

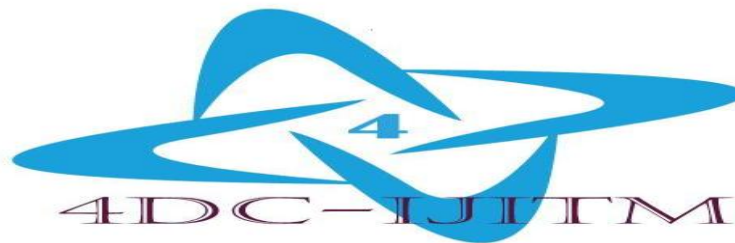
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**EDITOR'S DESK**

*With great pleasure I am presenting this Second issue of 4D International Journal of IT & Commerce. We had an overwhelming response from teaching faculties, research scholars, and corporate persons from various regions. Out of 45 papers we received and based on blind review, 19 papers are selected for publication.*

*This issue depicts various areas of IT Applications & latest management issues. I am more than confident that interested students and research scholars as well as teaching fraternity would find it very useful.*

*I am greatly thankful to all the contributors for submitting their research papers. I do look forward to a similar response for our coming July, 2013, Issue.*

*I am thankful to our Editorial board they have taken great care to put their valuable suggestions and screening, I extend my sincere thanks to them.*

*Last but not least valuable would be your response and suggestions on this first issue. Kindly send us your views so that we can keep on upgrading our journal.*

*Thanking you.*

*A. K. Dixit*  
**MANAGING EDITOR**

**‘BRAND RECALL AND PRODUCT PLACEMENT IN TV & MOVIE’**

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**ABSTRACT**

*Cinema and other electronic media has become a powerful medium of advertisement and creating Brand image ,brand loyalty ,by influencing brand perception of the consumers and customers. However, there is a contention as to whether the product should be placed between the scenes of movie or shown in the middle of any program or not. Further ,it is also a questionable subject as to this type of advertisement can influence product recall by the consumers or not. The research activity is performed to assess how much of significance exists when a product or any brand is placed or displayed in contemporary avenues of marketing one of which is brand and product placement in cinemas. Two most powerful movie worlds ,Hollywood and Bollywood have been taken into consideration in arriving at the conclusion. There are various details available to validate the finding on product placements and product recall in the past. Similarly TV serials are fast becoming marketers choice of advertising their product and watching carefully its impact on product recall”. Positioning is the act of designing company’s offering to the target market”.[4]*

*To achieve this a sample of 100 respondents were carefully chosen from various walk of life, and data analysis was carried with modern tools. The overall analysis of the survey shows us that a healthy 75% of respondents do feel positive upon such contemporary formats of advertising. Upon the various parameters conducted, to check upon the actual effectiveness of the format of advertising, a majority of the respondents do feel that such modern format of advertising will ensure a definite impact on the consumers. Based on the above outcomes, there are few recommendations that has been made for company to incorporate or implement.*

**Key words:** *Brand image, brand loyalty, contemporary avenue, parameters, impact*

**1. INTRODUCTION**

“In dynamic currency terms (and from a US Dollar perspective) we expect global advertising growth of 9.2% in 2011, in line with the trend in 2010. Over the following five years we expect growth to average 7.3% in dynamic currency terms through 2016.”[19] The advertising industry as of today is pegged at a handsome rate of almost Rs. 21000 crore, A major chunk of which amounting to almost 48% lies with print media. It is then followed by TV media which demands

a share of 40 %. The remaining formats command a minor share of 12 % which includes OOH, DIGITAL, INTERNET, etc. Though print and television media command the largest share, its effectiveness is depleting day by day and due to which marketers today are looking forward to various sizeable avenues. These traditional advertising industries are switching to new formats of advertising like the Celebrity endorsement, Events Sponsorships, Bollywood commercial cinema advertising, etc.

Product placement is the practice of including a brand name, product, package, sign or other trademark merchandise within a motion picture, television or other media vehicles for increasing the memory of the brand and for instant recognition at the point of purchase. The common practice has been that advertising has been inserted within breaks, 30 seconds or 10 seconds commercial, but with increasing number of channels and media clutter, the target audience is not properly exposed to the message.[7] The tendency of the audience is to change the channel whenever an advertisement appears. But by subtle placement of products in the settings of the Movie or a TV serial, the promotional message can be effectively put across the target audience. The Product Placement can be implicit or explicit or implicit depending on the marketers requirement and the scene/plot where the Product has been placed.>{6} The motive of the Product Placement can be different for different brand and marketer. Sometimes the medium is used to launch a new product, sometimes it can be used to demonstrate the long tradition of a brand, other times it can be used in negatively (by portraying competitors product in a negative context) and at times the use of a particular product or service in a particular movie reinforces the brand image or reinforces its positioning message.

### **COMPARISON OF PRODUCT PLACEMENT BETWEEN TELEVISION AND FILMS**

.There are number of examples of how the product's appearance in a movie resulted in an increase in brand performance in Hollywood movies. When agent James Bond made top secret calls on an Ericsson mobile phone in 1997 in the movie Tomorrow Never Dies, the Ericsson trademark got a upward boost.[10]

Product placement

### **FILMS IN USA**

American research shows that teenagers are three times as likely as adults to be frequent movie-goers, and the situation is likely to be similar in Australia. This makes films an effective way to reach young people.

A review article examining the health content of the most popular American films made between 1977 and 1988 noted that portrayal of tobacco smoking had increased.

A study examining trends in tobacco use in the 20 top-grossing US films each year from 1960 through to 1990 (based on the random selection of two films each year) found that smokers were typically presented as white, male, middle class, successful and attractive. Smoking was associated with youthful vigour, good health, good looks and personal and professional

acceptance. Over the time period surveyed, smoking became more frequently portrayed in a social than a personal setting, and its use was associated with stress reduction.[15]

Various brands have featured in a number of recent, well known movies. An American-based group has identified nearly 50 feature films, many made for children, which contain brand-specific cigarette advertising. For example the brand Marlboro received a number of exposures in the film 'Superman II', where Lois Lane (a non-smoker in the comics) chain-smoked and the name appeared on a semi-trailer used in an action sequence. In a scene in 'Beverly Hills Cop', Eddie Murphy holds up a pack of Lucky Strike and says 'These are very popular cigarettes with the children'. Walt Disney movies 'Who framed Roger Rabbit' featured Lucky Strike and Camel cigarettes; 'Honey I shrunk the kids' featured Camels; and in 'Baby', the story of a cute baby dinosaur, the lead female figure smokes Marlboros. The rebellious machismo imparted to smoking by Mel Gibson in 'Lethal Weapon II' was in no way undermined by his acknowledgment that smoking is dangerous in the final scene. Camel and Lucky Strike were both used by the chain-smoking character played by Madonna in 'Desperately Seeking Susan', and Susan Sarandon as the character Louise smoked constantly throughout 'Thelma and Louise', a movie which has since been held up as a post-feminist anthem and the first female version of the 'buddy and road' movie genres. The character played by Winona Ryder in 'Reality Bites' was also a chain-smoker.

It is interesting to note that even in films where it is known that money changed hands in order to promote cigarettes, smoking has not necessarily received a simple and uncritical endorsement. For example Superman does draw attention to the fact that Lois might get lung cancer, using his x-ray vision to check her lungs. Since it is fair to assume that the tobacco company involved did not pay to have their product disparaged, one can only assume that the industry is well aware of the psychological profile of its target audience and the portrayal of smoking most likely to appeal.

In response to pressure, the Walt Disney Corporation has agreed to prevent tobacco companies from gaining exposure in return for money or in-kind consideration. However it has stopped short of adopting a policy that prevents glamorized or inappropriate depiction of smoking in its movies, or inclusion of cigarette brand names not paid for by tobacco companies.

According to the US Tobacco Institute, its 13 member companies have agreed to stop using product placement in films, but through product placement, tobacco advertising has achieved a kind of immortality.[16] Long after tobacco advertising has vanished from other forms of media, exposure will continue through movie classics, leaving young viewers with the message that smoking is tough, cool, sexy, and glamorous.

## **BRAND PRESENTATION**

The visual presentation of brands in cinema films is generally thought of as a form of advertising, which is pursued by companies because it influences people to purchase or use a product. Brand placement in films has become a preferred method for companies to raise brand awareness and develop favorable associations with their products for an international audience.

Case reports suggest that this practice can be effective in promoting sales. Increasingly, brand placement in films is part of an integrated international marketing plan for corporate products, such as the deal between beer, spirits, car, and mobile-phone manufacturers, plus a credit-card company in the film *Tomorrow Never Dies*. In total, these companies spent almost US\$98 million worldwide in advertisements associated with the release of this movie, which also featured their products.

Although there have been several studies of tobacco use in films, we identified only one mention of tobacco-brand appearances in films. Stockwell and Glantz assessed a random sample of five of the top 20 box-office hits for each year from 1985 to 1995, and noted that brand appearances declined after 1990,[17] although these findings were not supported by any data. Moreover, if brand appearances are fairly uncommon, trend analysis by sampling only five movies per year would be difficult.

On investigating the frequency of tobacco-brand appearances in the top 25 US box-office hits per year for 10 years (1988—97). We aimed to assess trends in relation to a tobacco-industry ban on payments for brand placement in films, and to estimate the size of the international audience for films with cigarette-brand appearances.

#### Product Placement Boosts Brand Awareness

Product placement in TV content boosts brand recognition by 20%, according to the results of a study released by Nielsen Media Research.[18] The study found that 57.5% of viewers recognized a brand when viewing a product placement in combination with a commercial, compared to the 46.6% of viewers that recognized a brand exposed only to a commercial. “This comprehensive study of the interaction of product placement and commercial messages demonstrates that product placement can represent a valuable enhancement to a media plan,” said David Poltrack, chief research officer for CBS and one of 14 charter subscribers that helped design and execute the study. “More importantly, it also confirms that not all product placements are successful and it provides valuable guidance for the development of an effective product-placement program.” While brand recognition increases with product placement, it doesn’t necessarily translate into sales. A little more than one third of all view expressed high interest in brands they were able to recognize. Brand awareness, attitude and purchase interest were also affected by the level of familiarity a viewer had with the brand, the program’s genre, the viewer’s loyalty to the program, and the exact nature of the product placement.

“Some [findings] did indeed confirm what we suspected was true. On the other hand, some findings were counter to what might have been expected,” said Mike Hess, director of global research and communication insights at OMD Worldwide, also a charter subscriber. The study was conducted over nine months between October 2005 and June 2006 at Nielsen Entertainment’s testing facilities in Las Vegas.[14] More than 10,000 individuals participated in the screening of 50 programs, which featured product placements and commercials for nearly 200 consumer brands. In addition to CBS and OMD, other charter subscribers included A & E, Court TV, Discovery, Fox, Magna Global, Mediacom, PHD, Scripps Networks, Sprint, The Weather Channel, Twentieth Century TV and Zenith Media.



**OBJECTIVE**

- To check the scope and potential of the contemporary method of cinema advertising to promote a Brand/Product.
- To examines the relationship between the concept of product placement and brand recall through such product placement.
- Effectiveness of product and brand placement in the contemporary Bollywood cinemas in order to strike upon a powerful brand recall.
- One will be able to: -Asses the true scope and potential of such formats of advertising to be existing in this clutter of advertising industry..Further asses the specific industries and products who can best advertise through this medium. Get the ability to check upon if the brand has a good recall or not through this format of product placement.one can check upon how a prospective consumer routes his decisions because of such contemporary formats of advertising and product placements.

**METHODOLOGY**

Through exploratory method by identifying the media agents and representatives of the media field, and followed by personal interviews with the target group.

**TOOLS OF DATA INTERPRETATION & ANALYSIS:** The prime tools like finding out the percentages, frequency distributions, cross tabular analysis, overall and specific analysis were done by the software engine SPSS.

**DATA ANALYSIS**

Q1} Are you aware of the contemporary method of advertising of Products/Brands in Commercial Bollywood Cinemas?

Yes (b) No (c) Not Sure

	Frequency	Percent	Valid Percent	Cumulative Percent
1	80	80.0	80.0	80.0
2	18	18.0	18.0	98.0
3	2	2.0	2.0	100.0
Total	100	100.0	100.0	

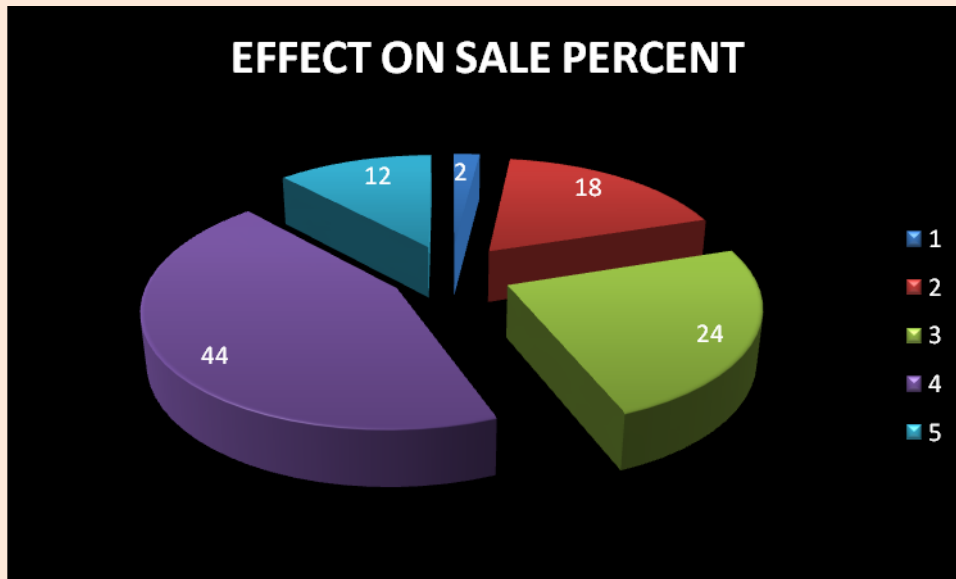
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(1)The figure above shows that as per the objective of this research there was an equal distribution of samples across all the three sections.

The figures portray that:A huge 80 % of respondents are well aware of this contemporary format of Product placement in cinemas. This proves that awareness and knowledge of such format is deeply penetrated.

Q2} On a scale of 1-5; How effective do you think is it to advertise in this contemporary method to ensure good fetch of consumers and to increase sale of the advertised Product/Brand(5 being the Most effective)

1 2 3 4 5



EFFECT ON SALE(2)

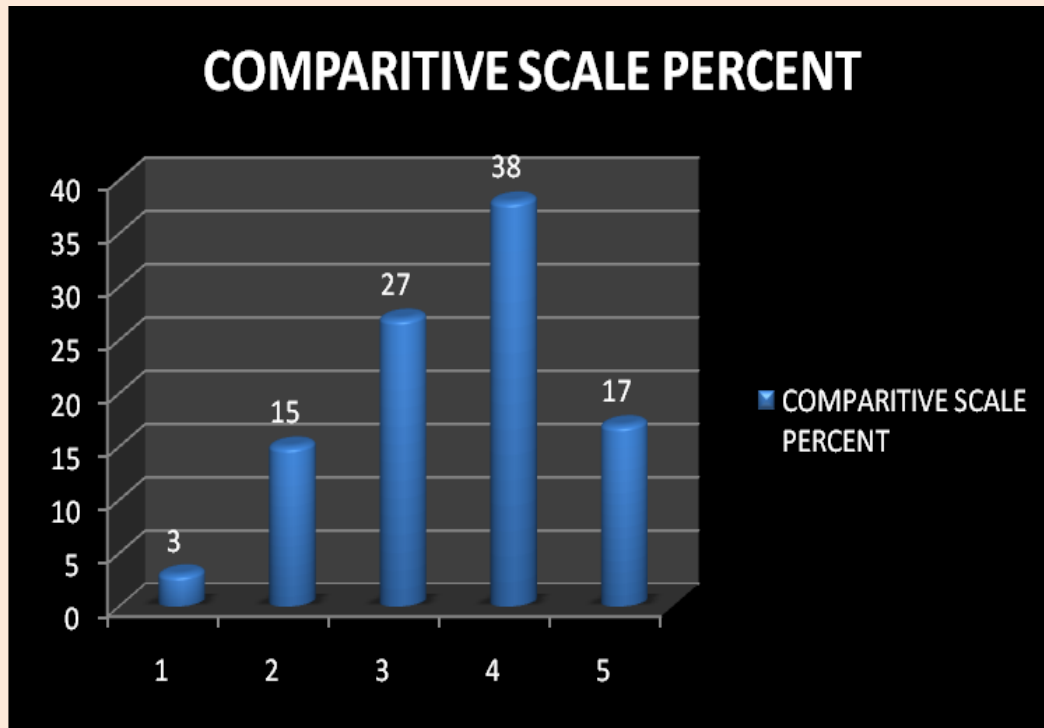
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	2	2.0	2.0	2.0
2	18	18.0	18.0	20.0
3	24	24.0	24.0	44.0
4	44	44.0	44.0	88.0
5	12	12.0	12.0	100.0
Total	100	100.0	100.0	

(2)The figures above portrays that as per the respondents group, 56% of the respondents are in strong contention of the Hypothesis that such contemporary formats of Product placement will definitely bring about an upward move in the sales of the brand associated with and also increase the quantum of the consumer pull. Against it there are only 20% of the respondents believe that no such change would happen because of such contemporary formats.

A Good 56 % of respondents strongly believe that such modern format is significantly effective in terms of sale and consumer pull.

Q.3} On a scale of 1-5; how effective is this contemporary method of advertising when compared to other traditional methods (Print, TV, Radio, OOH, etc) {5 being most effective} ?

1 2 3 4 5



COMPARITIVE SCALE(3)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	3	3.0	3.0	3.0
2	15	15.0	15.0	18.0
3	27	27.0	27.0	45.0
4	38	38.0	38.0	83.0
5	17	17.0	17.0	100.0
Total	100	100.0	100.0	

(3) as per the respondents group, 55% of the respondents are in strong contention of the Hypothesis that such contemporary formats of Product placement will definitely bring about an upward move in the sales AS WHEN COMPARED to the existing medium of product placement like the Print, Television, Online, Radio, Etc. Against it there are only 18% of the respondents believe that no such change would happen because of such contemporary formats.

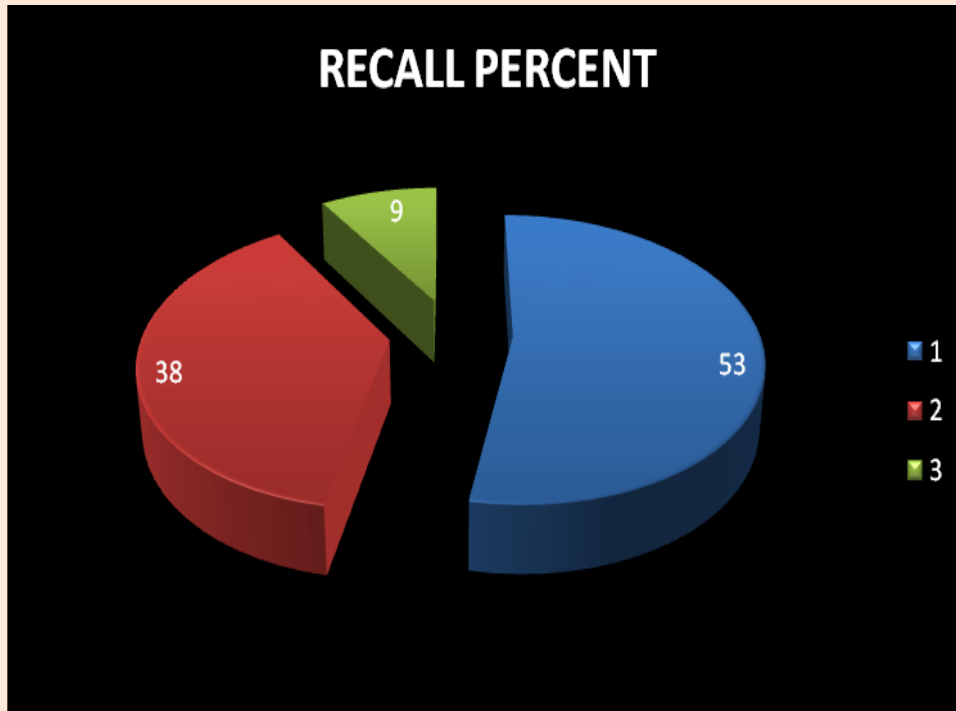
A Good 55 % of respondents strongly believe that such modern format is significantly effective as in comparison with few other formats of traditional method

Q4} Does such kind of advertising and product/brand placement in cinemas ensures you a good recall of brand/product.

Always

(b) At times

(c) Never



RECALL(4)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	53	53.0	53.0	53.0
2	38	38.0	38.0	91.0
3	9	9.0	9.0	100.0
Total	100	100.0	100.0	

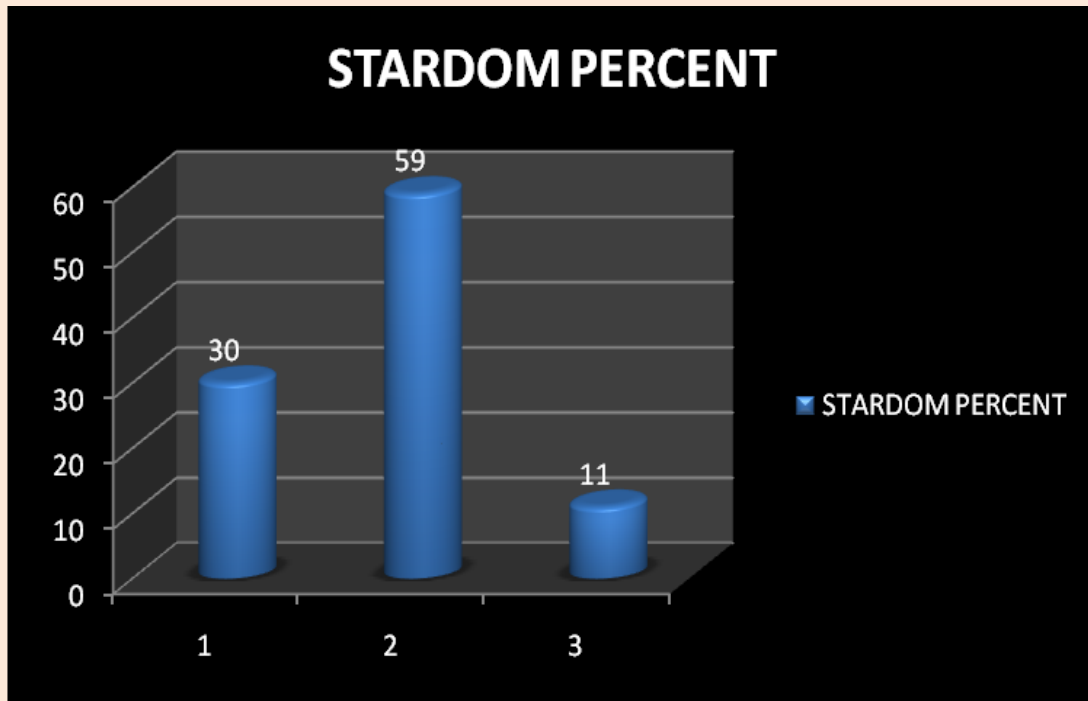
(4) as per the respondents group, almost 90% of the respondents are in strong contention of the Hypothesis that such contemporary formats of Product placement will definitely bring about a definite recall of the product/brand placed in there with. Against it there are only 10% of the respondents believe that no such change would happen because of such contemporary formats. A Good 90 % of respondents strongly believe that such modern format is significantly effective in terms of RECALL which will bring about upward sale and consumer pull.

Q5} Do you make it a point to purchase a Brand/Product advertised in any cinema because of the stardom attached to it?

Always

(b) At times

(c) Never



STARDOM(5)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	30	30.0	30.0	30.0
2	59	59.0	59.0	89.0
3	11	11.0	11.0	100.0
Total	100	100.0	100.0	

(5) as per the respondents group, almost 85% of the respondents are in contention of the Hypothesis that such contemporary formats of Product placement will definitely bring about a CHANGE IN MINDS OF VIEWER to go for a particular brand because of the STARDOM attached to it. Against it there are only over 10% of the respondents believe that no such change would happen because of such contemporary formats.

