Balakrishnama Naidu, 2013).

The challenges that confront Indian steel industry in the age of globalization are complex in nature. There is need for policy support for the survival of the ailing steel industry; Government and the management of steel industry should simultaneously take care of its total transformation towards a better future (**Indian Steel Industry: Problems and Challenges** by Dr. B. S. N. Raju, 2015).

The decline in productivity was caused largely by government protection regarding prices and distribution of steel and by inefficiencies in integrated steel plants that were reserved to the public sector. With liberalization of the iron and steel industry productivity increased substantially to positive growth rates (**India's Iron and Steel Industry: Productivity, Energy Efficiency and Carbon Emissions** by Katja Schumacher and Jayant Sathaye, 1998). The present literature review shows that no study has been carried out to know the basic financial problem that an Indian steel industry generally faces.

## OBJECTIVES

1. To study the sustainability of Indian Steel Industry.
2. To identify and analyze the financial problem that Indian Steel Industry faces.
3. To give appropriate suggestions in practical way.

## DISCUSSION

The steel sectors, is however, dwarfed by numerous financial obstructions discussed below.

### 1. Amount of Capital: A important issue for steel sectors

Capital amount is an essential requirement for establishing a steel company as like every company. Sometimes requirement of a big amount of capital creates a restriction in initiating a business. For a steel industry the capital amount initially used in establishing the company, after that operation process, maintenance of equipment's, manpower incorporate, allocation of land etc needs a strong weight of money. Investment by some reliable investors become the add to the capital value. As the investors put there their money in steel industry the respective company has to give profit in return to the investor. Hence the steel sectors have a pressure to earn profit in a big amount to give the ROI (Return of Investment) to the Creditors. Insufficient amount of capitals surely creates problems for the steel sectors such as causing poor infrastructure, weak supply chain system, less effective production process, less quality of products which collectively causes loss to the company. Adani Group has signed an agreement with the government of Tamil Nadu for a solar power plant, for which Adani would invest Rs 4,536 crore in the project that would involve setting up of a 648 Mega-Watt solar power plant. With the capital amount of Rs 4,536 crore, Adani has to earn more profit in comparison to invested amount.

### 2. Cost of raw materials: Do create a problem for steel sectors

For steel industries the most two important raw materials are Iron ore and coal. India is enriched with a very big iron ore bed through the area of the geographic positions. It is needed a good role of money to extract these resources and put it in use for further production of steel. If this amount is very big then initially it's difficult for a steel industry to invest more amounts to have best quality of raw materials. Essar Steel is recognized as India's largest exporter of flat rolled products, with manufacturing facilities that include Bailadilla Ore Beneficiation Plant, Visakhapatnam Pelletisation Plant, and Hazira Steel Complex. We have set up a 12 MTPA beneficiation plant in Dabuna (Odisha) which benefits from close access to the rich iron ore reserves in the state. A 253km slurry pipeline transports the raw material to the pellet plant at Paradip (Orissa). In the above case the resources from mines i.e. Iron ore has to be extracted as per the norms of government and a specific amount of tax must be paid to government for that. It affects the cost of raw materials with the increment of the value of tax a financial effect is generated for the company. That it has to pay more tax to the government. Then cost of raw materials for a steel plant may causes financial fluctuation during the process. The process of iron ore beneficiation and transportation to the pelletisation plant need a vast amount of money because in the case of Essar steel Odisha plant to spread a pipe line over 253km and transport pure iron ore really had taken a much quantity of money to invest. A shortage of money or less investment cannot give a good design or effective process which causes poor quality of product. When we are taking the second important raw materials for steel i.e. coal, India's coking coal deposits are confined largely to the Raniganj and Jharia coal mines. These coal mines have become fairly deep and the cost of product of coal has gone up. Consequently, the input cost of energy is going up, affecting the output and margin of profit adversely. At the time of fall in raw materials create problem financially when these materials export outsidess the country. The prices of benchmark iron ore prices for export to China. Prices have recovered somewhat from the decade-low levels that they hit towards the end of July. Nevertheless, benchmark iron ore prices have lost ~19% since the beginning of 2015. Iron ore prices had earlier fallen almost 50% in 2014 as well. Rise in costs of raw materials causes fall in market prices concern among manufacturers. The increase in raw material costs, the production cost has to be rose up, to attain profit.