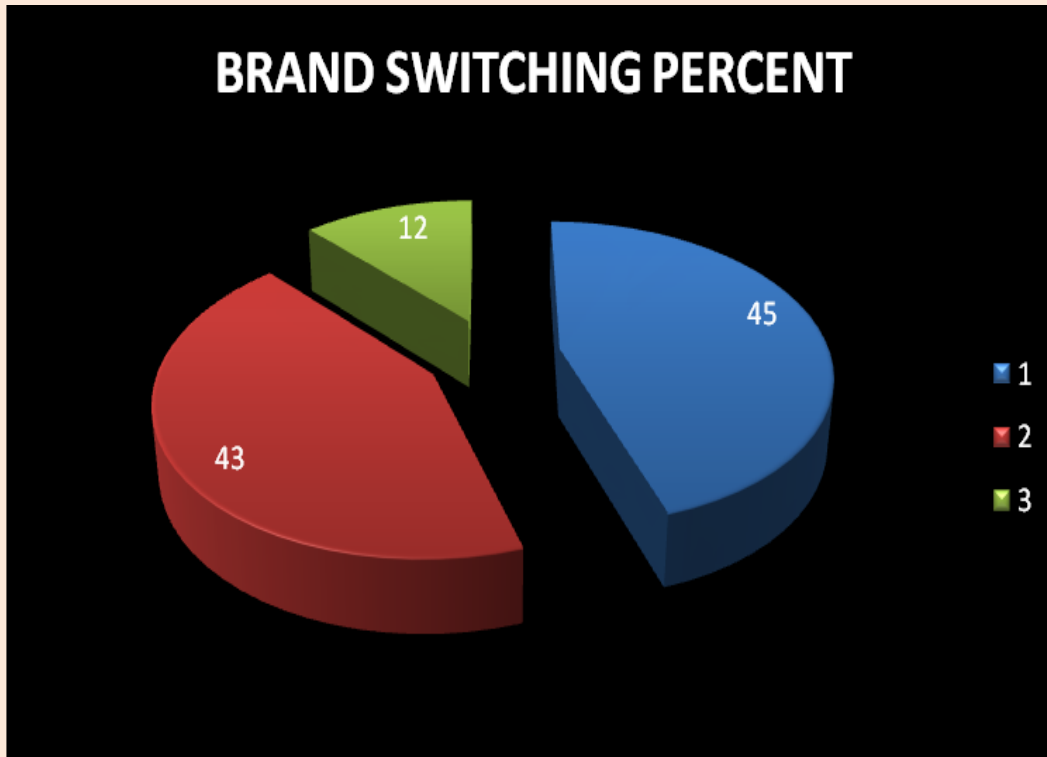
A Good 85 % of respondents strongly believe that such modern format is significantly effective in terms of pulling the consumer to change their minds to buy a particular product/brand because of the stardom attached with it.

Q6} Does your purchase decisions alter with such modern advertisement formats; due to which you switch from a regularly purchase brand to the newly advertised brand?

Always

(b) At times

(c) Never



BRAND SWITCHING(6)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	45	45.0	45.0	45.0
2	43	43.0	43.0	88.0
3	12	12.0	12.0	100.0
Total	100	100.0	100.0	

(6)The figures above portrays that as per the respondents group, almost 80-85% of the respondents are in contention of the Hypothesis that such contemporary formats of Product placement will definitely bring about a CHANGE IN MINDS OF VIEWER to go for a particular brand leaving his particular regularly purchased brand.. Against it there are only over 10-15% of the respondents believe that no such change would happen because of such contemporary formats.

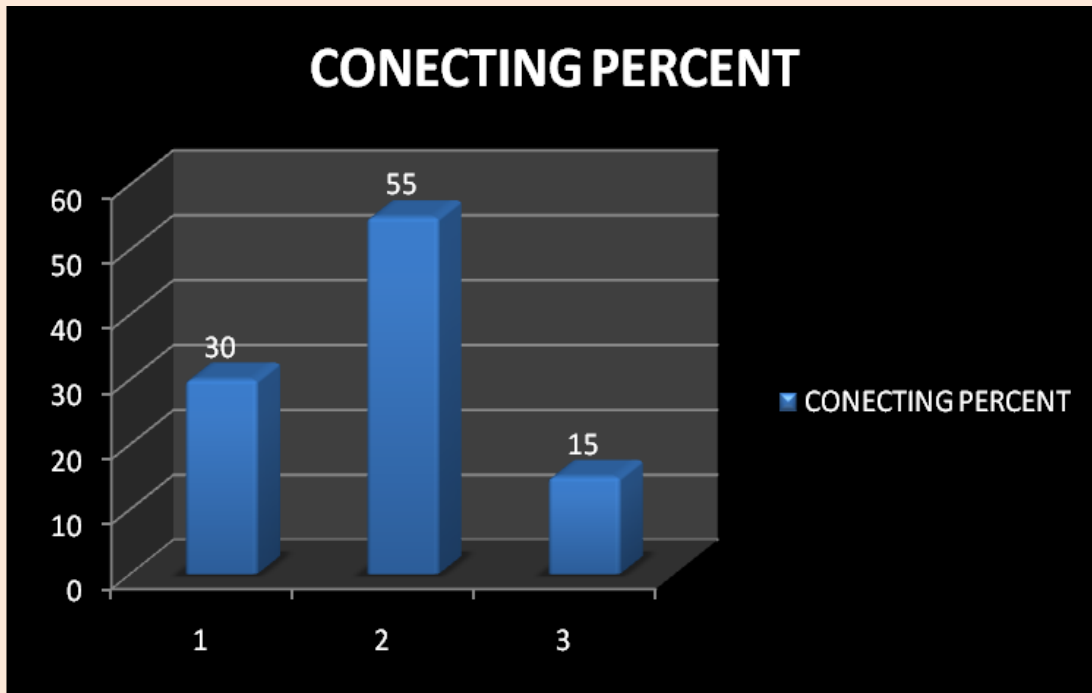
A Good 80-85 % of respondents strongly believe that such modern format is significantly effective in terms of pulling the consumer to change their minds to buy a particular product/brand leaving the regularly purchased brand.

Q7} On sighting a particular brand/product at any store, do you connect it with the Movie and Stardom with which it was placed in?

Always

(b) At times

(c) Never



CONNECTING(7)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	30	30.0	30.0	30.0
2	55	55.0	55.0	85.0
3	15	15.0	15.0	100.0
Total	100	100.0	100.0	

(7)The figures above portrays that as per the respondents group, almost 75-80% of the respondents are in contention of the Hypothesis that such contemporary formats of Product placement will definitely bring about a CHANGE IN MINDS OF VIEWER. Against it there are only over 15-20% of the respondents believe that no such change would happen because of such contemporary formats.

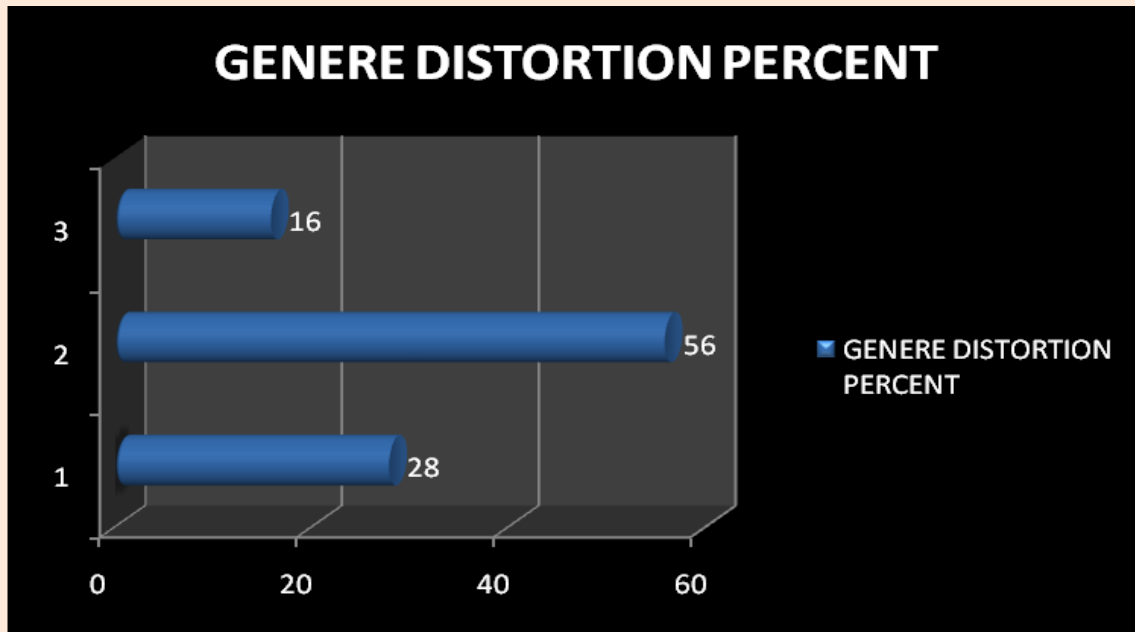
A Good 75-80 % of respondents strongly believe that such modern format is significantly effective in terms of pulling the consumer to change their minds to buy a particular product/brand leaving the regularly purchased brand.

Q8} On a scale of 1-5; do you think that such kind of concept of placing the Products/Brand in between movies distorts the flow and genre of the movie by making it more commercial than entertaining?

Yes

(b) No

(c) Not Sure



GENERE DISTORTION(8)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	28	28.0	28.0	28.0
2	56	56.0	56.0	84.0
3	16	16.0	16.0	100.0
Total	100	100.0	100.0	

As per the respondents group, almost 56% of the respondents are in contention of the Hypothesis that such contemporary formats of Product placement will definitely have NO DISTORTION OF GENERE of the movie if the products/brands are smartly placed in the cinemas. Against it there are only over 15-20% of the respondents believe that such practice of product placement distorts the genre and flow of the film would happen because of such contemporary formats.

A Good 56 % of respondents strongly believe that such modern format and practice of placing the product in between the movies does not distorts the flow and genre of the movie if the placement is done smartly.

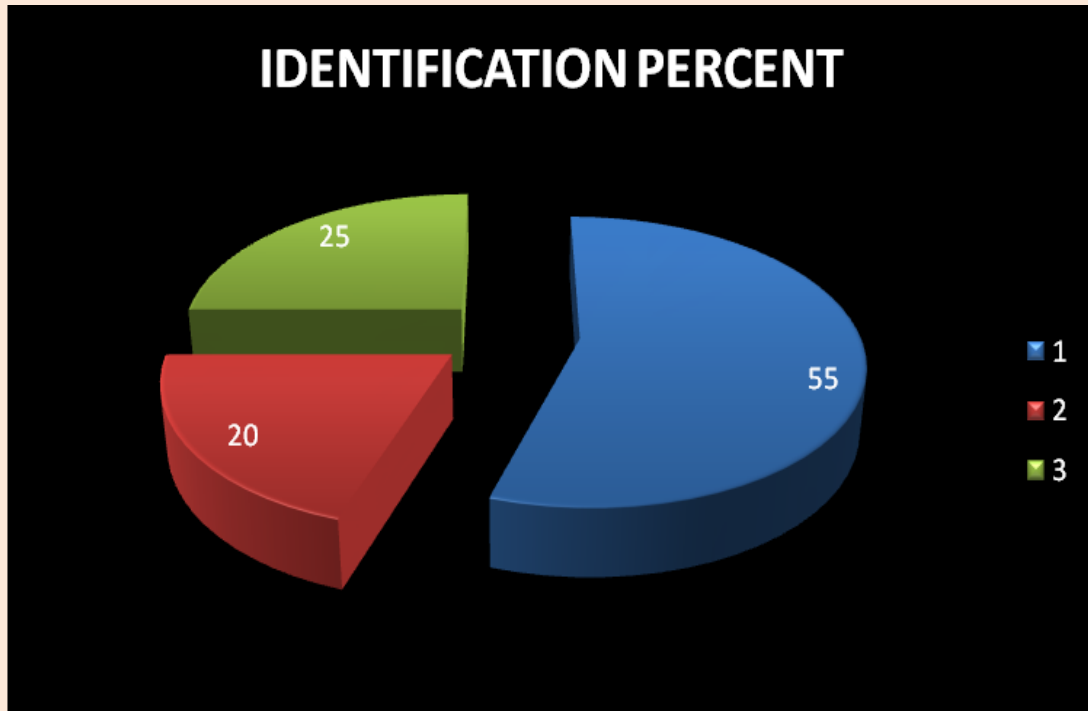


Q9}Do you identify in a running movie that there is advertisement of a Product/Brand happening implicitly or explicitly?

Yes

(b) No

(c) At times



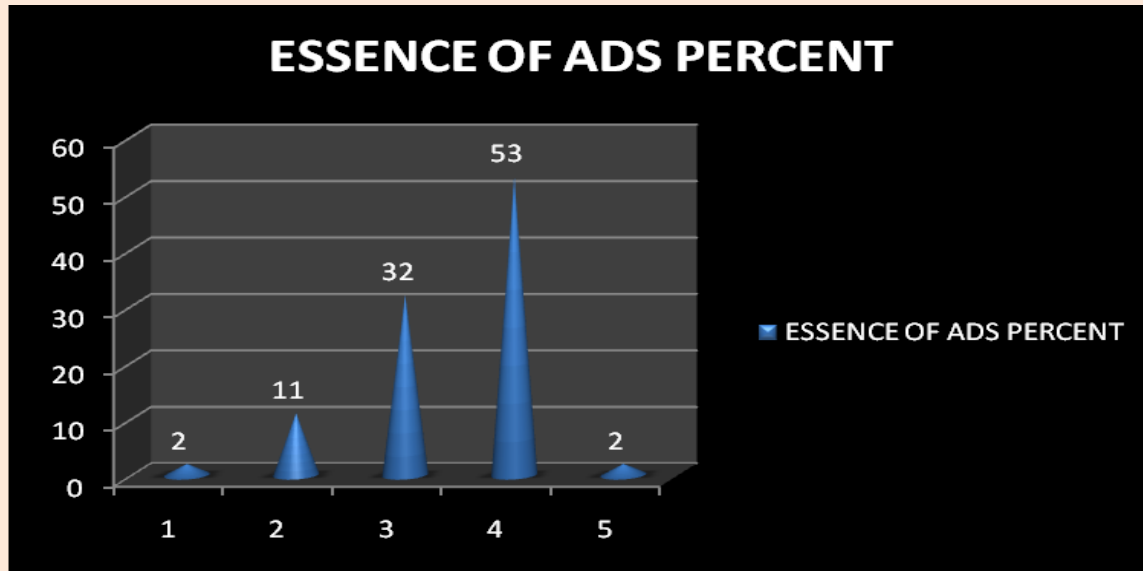
IDENTIFICATION(9)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	55	55.0	55.0	55.0
2	20	20.0	20.0	75.0
3	25	25.0	25.0	100.0
Total	100	100.0	100.0	

(9)as per the respondents group, almost 55% of the respondents are in contention of the Hypothesis that such contemporary formats of Product placement gets easily identified by a prospective viewers. Against it there are only over 15-20% of the respondents cannot make out the product placement that happens in film would happen because of such contemporary formats. A Good 55 % of respondents strongly believe that such modern format and practice of placing the product in between the movies gets easily identified if the placement is done smartly.

Q10}In terms of Recall, Interest generation, Effectiveness, Mass reach, Reinforcement, Etc how effective do you think as a consumer about the advertisements done in this method of Advertising in movies. Rate it on a scale of 1-5. (5 being most effective)?

1 2 3 4 5



ESSENCE OF ADS(10)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	2	2.0	2.0	2.0
2	11	11.0	11.0	13.0
3	32	32.0	32.0	45.0
4	53	53.0	53.0	98.0
5	2	2.0	2.0	100.0
Total	100	100.0	100.0	

(10)as per the respondents group, more than 50% of the respondents are in contention of the Hypothesis that such contemporary formats of Product placement gets do competitively deliver the essence of the advertisement. Against it there are only over 10% of the respondents do not feel that this contemporary format delivers the essence of advertisement.

A Good 50 % of respondents strongly believe that such modern format and practice of placing the product in between the movies gets to deliver the essence of the advertisement very easily in comparison with others.

**SUGGESTIONS AND CONCLUSIONS**

Television has always been a very powerful medium of communication and it stands till today in spite of challenges from the internet. But because of the multi-utility of the internet people are

spending more and more time on the internet and moving away from the television. Therefore according to me the faster IP tv technology is made available in large scale the better it is for survival of television advertising.

As we deduced in the way of analysis new innovative content that gives the audience a feeling of involvement would definitely help increase TRP and along with it the advertisement effectiveness like we saw in case of the program "saas bahu ki saazis" on star news. Integration of cellular service with television programming would help to maintain touch with audience and help in personalised brand communication. E.g.: sending reminders of programs via sms. Use of long tail theory of advertising by targeting more than just one market segment can be done. This can be done by differently positioned advertisements of same product according to genre of program being advertised in. The number of ad repeats must be cut down to channel that saved money into the extra variety of commercials being made.

Great care should be taken to make sure that the in-content advertising stays within un-irritable limits. Some channels have started overdoing the "L-bands" so much so that the broadcasted content gets hidden sometimes. This would turn away audiences.

Accordingly there is tremendous scope of having a news website of star news. The content of the webpage would already be there with star news it only needs to be converted into html for the internet. So no additional spending required for the web page. Secondly if it can follow Google's model of sponsored links then that would open a completely new avenue for advertising revenue to flow in. Very topical and related ads can be provided with the news search that one does on the page. This would help the advertiser address his target market directly without having to mass-broadcast his advertisement. The advertisers might even be ready to pay premium rates for such precise advertising. For example: if someone searches for the news of petrol price hike then the sponsored links could be advertisements of CNG kit suppliers.

Product placement is being done successfully now in the Indian films and the small screen. The marketers and brand endorsers are largely benefiting from this. The success of in-serial and film product placement depends upon the involvement of consumers in the serial as well as its popularity. From Giorgio Armani's to Raymonds, ICICI Bank to Central Bank, BMW to Maruti or Coke to Pepsi everybody has realized the need of harnessing the power of the Big and the Small screen.

"Subtle product placement can be very effective in positioning a product".[3] A careful selection of a movie or a TV serial to place a product will help in reaching the target audience. For instance Krrish targeted children, Dil chahta hai targeted youth, Vivah targeted audience of small cities, products like Jewelries and Sarees are feminine products and rightly placed in soaps like 'Kyunki Saas Bhi kabhi Bahu Thi' and 'Kasauti Zindagi Ki' which has a lot of female viewership. Once the target market is accessed the next step is designing the message to position the brand.>{8} The message can be effectively delivered through movies and TV serials. This is because the Brand recall, message recall, brand familiarity is higher with Product Placement technique. When a person goes for a movie, he makes a voluntary choice for viewing (exposure) at a cost (financial, time and opportunity cost) for the purpose of entertainment. So he is more

receptive to the information provided to him in the movie. If he finds product in the settings of the movie, the product recall are supposed to be higher. Furthermore, retention is enhanced if the products are fitted to the genre of the movie.

Marketers can take a cue from this. Product Placement in Movies and TV serials provides them with the right kind of target audience to get their message through. The objective of positioning is to occupy a distinctive place in the minds of the target market. Product placement has shown better product/brand recall. There is a positive relationship between those Product Placements' recalled and product category / brand familiarity.

New Zealand as a destination was positioned well in the movie 'Kaho Na Pyar Hai'. In fact such was the impact it became a popular holiday destination after that. Now it is being considered by students for higher studies and also by low skilled job seekers. The place is now being looked at by new perspective among Indians.

High level of media clutter, channel switching behavior are some of the factors responsible for generating sufficient level of research interest at the practice of brand placements in movies. The basic objective of permitting product placements in movies is to cover up the possible level of production cost before the movie is released. There are number of examples of how the product's appearance in a movie resulted in an increase in brand performance in Hollywood movies. James Bond made top secret calls on an Ericsson in 1997 in the movie Tomorrow Never Dies, the Ericsson trademark got a upward boost in visibility and market share. Television stars have become favorites with advertisers and enlisted their names for the second best option as brand endorsers.

.In- TVserial brand integration is relatively cheaper than in-film placement of brands. Television has emerged as one of the largest medium of mass communication hence offering wide reach and easy accessibility than films. Target groups are in regular touch with television than films. Frequency of watching a serial is more than the frequency of watching a film. In serial brand placement also offers the benefit of flexibility. This means, if a certain brand placement is not doing well, then the marketer has the liberty to change the strategy. This option however is not available in case of product placement in cinema.

One can even take an instance of in-serial promotion by the Hindi film industry. Hum Tum, a Yashraj production, was promoted in Sony TV's 'Jassi Jaisi Koi Nahin'. The lead star Saif Ali Khan even did a cameo in one of the episodes.

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## CLOUD COMPUTING AND ERP SYSTEMS: ISSUES & CHALLENGES

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### ABSTRACT

A Cloud computing system is intended to improve and automate the controlling single point operations. By using a single point of control, this goal is accomplished through the elimination of duplicate entry and the contribution of data integrity, detailed drilldown, simple training, manageable support, minimal IT maintenance, easy upgrades and reduced costs. Overall, the vantages of cloud computing usage fulfill the original intentions of business as it allows process manufacturers to manage their business as simply and efficiently as possible. Enterprise Resource Planning (ERP) software is designed to improve and auto-mate business processes operations. However, this technology is still in its initial stages of development, as it suffers from threats and vulnerabilities that prevent the users from trusting it. Various malicious activities from illegal users have threatened this technology such as data misuse, inflexible access control and limited monitoring. The occurrence of these threats may result into damaging or illegal access of critical and confidential data of users. This research paper describes the characteristics (threats, vulnerabilities) associated with a stormy cloud also there are many unnecessary administrative, procedural costs and delays often associated with this practice. Examples include duplicate data entry, data corruption, increased training, complicated supplier relations, greater IT support and software incompatibilities. Purpose of this system is Single Point of Control, Duplicate Entry Elimination, Data Integrity, Detail Drill Down, Basic Training, Manage Support, Security, Minimal IT Maintenance, Easy Upgrades, and Reduce Costs etc.

### Keywords

Cloud, ERP, Business Consequence, Illegal access, Threats, Vulnerabilities

### INTRODUCTION

The traditional era of computing involves the use of software, hardware and storage to achieve the required computational service whereas cloud computing has isolated the services from resources (networks, storage, servers). The required services are provided to the users by utilizing the resources of provider. Users are no longer required to purchase hardware, software or to manage storages. Due the evolution of this technology users are required to pay for cloud services on consumption basis.

Now every organization are in a global world where all the business are very much familiar to use technology for prosper, prospect as well as daily work. Business has willing to do all the works in respect of saving money, time and energy and also for the fortification of their assets and belongings in an effective and efficient way. ERP software is very much dependent on Software platform, Database, Intelligence, security and other third party software. Some time it is not possible for single software development firm to treat every dependency and feature in a

same manner<sup>1</sup> Cloud computing can ensure the benefit of both vendor and the business user. This is only part of the challenge, though. Forecasted growth will generally have at least some impact on IT operating costs. Here assumed that cloud is not only created for the ERP the total support and establishment of ERP will be from a cloud<sup>2</sup>.

Organizations have goals to implement this proposed system let the business organization define their business process, no dependency on predefined ERP business flow. To support and develop a cost effective and user friendly Cloud based ERP system providing high quality and robust system dependency. There is a multiple venture idea to support and maintain the system. This system can offer reliable and paramount service to the IT management for business organizations<sup>3</sup>.

The users must consider that cloud can be rainy as well, in other words this technology is not trustworthy as it is affected with threats and vulnerabilities. We have termed a cloud with threats and vulnerabilities as a stormy cloud. Based on Cloud Security Alliance (CSA) and our research, identified top threats and vulnerabilities that are the causes behind the creation of a stormy cloud<sup>4</sup>.

## LITERATURE REVIEW

**N. Ram Ganga Charan**<sup>5</sup> mainly focused on cloud, cloud computing and its myriad application. They describe various cloud computing paradigm and types of clouds those includes public cloud, private cloud, community cloud and hybrid cloud. A cloud computing architecture has been describes with existing features. Finally, they have deployed a cloud computing system and showed the feature that differentiates with the existing cloud computing process.

**P. Shanthi Bala**<sup>6</sup>, works with cloud computing for educational system and more specifically on the security issues of public clouds. At the end, he has provided a guide line to develop a cloud computing for education system. Finally the author suggest few issues to develop a educational cloud computing system those includes working principles, significance of development, growth of the system and implications of the education.

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<sup>1</sup> Jae-won Park and Nam-Yong Lee, A Conceptual Model of ERP for Small and Medium-Size Companies Based on UML, IJCSNS International Journal of Computer Science and Network Security, VOL.6 No.5A, May 2006.

<sup>2</sup> N. Ram Ganga Charan , S. Tirupati Rao , Dr .P.V.S Srinivas , Deploying an Application on the Cloud, International Journal of Advanced Computer Science and Applications, Vol. 2, No. 5, 2011

<sup>3</sup> M. Sudha, M. Monica, Investigation on Efficient Management of workflows in cloud computing Environment, (IJCSNS) International Journal on Computer Science and Engineering, Vol. 02, No. 05, 2010, 1841-1845

<sup>4</sup> CSA, "Security Guidance for Critical Areas of Focus in Cloud Computing V2.1" Cloud Security Alliance, 2009, [Online], Available: <https://cloudsecurityalliance.org/topthreats/csathreats.v1.0.pdf>, [Accessed: 08-July-2011].

<sup>5</sup> N. Ram Ganga Charan , S. Tirupati Rao , Dr .P.V.S Srinivas , Deploying an Application on the Cloud, International Journal of Advanced Computer Science and Applications, Vol. 2, No. 5, 2011

<sup>6</sup> P. Shanthi Bala, Intensification of educational cloud computing and crisis of data security in public cloud. , International Journal on Computer Science and Engineering, Vol. 02, No. 03, 2010, 741-745.

An investigation on cloud computing done by **M. Sudha et al**,<sup>7</sup>. The authors tested the performance of cloud computing systems running in a virtual environment via remote, and wide-area network resource access. Their test result showed that virtual environment system having short job runtime of a work flow has the good compute time scale that can be effected by resource scheduling delays and wide area communications.

According to **Muzafar Ahmad Bhat et al**<sup>8</sup>, Multi-tiered architecture for GIS(Geographical Information System) Cloud System has been proposed that holds mainly two components those are GIS cloud web interface and GIS server. The GIS server has been divided into five sub layer to get the best performance from the shared resource like databases, configuration, server logic, server side utilities, communication interfaces and high powered processing infrastructure.

Importance and advantage of cloud computing on web application have been showed by **Liladhar R. Rewatkar et al**,<sup>9</sup>. They remarks on few issues related to cloud computing for web application like price, simplicity, flexibility, collaboration, privacy and security. They also discussed how power loss occurred with the component of computer and they think that distributing high voltage DC power throughout the data centre may reduce the loss.

**K.Mukherjee et al**<sup>10</sup> focused on frame work of future e-government for cloud computing. They observed that present e-government frame work is not able to map all users' criteria. They have been proposed an new effective e-government frame work which is more intelligent and able to filled up all user criteria's.

According to **Michael Armbrust et al**<sup>11</sup>, they focused on Software as a service providers (cloud user) and cloud providers. They have defined cloud, is the combination of data centre hardware and software. They also define the public cloud as, when a cloud have prepared with the pay-as-you go manner for public and these services are sold called utility computing. They have predict cloud computing will grow fast and developer should account on how smoothly a single virtual Machine serve the services. In addition, they also remarks three points those includes scale down and up of application software, upgrading of infrastructure software and hardware system (putting idle portions of the memory, disk, and network into low power mode, processors should work well with VMs, flash memory should be added to the memory hierarchy, and LAN switches and WAN routers must improve in bandwidth and cost).

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<sup>7</sup> M. Sudha, M. Monica, Investigation on Efficient Management of workflows in cloud computing Environment, (IJCSSE) International Journal on Computer Science and Engineering, Vol. 02, No. 05, 2010, 1841-1845

<sup>8</sup> Muzafar Ahmad Bhat et al, Cloud Computing: A solution to Geographical Information Systems (GIS), International Journal on Computer Science and Engineering (IJCSSE), ISSN : 0975-3397 Vol. 3 No. 2 Feb 2011

<sup>9</sup> Liladhar R. Rewatkar, Ujwal A. Lanjewar ,Implementation of Cloud Computing on Web Application, International Journal of Computer Applications (0975 – 8887) Volume 2 – No.8, June 2010.

<sup>10</sup> K.Mukherjee, G.Sahoo, Cloud Computing: Future Framework for e-Governance, International Journal of Computer Applications (0975 – 8887), Volume 7– No.7, October 2010

<sup>11</sup> Michael Armbrust, Armando Fox, Rean Griffith, Anthony D. Joseph, Randy H. Katz, Andrew Konwinski, Gunho Lee David A. Patterson, Ariel Rabkin, Ion Stoica, Matei Zaharia ,Above the Clouds: A Berkeley View of Cloud Computing, <http://www.eecs.berkeley.edu/Pubs/TechRpts/2009/EECS-2009-28.html>, February 10, 2009



**Brian Hayes**,<sup>12</sup> works on cloud computing because of the migration of software system to distance server that is accessible remotely. They have shown the evolution of cloud computing and predicts the future of cloud computing is less than clear, showing few example that treated as directions. They have mention about WordStar for the web that first attracted people to cloud computing. They also mentioned about Google docks as earlier developed application for WordStar. In enterprise cloud computing, the first was Salesforce.com that was founded in 1999. They also focused on cloud infrastructure and cloud OS.

## COUNTED CHALLENGES

### CLOUD COMPUTING THREATS

These threats are identified as follows:

#### **A. Abuse and Nefarious Use of Cloud**

Cloud providers facilitate the users with various types of services including unlimited bandwidth and storage capacity. Some cloud service providers offer free limited trial periods that gives an opportunity for hackers to access the cloud immorally, their impact includes decoding and cracking of passwords, launching potential attack points and executing malicious commands. Spammers, malicious code authors and other cybercriminals can conduct their activities with relative impunity, as cloud service providers are targeted for their weak registration systems and limited fraud detection capabilities. For example some cybercriminals use rich content applications such as flash files that enable them to hide their malicious code and utilize users' browsers to install malware<sup>13</sup>.

#### **B. Insecure Interfaces and APIs**

Cloud users are using software interfaces and APIs to access and manage the cloud services. These APIs need to be secured because they play an integral part during provisioning, management, orchestration and monitoring of the processes running in a cloud environment. The security and availability of cloud services is dependent upon the security of these APIs so they should include features of authentication, access control, encryption and activity monitoring. APIs must be designed to protect against both accidental and malicious attempts to avoid threats. If cloud service provider relies on weak set of APIs, variety of security issues will be raised related to confidentiality, integrity, availability and accountability such as malicious or unidentified access, API dependencies, limited monitoring/logging capabilities, inflexible access controls, anonymous access, reusable tokens/passwords and improper authorizations<sup>14</sup>.

#### **C. Malicious Insider**

Insider attacks can be performed by malicious employees at the provider's or user's site. Malicious insider can steal the confidential data of cloud users. This threat can break the trust of cloud users on provider. A malicious insider can easily obtain passwords, cryptographic keys and

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<sup>12</sup> Brian Hayes, Cloud computing, DOI: 10.1145/1364782.1364786, <http://bit-player.org/bph/publications/CACM-2008-07-ayes-cloud.pdf>

<sup>13</sup> CSA, "Security Guidance for Critical Areas of Focus in Cloud Computing V2.1" Cloud Security Alliance, 2009, [Online], Available: <https://cloudsecurityalliance.org/topthreats/csathreats.v1.0.pdf>, [Accessed: 08-July-2011].

<sup>14</sup> CSA, "Security Guidance for Critical Areas of Focus in Cloud Computing V2.1" Cloud Security Alliance, 2009, [Online], Available: <https://cloudsecurityalliance.org/topthreats/csathreats.v1.0.pdf>, [Accessed: 08-July-2011].

files. These attacks may involve various types of fraud, damage or theft of information and misuse of IT resources. The threat of malicious attacks has increased due to lack of transparency in cloud provider's processes and procedures<sup>15</sup>. It means that a provider may not reveal how employees are granted access and how this access is monitored or how reports as well as policy compliances are analyzed. Additionally, users have little visibility about the hiring practices of their provider that could open the door for an adversary, hackers or other cloud intruders to steal confidential information or to take control over the cloud. The level of access granted could enable attackers to collect confidential data or to gain complete control over the cloud services with little or no risk of detection. Malicious insider attacks can damage the financial value as well as brand reputation of an organization.

#### **D. Virtualized Technology**

Due to the cloud virtualization, cloud providers are residing the user's applications on virtual machines (VMs) within a shared infrastructure. The VMs are virtualized based on the physical hardware of cloud provider. In order to maintain the security of users, providers are isolating the VMs from each other so if any of them is malicious, it will not affect the other VMs under the same provider. The VMs are managed by hypervisor in order to provide virtual memory as well as CPU scheduling policies to VMs. As the hypervisor is main source of managing a virtualized cloud platform, hackers are targeting it to access the VMs and the physical hardware, because hypervisor resides between VMs and hardware<sup>16</sup>, so attack on hypervisor can damage the VMs and hardware. Strong isolation should be employed to ensure that VMs are not able to impact or access the operations of other users running under the same cloud service provider. Several vendors such as Xen and KVM are providing strong security mechanisms of securing the cloud hypervisors, but still it is identified that sometimes security of VMs is compromised.

#### **E. Data Loss or Leakage**

Data loss can occur due to operational failures, unreliable data storage and inconsistent use of encryption keys. Operational failure refers to deletion or alteration of records without a backup of the original content that can take place intentionally or unintentionally. Unreliable data storage refers to saving of data on unreliable media that will be unrecoverable if data is lost<sup>17</sup>. The inconsistent use of encryption keys will result into loss and unauthorized accesses of data by illegal users that will lead to the destruction of sensitive and confidential information. Example of data loss is Twitter hacks. The online accounts of Twitter accessed by hackers and their numerous sensitive corporate documents were stolen. These documents were housed in Google's online web office service Google Docs. Although Google was not the one to be blamed for security break-in as the security of documents from twitter was not efficient enough. Instead, the entire company data was only one password crack away from discovery<sup>18</sup>. It's clear from this example that data loss or leakage can damage one's brand, reputation and cause a loss that may

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<sup>15</sup> E., Mathisen, "Security challenges and solutions in cloud computing," in Digital Ecosystems and Technologies Conference (DEST), 2011 *Proceedings of the 5th IEEE International Conference on*, 2011, pp. 208-212.

<sup>16</sup> Wei Chen, Hongyi Lu, Li Shen, Zhiying Wang, Nong Xiao, and Dan Chen, "A Novel Hardware Assisted Full Virtualization Technique," in *Young Computer Scientists, 2008. ICYCS 2008. The 9th International Conference for*, 2008, pp. 1292-

<sup>17</sup> S. Farrell, "Portable Storage and Data Loss," *Internet Computing, IEEE*, vol. 12, no. 3, pp. 90-93, 2008.

<sup>18</sup> R., Trope, C., Ray, "The Real Realities of Cloud Computing: Ethical Issues for Lawyers, Law Firms, and Judges", [Online], Available: [http://ftp.documation.com/references/ABA10a/PDFs/3\\_1.pdf](http://ftp.documation.com/references/ABA10a/PDFs/3_1.pdf), 2009, [Accessed: 15-Jul-2011].

significantly impact employee, partner and users' morale as well as trust. Loss of core intellectual property can have competitive and financial implications beside the compliance violations and legal consequences.

#### *F. Account or Service Hijacking*

Account or service hijacking refers to unauthorized access gained by attackers to control the users' accounts, such as phishing, fraud and exploitation of software vulnerabilities. For example if an attacker gains access to users' credentials, they can spy on their activities/transactions, manipulate their data, return falsified information and redirect them to illegitimate sites<sup>19</sup>. Users' account or service instances may become a new base for the attackers who can leverage the cloud service providers' reputation by launching subsequent attacks. With stolen credentials, attackers can often access critical areas of deployed cloud computing services, allowing them to compromise the confidentiality, integrity and availability of those services. Authentication and authorization through the use of roles and password protecting is a common way to maintain access control when using web-browsers to access cloud computing systems. However, this method is not sufficient enough to secure sensitive and critical data.

#### *G. Unknown Risk Profile*

It is important for the users to know software versions, security practices, code updates and intrusion attempts. While adopting cloud computing services, these features and functionality may be well advertised but what about the details or compliance of the internal security procedures, configuration hardening, patching, auditing and logging. Users must be clarified how and where their data and related logs are stored. However, there is no clear answer that leaves users with an unknown risk profile that may include serious threats.

### **CLOUD COMPUTING VULNERABILITIES**

There are several significant vulnerabilities that should be considered when an organization is ready to move their critical applications and data to a cloud computing environment, these vulnerabilities are described as follows:

#### *A. Session Riding and Hijacking*

Session hijacking refers to use of a valid session key to gain unauthorized access for the information or services residing on a computer system, it also refers to theft of a cookie used to authenticate a user to a remote server and it is relevant to web application technologies weaknesses in the web application structure at their disposal that gives the chance to hackers in order to accomplish a wide variety of malicious activities. While session riding refers to the hackers sending commands to a web application on behalf of the targeted user by just sending that user an email or tricking the user into visiting a specially crafted website. Session riding deletes user data, executes online transactions like bids or orders, sends spam to an intranet system via internet and changes system as well as network configurations or even opens the firewall<sup>20</sup>. However, the web technologies evolution and refinement also brings new techniques

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<sup>19</sup> Karthick Ramachandran, Thomas Margoni and Mark Perry, "Clarifying Privacy in the Clouds" in *CYBERLAWS 2011 : The Second International Conference on Technical and Legal Aspects of the e-Society*, IARIA,2011

<sup>20</sup> T. Schreiber, "Session Riding a Widespread Vulnerability in Today's Web Applications" [Online], Available: [http://www.securenet.de/papers/Session\\_Riding.pdf](http://www.securenet.de/papers/Session_Riding.pdf), white paper, 2004. [Accessed: 20-Jul-2011].

that compromise sensitive data, provide access to theoretically secure networks and pose threats to the daily operation of online businesses.

### ***B. Virtual Machine Escape***

Cloud computing servers use the same OS, enterprise and web applications as localized VMs and physical servers. The ability for an attacker or malware to remotely exploit vulnerabilities in these systems and applications is a significant threat to virtualized cloud computing environments<sup>21</sup>. In addition, co-location of multiple VMs increases the attack surface and risk of VM-to-VM compromise. Intrusion detection and prevention systems need to be able to detect malicious activity at VM level, regardless of the location of the VM within the virtualized cloud environment. VM escape is a vulnerability that enables a guest-level VM to attack its host. Under this vulnerability an attacker runs code on a VM that allows an OS running within it to break out and interact directly with the hypervisor. It allows the attacker to access the host OS and all other VMs running on that particular host. Hypervisors and VM's complexity may cause an increase threat to attack surface that weakens security such as paging, check pointing and migration of VMs<sup>22</sup>.

### ***C. Reliability and Availability of Service***

In terms of reliability and availability, cloud computing is not a perfect technology. For-example in February 2008, Amazon's Web Service (Amazon's-S3) cloud storage infrastructure went down for several hours, causing data loss and access issues with multiple Web 2.0 services. With more services being built on top of cloud computing infrastructures, an outage or failure can create a domino effect by taking down large amounts of Internet based services and applications which raise several questions such as in cases of failure, what forms of settlement exist for stakeholders? What is the responsibility of cloud providers? What will be appropriate procedures to overcome these issues? <sup>23</sup>.

### ***D. Insecure Cryptography***

Attackers' can decode any cryptographic mechanism or algorithm as main methods to hack them are discovered. It's common to find crucial flaws in cryptographic algorithm implementations, which can twist strong encryption into weak encryption or sometimes no encryption at all. For example in cloud virtualization providers uses virtualization software to partition servers into images that are provided to the users as on-demand services. Although utilization of those VMs into cloud providers' data centres provides more flexible and efficient setup than traditional servers but they don't have enough access to generate random numbers needed to properly encrypt data. This is one of the fundamental problems of cryptography. How do computers produce truly random numbers that can't be guessed or replicated? In PCs, OS typically monitors users' mouse movements and key strokes to gather random bits of data that are collected in a so-called Entropy Pool (a set of unpredictable numbers that encryption software automatically pulls

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21 S., Subashini, V. Kavitha. "A survey on security issues in service delivery models of cloud computing". *Journal of Network and Computer Applications*, vol.34, pp.1-11, 2011.

22 Trend Micro, "Making Virtual Machines Cloud-Ready", [Online], Available: <http://www.whitestratus.com/docs/making-vms-cloud-ready.pdf>. A Trend Micro White Paper, 2009 [Accessed: 16-Jul-2011].

23 B. Grobauer, T. Walloschek, and E. Stocker, "Understanding Cloud Computing Vulnerabilities," *Security & Privacy, IEEE*, vol. 9, no. 2, pp. 50-57, 2011.

to generate random encryption passkeys). In servers, one that don't have access to a keyboard or mouse, random numbers are also pulled from the unpredictable movements of the computer's hard drive. VMs that act as physical machines but are simulated with software have fewer sources of entropy. For example Linux-based VMs, gather random numbers only from the exact millisecond time on their internal clocks and that is not enough to generate strong keys for encryption<sup>24</sup>.

#### ***E. Data Protection and Portability***

Although the cloud services are offered based on a contract among client and a provider but what will happen when the contract is terminated and client doesn't wants to continue anymore. The question is, will the sensitive data of client be deleted or misused by the provider. Secondly if the provider went out of business due to any reason, what will happen to the services and data of the client? Will the provider handout the data of client to some other provider, if yes, will client trust the new provider? Considering these questions we can say that data protection and portability remains as one of main weaknesses of cloud computing.

#### ***F. Vendor Lock-in***

This vulnerability occurs due to immature providers and new business models which raise the risk of failure and going out of the business. Lock-in, makes a client dependent on a provider for products and services so they will be unable to deal with another provider without substantial switching costs. Clients must be sure of their potential provider prior to provider selection process. Lack of standards may also lock-in the clients with only one provider. Due to heterogeneous standards and policies settled by each provider, clients are not able to easily migrate from one provider to another even though they want to do so<sup>25</sup>.

#### ***G. Internet Dependency***

Cloud computing is an internet dependent technology where users are accessing the services via web browser. What if internet is not available or service is down, what will happen to users systems and operations that are very critical and need to run 24 hours such as Healthcare and Banking systems. In some Asian and African underdeveloped countries where service of internet is not considered as reliable enough, will organizations adopt this paradigm to move their significant systems on cloud?

### **DISCUSSION AND ANALYSIS**

Earlier ERP systems are implemented on the platform of premises of a company's server, thus hosted systems are at their own services. Proposed system allows implementing the ERP into a cloud that is managed by other vendor. Proposed system has an efficient option to choose business organization's own business flow as they recently acting on. More precisely we can say that, Cloud ERP has its own flow. But a business organization can also define their business by themselves. On the other hand ERP provider can define a standard business flow that can be followed by the business organization. ERP packages are also has options to choose from cloud during ERP software selection by the business organization. Technically Cloud ERP is simple to

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24A., Greenberg, "Why Cloud Computing Needs More Chaos" [Online], Available:<http://www.forbes.com/2009/07/30/cloud-computing-security-technology-cio-network-cloud-computing.html>, 2009, [Accessed: 20-Jul-2011].

25 G., Petri, "Vendor Lock-in and Cloud computing", [Online], Available: <http://cloudcomputing.sys-con.com/node/1465147>, 2010, [Accessed: 23-Jul-2011].

deploy, organization need not to bear additional server and other dependent costs. It is also easy and quick to implement an ERP to a business organization. On the other hand, traditional ERP experience a challenge to deploying and maintenance. Traditional ERP is very much controllable by the business organizations, because it is under their supervision. Again cloud ERP controlling depends on the support of the vendor. Vendor can ensure the control of ERP on behalf of business organizations. Traditional ERP has an easy accessibility both technically and user prospect. It does not depends on internet rather intranet. Alternatively, cloud ERP depends on internet. So if the internet bandwidth is low or it's technically departed then support cloud ERP is in trouble. Some specific and desirable quality of the traditional ERP and Cloud ERP are listed bellow in the Table 1.

**Table 1: Comparison among Traditional ERP and Cloud ERP**

Quality	Traditional ERP	Cloud ERP(Proposed)
<b>Deployment</b>	Local server	Cloud Server
<b>Defining Business Flow</b>	Defined by ERP developer and business organization specific. Organization Specific	Define by both, ERP developer and Business organization. Flow specific.
<b>Implementation cost</b>	High	Low
<b>Ongoing cost</b>	Relatively high	Low
<b>Control over ERP</b>	Easily controllable.	Relatively tough to control. Cause ERP is in the cloud.
<b>Customization</b>	Not open for business organizations	Open for business organizations
<b>Support cost</b>	Relatively high	Low
<b>Integration</b>	Dependent on vendors.	Depends on the vendor, but it can support centrally so many other business organization might supported at a time.
<b>Licensing cost</b>	High	Low
<b>ERP update, modification</b>	Costly.	Low cost, cause it is maintained centrally
<b>Dependency on internet</b>	No	Yes
<b>Audit and Trial</b>	By organizational prospect, it is easy	Relatively complex.
<b>Version controlling</b>	Relatively complex	Easy

## PROPOSED SYSTEM FEATURES

Defining the business process will be on the safe side of business organization. Business organization will follow a standard business process, which can be defined by ERP system. Our proposed system for Cloud computing has been placed in Fig 2 bellows. Definition and

connectivity of database system will be provided by vendor. Business organization has to have an option to choice database depending on their budget and intelligence they need. Database definition and specification is defined such a way that different business organization has an access to their own database. Reporting tools will be general for all business organization. Business organization can define their simple reports by their own skill. If the report is complex, business organization will consider vendor to provide them support. Report integration (RI) will be provided by the vendor to get reliable and specific report for the organization. Security is a vast issue for ERP. Vendors will provide security to their cloud, application and database separately. Security and encryption may be provided by the different vendor to make a reliable system. Sometime ERP need integrated hardware mostly to read Infrared tag, RFID (Radio Frequency Identification) tag etc. These integrated hardware driver software will be supported by the cloud system. To implement most sophisticated ERP system there is a vast dependency on a reliable Operating system. Vendor will chose an operating system to be on cloud and give an elevated performance to the Business organization. This operating system should be easily configurable and maintainable by vendors.

Operating system is also very important to support third party software. Cloud server should be robust and reliable in its performance. IT service of different organization will be provided in a single point. As Cloud Computing becomes more mature, there will be opportunity for ERP Service Vendors on two fronts. Existing big companies will start migrating to "Cloud" to reduce capital and operational IT expenditure. All IT support, Maintenance and training provided by the vendor end. Traditional systems are very high at cost in these issues. Cost will be nominal. Every R&D dependent on the cloud environment will be pointed on the single point service. The ERP cloud will be access by Administrator, User and Vendors. Vendor will create and support the cloud to give its optimum performance to the Business user. Version controlling and upgrades will centrally provided by the vendors. Administrators from both end - business organization and vendor will define the business process, check the performance, reliability and robustness of ERP. User of the Cloud ERP system will make an efficient use of the system. This end user will authenticate and corroborate that the system is fit for their purpose.

## **CONCLUSION**

Our aim was to design a cloud based ERP business consequence that has been done and discussed in the previous sections. We have also showed how our proposed cloud based ERP system would be easy of use and cost effective comparing with present ERP flowchart. The weakness of our proposed ERP model has also been discussed .Considering the cost effectiveness and ease of use, our proposed system has a better prospect in the filed of ERP based automatic business system. The Cloud Computing paradigm is yet to prove itself as a reliable and mature IT services model which is not only promises to cut the IT infrastructure costs but will also provide businesses to reap benefits from faster implementation of IT projects, improved agility to adjust to ever changing market environment and reduce IT costs at the same time. Confidently make that path to finish the research according to a project plan and work schedule managing the risks and flaws.

## ICT TECHNOLOGY DEVELOPMENT IN NIGERIA EDUCATIONAL SYSTEM

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### ABSTRACT

The use of ICTs in Nigeria and African countries generally is increasing and dramatically growing. However, while there is a great deal of knowledge about how ICTs are being used in developed countries, there is not much information on how ICTs are being used by teachers in developing countries. The descriptive survey investigated the perception of teachers in the use ICT facilities in teaching and achievement of student in some selected schools in Sagamu Local Government Area of Ogun State. It was carried out purposely to ascertain how teachers can teach effectively and performance of students while using ICT facilities.

Based on the result of the findings, one would not have expected any consideration gap in the performance of students, with ICT in teaching and any ordinary teaching method. However, the performance of students in science subjects while teaching with ICT facilities is more appreciable than that of ordinary teaching method.

Therefore, in carrying out this research work, five secondary schools were selected as samples around Sagamu area, the results in Chemistry in the selected schools were used as source of data.

Findings from this research work showed that ICT facilities makes teaching easier for the teachers. Moreover, it also reveal the fact that students perform very well with ICT facilities. For such a research work to have greater national significance and applicability, it was recommended that government should play a very good impact in our educational system by providing ICT facilities for all schools in order to aid easy delivery of subject content and great performance of student in science subjects.

**Key words:** ICTs, Ogun State, perception, Nigeria, Descriptive, Science Subjects, Applicability

### INTRODUCTION

For longer than a decade, one of the key challenges to professional development of teachers has been to help the integration of ICT into education. Rationales for an increase in ICT use are based on the assumption that the future will be dominated by knowledge-intensive professions, and employees need, therefore, ICT in teaching is considered important in the facilitation of equal opportunities for citizen to study and develop their own knowledge to ensure the success and welfare of the nation (Schie, 1997, Moursund and Bielefeldt, 1999; OECD, 2004 UNESCO, 2008). However, the implementation of ICT innovations into school practice is difficult. Thus, it is important to initiate research and development in this field in order to discover what contributes to successful adoption of these innovations. Research literature has shown promising results on benefits of ICT use in education: it supports student collaboration and knowledge



building. Further, in the context of science education, it offers possibilities for interaction with the nature; tools for real-time data logging. However, several problem issues have been identified which explain why ICT is not used in teaching in such extent as it could be appropriate according the potentials reported in the literature. Teachers feel a lack of up-to-date computer equipment and software. One interpretation could be that computers tend to be located in computer labs, not in ordinary classrooms or science labs (Newton, 2000; Hakkarainen et al., 2000). The second interpretation could be that teachers have had insufficient time to learn about the use of ICT and its applications in science classrooms (see e.g., Russell & Bradley, 1997); consequently, they have no confidence in ICT use. The third interpretation is teachers' 'technophobic' attitudes about ICT in science teaching (Demetriadis et al., 2003). Research suggests that in any topic, including the benefits of ICT in education, it has been difficult to change teachers' beliefs about teaching and learning (Tobin et al., 1994, 64; Willis, 1997). Teachers' beliefs have remained stable, and their resistance to change is one of the main explanations behind the diminutive adoption of ICT in education (Haney, Czerniak & Lumpe, 1996). Knezek and Christensen (2002) found evidence that teachers' beliefs regarding the usefulness of ICT in education appear to be surprisingly consistent across nations and cultures.