### 3. Cost of Manpower: Human Resource may cause an issue

For Indian steel makers Money invested on HRM (human resources management) is one of the important aspects. Manpower Cost is related to the cost associated with engaging staff and labour for performing a given activity. The Manpower Cost includes Salary of employees and Wage of labours including allowances & perquisites, Bonus / Performance Pay, Transportation Cost if commonly provided to all the employees, Subsidized Canteen, Recruitment Cost - such as Advertisement in News Paper, Reimbursement of travel fare for attending interview, Hotel accommodation for attending interview etc, Gratuity / Extra; and Any other cost directly incurred in connection with staff / labour. It will create difficulties for the steel sectors by increasing the allowances as the demand by the employees and labours as, there is a special allowance given by each steel sector to its labour and employees known as mining allowances. Employee demand may be there to increase their Travelling allowances. So to overcome this, proper rules and regulations should be made containing financial eligibility for employees' designation wise. As per the Mines Labor Welfare Fund Act, 1972 a person cannot work more than 8 hrs per day in the initial stage of steel industry. If a steel company imposed people to work, he will be pay more amounts which is a challenge related to economic status of the industry. In some steel companies some contractual labours are implemented for day to day work who have their own demand and wants financially which is really fluctuating in nature. This demand must create a huge problem for the respective company. The rate of wage increment than the productivity and profitability must create a financial crisis for the company not only internally but also globally.

### 4. Electricity charges: Always create a question to think upon

Understanding that the energy cost is a challenge to many steel industries in India, as cost varies from state to state. Investors must examine power rates to have the knowledge of their potential operating costs. Industrial power rates are a critical pre-investment consideration for manufactures. The Indian government has fixed some tariff for electricity for the steel industry which is difficult to attain for the initial steel plants. A delegation of steel manufacturers met Maharashtra Governor Ch Vidyasagar Rao for reduction in power tariff for the steel industry. The delegation told the Governor that the steel industry in Wada employs one lakh workers and generates a sales tax of Rs 350 crore for the state. It pointed out that electricity constitutes 70% of the raw material cost in steel manufacturing. Members of the delegation told the Governor that due to non-availability of higher voltage and poor infrastructure in Wada, the cost of power per unit was higher than the per unit cost in Vidarbha and Marathwada. They told the Governor that the electricity duty of 9.3% is levied on these units. Mentioning that Wada faces "tremendous competition" from Daman, Silvassa and Gujarat, which offer lower electricity tariffs, the delegation said if state power utility's tariff reduction was

not granted, it will create an extinction process for all the steel industry. The problems of high tariff of power in India can only be decreased or controlled by producing electricity in India itself. According to an analysis and data collection the cost of power in India i.e. nearly Rs 6 per unit which is more than the other countries. Cost of power is a main domain which creates constraint in front of Indian steel industries. The increase ranges of electricity cost is from 3.6% in Orissa to 24% in Andhra Pradesh which state have mainly more and maximum numbers of steel industries, the hike in electricity cost may cause problem for these industries.

#### 5. **Cost of machineries & Infrastructure: A definite problematic point for the sector**

The Machinery & Goods along with the infrastructure is a physical foundation of the steel manufacturing sector. Primarily, the costly machineries make the steel industries think to buy it or not. Investing much amount of money in this costly equipment really need profitable output from it otherwise it traces the industry towards loss. Secondly, Industrial machines are commonly powered by fossil fuels that emit greenhouse gas (GHG) emissions and air pollution. If such things happen to an industry, then may be the respective government put some restriction and fines on the specific industry. Throughout the world, regulations are driving the adoption of machinery with improved fuel efficiency and lower air emissions. The industry has opportunities to address the growing need for fuel efficiency and reduced emissions. As the construction of steel industries demand for steel followed suit, with prices plunging 25.1% in 2009. Steel prices bounced back strongly the following two years; however, the recovery was short lived. As a result, World expects steel prices to decline overall at an annualized rate of 3.8% from 2011 to 2014. However, with steel prices forecast to increase at an annualized rate of 2.2% over the next three years and construction and industrial activity projected to remain strong. So both the factors like Price of machinery and cost of steel must be affordable for the company.

#### 6. **Transportation & Supply chain charges: A prime problematic issue**

The transportation sector is in itself a major component of economy of Steel industry. The transportation sector moves goods and people, employs millions of workers, generates revenue, and consumes materials and services. Transport systems face requirements to increase their capacity and to reduce the costs of movements. All users (e.g. individuals, enterprises, institutions, governments,) have to negotiate or bid for the transfer of goods, people, information and capital because supplies, distribution systems, tariffs, salaries, locations, marketing techniques as well as fuel costs are changing constantly. There are also costs involved in gathering information, negotiating, and enforcing contracts and transactions, which are often referred as the cost of doing business. The choice of a transportation mode to route steel and the raw materials within origins and destinations becomes important and depends on a number of factors such as the nature of the goods, the available infrastructures, origins and destinations, technology, and particularly their respective distances. Jointly, they define transportation costs. Transport activities are large consumers of energy, especially oil. About 60% of all the global oil consumption is attributed to transport activities. Transport typically account for about 25% of all the energy consumption of an economy of steel sector. Distance is commonly the most basic condition affecting transport costs. Minimum distance creates less expense when an extra distance creates unnecessary expenses. The packaging cost of iron ore is very less and for steel to the customer is little high this create an initial problem for industry.

If the source of raw materials is far away from the destination, then it will take very less amount of cost to invest. In Jindal steel and power limited Barbil, Keonjhar, Odisha has apelletisation plant which require the iron ore which it found from M/S Sarda Mines Pvt.Ltd which is one is present near to the Pellet plant so here the transportation problems very less. For steel industry the main way of transporting the raw materials and finished goods is Railway. So the government fixing the tax and tariff for railway department for the steel sectors. If the amount of such taxes and tariffs are huge in amount, then it creates a problem in front of steel sector. The transportation cost in India is Rs 7.9 per tonne of materials which is more than other countries.

#### 7. **Lack of Investment: A secondary and passive cause of downfall**

Investment in a business is a most important factor that adds to the value of any business, here in steel sectors. The people who are interested to invest in the steel sector in a particular company they first study the market brand value of the company. If the revenue of the company is satisfied and is in high among the market, then only it will be profitable for the investors for put their money in the business. If the amount of the investors less for a particular steel sectors, the capital amount does not have any change.

#### 8. **Competition in the international market: Basic cause of problem for steel industry**

The steel industries in India are facing devastating trouble today. The main and simple cause is Chinese companies are exporting its steel at \$50 below their marginal cost per ton i.e. \$370 per tonne, The Russians steel industries cut their price from \$530 to \$370. The Chinese and the Russians industries having the same exporting value. The other steel mills in the world including India who exports their steels in global market are really panicked. In another case in China the sell price of hot rolled steel is \$333 per tonne where in India, it is \$480 per tonne and in US it is \$520 per tonne. In China 20% of the GDP comes from exports. The Chinese exports in a very less price are the main reason for the steel sector slump condition across the globe and in India also. According to the plan of Hon'ble Prime Minister Mr. Narendra Modi steel production in 2025 can be reach 300 million tones which is looking quite difficult. It is expecting that Indian steel companies remain under pressure due to fall in raw material prices and a significant fall in domestic and global steel prices. International prices of iron ore are decreased by 55% in April 2015 which constraint the broadness of the Indian economy by stifling the income generated by steel sectors.

#### 9. **Lower domestic selling price of steel: A minimum price create problem**

It's obvious that the selling price of steel decides the amount of revenue and profit gain by the company. A good selling price always adds advantages to the industry. But sometimes due to steel market crisis the selling price of steel automatically decreased that is happening since 2013-14 and continuously going on. The steel turbulence in global market also put a bad impact on domestic steel market. More than 100 mines containing Iron ore and coal have been stopped and related steel industries are running below their capacity. It does not meet the need amount. A lower selling price always creates loss to the industry compare to its competitors in market. Domestic steel consumption growth improved to 3.1% in 2015 from 0.6% in 2014. It is only possible for construction sector and automobile sectors which requires the 60% of steel demand in India. Mines and Minerals (Development and Regulation) Amendment Act, 2015' is released and is in process to use in to make all the closed iron ore mines to restart by which it can have a good amount of iron ore for steel which can meet the needs of the domestic customers.