The use of ICTs in Nigeria and African countries generally is increasing and dramatically growing. However, while there is a great deal of knowledge about how ICTs are being used in developed countries, there is not much information on how ICTs are being introduced into schools in developing countries (Beukes-Amiss and Chiware, 2006). It should be noted that availability of ICTs vis-à-vis access in term of ratio of teachers and students differs significantly. Despite this, the new and emerging technologies challenges the traditional process of teaching and learning, and the way education is managed. While information communication technology is an important area of study in its own right, it is having a major impact across all curriculum areas. Easy worldwide communication provides instant access to vast array of data, challenging assimilation and assessment skills (Fowowe, 2006). Rapid communication plus increased access to ICTs in the home, at work, and in educational establishment, could mean that learning becomes a truly lifelong activity- an activity in which the pace of technological change forces constant evaluation of teaching process itself. The rapid growth in Information Communication and Technologies (ICT) have brought remarkable changes in the twenty-first century, as well as affected the demands of modern societies. ICT is becoming increasingly important in our daily lives and in our educational system. Therefore, there is a growing demand on educational institutions to use ICT to teach the skills and knowledge students need for the 21st century. Realizing the effect of ICT on the workplace and everyday life, today's educational institutions try to restructure their educational curricula and classroom facilities, in order to bridge the existing technology gap in teaching and learning. This restructuring process requires effective adoption of technologies into existing environment in order to provide learners with knowledge of specific subject areas, to promote meaningful learning and to enhance professional productivity (Tomei, 2005).

Literature review showed utilization of ICT in chemistry teaching (Henriques, L., 2002). Use of computer has enhanced meaningful chemistry learning and developed learning environment (Paul, et.,al.,2002). Despite successful computer utilization in classroom, practices are still relatively rare. Although, many countries have increased the number of computers in schools during recent years. However, still few teachers use computer in classroom practice, software often does not fit textbook and the curriculum pattern is poor (Van den Akker, J., P.

Keursten and T. Plomp, 1992). Researches have shown that there is still a long way ahead before implementing ICT in classroom practice (BECTA., 2004). Some studies have revealed that the integration of ICT in classroom practice has been low by chemistry teachers around the world. Furthermore, there are barriers integrating computer use in schools curriculum (BECTA., 2004). Moreover, there are various factors that influence on the use of ICT in science education: the infrastructure for ICT in science education, the principal's views of ICT in the school and the external parameters affecting philosophy/practice (Kozma, R., 1999). Also, Fullen identified factors such as: the characteristics of innovation (e.g. need for innovation and its properties), local characteristics (e.g. chemistry teachers' ideas, support and school context) and external factors (e.g. the national framework curriculum in chemistry) (Fullan, M., 1993). As stated, the most factors contributing to the advancement of innovation is the availability of infrastructure resources such as: hardware, in terms of the number of computers in the school available for students and teachers for educational purposes, the quality and functioning equipment( speed of processors, operating systems, peripherals and access to the internet) as well as availability of general educational software (Venezky, R.L., and C. Davis, 2001). In otherwords, availability of ICT alone is insufficient and must be accompanied by technical as well as pedagogical support Pelgrum, W.J. and R.E. Anderson, (1999). Research has shown that teachers' attitudes towards technology influence their acceptance of the usefulness of technology and its integration into teaching, Huang & Liaw (2005). In European Schoolnet (2010) survey on teachers' use of Acer netbooks involving six European Union countries, a large number of participants believed that the use of netbook had had positive impact on their learning, promoted individualized learning and helped to lengthen study beyond school day. However, evidence suggests that small number of teachers believe that the benefits of ICT are not clearly seen. The Empirical survey revealed that a fifth of European teachers believed that the use of ICT in teaching did not benefit their students' learning, Korte & Hüsing (2007). A survey of UK teachers also revealed that teachers' positivity about the possible contributions of ICT was moderated as they became 'rather more ambivalent and sometimes doubtful' about 'specific, current advantages', Becta (2008, p.45). Teachers' computer experience relates positively to their computer attitudes. The more experience teachers have with computers, the more likely that they will show positive attitudes towards computers (Rozell & Gardner, 1999). Positive computer attitudes are expected to foster computer integration in the classroom (van Braak, Tondeur & Valcke, 2004). According to (Woodrow, 1992) for successful transformation in educational practice, user need to develop positive attitudes toward the innovation.

### **STATEMENT OF THE PROBLEM**

It has been observed that Nigeria educational system has been suffering a lot lapses, based on poor availability and its usability of ICT in secondary school. Also, the usability of ICT in the teaching and learning of science has not taken into consideration.

In spite of the above, there had been recent development in the inclusive of ICT training into secondary school curriculum which is aimed at enhancing individual coping capability. Hence, some of the factors that give rise to poor academic performance of students in science subjects is the unavailability of ICT facilities in school. Also, the utilization based on teachers perception to ICT in teaching and learning of science subjects instruction in secondary schools.

### **PURPOSE OF THE STUDY**

1. To examine the reaction for the new ICT technology development in Nigeria educational system
2. To examine the challenges faced in the availability and utilization of ICT in secondary schools
3. To appraise the roles of government toward solving the challenges of ICT during teaching and learning.
4. To examine the way forward and prospect of availability and utilization of ICT in secondary schools.

## **RESEARCH DESIGN**

In this study, survey research design was used in an attempt to design the perception of teachers in the use of ICT facilities in teaching and achievement of students in some selected secondary schools in Sagamu local government areas of Ogun state.

## **POPULATION OF THE STUDY**

Due to the nature of these research, the study adopt sixty(60) respondent cutting across five secondary schools in Sagamu local government. A sample random sampling were adopted for the study Ten(10) respondent were randomly selected each from selected secondary schools selected for the study.

## **SAMPLE AND SAMPLING TECHNIQUES**

The sampling techniques adopted in this study is satisfied random sampling method. This is done by selected ten(10) respondent each from the five selected secondary schools in Sagamu local government.

## **RESEARCH INSTRUMENTATION**

The basic instrument to be used in the study is an structural questionnaire designed specially for the purpose of eliciting information on represent personal data, as well as their understanding on the perception of teachers in the use of ICT facilities in teaching and achievement of students in secondary school chemistry.

The questionnaire were in two categories section A: give personal information which include Teacher name, class taught, school, sex age, qualification and years of experience of the respondent while section B: comprises twenty (20) items on the perception of teachers in the use of ICT facilities in teaching and achievement of students in secondary school chemistry

## **RELIABILITY OF THE INSTRUMENT**

The questionnaire was administered to all the chemistry teachers in the selected secondary schools from the responses of the teachers a reliability coefficient of 0.763 was establish using “Cronbach Alpha Coefficient”

## ADMINISTRATION OF THE INSTRUMENT

During the process of the administration, the researcher personally visited the selected schools and permission was sought and obtained from the principals of the selected schools who introduced the researcher to the chemistry teachers.

The chemistry teachers really cooperated with the researchers in such a way that they accepted the questionnaire and answered the instrument at the stipulated time. The researcher collected the answered scripts, marked and used the scores to determine the perception of teachers in the use of ICT in teaching and achievement of student in senior secondary school chemistry.

## DATA ANALYSIS TECHNIQUES

The method of data analysis involved the use of Pearson product moment correlation, and T-Test while simple percentage was used for the bio-data of the subject. The result of each classes of the visited schools verify how ICT facilities are effective in teaching and learning of Chemistry in secondary schools.

### Presentation of the Bio-data of teachers according to tables

**Table 2.3: Distribution of teachers according to class taught**

Class	Frequency	Percentage
S.S.1	22	36.7
S.S.2	21	36.0
S.S.3	17	28.3

This table reveals 22 SS1 Chemistry teachers participated in the study representing 36.7% of the samples, 21 teachers from SS2 and 17 teachers from SS3 which represent 36 and 28.3% participate in the study.

**Table 2.4: Distribution of teachers according to Gender**

Gender	Frequency	Percent
Male	33	55
Female	27	45
Total	60	100

The data show that 55%(33) of the sample were male teachers while the remaining 45%(27) were female.

**Table 2.5: Distribution of teachers according to their age groups**

Age Group (year)	Frequency	Percent
20-25	20	33.3
36-30	26	43.3
31-35	7	11.7
36-40	3	5.0

Above 40	4	6.7
Total	60	100

The data presented in the table above shows that teachers within the age group of 20-25 were 33.3%(20), those between 26-30 were 43.3%(26), those within 31-35 years were 11.7%(7), those within 36-40 were 5%(3), while those above the 40years were 4 which represent 6.7%. this reveals that the teacher within the age bracket of 20-30 constitute the workforce of chemistry teacher used for this study as the elderly ones gradually retiring out of services.

**Table 2.6: Distribution of teachers according to qualifications.**

Qualification	Frequency	Percent
NCE	17	28.7
BSC(ED)	40	66.7
MSC(ED)	3	50
Total	3	100

The data show above reveal that only three level of qualification which are the requirement for teaching in secondary school took part in this study. NCE chemistry teachers were 17(28.3%0, BSC(ED) teacher were 40 representing 66.7% while the rest 3(5%) were MSC(ED) teachers. This shows that chemistry teachers in the selected schools sampled were qualified to teach the subject except for the 17 NCE teacher who are currently doing their degree program.

**Table 2.7: Distribution of teachers according to Years of Experience**

Years of Experience	Frequency	Percent
1-10	44	73.3
11-20	14	23.3
21-30	2	3.4
Total	60	100

The years of experience of teachers used for this study were categorized into three groups as shown above. The data reveal that 44 teachers (73%) fall within 1-10 years, 14 teachers represent 23.3% fall within 11-20 years while only two teachers representing 3.4% had experience ranging from 21-30yrs. The implication of this is that the bulk of teachers used for this study had little

#### **Presentaion of Result of data analysis**

**Research Question:** what is the perception of chemistry teachers towards the uses of ICT facilities in teaching?

**This research question was answered using the data presented in table 4.6**

S/N	Items	SD	D	A	SA	Me an	STD
1.	ICT facilities are available in my school			42 (70)	18 (30)	3.3	.46
2.	Whenever I remembered that I will use electronic projector in teaching, it make me feel happy.		1 (1.7)	29 (48.3)	30 (50)	3.4	.54
3.	The use of electronic projector makes my class	1	5	27	27	3.3	.71

	dull.	(1.7)	(8.3)	(45)	(45)		
4.	The use of computer assisted instruction make teaching interesting.	1 (1.7)	1 (1.7)	30 (50)	28 (46.7)	3.4	.62
5.	Large class is effectively handled with the use of electronic projectors	2 (3.3)	6 (10.0)	23 (38.3)	29 (48.3)	3.3	.79
6.	My class is always very interactive whenever I use any of the ICT facilities.		1 (1.7)	41 (68.3)	18 (30)	3.3	.49
7.	There Is no ICT facilities in my school.		1 (1.7)	11 (18.3)	40 (80)	4.0	.45
8.	Whenever I remember that I will be using any of the ICT facilities for teaching, I am always sad.			29 (48.3)	31 (51.5)	3.5	.50
9.	Some student often sleep off whenever any of the ICT facilities is brought out for use.	6 (10)	4 (6.7)	39 (65)	11 (18.3)	2.9	.61
10.	The use of iCT makes some difficult topics in chemistry clearer.	1 (1.7)	1 (1.7)	33 (550)	25 (45)	3.4	.61
11.	The use of interactive white board makes my class interesting.			33 (55)	27 (45)	3.5	.50
12.	My students are always willing to learn whenever they know that the ICT facilities will be used.		1 (1.7)	27 (45)	32 (53.3)	3.5	.53
13.	My students always get bored and tired in classes with ICT facilities.	2 (3.3)	1 (1.7)	34 (56.7)	23 (38.3)	3.3	.67
14.	Many students like attending classes where ICT facilities are made use of.		1 (1.7)	34 (56.7)	26 (43.3)	3.4	.53
15.	The use of electronic media allows easy delivery of the chemistry content.	1 (1.7)	3 (5.0)	30 (50)	26 (43.3)	3.4	.66
16.	Large class cannot be effectively handled by the use of electronic projector.	2 (3.3)	6 (10)	24 (10)	28 (46.7)	3.3	.79
17.	Most of the students always walk out of the class whenever ICT facilities is being used.			28 (46.7)	32 (53.3)	3.5	.50
18.	The use of ICT facilities makes teaching and learning faster.			29 (45)	33 (55)	3.6	.50
19.	Students are not easily distracted whenever I make use of ICT facilities.	25 (25)	13 (21.7)	12 (20)	20 (33.3)	2.6	1.20
20.	The use of ICT facilities make chemistry topics very difficult to understand.	4 (6.7)	11 (18.3)	11 (18.3)	34 (56.7)	3.3	9.9

**Weighted mean = 3.36**

**Decision Rule:** Weighted mean  $\leq 2$  = Negative perception

Weighted mean  $\geq 3$  = Positive perception

To answer the research question, the weighted mean is computed for the mean values in table 4.6 above, and the value is 3.36. since the weighted mean is greater than 2 the teacher have a positive perception towards the use of ICT facilities in the teaching of Chemistry in senior secondary schools. However, data in table 4.6 show that the teachers do not agree with the following statement:

- The use of electronic projector makes my class dull (3.3)

- There are no ICT facilities in my school (4)
- Whenever I remember that I will be using any of the facilities in teaching, I am always sad (3.5)
- Some students often sleep off whenever any of the ICT facilities is brought out for use (3)
- My students always get bored and tired in classes with ICT facilities (3.3)
- Large classes cannot be effectively handled by the use of electronic projector (3.3)
- Most of the students always walk out of the class whenever an ICT facilities is been used (3.5)
- The use of ICT facilities chemistry topics very difficult to understand (3.3).

### TESTING THE HYPOTHESIS

**Hypothesis 1:** there is no significant relationship between the use of ICT facilities and student achievement in chemistry.

This hypothesis was tested with Perason product moment correlation and the result is presented in table 4.7 below.

**Table 4.7: summary of Pearson product moment correlation showing relationship between the use of ICT facilities and student achievement in chemistry.**

Variables	N	Means	SfD Dev	R	Sight	Remark
ICT usage	60	67.2	63	-0.38	0.0774	Not Significant
Achievement	60	62	4.4			

The data in table 4.7 above show that r is not significant ( $r = -0.38, P > 0.5$ ). This means that there is no significant relationship between the use of ICT facilities and student achievement in chemistry. Therefore the null hypothesis of no significant relationship is not rejected.

**Hypothesis 2:** There is no significant difference in the perception of teachers in the use of ICT facilities based on gender.

The hypothesis was tested with the T-Test statistics and the result is presented in table 4.8 below.

**Table 4.8: summary of T-Test of teacher's perception in the use of ICT facilities based on gender.**

Variable	N	Means	SfD Dev.	T	df	Sig.	Remark
Teacher's perception							
Gender							
Male	33	69	5.96	1.823	58	0.73	Not Sig.
Female	27	66	6.43				

From the summary table above, result show that there is no significant difference in the perception of male and female teacher towards the use of ICT facilities in teaching chemistry. ( $t = 1.823$ ,  $df = 58$ , and  $P > 0.5$ ). Therefore, the null hypothesis is not rejected.

## DISCUSSION OF FINDINGS

The researcher worried on the perception of teachers in the use of ICT facilities in teaching and achievement of student in senior secondary schools chemistry.

Findings showed that the use of ICT facilities in teaching in secondary schools has greatly improve the teaching strategies of teachers. Brested and pailsback (2001) reviewed in the finding that school that provided high level of support by providing ICT facilities for their teachers retained more teachers recorded higher students achievement and test scores, higher quality teaching and increased teacher effectiveness. The finding that teacher's expertise and lack of knowledge to evaluate the use and role of ICT in teaching as the two prominent factors hindering teacher's readiness and confidence in using ICT support. Similarly, (JISC, 2004) in their study on developing maturity in learning technology revealed that the most significant barriers identified are linked to staff attitude and training staff in the use of ICT, access and ICT skill in general. Moreover (Marshall, Elgort & Mitchell, 2003) reported similarly that staff continues to identify a lack of time as a barrier to the use of technology. While this has been interpreted to mean that staff have not have had the time to acquire the necessary skills in the use of technology in teaching, it now seems more likely that it reflects a sense of priority conveyed by the institution and a desire by academics to see a return on the investment of their time in developing their teaching delivery with technology. Previous surveys of academic staff attitudes to the use of technology have also repeatedly identified time and an absence of such examples (e.g. skills and knowledge) as significant barriers to technology adoption (Marshall, 2000).

The researchers likewise discovered that, teachers develop large and more sophisticated repertoire of teaching strategies and stronger classroom management skills, and also ability to deal with behaviour and discipline problems more effectively to have increase job satisfaction, lower stress, anxiety and frustration. The evidence gathered has shown the impacts of ICT facilities on teaching and learning indicates that where the use of ICT is most effective in enhancing the learning experience, teachers have been able to integrate a number of technologies such as laptops, interactive white boards and the internet, such combination of hardware software and connectivity allow them to develop innovative approaches to learning and teaching (Becta, 2007).

It was also discovered that in study chemistry in secondary schools, ICT is helping students to learn and enabling them to consolidate and deep their knowledge, understanding and skill according to (NCA, 2007), using ICT in teaching can help students to access, select and interpret information recognize pattern, relationships and behaviour models, predict an hypothesis, test reliability and accuracy, review and modify their work to improve the quality, communicate with others and present information, evaluate their work and improve efficiency. However, it was discovered through the analysis done above that teachers have a positive perception towards the use of ICT facilities in the teaching of chemistry in senior secondary schools. The Implication is that ICT facilities greatly helped teachers in their teaching strategies and skills.

It was also discovered from the analysis that the use of ICT facilities in teaching does not base on teachers gender, the result show that there is no significant difference in the perception



of male and female teachers toward the use of ICT facilities in teaching chemistry. The implication is that both male and female teachers have a positive perception towards the use of ICT facilities in chemistry teachings, meaning that both male and female teachers can perform very well while teaching with ICT facilities which will also bring great achievement on the part of the student.

### **RECOMMENDATION**

Recommendation will be highlighted and discussed as how to improve on the method of chemistry teachings as well as expected roles of the government, teachers, parents and students. Conclusion on the findings that is the perception of teachers in the use of ICT facilities in teachers and achievement of students in senior secondary schools is encouraging, as the students perform very well with the use of ICT facilities. Therefore, the bulk of the work lies with the government as majority of schools still lack these facilities in their schools, government should help chemistry teaching by specifically providing adequate ICT facilities for all the schools in order to reduce the stress of the teachers and also to improve the performance of the students, and as a means of preparing the current generation of the student for future place, that is, providing tools for tomorrow practices. This was underscored in the foreword written by Lemke (2009) in the Nigerian education technology commissioned report Lemke noted inter-alia “ Today students live in a global knowledge base age, and they deserve teachers whose practice embraces the best that technology can bring to learning.

Therefore, teachers on training need practical facilities with which to teach those students, during teaching practice exercise student teachers should be supply with and learn how to present and distribute instructional content through web environment (e-teaching) or system of offering an integrated range of tools ( stand alone computer instruction CD-ROM, among Others) the support learning and communication of chemistry education. Also teachers should see ICT as personal subject and teaching competencies, the parent should also co-operate with the school as regards the issue of discipline, they can also provide their children with useful facilities that can enhance their performance and also discourage their children from getting addicted to watching television, attending non-resourceful programmes and other activities, associated with youthful exuberance.

### **REFLECTION, CONCLUSIONS AND IMPLICATIONS**

The data analyzed, that is, the result of the perception of teachers to the use of ICT facilities in teaching and student achievement in chemistry is still encouraging. Recommendation have been made so that government will supply ICT facilities in all secondary schools nationwide in order to bring better performance of student. If the recommendation proffered are practiced it would go a long way in enhancing easy delivery of chemistry topics and better performance of students in our schools.

Consequently, it is imperative for any future research to expand the study to wider area. For this senior secondary school, it can be done at the national level, that is the use of ICT facilities in different state of the country, which will make a true representation of all secondary schools in Nigeria and the period under review could be extended to the duration of 10-15 years.

#### **List of ICT facilities used in teaching and learning**

- Computer, Radio, Printed matter, Video
- E-learning, Email, Internet, Word processor
- Television, Telephone, Graphic packages

- Digital camera, presentation application, removable media
- Analogue recorders (DVD and Video), photocopiers, printers
- Facsimile machine, Foe-based web services, Electronic projector, Audio cassettes and others.

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## “A STUDY OF SERVICE QUALITY AND AGE OF THE CONSUMER”

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### ABSTRACT

*Banking and financial services are a demand driven industry, which constitute an important part of the services industry (MP, 2001). Many regulatory, structural and technological changes have taken place within the world banking industry, in line with the trend towards a more integrated global banking environment (UP., 1999). The banking sector in Indian grew rapidly in the recent years. Services sector accounts 56.2% of Gross Domestic Product in Indian economy which is the highest in all sectors where as the financial services which includes banking industry contribute 9.7% to total Gross Domestic Product (Central bank Report 2006). Further in Indian, financial system of the country mainly depends on banking system because banking sector represents a share of 70.8% of total financial system of the economy. The rapidly changing and highly competitive environment which banks are forced to operate within are pushing them to rethink about their attitude towards customer satisfaction and optimization of service quality.*

*Therefore identifying the significance of the age categories of the consumers' on the evaluation of service quality in the retail commercial banking industry of Indian is significantly important. Further, it is worth to identify whether there is any difference based on the age categories of the consumers on evaluation of service quality of the banks that they are dealing with. Based on the stratified sampling technique 150 consumers were selected as the sample. The scope of the study was retail consumers of private and public commercial banks situated in the Mumbai district, who have been dealing with those particular banks more than two years.*

*The retail consumers who are maintaining savings accounts, fixed deposit accounts and current accounts were considered proportionately in drawing the sample elements.*

*Survey method used to gather primary data and it was developed on SERVQUAL model of service quality. The gathered data were analyzed using ANOVA and findings showed that there is a difference among the consumer groups based on their age categories in terms of evaluation of service quality provided by the banks.*

**Keywords: Service Quality, Retail Consumers, Banking industry, Age**

### 1. INTRODUCTION

Service quality being an important factor to retain the customers with the firm as proven through several past studies had been gained a greater prominence among the service driven industries. It is the main weapon of tangiblizing the service to be differentiated among the intense competition. Again the results of past studies indicate and establish that there is an impact from the demographics of the consumers on the way that they perceive the level of service. When there is such an impact and if still the banks are ignoring that and render the same

level of service to all the consumers though they are different in their demographics, it is a critical point on where the management might lose their control over their customer bases, because the consumers tend to leave the organization and will shift to another. More than that the bad recommendation he or she gives to the potential customers through word of mouth communication might affect considerably in attracting new customers.

Though it gives such type of negative behavioral consequences it cannot find any significant effort that has taken to address this issue in the Indian context other than some actions such as increasing the number of bank branches, installing more Automated Teller Machines and training the human resource and so on. Those which can be found when go through the history of the banking industry, despite of going into roots of the problem.

It is evident that earlier researches carried out on service quality were basically twofold. Studying the dimensions of service quality and developing measurement scales for different service sectors were the prominent research areas that can be witnessed. The impact of organizational variables on service quality has also studied in a few instances, especially in banking industry of developed countries. But with respect to the Indian context very few studies have been carried in the area of service quality.

In the early nineteen fifties, the banking industry in the country was confined to 16 commercial banks, out of which nine were foreign and held more than 60% of banking assets. None of these commercial banks saw any reason to extend their services to rural areas, and then home to nearly 85% of the population. The wide spread IT usage in the Indian banking sector began only in the late nineteen eighties, with initiatives taken by a few private banks. This IT wave brought the computer terminals out of the air-conditioned and entry restricted computer rooms to the teller countries. The transactions were carried out on-line against the batch processing mode used earlier and the manual work was gradually replaced by the automated procedure such as online real-time computer operations. This breaks the barrier of confining a customer to a branch, but making the resource of the bank available to them, anywhere, anytime. With the expansion of the computer network was also more than doubled. The card base too was expanded aggressively. The bank continually enhances the richness of its IT based product and services. Today customers enjoy services through Internet banking, Tele-banking, Mobile telephone banking (provided through both Short Message Service and WAP technologies) and Visa Electron/Visa Credit card facilities. A notable feature is the integration of an e-trading hub with Internet banking and the bank's web-site.

Technology has changed the contours three major functions performed by banks. That is access to liquidity, transformation of assets and monitoring risk. Further information technology and communication network systems have a critical bearing on the efficiency of money, capital and foreign exchange markets.

Entry of new Banks resulted in a paradigm shift in the ways of Banking in Indian. The growing competition growing expectations led to increase awareness amongst Banks on the role and importance of technology in Banking. The arrival of foreign and private Banks with the superior state-of-heart technology-based services pushed Indian also to follow suit by going in for the latest technologies so as to meet threat of competition and retain customer base.