#### 10. **Expenses: Another wings cause financial problem**

In this heading all the expenses like salary to employee, wages to labours, maintenance cost, inventory cost, CSR activities, Media relations, are come into play each and every point need a special care and specific amount for the specific financial year of a steel industry. If a slight deviation of each field creates new challenges for the respective industry. In some company labor union are there. So they have their own demand so the industry must have to meet their need for that the industry is ready to spend the required amount. In the operational plant the process needs a very good maintenance which needs a good amount of funds to invest. In the inventory process some extra amount of money is spent generally. In CSR activity the company has to put much more amount of fund to serve for the society which creates a smooth path for the industry to run its business. Media play a vital role in influencing the business of the steel sector but focusing on its publicity and doings, for this the respective industry has to spend more money on it. At the end main field where the Indian steel industry put their maximum money is Safety and security of their assets, labour and employees, which is very much required for the industry. So these expenses are stable and mandatory in nature which cannot be changed. But only the amount can be varied when require and when does not require.

#### 11. **High-Interest-Rate**

The rate of borrowing for capacity expansion in India is very high compared to other countries. Indian financial institutions are charged 14% interest whereas in the interest rates in Japan is 2.4%. The Indian companies need to recover these costs when deciding on the final price. Other countries' manufacturers will have a lower interest cost; hence their final cost will be lower than their domestic producers. The above mentioned factors have put the Indian steel industry in disadvantage state to survive in this scenario.

#### **STRONG AND SUSTAINABLE GROWTH IN INDIA'S STEEL INDUSTRY: A FINANCIAL GROWTH**

From independence, India has an experienced smooth and saturated growth in the steel industry. The governments have supported the industry and helped for its development. With the help of foreign technology and some financial support, Indian government creates the scope to establish many steel industries in India which help in increasing the economic conditions of India. As per the previous available data in 1992, India produced 14.33 million tones of finished carbon steels and 1.59 million tones of pig iron; the quantity of steel production of India has increased from 1991 to 2008 such as nearly 46.575 million tones of finished steels

and 4.393 million tones of pig iron. When we will discuss the total consumption of steel, in 1992, the total domestic steel consumption was 14.84 million tones and in 2008, the total amount of domestic steel consumption increased to 43.925 million tones. With the increased demand in the national market, in international market India make its position which helps in increase in export of steel to global market. As a result, it increases GDP (Gross Domestic product) and GNP (Gross National Product) along with the high Revenue adding to the Indian economy. Over the last decade, the contribution of iron ore mining and steel to India's GDP has fallen from 1.2 per cent to 1 per cent. If properly tapped, the mining industry could help propel growth for the country over the next decade. In fact, the performance of steel sector will be an important factor for India to achieve 7 per cent plus GDP growth. The steel industry has the potential to create a big amount of employment by 2025.

#### INVESTMENTS AND GOVERNMENT INITIATIVES

According to Department of Industrial Policy and Promotion (DIPP), the Indian metallurgical industries try to fetch foreign direct investments (FDI) to invest US\$ 8.7 billion during the period April 2000–May 2015. Besides this investment of SAIL of US\$23.8 billion to increase the steel production to 50 MTPA by 2025, Joint venture of ArcelorMittal with Steel Authority of India Ltd (SAIL) to set up an automotive steel manufacturing facility in India, Agreement of Posco Korea, the multinational Korean steel company with Shree Uttam Steel and Power to set up a steel plant at Satarda in Maharashtra, Planning for establishing 20 MT steel plant in Karnataka by JSW steel by 2022 and Investment of 18000 crore by NMDC Ltd for a steel mill in Karnataka are really very good initiatives and appreciative investment which will be the cause of development of Indian steel sector, economic status of India and hike in GDP. The Indian Ministry of Steel has announced for a good investment and the new establishment of steel plants of Steel Authority of India Limited (SAIL) and Rashtriya Ispat Nigam Limited (RINL) in various states. Which will help in enhancing the steel production capacity. In case of SAIL it is from 12.8 MTPA to 21.4 MTPA and in case of RINL it is from 3.0 MTPA to 6.3 MTPA respectively. For this purpose, SAIL has planned to invest US\$ 23.8 billion for increasing its production by 2025. Under planning of Indian government, A Project Monitoring Group (PMG) has been made to solve all the problems during money sanction and clearances of issues related to investments of Rs 1,000 crore (US\$ 152 million) or more.

#### SUGGESTIONS

1. To maintain a required amount of capital one should have a very good amount of savings, borrowing amount from others, loans from some financial institutions in minimum interest and government subsidies.
2. Raw materials like iron ore and coal should be available to domestic steel maker in low price. Domestic availability of raw material should be given much more importance rather than export to foreign countries.
3. Only required amount of employees and workforce should be recruited. Secondly forecasting and proper HR planning should be formulated to attain all the financial requirement and rights of an employee. A proper negotiation should be made with labour union, if present regarding their demands.
4. A proper maintenance process should be followed which definitely increase the life period of the equipments. As a result, it decreases the expenses and inventory cost related to new equipment and sub assembly parts.
5. The electricity charges for steel industry must be reduced by government. More importance is given by the respective steel industry to establish a plant for generate their own electricity for their use only it may be solar energy, hydro energy, thermal energy, nuclear energy and wind energy and tidal energy.
6. Shortest route is identified for transportation and to earn profit from that. Required transportation elements need to be used rather than vehicle.
7. To fight against the trouble time in global market India has to produce much more amount of steel in future to meet the domestic needs as well as the global consumer wants based on quality at minimum price as compare to other competitors in the market.
8. The actual amount of investment on R&D by the large Indian steel companies varies from 0.05% - 0.5% of its turnover. This value should be increased. This sector should do their research work on finding solutions to remove the financial obstacles throughout the financial innovative process.
9. To overcome high interest, the Government must come up with a policy framework addressing these issues to strengthen the domestic industries. A balance must be maintained between industries and price of domestic customers for sustainability of industries and satisfy the customers. On the other hand, the steel industries need to innovate and make their process more efficient, thus reducing their production costs.
10. Adopt a proper financial management team for continuous monitoring of economic condition of the steel sector to fight against the financial disputes created by the steel industry.
11. The financial condition of Indian steel industry is now affected by the excess import from china, which should be reduced by producing steel domestically in India, which definitely create a good economic environment throughout the country.
12. All the Indian steel companies like SAIL, Tata Steel, JSW Steel, Jindal Steel and Essar should do their research work on the market Inflation, financial crisis related to all economic disputes.
13. As per an estimation the world steel consumption will be doubled in next 25 years so all the Indian steel sectors should put efforts to increase the quality and quantity of the steel which should be available at comparatively reasonable prices then Indian steel sector can get profit from exports.
14. To get better quality from all steel manufacturers, they should use sophisticated technology for example pre coated sheets can be used in manufacture of appliance, furnishing, public goods and public transport vehicle. Production and supply of superior grades of steel in desired shapes and sizes will definitely increases the steel consumption as well as demand which will help in increase in financial condition of Indian steel industry.
15. For improve the current status of Indian steel sector, all the developed country having good amount of revenue from their steel sectors combinely must put their funds in upliftment of Indian steel sector.

#### CONCLUSION

The Indian Iron & Steel sector has plants which are energy efficient and are comparable to the best in the world after adjusting for the availability and quality of the key inputs such as iron ore and coal. However, there are plants which operate under conditions of smaller scale, out dated technology, lower grade iron ore and coal and without adequate access to knowledge of best practices and with poor financial conditions. Steel enriched India is a national priority. We have analysed the crucial financial problem that Indian steel industry commonly faced and have given some suggestion to overcome the respective problems. Government should formulate some policies by keeping the financial status and profitability rate of Indian steel sectors. Such steps can contribute to reducing the intensity of financial challenges of Indian iron and steel industry.

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**CORPORATISATION OF GOVERNMENT: CORPOCRACY**

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**ABSTRACT**

All these years, we have known Capitalism, Socialism, Communism, Dictatorship, Totalitarian, Theocracy, Monarchy, Parliamentary, Republic, Anarchy, Totalitarian, Oligarchy/Plutocracy, Democracy, etc. 'Corporatisation of Government - Corpocracy' is a novel concept, not in practice anywhere across the world yet. It is a way of running a nation's Government based on Corporate Structure. The primary purpose behind this idea is to enable higher level of accountability and transparency on the part of the Government. Also, it would enable the Government body to raise funds and effectively manage the working of their territory. This would take the State from 'Politicalisation' stage (full of confusion and non-transparency) to a very less or no chaotic 'Corporatisation' stage (full of able administration and transparency). Now the question is how would the Government undergo 'Corporatisation' and how is the monitoring possible? Well, an answer to this question is by using the financial forces to govern the course of action of the Government. That is, by floating shares in the open market through Stock exchanges and thus, enabling them to tap the untapped investment of the citizens of the country. This would involve launching of an Index representing the position/ condition/ status of each state. Each Index will represent the state of affairs in corresponding state. The Index position will reflect several indicators which will be computed by a Centralised Statistical Institute at regular intervals. This concept can be used to create a new financial product as well, that can be used for running on similar lines. As the investment in the Government is by the people, of the people and for the people, it is on lines with the principles of democracy in true sense and spirit. There are going to be several repercussions in legal, economic, political, international, financial dimensions during implementation stage. However, this paper is an attempt to introduce the concept at a primary level.