In response to the reforms, the financial services sector in Indian and the banking sector, in particular, have undergone substantial changes to ensure an increased level of service which may have impacted on efficiency and productivity change, and competition and market structure. The main driving forces behind these changes were financial deregulation, development in information and communication technologies and the globalization of the financial services industry in general. The consequent changes were observable in areas such as the scope of banking operations, number of banks and bank branches, technologies used and quality of human resources in the banking industry. These changes might ultimately be reflected in efficiency and productivity gains with the aim of improving the level of service. Even though there is a growing body of literature that focuses on efficiency and productivity gains, market structure and the performance of banking industries in other countries, no major study has been conducted in Indian addressing the impact of demographic characteristics of consumer on evaluation of the quality of the service in the banking industry.

## **2. RESEARCH PROBLEM**

The study mainly focuses only on the retail consumers of the commercial banks with in the local context. It includes all the commercial banks of the private sector local banks and public sector banks. And also the researchers evaluate how the level of service quality varies in terms of the age of the consumers. The study is done taking the bank branches located in the Mumbai District only. Further the study includes consumers who have been dealing with the bank for more than two years, who are maintaining current accounts, fixed deposit accounts and savings accounts in the above mentioned banks of the Mumbai district. Though there are several types of factors which are affecting on consumer behavior such as cultural factors, social factors and psychological factors, this study focusing only on the age of the consumer which is a demographic factor.

## **3. LITERATURE REVIEW**

Customer satisfaction is determined by defining customer perceptions of quality, expectations, and preferences (Bowen, 1990). Said another way, satisfaction, or lack of it, is the difference between how a customer expects to be treated and how he or she perceives being treated (Bowen and Headley., 1995). To attain true customer satisfaction companies need to achieve quality not only by eliminating the causes for direct complains but they need to provide their products with excellent, attractive quality and provide the delight to the customer. So research on customer satisfaction is often closely associated with the measurement of service quality (Cronin and Taylor, 1992;Rust and Oliver, 1994).Quality is the most important purchase decision factor influencing the customer's buying decisions. Furthermore, it has strategic benefits of contributing to market-share and return on investment as well as in lowering manufacturing costs and improving productivity.

Service quality has been reported as having apparent relationship to costs , profitability (Rust and Oliver, 1993), customer satisfaction (Boulding et al, 1993), customer retention (Reichheld and Saser , 1990), behavioral intention, and positive word-of- mouth. Parasuraman et al. (1985) described service quality as: the ability of the organization to meet or exceed customer expectations. Customer expectations may be defined as the desires and wants of consumers that is what they feel a service provider should offer

rather than would offer (Parasuraman, Zeithaml and Berry, 1988). Definitions of service quality, therefore, focus on meeting the customers' needs and requirements, and how well the service delivered matches the customers' expectations of it. In recent years, greater emphasis has been placed on the need to understand the role of expectations, given the fact that consumers' expectations of quality are increasing, and people are becoming more discerning and critical of the quality of service that they experience. Swartz and Brown (1989) drew some distinctions between different views on service quality, drawing from the work of Gronroos (1983) and Lehtinen and Lehtinen (1982) concerning the dimensions of service quality. What the service delivers is evaluated after performance (Swartz and Brown, 1989, p.190). This dimension is called outcome quality by Parasuraman et al. (1985), technical quality by Gronroos (1983), and physical quality by Lehtinen and Lehtinen (1982). How the service is delivered is evaluated during delivery (Swartz and Brown, 1989, p. 190). This dimension is called process quality by Parasuraman et al. (1985), functional quality by Gronroos (1983), and interactive quality by Lehtinen and Lehtinen (1982). In their empirical findings, Cronin and Taylor specifically explored the relationship between service quality, satisfaction, and purchase intention. Furthermore, they compared SERVQUAL's efficacy with attitude-based methods (as applied in consumer satisfaction/dissatisfaction research) of measuring service quality.

An attitude-based conceptualization would argue for either an importance-weighted evaluation of specific service attributes or even just an evaluation of performance on specific service attributes. The service quality models they examined were (1) a performance measure, (2) a performance measure weighted by importance, and (3) SERVQUAL weighted by importance. Their analysis suggests that service quality is an antecedent of customer satisfaction and that satisfaction has a stronger influence than does service quality on purchase intentions. (McAlexander, Kaldenberg, Dennis, Koenig, Harold, 1994).

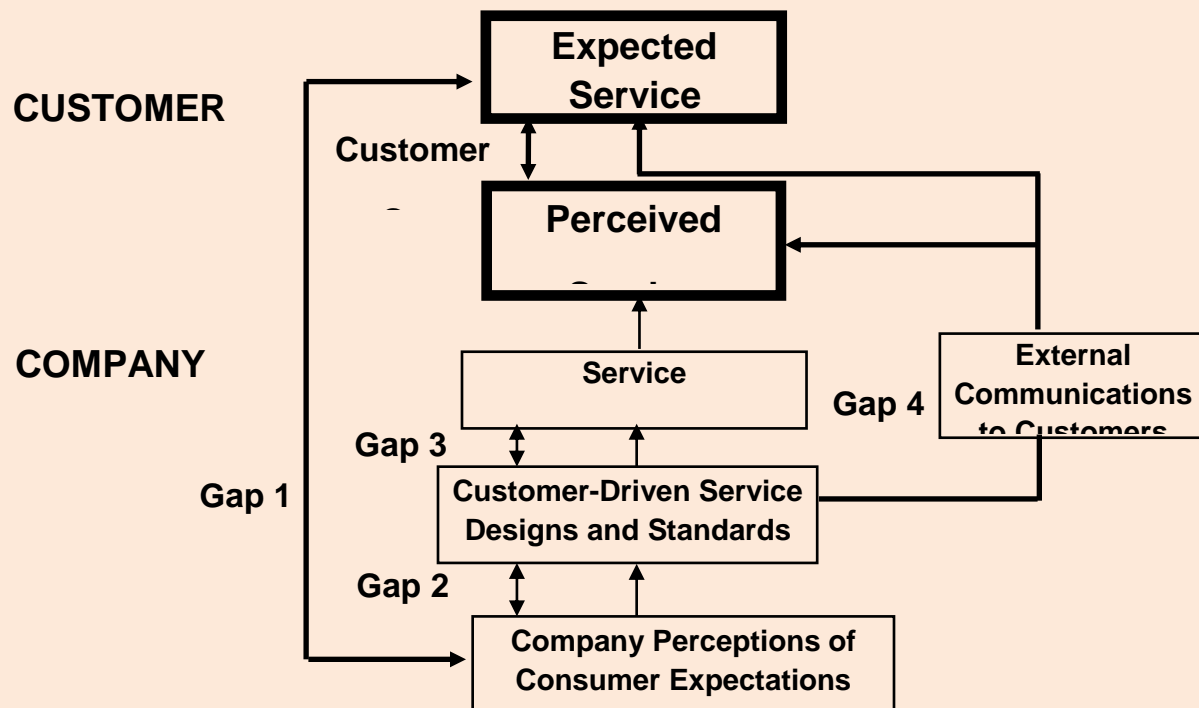
In an effort to understand the main concepts incorporated under the umbrella of service quality better, many conceptual quality models have been postulated. Obviously, service quality research has given the customer perspective a predominant role and these quality models have centered on measuring the gap between customer expectations and experiences as a determinant of satisfaction. However, despite the wealth of information which can be gleaned from these various service quality models, we still lack substantial knowledge as to how consumer evaluations of a particular service are really formed. Much of this recent research has been carried out within the framework of the Service Quality Gap Model of Parasuraman et al. (Parasuraman, A., Zeithaml, V.A. and Berry, L.L., 1985). This conceptual framework has made a substantial contribution to our understanding of the concept of service quality and the factors that influence it, by identifying four gaps“ which can occur in organizations.

According to Parasuraman et al. (Parasuraman, Zeithaml, Berry, 1985), a gap represents a significant hurdle in achieving a satisfactory level of service quality. This model is more of a diagnostic tool, which if used properly should enable management at all levels to identify service quality short-falls systematically. Since this model is externally focused it has the potential to assist management in identifying pertinent service quality factors from the perspective of the customer. These gaps “can cause quality problems and it is



these quality problems which give rise to a fifth gap of the difference between the customer's expectations of the service and his/her perceptions of the service that is actually received. The authors have defined this difference as Service Quality. In this respect, perceived service quality is the disconfirmation or disparity that is the mismatch, between the consumer's expectations and perceived service performance. Without doubt, conceptual service quality models are useful in so much as they provide an overview of the factors which have the potential to influence the quality of an organization and its service offerings. They facilitate our understanding and can help organizations to clarify how quality shortfalls develop. However, they are almost invariably simplified versions of reality. They can be misleading in that they tend to suggest that there are simple relationships between complex phenomenon, and that systems operate by rules of cause and effect. However, human behavior significantly affects the quality of an organization and its offerings, and this is more evident in service organizations.

*Fig. 3.1 The Gaps Model of Service Quality*



*Source: Parasuraman, Zeithamal and Berry, 1995*

### 3.1 AGE DIFFERENCES IN CONSUMER BEHAVIOUR

Previous research has shown that demographic variables are related to service Expectations quality expectations (Gagliano and Hathcote, 1994; Thompson and Kaminski, 1993; Webster, 1989). More specifically, Thompson and Kaminski (1993) found a significant relationship between age and dimensions of service quality. Age is a simple, yet critical demographic variable, since purchases vary by age category. Age also allows a marketer to

determine how wants and needs change as an individual matures. Further, Hansman and Schutjens (1993) proposed an irrational assumption that age is a strong predictor of changes in attitudes and behavior. For example, Mathur and Moschis (1994) found that age is inversely related to credit card use; younger adults use credit cards significantly more than older adults. With regard to the current study, there is a critical need to understand just how age affects perceptions of service quality by determining which elements of service quality are important to different age groups.

#### 4. METHODOLOGY

In this study it measures the relationship between the service quality dimensions and the level of perceived service quality considering the differences of age groups of the consumers by which it explains the existing situation rather going to examine cause and effect situation. Therefore the design of the research falls under the research design of descriptive research. Both primary and secondary data were used. Secondary data were collected through text books and previous research articles. Primary data were collected on survey method based on a structured questionnaire developed on SERVQUAL Model and variables were operationalized on the basis of SERVQUAL instrument. Stratified Random Sampling technique was used to select the sample elements and gathered data were analyzed using one way ANOVA. The questionnaire was circulated among 150 consumers who have been already dealing with the bank more than two years. The sample elements were selected in the following manner.

**Table 4.1- Sample Profile**

<b>Ownership</b>		<b>No. of Respondents</b>
Private Sector Local Banks		90
Savings Accounts Holders	45	
Fixed Account Holders	30	
Current Account Holders	15	
Public Sector Banks		60
Savings Accounts Holders	30	
Fixed Account Holders	22	
Current Account Holders	08	
<b>Total Respondents</b>		<b>150</b>

#### 4.1 RELIABILITY AND VALIDITY OF INSTRUMENTS

Though the SERVQUAL is an internationally tested instrument still the testing the reliability is needed since it is going to apply to different nature of context. And also it has to be checked whether language of questionnaire does any impact on the reliability of the measurements. "At times, we may also have to adapt an established measure to suit the setting. For example, a scale that is used to measure job performance, job characteristics, or job satisfaction in the manufacturing industry may have to be modified slightly to suit a utility company or a health care organization. The work environment in each case is different and the

wordings in the instrument may have to be suitably adapted” (Research Methods for Business, Sekaran Uma, 4th Edition, pp 208).

Since the data was generated using scaled responses reliability of the questionnaire was measured through Cronbach’s alpha to ensure the internal consistency of the instrument. Cronbach’s Alpha was measured for all the dimensions of the service quality of both expected and perceived. And also the reliability of the expected service quality part of the questionnaire and the perceived service quality part of the questionnaire was measured separately. All the scores of Cronbach’s Alpha for all dimensions were over 0.7 as shown in the below table. Scales that receive alpha score over 0.7 are considered to be reliable (Malhotra 2005).

**Table 4.2: Reliability Statistics**

Variables	Cronbach’s Alpha	No. of Items
Expected Service Quality-Tangibles	.797	4
Expected Service Quality-Reliability	.858	5
Expected Service Quality-Responsiveness	.808	4
Expected Service Quality-Assurance	.816	4
Expected Service Quality-Empathy	.836	5
Perceived Service Quality-Tangibles	.836	4
Perceived Service Quality-Reliability	.877	5
Perceived Service Quality-Responsiveness	.880	4
Perceived Service Quality-Assurance	.775	4
Perceived Service Quality-Empathy	.900	5
Expected Service Quality	.947	22
Perceived Service Quality	.956	22

*Source:* Results of Data Analysis

Convergent Validity of the questionnaire was measured through Paired Sample Correlation. Convergent validity was measured in the two sections of questionnaire separately. In the sections of expected service quality and the perceived service quality, it was measured the degree to which the dimensions of service quality and the expected service quality and the perceived service quality correlate to each other. Convergent validity is established when, the scores obtained with two different instruments measuring the same concept are highly correlated (Sekaraku Uma, 2006).

**Table 4.3: Paired Samples Correlations: Expected Service Quality**

		N	Correlation	Sig.
Pair 1	Mean Expected Tangibles & Expected Service Quality	150	.771	.000
Pair 2	Mean Expected Reliability & Expected Service Quality	150	.905	.000
Pair 3	Mean Expected Responsiveness & Expected Service Quality	150	.907	.000
Pair 4	Mean Expected Assurance & Expected Service Quality	150	.885	.000
Pair 5	Mean Expected Empathy & Expected Service Quality	150	.863	.000

Source: Results of Data Analysis

Table 4.3 represents the coefficients of, in between all the dimensions which are measuring the variable of expected service quality and the variable of expected service quality as a one variable. They are showing a higher correlation. It says that in between the five dimensions of expected service quality and the expected service quality, convergent validity is there.

**Table 4.4: Paired Samples Correlations: Perceived Service Quality**

		N	Correlation	Sig.
Pair 1	Mean Perceived Tangible & Perceived Service quality	150	.800	.000
Pair 2	Mean Perceived Reliability & Perceived Service quality	150	.899	.000
Pair 3	Mean Perceived Responsiveness & Perceived Service quality	150	.913	.000

Pair 4	Mean Perceived Assurance & Perceived Service quality	150	.853	.000
Pair 5	Mean Perceived Empathy & Perceived Service quality	150	.898	.000

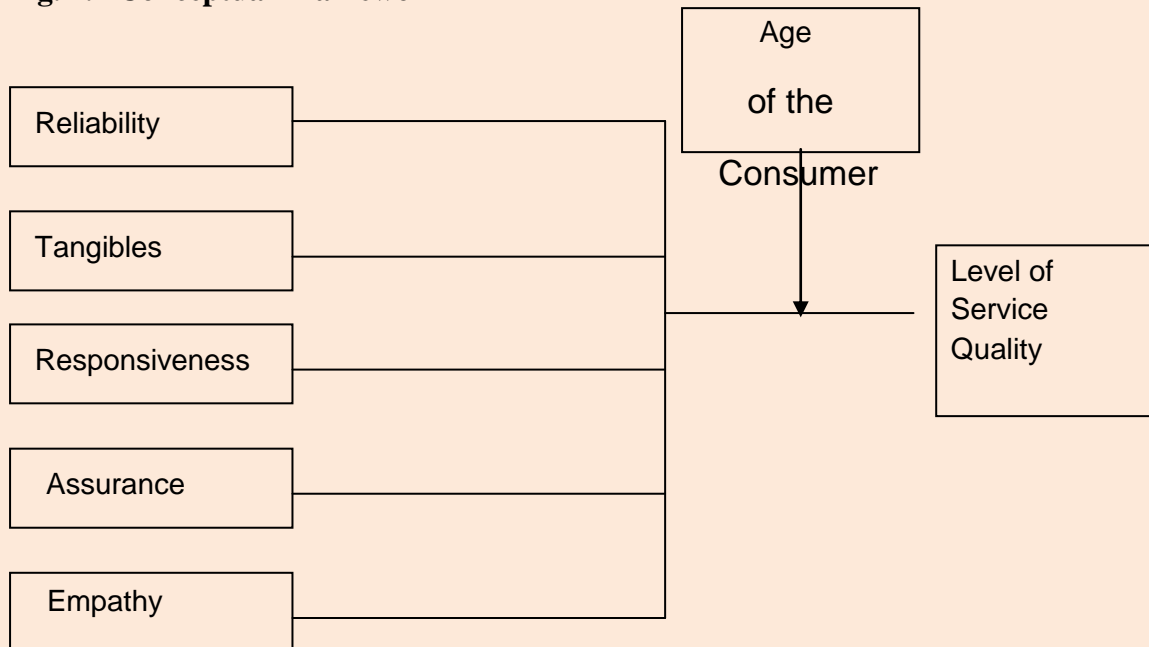
Source: Results of Data Analysis

Table 4.4 shows the coefficients of, in between the dimensions of perceived service quality and the perceived service quality variable. Since it shows higher correlations among the pairs it can be said that convergent validity is there in the instrument of data collection.

**4.2 CONCEPTUAL MODEL**

Based on the reviewed literature the researcher was able to identify dimensions of service quality of reliability, tangibles, responsiveness, assurance and empathy as per the SERVQUAL Model and those dimensions are using as the base for measure the service quality of the banks. Further it is evident through the literature that the relationship between the independent variables of dimensions of service quality and the dependent variable of service quality is moderated through the impact of the demographic variables of the consumer such as gender, age, income level, and education level, geographic area of living and social class. But, the researcher is focusing only on the gender of the consumers under this study. Figure 4.1 illustrates the relationship among these variables.

**Fig. 4.1 Conceptual Framework**



Source: Researcher’s own construction, based on SERVQUAL Model

**4.3 HYPOTHESES**

**H1:** Consumer evaluation on service quality varies in terms of the age of the consumer.

**H2:** The importance assigned to the each dimension of service quality varies in terms of the age of the consumer.

#### 4.4 Data Analysis

To test the hypotheses developed, ANOVA was used through the SPSS package.

**H1:** Consumer evaluation on service quality varies in terms of the age of the consumer

The mean values of service quality obtained by subtracting the expectations by perceptions were related with age groups of the consumers and table 4.5 indicates the results of the data analysis obtained using ANOVA. There by it can be said that the hypothesis of consumer evaluation on service quality varies in terms of the age groups of the consumer can be accepted since it is statistically significant, because table value of 0.035 is lesser than the P value of 0.05.

**Table 4.5: ANOVA Table- Service Quality and the Age Groups of the Consumer**

ANOVA					
Service Quality					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10.557	4	2.639	2.670	.035
Within Groups	143.314	145	.988		
Total	153.872	149			

**H2:** The importance assigned to the each dimension of service quality varies in terms of age groups of the consumer.

Within the frame work of this hypothesis another five hypotheses can be built up on the basis of each dimension of service quality. Again using ANOVA the status of these hypotheses was tested. For that the mean values of service quality with respect to each dimension in overall were related with the age group of the consumers. According to the table 4.6 the acceptability or the rejection of following mentioned hypotheses can be tested.

- The importance assigned to the tangibles of service quality varies in terms of the age group of the consumer- This hypothesis is accepted since the table value of 0.030 is lesser than 0.05.
- The importance assigned to the reliability of service quality varies in terms of the age group of the consumer- This one is also accepted because the table value of 0.020 is lesser than 0.05.
- The importance assigned to the responsiveness of service quality varies in terms of the age group of the consumer- It is accepted because the value in the table of 0.039 is lesser than 0.05.

- The importance assigned to the assurance of service quality varies in terms of the age group of the consumer- It is rejected because the value in the table of 0.111 is greater than 0.05.
- The importance assigned to the empathy of service quality varies in terms of the age group of the consumer- This is also rejected since the value of 0.092 which indicates the table is greater than the value of 0.05.

**Table 4.6: ANOVA Table- Service Quality and Age Groups of the Consumer**

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Service Quality Tangible	Between Groups	12.735	4	3.184	2.765	.030
	Within Groups	166.983	145	1.152		
	Total	179.719	149			
Service Quality Reliability	Between Groups	16.981	4	4.245	3.024	.020
	Within Groups	203.558	145	1.404		
	Total	220.539	149			
Service Quality Responsiveness	Between Groups	13.120	4	3.280	2.598	.039
	Within Groups	183.088	145	1.263		
	Total	196.208	149			
Service Quality Assurance	Between Groups	8.719	4	2.180	1.913	.111
	Within Groups	165.218	145	1.139		
	Total	173.937	149			
Service Quality Empathy	Between Groups	13.725	4	3.431	2.040	.092
	Within Groups	243.836	145	1.682		
	Total	257.562	149			

## 5. DISCUSSION OF FINDINGS

As the results of the previous studies have shown that age group of the consumers is a significant discriminator of service quality, the acceptance of the first hypothesis of that consumer evaluation on service quality varies in terms of the age of the consumer proves the same with respect to the Indian context as well. Further it says that based on the age group of the consumer he or she expects different levels of service quality from the banks. When it comes to the second hypothesis of that the importance assigned to the each dimension of service quality varies in terms of the age group of the consumer, acceptance of this hypothesis with respect to the service quality dimensions of tangibles, responsiveness and reliability again says that based on the age of the consumer there is a difference with the way that they evaluate the service quality of the banks of which they are dealing with. Therefore the management should give their special attention to these three dimensions and the age of the consumer when they deliver the service. But based on the other two dimensions of service quality of assurance and empathy this hypothesis was not proven with the empirical data gathered. Therefore it can be said that assurance and empathy dimensions are expected at a higher level by all the consumers regardless of their age groups.

## 6. CONCLUSION

Based on the results of the study it can be concluded that age of the consumer exerts a significant impact on evaluations of service quality of the consumers. Further the findings imply that overall service quality and also service quality with respect to the dimensions of tangibles, reliability and responsiveness are differentiated on the basis of age of the consumer. Hence the manager should identify carefully the relation between the age groups and the way that they evaluate service quality in overall and also with related to the dimensions of service quality. Service quality related to the dimensions of assurance and empathy are not differentiated by the age of the consumer which indirectly says that every consumer is expecting a higher level of service quality with respect to these two dimensions. Therefore what it can be recommended for the managers of the banks in segmentation of markets since the age of the consumer plays a critical role as suggested through the findings age can be a better demographic variable to segment the markets.

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## TECHNOLOGICAL DETERMINANTS OF RFID ADOPTION IN RETAIL INDUSTRY: AN EXPLORATORY ANALYSIS

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### ABSTRACT

*Radio frequency identification (RFID) gain emerges interest in retail in recent years and sparked the intensive debate in academia and practice on the benefits to be expected by this technology. Some of the largest retailers in the world have put much effort into convincing their suppliers, logistics service providers as well as companies from other industries of the positive impact of RFID. Various improvements may be achieved by use of RFID in retail and quotes opportunities for increased revenue (through reduced out-of-stocks and better planning of promotions), reduced distribution costs (through reduced losses and logistics costs) and reduced store operation costs. Companies in this segment estimate that they can raise their operational margins from 22 to 74 percent as a basis for RFID implementation. In addition to these benefits, some researchers believe that adoption of RFID may lead to a greater concentration in the retail sector, besides having a high impact on the store operation and on consumer purchasing experience.*

*Radio frequency identification (RFID) technology has a tremendous potential to offer numerous benefits and has already been used for hundreds of applications around the world. It is one of the most effective technologies, which identifies an object automatically and uniquely using electromagnetic radio waves, and can store enormous amount of data for many years, which can later be retrieved and used as information as required.*

*Apart from all this benefits and advantages, nevertheless some indication that the initial enthusiasm for RFID has at least partly given way to a more disillusioned assessment. From the various studies, it becomes increasingly evident that the overall adoption rate in the industry lags behind the initial expectations. The one reason of this is the research on RFID adoption is still in its infancy with the first publications in 2002. Second, none of the studies considered the differences between the perceptions of adopters and non-adopters. Some authors dropped*

*responses from firms already using RFID, and concentrate explicitly on the intention to adopt RFID among non-adopters.*

*The purpose of this paper is to provide a framework for radio frequency identification (RFID) technology issues and its adoption in retail stores. And identify the main drivers of RFID adoption in retail stores.*

*A conceptual framework for RFID adoption derived from literature and identified the six construct of technological issues, which affect the adoption of RFID by retailers. These issues are Technical awareness, Technical innovation, technical compatibility, technical complexity, technical uncertainty and technical expertise. For measuring these construct the measurement scale adopted form the various studies. All variables were measured using multi-item seven point Likert scales. This conceptual model tested on 432 retail stores of Delhi NCR region. SEM used to test the model. Study use SPSS 18.0 and AMOS 18.0.*

*The survey clearly state that the technological issues effect the adoption of RFID in retail stores and for enhancing the adoption rate of the technology in the retail, the various complex issues should be taken care. The survey highlights the important drivers for the RFID adoption. The paper is only covers the technical factors and conducted in Delhi NCR region.*

*The main contribution of the paper is that it yields a framework for analyzing RFID adoption in retail industry. The authors use this framework to analyze RFID adoption in Indian retail hypermarket, which proved to be a useful one for identifying key issues for technology adoption. The paper is useful to any researchers or practitioners who are focused on technology adoption and for those organisations, wants to adopt RFID technology.*

## **Keywords**

Radiofrequencies Identification, Adoption, technological factors, Retail Industry.