**KEYWORDS**

corporatisation, corpocracy.

**INTRODUCTION**

orporatisation' is one of the best ways of governance. It proposes a corporate model to the way of governance. The concept "Corpocracy" is a mutually complementing combination of Corporate and Democracy.

Like BSE SENSEX or NSE NIFTY represents a bucket of companies' performances in stock market, a new index representing each state and its performance can be created so as to allow investors to invest in a particular state. How to arrive at the Index for a specific state has been discussed under the head 'Methodology'.

The shares, thus, raised by the Government could be issued in lieu of money market instruments like Bonds, T-bills, etc.

**METHODOLOGY**

Several indicators could be used to launch the Index for the first time. These indicators could be used to frame the Index by assigning weightage to every parameter (indicator). The parameters that could be used are both financial as well as non-financial ones and are as follows (The list given below is non-exhaustive):

1. Literacy Rate
2. Crime Rate
3. Gross State Income
4. FDI inflows
5. Contribution to Exports
6. Infant Mortality Rate
7. Gender Ratio
8. Carbon Credits – Pollution Index
9. Per Capita Income
10. Agricultural Growth Rate
11. Industrial Growth Rate
12. Services Growth Rate
13. Infrastructure Position
14. Tourism Growth Rate
15. Contribution to National Income
16. Human Development Index
17. Price to Income Ratio
18. Affordability Index
19. Health Care Index
20. Traffic Index
21. CO2 Emission Index
22. Quality of Life Index
23. Purchasing Power Index
24. Safety Index
25. Health Care Index
26. Consumer Price Index
27. Property Price to Income Ratio
28. Traffic Commute Time Index
29. Pollution Index
30. Climate Index

The Base Index will stand to represent actual position of well-being of a state vis-a-vis every other state in the nation. However, after the commencement of trading the Index position will showcase significantly the perception towards the state as per the investors as well as the actual position of the state to a certain limit.

In order to get listed on the Stock Exchange, every state will have to float its own shares at an initial Book Price. This Book Price will be same for all the states. Number of shares will have to be issued by a State may be determined by the Legislative Assembly/ Council of the respective states depending on the fund



requirement of the State. Once the trading on the Exchange starts, the Price of the Share will be determined by the demand forces and supply forces of the share/security.

As the shares/ securities of each state will be floated on the Stock Exchange, the States will be obliged to report the End use of the Funds Statement annually for the money raised by them through the Stock Exchange and Budgetary allocations (if any). Thus, every State will have to report its financial and non financial developments through Income and Expenditure Statement and Balance-sheet of the respective state or Annual Report. The State may be required to include the Inflows and Outflows Statement for the Budgetary Allocations (if any). Thus, the State Corporates will be subject to Financial Audits.

The Base Index for a state can be calculated as follows (Please refer ANNEXURE A):

1. List the latest statistics for the corresponding parameters of the state.
2. Assign weightage to every parameter based on impact the parameter has and how significant is the impact on the overall development of the State.
3. Calculate scores for performance as:  
(Statistic of state/statistic of nation) \* 100
4. Multiply the 'weightage' and 'scores for performance' to arrive at 'Weighted Score'.
5. Summation of the 'weighted scores' will get us the 'Base Rate of Index' for that particular state.

#### Note

In parameters like 'Infant Mortality Rate', it would be favourable if the score is low i.e. Lower the score, the better it is; whereas in parameters like 'GDP' it would be favourable if the score is high i.e. Higher the score, better it is! So, for the former types of parameter, the score has been multiplied by '-1' in order to bring the net effect of the parameter correctly.