## **1. INTRODUCTION**

A growing number of companies (e.g. Wal-Mart) and government entities (e.g. the US Department of Defense) have begun investigating and in some cases adopting radio frequency identification (RFID) systems (Powanga and Powanga, 2008). This fact of eventual technological evolution is made clear by Deitz and his colleagues in their recent 2009 International Journal of Physical Distribution & Logistics Management publication on technological mandates. Academic research and industry practices have suggested that RFID has the potential to offer some superior performance opportunities and benefits for companies, such as lower operating and overhead costs, reduced inventory, reduced lead time, improved supply chain visibility, increased information accuracy, enhanced efficiency and productivity, and strengthened buyer-seller relationship, etc. (Attaran, 2007; Kelepouris et al., 2007; Powanga and Powanga, 2008; Veeramani et al., 2008; Whitacker et al., 2007; White et al., 2008). Given anecdotal evidence, it is expected that RFID technology can bring significant positive return on

investment (Attaran, 2007; Whitacker et al., 2007). Even a relatively loose study by Jeong and Lu (2008) found that the announcement of RFID investment may have positive impacts on a firm's market value (i.e. stock price). Researchers have identified some major constraints related to RFID which adversely affect adoption of RFID, such as security, privacy, conflicting standards, high implementation costs, and reliability (Peslak, 2005; Sabbaghi and Vaidyanathan, 2008; Shih et al., 2008; Soon and Gutierrez, 2008).

It is not surprising that such controversy would make the acceptance of RFID a popular topic among researchers. As such, studies have attempted to identify the key determinants of RFID adoption. Yet, Richey et al. (2007) note that focusing on adoption is short sighted as the keys to implementation are related to preparedness (or readiness) and acceptance. Likewise, Deitz et al. (2009) point to an important research gap that emerges in our subsequent literature review: no study to date has examined the adoption of RFID technology from a wide company's perspective. We believe that RFID adoption wants a careful and 360° degree examination because it is a distinct concept from assume acceptance as an antecedent of preparedness. In other words, a company might have accepted RFID technology due to various reasons but it still does not fully adopt this technology.

In existing literature, researchers have identified some key drivers or determinants of RFID adoption, such as market uncertainty, a performance gap, vendor pressure/mandates, perceived benefits, industry sector expectations, and the budget available (Lee and Shim, 2007; Shih et al., 2008; Whitacker et al., 2007; White et al., 2008). Our literature review indicates that there are still some important factors that remain unexplored. For example, technological uncertainty or expertise may be influential factors in the company's adoption decision. Also, a company's technological readiness or preparedness may be determining factor in a firm's RFID acceptance process (Richey and Autry, 2010; Richey et al., 2007, 2008, 2009).

### ***1.1 Prior research on RFID adoption***

The nature of RFID as an emerging new technology has determined the particular relevancy of these streams of literature. Because of RFID's significant deviation from existing technologies – some researchers have suggested it is a disruptive technology (Krotov and Junglas, 2008), organizational changes are expected in RFID acceptance and implementation process. Richey and Autry (2010) suggested the importance of a company's willingness of technical adoption to its competitive advantage in a general sense, and it is believed that a company's overall willingness of technical adoption should be particularly relevant to the research context of the current RFID study.

The research on RFID adoption is still in its infancy with the first publications in 2002. Many of the early scholarly papers were general review articles that discuss the technological characteristics of RFID, applications in the supply chain, and implementation challenges. Often-cited examples are the works by Angeles (2005), Jones et al. (2004), Ka`rkka`inen and Holmstro`m (2002), McFarlane and Sheffi (2003), and Srivastava (2004). Critical adoption factors are usually discussed in these works by drawing the parallel between RFID and EDI, the bar code, or other technologies for the implementation of IOS. Factors mentioned there in

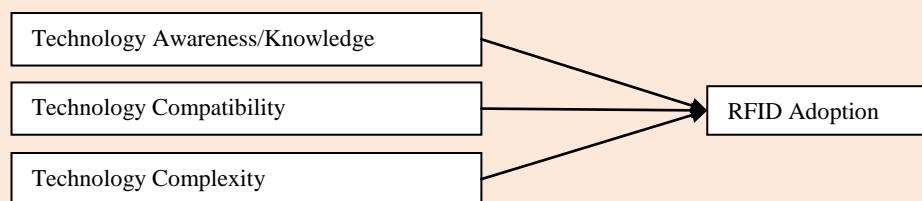
include benefits, costs, standards, compatibility, firm size, technological knowledge, and the availability of a common infrastructure for RFID data exchange. A study focusing on external factors on the industry level was presented by Prater et al. (2005), who discuss RFID adoption and implementation barriers in grocery retail. The first empirical studies concentrated specifically on one or more cases of RFID implementation (Lee and Chung, 2006; Brown and Russel, 2007; Loebbecke and Huyskens, 2008; Sharma et al., 2007; Huber et al., 2007). It was only recently that researchers started using the survey method to collect empirical data on RFID adoption from larger samples of organizations and find fraction of adopters in the samples is usually low.

The adoption factors investigated in these prior works correspond to those known from earlier research on EDI adoption. Perceived benefits and costs, technological complexity, firm characteristics, and external pressure are examples of factors that could be confirmed for the case of RFID as expected from theory. Notwithstanding the fact that earlier studies were able to improve our understanding of the technological determinants of an organization's initial decision in favor of RFID, a research gap exists regarding the subsequent adoption process. A positive adoption decision alone does not guarantee long-term assimilation and actual use of a technological innovation within the organization (Sharma et al., 2008).

The technological factors like complexity, innovation and compatibility are the major technical drivers for assessing the adoption of technology in an organization. The proposed conceptual model also develops and investigates the impact of technological factors on RFID adoption by retailers. Structural equation modelling was used to test the proposed relationships. This research confirms that the technological issues of RFID affect a company's RFID adoption.

### ***1.2 Conceptual model development and Research Hypothesis***

As shown in figure I, there are three technological construct which effect the adoption of RFID technology in a retail organisation. The successful implementation of the RFID program can be viewed as the routinized utilization of the capabilities of the RFID technology effectively in their business activities (Armstrong and Sambamurthy, 1999).



**Figure I: The Conceptual Model for the Technological Determinants of the RFID Adoption.**

#### ***1.2.1 Technology Awareness/knowledge***

The previous researches suggest that among specific resources prior technical knowledge is necessary for the successful implementation of an RFID program. (Fichman and Kemerer, 1997). Researchers have found that firms with more prior knowledge and diverse knowledge are more likely to sustain the implementation of a technology (Fichman and Kemerer, 1997). The degree of existing technical knowledge within an organization as it relates to RFID technology may also have an impact on the success of RFID implementation (Fichman and Kemerer, 1997). While some of the technical knowledge is explicit, in that the ability to implement a new technology is based on the codified knowledge within the firm, it can be argued that the majority of the knowledge is tacit in that it has been learned through experience. Research suggests that tacit knowledge increases a firm's ability to innovate (Cavusgil et al., 2003). Related technical knowledge increases a firm's ability to acquire and retain new knowledge because the knowledge foundation provides a mental schema that assists and bridges the gap between the old and new knowledge (Fichman and Kemerer, 1997). The gap between what they know and what they need to know is lessened because they have to acquire less knowledge. Zahra and George (2002) suggest that firms with realized absorptive capacity are more innovative due to their enhanced abilities to transfer and exploit knowledge. They suggest that firms high in absorptive capacity are better equipped to change current processes and find innovative ways to increase organizational performance. Studies also indicate that organizations with high learning abilities are more likely to successfully reengineer their business processes to participate in electronic markets (Grewal et al., 2001). Thus, the following hypothesis is proposed:

*H1: A firm's technology awareness/knowledge is positively related to its RFID acceptance*

### **1.2.2 Technology complexity**

The degree of technological complexity denotes the difficulties associated with understanding, implementing, and using an innovation (Rogers, 2003; Seymour et al., 2007). A high level of complexity can therefore raise doubts within an organization as to the success and benefits of new technology and delay or even prevent its adoption. In the case of RFID, skills regarding the physical characteristics of RF communications, the integration of RFID components with an organization's IT infrastructure, and the transformation of business processes to make use of the new data quality are required to efficiently deploy the technology. Owing to the novelty of RFID, the corresponding IT and process capabilities may not be present even within IT intensive organizations (Thiesse et al., 2009). The complexity of RFID is therefore likely to have a negative influence on the adoption of RFID (Bradford and Florin, 2003; Prem kumar and Roberts, 1999; Prem kumar et al., 1997; Tornatzky and Klein, 1982):

*H2: A firm's technology complexity negatively influences the adoption of RFID.*

### **1.2.3 Technological compatibility**

The technology compatibility of an organisation refers with existing values, experiences, strategic orientation, deployed infrastructure, and the essential needs of an organization (Brown and Russel, 2007; Premkumar et al., 1997; Rogers, 2003; Tornatzky and Klein, 1982). The technological compatibility of IT innovations with regard to hardware and software facilitates the integration into the existing infrastructure of an organization. For the adoption of RFID, for

example, the presence of a flexible IT infrastructure is crucial to be able to integrate a large number of reader devices and the associated middleware components with minimal effort. If this is not the case, there may be a slower adoption and diffusion within the organization and thus also within the entire value chain (Brown and Russel, 2007). Moreover, every innovation, especially new IT, brings changes with it, for example, to other IT systems of the organization, procedures and processes, or organizational structures. Accordingly, the better a technology can be integrated into the organization, the greater are the chances that a benefit from its adoption can quickly be generated. Similarly, a higher level of satisfaction among users can be expected (Bradford and Florin, 2003). Therefore, the RFID adoption decision is likely to be positively influenced by a high level of compatibility with the respective organization (Premkumar and Roberts, 1999; Premkumar et al., 1997):

*H3: Technology compatibility positively influences the adoption of RFID.*

## 2. METHODOLOGY

### 2.1 Data collection process

Data were collected by questionnaire during the June of 2012. Of the 450 stores accessed the survey, 283 completed the questionnaire properly. All respondents represent organizations in the Delhi NCR retail sector. In total, 67 percent hold operations-related managerial or supervisory positions and 33 percent hold in operational positions. Respondents have been in their current positions for 3 or more years.

### 2.2 Instrument development

To test the research model and the associated hypotheses proposed above, we designed a questionnaire on the basis of an extensive review of the IOS adoption literature. The measurement scales were operationalized by adopting items from existing scales wherever possible and adapting them to the specific context of RFID. An overview of the instrument and the sources used for the scale development is given in Table I. Instead of modeling the dependent variable as a mere binary variable – as is common in most adoption studies – we follow the approach taken by Chwelos et al. (2001), which better suits a study of organizations in the process of adopting a new technology. As detailed in the appendix, all variables were measured using multi-item seven point Likert scales.

**Table I: Construct and its sources**

Construct	Items	Source(s)
Technology Awareness/Knowledge	4	Koh et al.
Technology Compatibility	4	Koh et al.
Technology Complexity	5	Koh et al.
Adoption	3	Researcher

### 3. RESULTS

#### 3.1 Descriptive statistics and correlations

Scale item values were averaged to obtain summary variables for technology factors and RFID technology adoption. Descriptive statistics and correlations for the summary variables are presented in Table II. Summary variable means for for technology factors and RFID technology adoption are 4.80 and 5.09, respectively. The relatively low mean for technology factors reflects the relatively early stage of adoption of the technology in the retail sector. Technology awareness is positively related to adoption with a correlation coefficient of 0.26, significant at the 0.01 level. Technology compatibility is positively related to adoption with a correlation coefficient of 0.25, significant at the 0.01 level. Technology complexity is negatively related to adoption with a correlation coefficient of 0.28, significant at the 0.01 level.

**Table II: Descriptive Statistics and Correlations**

Descriptive Statistics					
Construct	Item	Factor Loading	Cronbach's Alpha	Mean	Std. Deviation
Technology Awareness [ta]	ta1	0.809	0.921	4.9926	1.45286
	ta2	0.843			
	ta3	0.776			
	ta4	0.819			
Technology Complexity [tcx]	tcx1	0.811	0.918	4.8056	1.57700
	tcx2	0.816			
	tcx3	0.835			
	tcx4	0.840			
	tcx5	0.859			
Technology Compatibility [tcb]	tcb1	0.655	0.751	4.8733	1.27100
	tcb2	0.655			
	tcb3	0.676			
	tcb4	0.706			
RFID Adoption [ad]	ad1	0.705	0.778	5.0952	1.16106
	ad2	0.704			
	ad3	0.711			

#### Correlations



		ad	ta	tcx	tcb
ad	Pearson Correlation Sig. (2-tailed)	1			
ta	Pearson Correlation Sig. (2-tailed)	.240** .000	1		
tcx	Pearson Correlation Sig. (2-tailed)	-.514** .000	.200** .000	1	
tcb	Pearson Correlation Sig. (2-tailed)	.263** .000	-.158** .001	.180** .000	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### 3.2 Structural equation modeling results

The structural model is displayed in Figure II. The model fits the data relatively well with a relative chi-square of 1.969, root mean square error of approximation of 0.046, NNFI of 0.912, and CFI of 0.954. The path from technology awareness to RFID adoption (H1) is significant at the 0.01 level with a standardized coefficient of 0.26 and an associated t-value of 2.656. H1 is supported. The path from technology compatibility to RFID adoption (H2) is significant at the 0.01 level with a standardized coefficient of 0.25 and an associated t-value of 2.034. H2 is supported. The path from technology complexity to RFID adoption (H3) is significant 0.01 level with a standardized coefficient of -0.28 and an associated t-value of -3.761. H3 is supported. Technology factors directly impacts RFID adoption.

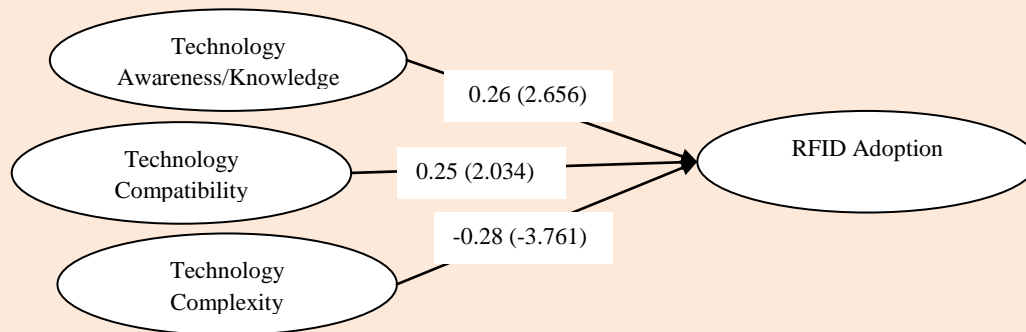


Figure II: RFID Adoption Model with standardized coefficient and t-value

### 3.3 Measurement scale assessment

Garver and Mentzer (1999) recommend computing Cronbach’s coefficient alpha to assess scale reliability, with alpha values greater than or equal to 0.70 indicating sufficient reliability. Alpha scores for all the technology factors construct technology awareness (alpha = 0.921), technology Complexity (alpha = 0.918), Technology Compatibility (alpha = 0.751) and RFID Adoption (alpha = 0.778) scales exceed the 0.70 level. All scales exhibit sufficient reliability with coefficient alpha values greater than the 0.70 criterion recommended by Nunnally and Bernstein

(1994) for basic research. To establish discriminant validity, the variance shared between a construct and any other construct in the model need to be assessed (Fornell et al., 1982). This was done by comparing the square root of the average variance extracted for a given construct with the correlations between that construct and all other constructs. If the square roots of the AVEs were greater than the off-diagonal elements in the corresponding rows and columns, it suggested that the given construct was more strongly correlated with its indicators than with the other constructs in the model; and discriminant validity was achieved shown in table III.

**Table III: Discriminant Validity**

		Correlations			
		ad	ta	tcx	Tcb
ad	Pearson Correlation Sig. (2-tailed)	0.658			
ta	Pearson Correlation Sig. (2-tailed)	.240** .000	0.660		
tcx	Pearson Correlation Sig. (2-tailed)	-.514** .000	.200** .000	0.520	
tcb	Pearson Correlation Sig. (2-tailed)	.263** .000	-.158** .001	.180** .000	0.372

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Garver and Mentzer (1999) recommend reviewing the magnitude of the parameter estimates for the individual measurement items to assess convergent validity, with a strong condition of validity indicated when the estimates are statistically significant and greater than or equal to 0.50. All thirteen estimates for the technology factors scale are statistically significant and exceed the recommended 0.50 level. All three estimates for the RFID adoption scale are statistically significant and exceed the recommended 0.50 level. Figure III incorporates the parameter estimates and accompanying t-values.

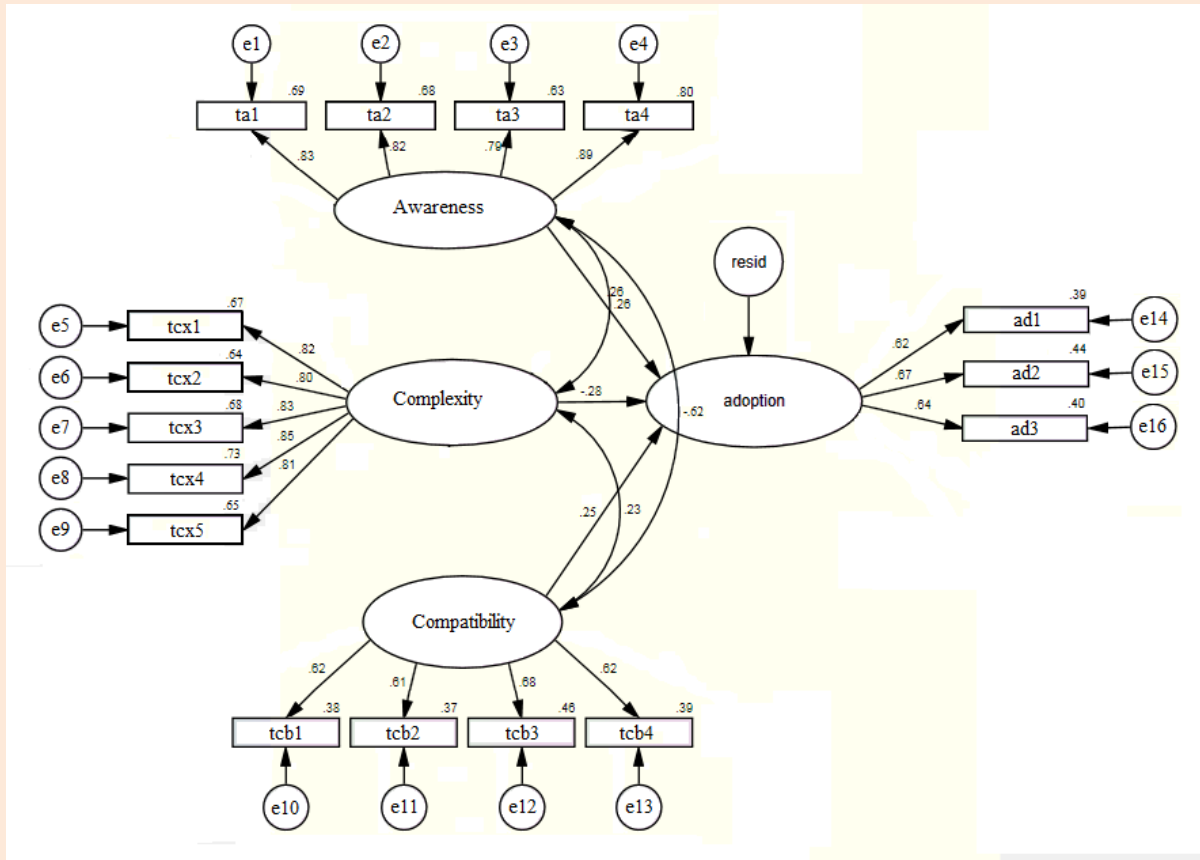


Figure III: Path Analysis of Model

4. Summary of results

The measurement scales for technology factors utilization and RFID adoption assess as unidimensional, reliable, and valid. The scales measure single dimensions, are internally reliable, and exhibit sufficient convergent and discriminant validity. The measurement model incorporating both measurement scales fits the data sufficiently well to support structural analysis. The theorized structural model fits the data well providing support for the study hypothesis that RFID technology utilization positively impacts operational performance. The parameter estimate for the link is positive and significant at the 0.01 level describe in table IV.

Table IV: Summary of hypothesis

Independent variable	Dependent variable	Beta	t	Sig.	Result
Technology	RFID	0.26	2.656	0.008**	supported
Awareness/Knowledge	Adoption				
Technology Compatibility	RFID	0.25	2.034	0.012*	supported
	Adoption				
Technology Complexity	RFID	-0.28	-3.761	0.000**	supported
	Adoption				

\*\* . Correlation is significant at the 0.01 level (2-tailed).

In the retail sector adoption of RFID will have impact of technology factors. Even at this early stage of adoption, retail sector shows the effect of technological factors like awareness, complexity and compatibility.

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## MANAGERIAL LEVEL AND PERFORMANCE APPRAISAL-A COMPARATIVE STUDY OF IT AND NON-IT SECTOR

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### ABSTRACT

*The author attempts to assess the performance appraisal system in selected Information Technology Companies and Non-Information technology companies of Mysore region. A total of 160 (58 IT and 102 non- IT) employees belonging to Information Technology and Non- Information Technology Companies who were selected through stratified random sampling technique completed modified questionnaire of Rao (2000) which was used to measure the Performance Appraisal System for Industries. Multi-variate analysis of variance technique was employed to find out the differences between sectors and managerial levels of the respondents including interaction effects. It was found that there were no significant differences in performance appraisal between IT and NON-IT sector for all the components and total. Further, it was found that as the one's managerial level increased, performance appraisal, also increased irrespective of the sectors. However the increase was linear for the IT sector. The interaction effects clearly revealed that managerial levels influenced performance appraisal on the components-rules and regulations, interpersonal relations and the total. The interaction effects clearly revealed that experience related increase in components of performance appraisal and total appraisal which were specific to IT sector.*

Key words: Performance Appraisal, Information Technology and Non Information Technology sector, Managerial level.

### INTRODUCTION

Performance Appraisal is one of the oldest, natural and most universal practices of Management. The basic purpose of Performance Appraisal is to ascertain the behaviour of an employee anchored to performance and integrate with the organizational performance. It helps both the employers and employees to understand the responsibility in the organization.

Performance appraisal, is a method by which the job performance of an employee is evaluated (generally in terms of quality, quantity, cost and time) typically by the corresponding manager or supervisor A performance appraisal is a part of guiding and managing career development. Performance appraisal is an analysis of an employee's recent successes and

failures, personal strengths and weaknesses, and suitability for promotion or further training. It is also the judgment of an employee's performance in a job based on considerations other than productivity alone.

According to Roland Benjamin (Mammoria & Gaonkar 2008) “A Performance Appraisal determines who shall receive merit increases, counsels employees on their improvement, determines training needs, determines ability to get promoted and identifies those who should be relocated.

Kochar et al (2010) carried out “an empirical study on Performance appraisal system in Oil and Natural Gas Commission” India that provides a crisp and comprehensive picture of the objectives with which the Indian organizations apply systems to appraise their employees, the basis the companies use to appraise their employees and the reasons for which the companies have attempted to adopt new systems of performance appraisal. Further the study works upon empirical data pertaining to the above system with special reference to Oil and Natural Gas Commission (ONGC), India. Also, certain suggestive schemes which this state statutory body has come up to overcome the limitations of the existing system and survive in the dynamic environment, have been mentioned.

Boohene et al (2011) carried out a study on “The effect of Human Resource Management practices on corporate performance: A Study of Graphic Communications Group Ltd” intended to find out the effect of GCGL's HR practices like recruitment ,selection, performance appraisal, remuneration, training and development practices on performance. The results revealed that, from the perceptions of the respondents, there exists a positive relationship between effective recruitment and selection practices, effective performance appraisal practices on GCGL's corporate performance. The research did not gather sufficient evidence to conclude on how remuneration, training and development practices influence GCGL's performance. The study recommends that the management of GCGL continues to ensure that the company's HR policy, effective recruitment and selection practices, as well as effective performance appraisal practices are upheld.

### **OBJECTIVE:**

Evaluate the influence of one’s managerial levels on performance appraisals; among employees of IT and non IT industries of Mysore District.

Hypotheses:

- **There is a significant influence of one’s managerial levels on performance appraisals of IT and non IT employees.**
- **Employees of different managerial levels differed in their performance appraisals.**

### **Sample:**

Stratified Random Sampling was adopted to gather data; a total of 160 (58 IT and 102 Non IT) respondents working in Information Technology and Non- Information Technology Companies in and around Mysore region participated in the study.

### **Instrument:**

1. An interview schedule was prepared to gather the general information about employees in the organization.
2. A modified questionnaire based on Rao. T.V., (2000) Indian Institute of Management (IIM) – Ahmadabad, who developed questionnaire to measure performance appraisal system for industries.



Questionnaire by Rao (2000) aims at assessing the performance appraisal system in the organisation. Based on the principles followed by Rao, the present researcher developed questionnaire to measure performance appraisal system for appraisees with some modifications. The questionnaire comprises of 33 questions and they are classified into 6 components as shown below:

Components of performance appraisal		Question Numbers	No of statements
A	Rules and regulations	1,3,4	3
B	Inter personal relations	2,6,27,28,33	5
C	Identification of training and development needs	5,14,15,16,17,18,19,20	8
D	Roles and responsibilities	8,9,10,11,22,25,26,29,30	9
E	Target and task orientation	12,13,24,31,32	5
F	Open communication	7,21,23	3
		Total	33

The answering pattern would be -1-Strongly disagree, 2-disagree, 3-Can't say, 4-Agree, and 5-Strongly agree, for positive questions and the reverse scores for negative questions. The above questionnaires are validated by the researcher and experts in the field using face and content validity. Later reliabilities for the questionnaires were established through split-half reliability technique.

#### **METHODOLOGY:**

Data collection for the main study was carried out in two sessions. In the first session the participants were informed about the purpose of the study and their oral consent was obtained. In the second session questionnaire on performance appraisal was administered. An attempt was also made to maintain interest and cooperation throughout the testing session. The participants were given assurance about the confidentiality of obtained information. A consent letter was taken from each participant before the study. They were informed to cooperate throughout the study and if at all they felt discomfort during the sessions or in answering questions they had OPTION TO OPT OUT FROM THE INVESTIGATION.

#### **SCORING AND ANALYSIS:**

One sample t test and multi variate analysis of variance technique have been employed to test significance of the difference between means of performance appraisal of employees and the expected standards. Further, sector-wise and age wise differences in each component and total performance appraisal scores has been done through MANOVA (multivariate analysis of variance) using SPSS for Windows software (version 16.0).

#### **Results**

##### **Table 1**

**Designation wise** mean scores of employees in IT and Non-IT sector on various components of performance appraisal and total scores and results of Multi-variate analysis of variance.

Sector	Designation	Subscales							
		Rules and regulations		Inter personal relations		Training & development needs		Role & responsibility of employees	
		Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D
IT	Entry	11.26	1.93	19.67	2.00	31.15	3.25	36.04	3.71
	Middle	12.77	1.99	21.87	2.56	34.13	3.55	38.63	3.94
	Top	15.00	.	25.00	.	40.00	.	45.00	.
	Total	12.10	2.11	20.90	2.58	32.84	3.79	37.53	4.10
Non-IT	Entry	13.67	0.97	21.78	1.83	33.72	2.70	36.67	3.03
	Middle	13.43	1.39	22.01	2.19	34.38	5.04	37.84	4.53
	Top	13.80	1.75	22.00	1.70	35.40	3.31	36.80	4.52
	Total	13.51	1.36	21.97	2.07	34.36	4.56	37.53	4.29
Total	Entry	12.22	2.00	20.51	2.18	32.18	3.27	36.29	3.43
	Middle	13.24	1.60	21.97	2.29	34.31	4.65	38.07	4.36
	Top	13.91	1.70	22.27	1.85	35.82	3.43	37.55	4.95
	Total	13.00	1.79	21.58	2.32	33.81	4.35	37.53	4.21
F (Sector)		F=1.100; P=.296		F=.094; P=.759		F=.145; P=.704		F=3.289; P=.072	
F (Designation)		F=3.834; <b>P=.024</b>		F=5.970; <b>P=.003</b>		F=4.338; <b>P=.015</b>		F=4.085; <b>P=.019</b>	
F (Interaction)		F=5.258; <b>P=.000</b>		F=4.296; <b>P=.015</b>		F=1.894; P=.154		F=2.025; P=.136	

**Rules and regulations:** Between IT and Non-It sectors a non-significant difference was observed in their mean appraisal on rules and regulations (F=1.100; P=.296), however, designation wise significant differences were observed (F=3.834; P=.024), where we see designation related increase in the performance appraisal. Further, the interaction between sector and designation was also found to be significant (F=5.258; P=.000), where we find that the designation related increase is more in IT than non-IT sector.

**Inter personal relations:** In interpersonal relations respondents from IT and non-IT sectors had similar scores (F=.094; P=.759), however, designation related differences existed (F=5.970; P=.003). It is clear that designation related increase in the mean inter personal relations was observed. The interaction between sector and designation was also found to be significant (F=4.296; P=.015), again we see the increase is restricted to only IT sector.

**Training and development needs:** Between IT and Non-It sectors a non-significant difference was observed in their mean appraisal on training and development (F=.145; P=.704), however, designation wise significant differences were observed (F=4.338; P=.015), where we see clear designation related increase in the performance appraisal among IT and non It employees.

Further interaction between sector and designation were found to be non-significant ( $F=1.894$ ;  $P=.154$ ).

**Role & responsibility of employees:** There was a non-significant difference observed in the mean appraisal on role and 'responsibility of employees' component between IT and Non-IT employees ( $F=3.289$ ;  $P=.072$ ). However designation wise there was significant differences observed among IT and non-IT employees ( $F=4.085$ ;  $P=.019$ ) and further a clear designation related increase was found to be truer for IT sector. Interaction between sector and designation no significant differences were observed.

**Table 1 cont'd**

**Designation wise** mean scores of employees in IT and Non-IT sector on various components of performance appraisal and total scores and results of Multi-variate analysis of variance.

Sector	Designation	Subscales				TOTAL	
		Task and target orientation		Open Communication			
		Mean	S.D	Mean	S.D	Mean	S.D
IT	Entry	18.33	1.62	11.63	1.74	128.07	10.41
	Middle	20.20	2.61	13.10	1.71	140.70	13.86
	Top	25.00	.	15.00	.	165.00	.
	Total	19.41	2.46	12.45	1.87	135.24	14.24
Non-IT	Entry	18.89	2.35	12.44	1.34	137.17	9.34
	Middle	20.36	2.87	12.70	2.11	140.73	12.86
	Top	20.30	2.26	12.70	2.71	141.00	14.51
	Total	20.10	2.77	12.66	2.05	140.13	12.44
Total	Entry	18.56	1.94	11.96	1.62	131.71	10.86
	Middle	20.32	2.78	12.82	2.00	140.72	13.09
	Top	20.73	2.57	12.91	2.66	143.18	15.55
	Total	19.85	2.67	12.58	1.98	138.36	13.29
F (Sector)		F=1.956.; P=.164		F=.753; P=.387		F=1.154; P=.284	
F (Designation)		F=8.457; <b>P=.000</b>		F=3.535; <b>P=.032</b>		F=8.644; <b>P=.000</b>	
F (Interaction)		F=1.773; P=.173		F=2.008; P=.138		F=3.996; <b>P=.020</b>	

**Task and target orientation: Rules and regulations:** Between IT and Non-It sectors a non-significant difference was observed in their mean appraisal on task and target orientation ( $F=1.956$ ;  $P=.164$ ), however, designation wise significant differences were observed ( $F=8.457$ ;  $P=.000$ ), where we find that the designation related increase is more in IT than non-IT sector. Further, the interaction between sector and designation was also found to be non-significant ( $F=1.773$ ;  $P=.173$ ).

**Open communication:** As seen in the previous component in this component also sector wise ( $F=.753$ ;  $P=.387$ ) and interaction between sector and age ( $F=2.008$ ;  $P=.138$ ) non-significant differences observed. Only designation related difference was observed ( $F=3.535$ ;  $P=.032$ ), where higher designation group had more open communication than lower designation group.

**Total performance appraisal scores:** In total appraisal scores, respondents from IT and Non-IT sectors did not differ significantly ( $F=1.154$ ;  $P=.284$ ). However, F test indicated designation related difference ( $F=8.644$ ;  $P=.000$ ), having higher designation groups higher levels of performance appraisal than lower designation group. The interaction between sector and age was also found to be significant ( $F=3.996$ ;  $P=.020$ ). We see a drastic designation related increase in IT sector, however this pattern is not found in non-IT sector.

## DISCUSSION:

### *Main findings of the study are*

1. There were no significant differences in performance appraisal between IT and NON-IT sector for all the components and total scores.
2. Irrespective of the sectors, Performance appraisals increased as one's managerial level increased however increase was linear for IT sector.
3. The interaction effects clearly revealed that managerial levels influenced performance appraisal on the components-rules and regulations, interpersonal relations and the total.

The present study clearly revealed that managerial level had significant influence over PA, as the employees are internally motivated to go up the managerial hierarchy. It is quite natural that those who perform well would get themselves promoted to higher levels, and this further enhances involvement of employees in contributing themselves to better performance. Furthermore the attitude of employees plays a significant role in their motivation towards performance. Those with positive attitude naturally tend to perform better than those with negative attitude.

Employee acceptance is a critical component of an effective performance appraisal system. Research in organizational behavior clearly demonstrates that employee attitudes influence behavior, and participant attitudes toward performance appraisal systems are no exception. The attitudes of system participants play a key role in both the short and long term success of a performance appraisal system. Performance appraisal systems are but one component of an overall system of human resources management that is designed to enhance employee effectiveness. The key is the proper design and administration of the system in order to benefit both employees and management. Performance appraisal systems are employed to serve a host of administrative and developmental purposes from providing specific performance feedback to generating information for merit pay, promotion, demotion and other personnel decisions (Somashekar, 2010).

Brown and John (2005) estimated the determinants of performance appraisal systems. The results indicate that performance appraisal is associated with workers having shorter expected tenure and greater influence over productivity. They argue these results reflect those circumstances in which the net benefits of performance appraisal are likely to be greatest. The results also show that complementary human resource management practices, such as formal training and incentive pay, are associated with an increased likelihood of performance appraisal, but that union density is associated with a reduced likelihood of performance appraisal.

According to Ernest (2011) the human inclination to judge can create serious motivational, ethical and legal problems in the workplace. Without a structured appraisal system, there is little chance of ensuring that the judgments' made will be lawful, fair, defensible and accurate. In many organizations - but not all - appraisal results are used, either directly or indirectly, to help determine reward outcomes. That is, the appraisal results are used to identify the better performing employees who should get the majority of available merit pay increases, bonuses, and promotions. By the same token, appraisal results are used to identify the poorer performers who may require some form of counseling, or in extreme cases, demotion, dismissal or decreases in pay.

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## MODUS OPERANDI FOR SUSTAINABILITY IN HIGHER EDUCATION

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### ABSTRACT:

*Being competitive has become necessity in all sectors now days, even in education sector also. Indian education sector especially Higher Education, Management Education has to face a global challenge as foreign universities are knocking the doors. In this global competition for Sustainability in higher education 'Quality' in education must be maintained. To maintain and improve the quality institutes have to adapt the new modus operandi which will support the institutes to improve the quality. This paper focuses on three techniques or modus operandi to improve the quality in Higher education, specifically, the management institutes. These techniques are Balanced Scorecard, Benchmarking, and Competency Mapping.*

**Key Words: Higher Education, Quality, Balanced Scorecard, Benchmarking, Competency Mapping.**

### INTRODUCTION:

India could be superpower in 2030, by developing the Human Resources and for this reforms in higher education system are essential. To meet the challenges in higher education sufficient funds and quality of education is essential.

The Indian education system can become competitive and best in the world if it maintains the momentum of reforms. For this, it is essential that the Central Government, The State Government, and Higher Education Institution shall join hands together.

According to recent survey done by HRD ministry, in last four years there is almost 65% rise in gross enrollment ratio (GER), it has shot up from 12.4% to 20.2%. Kapil Sibbal, HRD Minister said, by 2030, the number of Indian students vying for university education will touch 400 million, the size of population of the US. This large influx of higher education would possibly require 800 more universities and 50,000 more colleges.

In such scenario, for sustainability quality education is must. To improve the quality of higher education following techniques or modus operandi can be useful for institutional improvement.

1. Balanced score card
2. Benchmarking
3. Competency Mapping

**The Balanced Scorecard (BSC)** is applied to measure and verify the association of organizational smaller-scale operational activities with its larger-scale objectives in terms of vision and strategy.

#### **Balanced Scorecard As A Performance Management Tool:**

Balanced scorecard system works as a measurement system that provides data necessary to know when targets are being achieved or when performance is out of balance or being negatively affected.

The Kaplan and Norton balanced scorecard looks at a company from four perspectives:

- *Financial*: How do we look to shareholders?
- *Internal business processes*: What must we excel at?
- *Innovation and learning*: Can we continue to improve and create value?
- *Customer*: How do customers see us?

The above four perspectives of balanced scorecard provides comprehensive understanding of current performance of the organization.

While these perspectives are not completely inappropriate for use by colleges/ institutions and universities, it is possible to adapt the balanced scorecard theory using a paradigm more traditional to higher education.

#### **The Balanced Scorecard and Higher Education:**

Since the 1990s, in 1991 and 1994, when India adopted LPG policy and signed GATS, accountability in higher education has become a challenging issue for higher education. It had become essential for the institutions to consider global competition. To survive in this, performance of the institute is the only factor which supports it. Institutions have been required to provide performance indicators— pragmatic evidence of their value—to the society or industry, alumni, prospective student, and other external stakeholders.

National and state commissions of higher education and boards have, developed gradation and accreditation system that grades the institutes and universities according to their level of performance in a variety of parameters. This gradation proves the quality of that University and institute.

AICTE- NBA is the accreditation body for management institutes in India. The management institutes are rated on eight different major parameters and these parameters are same as engineering parameters. Though the management institutes apply substantial energy and effort to collect, organize, and present performance information. But these parameters don't differentiate the geographical barriers and the quality of students.

With important stakes such as increasing financial resources, encouraging high-quality student applicants, and attracting good faculty dependent upon how they “measure up,” the institute is concerned with how best the institute presents itself. Institutions attempt to improve accountability while dealing with the more difficult and complex issue of how to improve its effectiveness. The assumption of many externally derived accountability programs prove that emphasis on one will result on the other. As performance parameters are linked to the institutional effectiveness the desired improvements in service, productivity, and impact are unlikely to occur. The institutions have to create meaningful systems for strategic organizational assessment and then use that information in internal policy and resource allocation decisions.

Performance indicators can be powerful tools, at both the university and the college/institute levels, for internal evaluation and strategic assessment. Though similarities exist between the indicators used for external reporting and internal assessment—indeed, many of the same data can be used for both—the development of internal indicators requires more attention to the contextual characteristics and operational goals of the institute. Under these circumstances, performance indicators can provide substantive information for strategic decision making.

#### **Internal Assessment V/s External Accountability**

The differences between the performance indicators for external accountability and internal assessment are clear through the following table. Performance indicators developed for external audiences are generally aimed at informing three types of stakeholders: consumers (i.e., students and parents), governing bodies (i.e., legislators and accrediting agencies), and potential revenue providers (i.e., alumni, donors, and funding agencies). The external audiences are often limited in their area of interest and have

specific ideas of what might be acceptable institutional outcomes. These external audiences tend to adopt incomplete and one-dimensional views of performance.

External indicators are presented in the form of rankings to present complex information in simple and attractive format. External bodies can use common single set of indicators to measure many institutions. For institutes affected by external assessment, the management task is to learn the art of image management. Since many external stakeholders have resources (financial, student, and accreditation) that are of interest to the institution, understanding the prescribed relationships between the performance numbers and how they influence perception of success or failure is key. Thus, the emphasis of the institute is primarily on external perception of success and manipulation of image and secondarily on improved institutional effectiveness. To be useful internally, performance indicators must be tied to the values and goals of the particular institute and should originate from the institution's performance objectives. These objectives translate the broad goals of the institution into specific research problems that can be studied and around which strategies for improvement can be developed.

The internal audience describes a broad spectrum of perspectives and interests with a wide range of opinions about the institutional outcomes and adopts multidimensional views of performance. For internal performance assessment, appropriate linkage between the values and goals of the internal audience, the strategic tasks required, and data collection and analysis is important. Sometimes, the emphasis on higher goals and values forbid specific action as the political alliances and/ or criteria are deficient by which the plans are evaluated. Every institution's common goals are its effectiveness and enhanced academic reputation but there is often disagreement about how institutional processes may actually have an impact on those goals. The task of institute decision makers who are doing internal assessment is to learn the art and science of institutional assessment. For institutional improvement it is necessary to develop a process or mechanism for dealing difficult strategic questions. Faculty and academic administrators of the institute supports in analysis and presentation of data which facilitates decision making. With this the decision makers can understand strengths and weaknesses of the institute which affects the decision process and increases the speed of both decision making and implementation changes in program if required. For internal performance assessment it is essential to develop the appropriate linkage between the values and goals of the internal audience, the strategic tasks required, and the data collection and its analysis.

**Table 1. Comparison of Externally and Internally Driven Assessment**

	<b>Externally Driven</b>	<b>Internally Driven</b>
<b>Audience</b>	<i>External evaluators</i> – Students  – Parents Governing bodies – Legislators – Accrediting agencies Revenue generators – Alumni – Foundations – Donors	<i>Internal evaluators</i> Academic administrators   Nonacademic administrators
<b>Concerns</b>	Education Image management	Organizational agenda Resource allocation Priorities



Focus	Influence choices of Relevant audience	Influence political factors
<b>Format</b>	Results Rankings or Indices	Faculty committee or institutional reports

Courtesy: "The Balance score card beyond reports and rankings"- by **Alice C. Stewart and Julie Carpenter-Hubin**

This internal and external driven assessment helps the organization to know its present status and could understand the areas of development, which leads to improve and maintain the performance. This balanced scorecard helps the institute to develop the better Performance Management System.

Thus, Balanced Scorecard works as one of the major tool to know the performance of the institute and the areas to improve. It helps in developing and implementing Performance Management system for the institute.

### **Benchmarking**

**Benchmarking** is the process of comparing the business processes and performance metrics including cost, cycle time, productivity, or quality to another that is widely considered to be an industry standard benchmark or best practice. Benchmarking helps to know the organization, where it is and where it would like to be; the improvements to be made to achieve the benchmark level.

Cobblers first used the term Benchmarking to measure people's feet for shoes, for this they would place someone's foot on a "bench" and mark it out to make the pattern for the shoes. Considering this, the industries applied this term to measure its performance and find out its defects then compare to others. It is also referred as "best practice benchmarking" or "process benchmarking". Benchmarking process is used in management and particularly in strategic management; the organizations assess various aspects of their processes in relation to best practice companies' processes and find out the deviations if any. Then the organization develops the plans of improvement to adapt the specific best practices, with the aim of improving its performance in some aspects. Benchmarking is a continuous process in which organizations seek to improve their performance and practices continually.

### **Benchmarking for management Institutes:**

Benchmarking is one of the tools of performance management system. Management institutes can develop and maintain Performance Management System on the basis of benchmarking.

Benchmarking keeps the institute continuously updated and developing. The institute can select a benchmarked institute and compare the different processes. Performance benchmarking could be suitable for management institutes. Following factors would do better comparison:

1. Vision
2. Mission
3. Strategy
4. Objectives
5. Infrastructure facilities
6. Qualified faculty and staff
7. Research, Consultancy and publications
8. Results and activities
9. Donations and funds

Benchmarking Process :

The benchmarking process can be classified into five different stages. Once the institute decides its benchmark then the following process could be used by the institute.

1. **Planning.** This is the first step in benchmarking process, the institutes can decide what, why, who and how this development could be done. Planning includes identification of what is to be benchmarked, identifying comparative institute and determining data collection method and collecting data.
  - **What is to be benchmarked?** The institute has different processes and functions. Every function has an outcome. Every function of an institute has output. Benchmarking is appropriate for any process or function.
  - **To whom or what will we compare?** Institute-to-institute, direct competitors are certainly prime candidates to benchmark. But they are not the only targets. Benchmarking must be conducted against the best institutes and its functions regardless of where they exist.
  - **How will the data be collected?** There's no one way to conduct benchmarking investigations. There's an infinite variety of ways to obtain required data – and most of the data needed is readily and publicly available. Recognize that benchmarking is a process not only of deriving quantifiable goals and targets, but more importantly, it's the process of investigating and documenting the best institute practices, which can help to achieve goals and targets.

2. **Analysis.** After planning the next step is analysis, which includes determining current performance gaps and protecting future performance levels. The analysis phase must involve a careful understanding of current process and practices, as well as those of the institute being benchmarked. What is desired is an understanding of internal performance on which strengths and weaknesses could be assessed. While analyzing following questions should be asked by an institute to itself-

- Is this other institute better than we are?
- Why are they better?
- By how much?
- What best practices are being used now or can be anticipated?
- How can their practices be incorporated or adapted for use in our institute?

Answers to these questions will define the dimensions of any performance gap: negative, positive or parity. The gap provides an objective basis on which to act—to close the gap or capitalize on any advantage for an institute.

3. **Integration.** After analyzing the next step is integration, which includes communication of benchmarked findings and gain acceptance and establishing functional goals accordingly. Integration is the process of using benchmark findings to set operational targets for change. It involves careful planning to incorporate new practices in the operation and to ensure benchmark findings are incorporated in all formal planning processes.

Steps include:

- Gain operational and management acceptance of benchmark findings. Clearly and convincingly demonstrate findings as correct and based on substantive data.
- Develop action plans.
- Communicate findings to all organizational levels to obtain support and commitment.

4. **Action.** The next step is action, which includes developing action plans, implementing specific actions and monitoring, and recalibrating the benchmark. Convert benchmark findings, and operational principles based on them, to specific actions to be taken. Put in place a periodic measurement and assessment of achievement. Use the creative talents of the people who actually perform work to determine how the findings can be incorporated into the work processes.

Any plan for change also should contain milestones for updating the benchmark findings, and an ongoing reporting mechanism. Progress toward benchmark findings must be reported to all employees.

**5. Maturity.** This is the last step of benchmark cycle/ process. Maturity will be reached when best industry practices are incorporated in all processes/ functions, thus ensuring superiority.

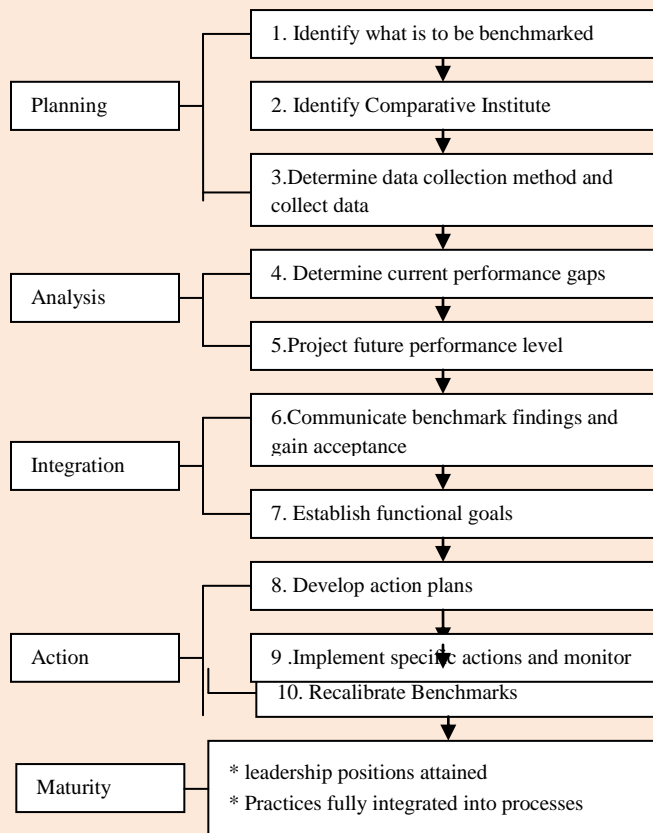
Tests for superiority:

If the now-changed process were to be made available to others, would a knowledgeable person prefer it?

- Do other institutes benchmark your internal operations?

Maturity also is achieved when benchmarking becomes an ongoing, essential and self-initiated facet of the management process. Benchmarking becomes institutionalized and is done at all appropriate levels of the institute, not by specialists.

Figure1. Benchmarking Cycle



Source: Excerpted from Robert C. Camp, [Benchmarking: The Search for Industry Best Practices That Lead to Superior Performance](#), ASQ Quality Press, 1989, pages 4-6.

### **Competency Mapping**

Competencies are the capabilities of any human being; these are the key elements and measure of human performance. While identifying competencies of any organization or institute the success factors necessary for achieving important results in a specific job or work role are collected. Success factors are historically called as “KSA’s” these are the combination of knowledge, skills, and attributes that are described in terms of specific behaviors, and are demonstrated by superior performers in the jobs or work roles. Attributes take into consideration the following factors: personal characteristics, traits, motives, values or ways of thinking that impact an individual's behavior.

### **Institutional competencies**

Every institute consisting of more than one person requires integrating the skills of others. Institutional competencies are functional capabilities and experience an institute possesses by virtue of the way it integrates and blends the individual skills of its teachers and staff to achieve a student’s benefit or make a significant contribution to the institution.

Institutional competencies are:

- Teachers and staff with knowledge and experience in dealing with different programs.
- Teachers and staff with knowledge and experience in student development and management.
- Teachers and staff with knowledge and experience in Research and publication.
- Teachers and staff with knowledge and experience in knowing the role of an institute in societal development.
- Teachers and staff with knowledge and experience in institutional growth development

Each of these competencies requires integrating the skills of a number of people. Because they integrate these skills across departmental and functional lines they are not likely to be possessed in a single individual. The effectiveness of these competencies is determined by the personal skills required and how well the institute integrates them.