Here in the following grid, I have calculated the Base Index for the nation. The statistical data is gathered from the Internet and are latest available statistics of India. This is a simple attempt to showcase the calculation of Base Index of India. It is calculated based on nation's performance vis-a-vis its own performance. Therefore, the calculation is simple and the full scores are earned!!!

### BENEFITS

1. Shift from 'politicalisation' to 'administration'
2. Accountability and disclosures by the State Governments
3. Healthy competition amongst the State Governments
4. Financial assistance to the Government
5. Government of the people, for the people and by the people
6. Fuel overall progress of nation

### CONCLUSION

All these years, we have known Capitalism, Socialism, Communism, Dictatorship, Totalitarian, Theocracy, Monarchy, Parliamentary, Republic, Anar-chy, Totalitarian, Oligarchy/Plutocracy, Democracy, etc. 'Corporatisation of Government - Corpocracy' is a novel concept, not in practice anywhere across the world yet. It is a way of running a nation's Government based on Corporate Structure. The primary purpose behind this idea is to enable higher level of accountability and transparency on the part of the Government. Also, it would enable the Government body to raise funds and effectively manage the working of their territory. This would take the State from 'Politicalisation' stage (full of confusion and non-transparency) to a very less or no chaotic 'Corporatisation' stage (full of able administration and transparency). Now the question is how would the Government undergo 'Corporatisation' and how is the monitoring possible? Well, an answer to this question is by using the financial forces to govern the course of action of the Government. That is, by floating shares in the open market through Stock exchanges and thus, enabling them to tap the untapped investment of the citizens of the country. This would involve launching of an Index representing the position/ condition/ status of each state. Each Index will represent the state of affairs in corresponding state. The Index position will reflect several indicators which will be computed by a Centralised Statistical Institute at regular intervals. This concept can be used to create a new financial product as well, that can be used for running on similar lines. As the investment in the Government is by the people, of the people and for the people, it is on lines with the principles of democracy in true sense and spirit. There are going to be several repercussions in legal, economic, political, international, financial dimensions during implementation stage. However, this paper is an attempt to introduce the concept at a primary level.

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## ANNEXURE A

Parameter	Statistics of State (here India is taken)	Statistics of Nation (India)	Year	Weightage	Scores for performance	Weighted Score
Formulae					(Statistic of state/statistic of nation) * 100	Weightage*Scores for Performance
Literacy Rate	74.04%	74.04%	2011	3	100	300
Crime Rate Index	46.59	46.59	2015	4	-100	-400
Gross State Income	USD 6.7 trillion	USD 6.7 trillion	2013	3	100	300
FDI inflows	USD 31 billion	USD 31 billion	2015	5	100	500
Contribution to Exports	Rs. 11369.64 crores	Rs. 11369.64 crores	2011	5	100	500
Infant Mortality Rate	39 per 1000 births	39 per 1000 births	2014	3	-100	-300
Gender Ratio	943 per thousand men	943 per thousand men	2011	3	100	300
Carbon Credits – Pollution Index	77.02	77.02	2016	5	-100	-500
Per Capita Income	Rs. 5350 Crores	Rs. 5350 Crores	2013	5	100	500
Agricultural Growth Rate	1.1	1.1	2014	3	100	300
Industrial Growth Rate	8.20%	8.20%	2011	3	100	300
Services Growth Rate	9%	9%	2014	4	100	400
Infrastructure Development Rate	10%	10%	2014	5	100	500
Tourism Growth Rate	7.90%	7.90%	2015	3	100	300
Human Development Index	0.609	0.609	2015	5	100	500
Price to Income Ratio	10.54	10.54	2016	3	100	300
Affordability Index	0.78	0.78	2016	3	100	300
Health Care Index	66.47	66.47	2016	3	100	300
Traffic Index	201.08	201.08	2016	3	-100	-300
CO2 Emission Index	5948.79	5948.79	2016	5	-100	-500
Quality of Life Index	109.28	109.28	2016	3	100	300
Purchasing Power Index	89.65	89.65	2016	3	100	300
Health Care Index	66.47	66.47	2016	5	100	500
Consumer Price Index	24.14	24.14	2016	4	100	400
Property Price to Income Ratio	10.54	10.54	2016	3	-100	-300
Traffic Commute Time Index	45.98	45.98	2016	3	-100	-300
Climate Index	19.66	19.66	2016	3	100	300
			<b>Total</b>	<b>100</b>	<b>1300</b>	<b>4800</b>

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