Institutional competencies must pass three tests to be considered core competencies.

1. The competency must make a significant contribution to student /customer perceived value or to the financial health of an institute.
2. The competency must be unique or performed in a way that is substantially superior to its peers.
3. The competency must be capable of being applied to a range of new programmes and services.

### **Fundamental competencies**

Institutes require many competencies in order to cover range of activities in different areas. Certain fundamental competencies are required by all institutions in order to operate effectively and carry out their mission. These competencies are called “table stakes” and define the standard level of competency the institute needs to sustain its operations.

Some of these fundamental competencies and skill sets all institutes require are:

**Marketing.** All institutes conduct and develop different programmes or services for student and industry and marketing is the function that creates the paying client/ customer. Without some competency in various areas / function the institute would not have any clients / customers. The marketing function includes the following skills:

- Identifying the programme characteristics and service attributes to provide the desired client/ customer benefit and how to offer these into the programme or service offering.
- Determining the price for the programmes and services offered including scholarships and donations, fees, charges etc. and how payment will be accepted.
- Determining how and where the programmes and services will be offered and by whom.
- Promoting the programmes and services, communicating with the prospective clients, and selling.

**Invention:** This function includes all the skills required to produce or invent the service to the requirements and specifications determined by the institute's marketing effort and making them available for delivery. This function is the most likely source of core competency if the institute provides a unique product or service.

- In management institutes this function consists of the development and delivery of the programme and service to the client i.e. to the students and industry.
- For institutes that invent a programme this function may include acquiring and analytical management skills. Depending upon the scope of invention these activities may be separated into separate functions like understanding student's, industry's and society's requirement and availability of different programmes.

**Human resources:** The work of the institute is accomplished by people and competency in hiring and training employees is needed by all institutes employing more than one person. This function may be a source of core competency if the institute is consistently able to develop and retain exceptional teachers and staff. This function includes the following skills.

- Interviewing prospective teachers and staff.
- Hiring and indoctrinating (coaching) teachers and staff.
- Determining the compensation for teachers and staff and establishing the process to pay them.
- Determining the teachers and staff training requirements needed to perform their jobs and providing or making arrangements to provide this training.
- Reviewing teachers and staff performance and if not ready to maintain performance then discharging ineffective personnel.

**Fund raising.** All non aided institutes need to raise funds. This function can be a source of core competency if the institute is consistently able to obtain sufficient contributions to fund its activities. This function includes skills in developing the Case for Giving, cultivating prospective donors and contributors, making "the ask", planning and implementing fund raising events, donor recognition, etc.

- **Administrative.** This is a catch all function that includes student's service, invoice and bill paying, answering the phones, facility maintenance and repair, etc. Since these functions tend to be relatively routine they are not likely to be a source of core competence unless their facilities and student's service make a significant contribution to student's perceived benefits.
- **Accounting and Book-keeping.** All institutes must record and monitor the institution's income and expenses and most must prepare financial reports periodically. All institutes must be at least able to record and categorize these transactions consistently. It is common for non aided institutions to contract these tasks to specialists and these competencies are not likely to be a source of core competency.
- **Payroll.** Institutes need people to do the work and these people must be paid. All institutes must record the hours that teachers and staff provide to the institute, the wages they are entitled to receive for their work and the salaries. This function includes paying these wages and salaries and the payroll taxes that are required by law. It is not likely to be a source of core competency.

**Identifying Institute's core competencies**

Core competencies require continuous improvement and development. Demands on institutions continue to rise and today's core competencies may be tomorrow's table stakes. Because they are long term and resource intensive not all institutes possess core competencies.

**Inventory of Organizational Competencies**

The first step in identifying core competencies is to develop an inventory of institute's competencies and skills.

- Institutional competencies are bundles of skills possessed by a number of individuals. They are more than the skills of a single person.
- Every institute consisting of more than one person requires integrating the skills of others. Institutional competencies require the integration of skills across practical appearance.

**Determine The Institutional Competencies That Are Core:**

- A core competence is a bundle of skills that enables an institute to provide a particular benefit to students and industry. For each competency listed in inventory, identify the students and industry benefit that results from that competency. The competency is not core if it cannot be associated with students and industry benefit or a significant contribution to the financial health of the institute. Identify the benefit from each competency.
- Separate the competency from the programme or service.

Use the core competency tests to determine the competencies that are core.

- Which of these competencies create students and industry perceived value throughout the programme or service offerings or make a significant contribution to the financial health of the institution?
- Include the institutional competencies that provide the programme characteristics, service attributes, or intangible features that convince the students and industry to use the programmes and services.
- Which of these competencies are unique to the institution or that the institute performs significantly better than its competitors.
- Which of these competencies provide opportunities for new programmes or services? Brainstorm some potential new programmes or services that can be developed from these competencies and what group of students and industry would value them.
- Analyze whether these new programmes will provide an opportunity that is worth the risk of serving these customers.

**Developing Core Competencies**

Developing core competencies requires time and resources. This requires a strong management commitment to their planning and development. Core competency development must address the following issues.

- Determining the core competencies desired. Most institutes do not have the resources to develop core competencies in a multitude of areas. They must select the competencies needed to pursue the institute's competitive strategy and growth goals.
- Acquire people with the needed skills. The least expensive way to do this is to develop and train existing personnel. The alternative is to recruit people that have the needed skills. This could be a more expensive option but may be needed when the core competency must be developed quickly.
- The integration of these skills is usually a function of management to create the

environment needed. The organization's management must recognize this need and plan how it will be accomplished.

- The core competency must be institutionalized through the institute's processes and procedures to become the natural way the institute acts.

Core competencies become one of the hallmarks of the institute. They are the driving forces of its competitive strategy and competitive advantage.

**Conclusion:**

Quality is one of the major aspects for sustainability in higher education. With the above mentioned modus operandi; Balanced Scorecard, Benchmarking and Competency Mapping will definitely support the institutions to improve the quality and to fulfill the dreams of our nation, to become education superpower by 2030.

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## FINANCIAL INCLUSION – AN INNOVATIVE STRATEGY FOR THE 'UNBANKED'

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### ABSTRACT

*Recently India has taken several steps towards financial inclusion for achieving faster inclusive growth. This paper discusses the different technological innovations by banking industry for the financial inclusion of unbanked. India is a country where many people are in unorganized sectors. People having a bank account are less in number. GoI and RBI are making efforts to increase the number of non-customer group as customers of bank. With the advent of Information and Communication Technologies (ICTs), the problem of financial exclusion is getting solved.*

**Key words:** Financial Inclusion, Financial Exclusion, Information and Communication Technology, Banking industry

### INTRODUCTION

Financial exclusion is a phenomenon which is restricted to rural areas where accessibility is limited and the population density is substantially lower. However, in recent days the phenomenon has also been observed in urban areas where some segment of the populace remains financially excluded in spite of the existence of bank branches. This exclusion is due to constraints such as access timings, and income potential. On a global basis, 62% of population living in Asia, Africa, and the Middle East and other developing countries are financially excluded (Chaia, 2009). In India and China only one third of the population participates in the formal banking sector. The extent of financial exclusion is very high in India (Suryanarayana, 2008). For example, only 55 percent of the population have deposit account and 9 percent have credit accounts with banks. India has the 145 million highest numbers of households excluded from Banking. The NSSO survey- 59<sup>th</sup> round states that 51.40% of farmer households are financially excluded from both formal/informal sources (459 lakh out of 893 lakh). Of the total farmer households, 73% of farmer households have no access to formal sources of credit. Thus, Financial



Inclusion is considered to be an important determinant for social inclusion of poor and vulnerable. It is in fact, one of the essential conditions for reduction of poverty and socio-economic inequalities in the society.(Rangarajan, 2008)

In 2006, the Government of India took some watershed steps for studying the issue of financial exclusion and devising strategic road map for financial inclusion for poor unbanked and under banked in India, consequent of which a commission headed by the eminent economist Dr. C. Rangarajan was formed and it came with its report on financial inclusion in 2008. The report has come with some fundamental policy suggestions and chalking out new role play for existing and new institutions like Cooperatives, Banks, Regional Rural Banks, SHGs, JLGs, NBFCs and other financial intermediaries like BC and BF . Dr.K.C.Chakrabarty, Deputy Governor, RBI says, “Financial inclusion, thus, has become an issue of worldwide concern, relevant equally in economies of the under-developed, developing and developed nations. Building an inclusive financial sector has gained growing global recognition bringing to the fore the need for development strategies that touch all lives, instead of a select few”.

Financial Inclusion becomes the greater concern for Government. To enhance investments, the role of ICT is much essential in today’s scenario. The Information Communication Technology (ICT) is aimed at promoting financial inclusion, kindle the transfer of research and technology in financial inclusion, increase the technological interest and the capacity of financial service providers/ users and encourage an environment of innovation and cooperation among stakeholders (Chakrabarty, 2009). The GoI, Reserve Bank of India (RBI) and NABARD with an intention to increase the Financial Inclusion a Rs. 500 crore corpus to be contributed in a ratio of 40:40:20.

### Financial Inclusion : India’s Position

India has been ranked at the 50<sup>th</sup> position, even below African countries such as Kenya and Morocco, in the Index of Financial Inclusion (IFI) prepared by prepared by the Indian Council for Research on International Economic Relations (Icrier). The index measure the extent of availability and usage of banking services in key nations of the world based on indicators such as number of bank accounts per 1000 adults, number of ATMs and bank branched per million people and the amount of bank credit and deposit.

The Icrier study indicates that in India, in spite of low density of bank branches, the usage of banking system in terms of volume of credit and deposit seems to be moderately high. The study also pointed out that number of bank branches per one lakh adults in India was 9.4, compared to 14.6 in Malaysia indicating the scope of expansion of banking services in the country. The report also pointed out that domestic deposit as percentage of GDP was 54.9 per cent, against 123.9 per cent in Malaysia indicating the scope of expansion of banking services in the country (Business Standard, 2012).

**Table 1: Select indicators of Financial Inclusion - Cross Country Analysis**

Country	Number of	Number of	Bank	Bank
	Branches	ATMs	credit	deposits
	(per 0.1 million adults)		(as per cent of GDP)	

India	10.91	5.44	43.62*	60.11*
Austria*	11.81	48.16	35.26	32.57
Brazil	13.76	120.62	29.04	47.51
France	43.11	110.07	56.03	39.15
Mexico	15.22	47.28	16.19	20.91
UK*	25.51	64.58	467.97	427.49
United States	35.74	173.75*	46.04	53.14
Korea	18.63	250.29*	84.17	74.51
Afghanistan	2.25	0.50	11.95	21.4
Philippines	7.69	14.88	27.57	53.02

*Source: World Bank, Financial Access Survey*  
*Note: Data pertains to 2010. For rows/cells indicated as '\*' data pertains to 2009. As at end of 2010-11, the number of ATMs per 0.1 million stood at 6.3, bank credit and bank deposit as a percentage of GDP stood at 50.10% and 66.10% respectively.*

### Role of Information Technology in Financial Inclusion

Technology and financial inclusion are the popular coinage in banking parlays in the country. Technology is a great enabler for continued and inclusive growth. Banks have been quick to realise and adopt technology in a big way. In day-to-day banking in India the visible benefits of IT are quite well known (Table 2).

Today, the 'Anywhere Banking' and 'Anytime Banking' through core banking system, 24/7/365 delivery channels like Automated Teller Machines (ATMs), and Net and Mobile Banking, etc., are becoming an integral part of today's banking services. With the intervention of IT, the structure has enabled efficient, accurate and timely management of the increased transaction volume that comes with a larger customer base (Srinivasa Rao, 2011).

Table 2

Financial Access point in India	Status
Total Number of no frills A/Cs	41.5 Million as on June 30th, 2009
Total Number of Bank Branches	81000
Total Number of Rural Branches	31,727
Total Number of ATMs	47,953
Number of PoS machines	5,22,148
Number of Kissan Credit Cards	76 Million (CMIE 2008-09)
Number of GCC issued by PSBs	1,52,842 ( March 31st, 2009)

Source:  
2009

With the initiatives of RBI the technology driven system helps the unbanked in various way. The inclusion of unbanked would be made possible by reducing transaction cost while dealing with poor, developing institutions to act as intermediaries between existing institutions and the excluded, building a platform for tackling the issues and supportive legal environment (Chakrabarty, 2010).

### Technologies supporting Financial Inclusion

Financial inclusion has become a mandate for all banks and targets are created as part of their Financial Inclusion Plan that has to be approved by RBI. As a result, the Banks have signed Business Correspondence agreements with various telecom providers like Airtel, Vodafone, etc and technology solutions providers like TCS, Oxigen, etc and financial payment systems like A Little World-ALW, Eko, FINO, etc are to deliver financial services (RBI Report 2010). NABARD supported MYRADA to develop NABYUKTI, software to generate simplified MIS for promoting and linking SHGs with banks. Ekgaon technologies offer software for accounting and MIS in case of SHG-based financial intermediation. Integra offers iMFAST [integra Mobile Financial Applications Secure Terminal], which is a portable teller machine that performs simple banking functions in rural areas.

### Mobile Based Banking

Telecommunications has taken the world to a new phase in managing communication and data irrespective of a person's location. The global economy is abuzz with the increasing use of handheld and mobile devices for the purposes like data transfer, information exchange, and service delivery. In today's scenario, the banking and payments industry is foreseeing a similar excitement with the analysts predicting that mobile banking is going to be the next big revenue generator (Kumar and Gupta, 2011).

While banks are experimenting with numerous ways of servicing customers, the mobile market was growing with unprecedented penetration across all customer segments. The Indian banking industry looks set to move into a new phase leveraging the mobile industry and its growing outreach, especially among the rural population (E&Y Report, 2010). It is expected that the mobile connections would reach to 200 million by 2012, up from the current 90 million. Thus, the mobile devices are used for payment and banking services, which could be the best suited model for branchless banking in India. In India alone the total number of people having mobile phones by 2011 was 5.2 billion as against 4 billion in 2008. The number of mobile subscribers has grown over 4.5 times within a period of three years. India is adding more subscribers per month than any other country (Table 3). This typical trend is not only isolated to India but in reality, it has made a drastic change in almost all developing economies like Africa, Latin America, and Asia.

**Table 3**  
**Table showing the number of people having bank account and mobile phones**

World-Total population	6.9 billion	100%
World- People having bank account	2.1 billion	30.43%

World- People having mobile phones	5.2 billion	75.36%
India- Total population	1.21 billion	100%
India-people having bank account	200 million	16.52%
India- people having mobile phones	811 million	68%

Source: The Hindu dtd: July 10, 2011

Some of the successful implementation of mobile-led financial inclusion are,

### **m-Pesa model in Africa**

A mobile-based money transfer service launched in Africa in a venture between Vodafone and Safaricom. In this model, to make payments, transfer money and redeem the cash, customers can use a wallet on their mobile phone. The servicing of these customers is through the network of airtime resellers.

The m-Pesa model offers several features such as:

- Withdraw and deposit cash
- Utility bill payment
- Money transfer

The m-Pesa model is quite popular in many countries of Africa, such as Kenya, Tanzania, and South Africa. A recent study also suggests that more than 10 percent of Kenya's GDP now pass through the mobile channel (The Economic Times, 2008).

### **Community banking in Standard Bank**

The community banking division of Standard Bank leverages MTNs MobileMoney solution. This product allows the client account to be linked to a SIM card. The customers can then transact on these accounts through an agent or a community banker who is a partner of Standard Bank. This solution allows customers to perform transactions such as:

- Purchase transactions
- Money transfers
- Account Enquiries

These transactions can be performed directly on the customer mobile phone or through the agent mobile phone. The customer money is reflected as information on a wallet on the SIM card which can then be used to perform the various transactions.

### **Grameen village phone in Bangladesh**

In Bangladesh, the Grameen Foundation launched its much acclaimed Microfinance program. The key objective of the program was to provide wide-spread access to loans to the unbanked women of Bangladesh. In this model, the beneficiary can procure a mobile phone from Grameen Phone with some pre-paid credit. The mobile phone can then be a source of income for the beneficiary as people in the village can use this phone to make telephone calls.

### **ATM based Banking**

**Micro ATMs** : Deploy low cost ATMs with minimum basic features like cash withdrawal, balance enquiry where rural people frequently visit. It is the most convenient and cost effective method of financial inclusion.

**Biometric ATMs**: For the convenience of illiterate and semi-illiterate customers, biometric ATMs are to be deployed. This system uses the thumb impression of the card holders which will be scanned and transferred to the central server. ATM dispenses cash and other services only after verifying the impression with the available finger print in the bank database.

**Mobile ATMs**: ATMs are designed in such a way that a van would move to the pre-determined places for easy banking of unbanked. It is also accessible to biometric card holders. Bank transactions like opening an account, cash withdrawal would be effectively used during the visits to the rural areas.

### **Handheld Devices**

A compact and portable device, easy to carry in field and ideal for a rural/semi-urban scenario. It can function on the field on any means of connectivity that is available in the country like GSM/GPRS, CDMA and the telephone line. It support various financial/non-financial transactions in offline mode in field such as, deposit, withdrawal, account transfer, standing instruction, new product request & alerts.

**Simputer** (Simple Computer or Simple In-expensive Multi-lingual Computer): A low cost portable palmtop which breaks the literacy barrier through natural user interface. It supports multi-lingual text and speech output. It has a personalized smart card facility facilitating community-sharing with no user limitation.

**SIM Toolkit**: Using a SIM Toolkit, mobile operators can load m-banking applications into the customer's mobile SIM card. It ensures availability of application as and when customer buys a new SIM card. Since the operator is closely associated with the mobile banking project and hence the task of delivery of service is easy.

**Mobile Application Development Platforms** : These technologies describe various programming languages using which applications can be developed for mobile phones. These applications along with customer's data reside on the mobile phone. It is operator independent and highly user interface. The development skill set is widely present for GPRS. It has a high ability to design and deliver better features.

### **Smart Cards**

State Governments are taking higher initiatives in Pension payments for senior citizens and disbursal under Rural Employment Generation Program through smart cards linked bank accounts. It provides biometric authentication, which helps in reducing frauds and ensure identity of customers. Such cards can also hold all transaction details on the card. In order to popularize smart cards, all agriculture short term loans and payment of social security schemes are to be dispensed through Smart Cards.

### **Aadhaar Project**

Government of India established Unique Identification Authority of India (UIDAI) with an objective to issue a unique identification number known as Aadhaar to all Indian residents with intent to eliminate duplicate/fake identities and to put hassle-free, cost effective verification/authentication system in place thereby to save considerable resources of various user departments as well as beneficiaries at large. UID project gives a big push to the government's financial inclusion agenda and also provides the strong foundation to deliver better services and paves the way to improve the operational efficiency of the system. All Public Sector Banks are acting as Registrars to undertake enrollment and authenticated services to their clientele and also other residents using technology embedded outsourced model.

### **Tie-up with Post Offices**

Modernization of Post Offices is in full swing and now they are well connected. Banks may make use of the presence of the post offices to extend banking services to the persons of unbanked areas. Smart Cards with bio-metric features will be delivered to them. The customer has to produce the Smart Card at post office for remitting cash or for withdrawal.

### **E-Seva Centers**

Banks may enter agreement with the respective state governments for sharing of resources, so that our rural/semi-urban customers can undertake financial transactions (Cash Deposit/Withdrawals) at these centres, which will be updated at Banks' server every day.

### **T-Banking**

The presence of Television in all households is the order of the day and now it has become one of the most cost effective modes to disseminate information across the country. Banks may explore the possibility of making use of cable network to extend banking services to remote rural areas and this can be used as non-branch service delivery channel.

In the above backdrop, Banks need to revisit their approach towards low value accounts of vast neglected population and adopt "High Volume – Low Margin – High Profit" business model backed by technology. This strategy enables to bring more customers in to bank's fold since this segment provides ample opportunities to improve business/profit on account of cost effective solutions.

### **Challenges Ahead**

The penetration of the technology based delivery channel, while very popular, has its own share of issues which are affecting its growth. These issues primarily affect the security paradigm, customer experience, and data sanity of the financial transactions.

The key issues are as mentioned below:

- Biometric authentication is currently available in a limited set of mobile phones. This poses an issue, as many financial inclusion programs rely on biometric authentication as the primary mode of customer authentication
- Mobile phones are good for limited data entry. However, complex transactions such as customer registration, service requests cannot be offered very easily. This limits the facilities which can be provided
- The user experience in case of self service can be an issue, as mobile phones provide a very simplistic user interface. Also, many of the self service models are not very intuitive and require customer education
- The SMS mode of operation, the most widely used mode of communication in mobile led financial inclusion, is not very secure and this poses a new challenge to be overcome
- In terms of regulatory aspects, AML, KYC, etc. norms should have inclusive parameters for rural banking.
- Due to high delivery costs, legacy systems and inflexible procedure the physical and banking infrastructure are underutilized.
- Information asymmetry due to non-availability of credit history of rural customers, willful defaulting and unclear Government policies.

### Conclusion

Even though a multitude of operational issues are quoted as reasons for lagging behind in financial inclusion targets, it could be resolved if banks begin to look at financial inclusion as a business opportunity and a service to the down trodden rather than an obligation and to fulfill their corporate social responsibility (CSR). It needs to be realized that technology per se is not an end in itself. Technology helps to the reform process and acts as a ladder to achieve the ultimate goal of providing financial services to the financially excluded. It is important that technology should be leveraged by Indian banks by providing affordable and cost-effective banking services to the masses through multi-delivery channels. The challenge now lies in taking greater advantage of new technologies and effective implementation of the same to expand the coverage of the banking and financial system. Thus, technology based solutions would go a long way for achieving greater financial inclusion.

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## THE CONTEMPORARY SALESMEN

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### ABSTRACT

*Selling new and emerging technologies been developed all over the world related to Information Technology, Audio and Video or a combination of these called "System Integration", which have been a success for its time and failures, as older technologies have been replaced by newer ones, yet awaiting to be replaced by a better technology. Identifying salesmen personalities who continue to drive the business within a limited period of time, their success factors and behavior, be explained and predicted by science and mathematics. So If you are seeking a big opportunity, seek a big problem, which brings the classic sales process of "seven steps" to an end, and will concentrate on consultative selling era problem identification, presentation of solutions and continued customer support. In IT selling, a sales representative who used to perform fulfillment functions besides actual selling 10 years ago is now supposed to be released from them and concentrate solely on selling related activities. IT selling is selling of complete package solutions rather than "stand-alone" products. This requires a solution selling approach which is conceptually more "demand driven" than "supply driven".*

### INTRODUCTION

No field of selling is more complex than IT technology selling, where personal contact is as important as the product itself (Dunn, Friar, and Thomas 1991:149). The selling task in the IT technology market is characterized by solution complexity, time pressure, the information load, the length of selling cycle, high customer demands (Newell and Simon, 1972 cited in Avila and Fern 1986:55).

Emerging technologies in Information Technology is "the stock of relevant knowledge that allows new techniques to be derived and includes both product and process know-how" (Mohr, Sengupta and Slater, 2005:3) It is closely related to "know-how", Therefore, when know-how is traded, the seller-buyer exchanges are characterized as intellectual property transactions (John et al., 1999:78)

The information technology market is a market with a high uncertainty, competitive volatility, network externalities, and an important role in industry standards (Mohr et al., 2005)

Software, Hardware, Services and system integration became the current sources of value and margins creation. "Solutions" and "system integration" and "establishing business relationships" are the key factors in today's IT business (Blustain 1992: 68). The IT selling strategy is now not centered on the product anymore, but is focused on value creation and finding solutions (Blustain 1992:68)

In the era of "systems integration" sales people need to have an in-depth knowledge of the whole range of information technologies: from local networks to telecommunications and beyond" (Blustain, 1999:69)

System Integration is a combination of different elements of the IT palette (Blustain, 1999:69)

Another peculiarity of IT selling is the selling of complete package solutions rather than “stand-alone” products. This requires a solution selling approach which is conceptually more “demand driven” than “supply driven”. An important role of the salesperson is to deliver the information on the customer reaction to the product supply and suggestions for product / service redesign according to the customer’s needs. The sales people play an additional role here as “conduits of information of future R&D investments and new products” rather than being purely sales oriented and achieve short –term revenue (Sharma et al 2005:289)

In IT selling, a sales representative who used to perform fulfillment functions besides actual selling 10 years ago is now supposed to be released from them and concentrate solely on selling related activities (Sharma et al., 2008:302). Therefore, Consultative selling era brings the classic sales process of “seven steps “ to an end , and instead , will concentrate on problem identification, presentation of solutions, and continued customer support (Sharma et al., 2008:303)

IT sales people talk with customers CEO’s about their view of their own business goals and with CFO’s about the financial ramifications. The sellers in IT do not rely on standard presentations, they “pepper each presentations with carefully crafted questions designed to uncover a client’s changing needs. The client representatives also spend a great amount of time with client generally, they attend client staff meetings, go on site tours, and spending time getting to know customers, rather than just selling to them (Ligos 2004:4).

Since IT sales people have a complex job, (Kerber and Campbell 1987: 40) suggested that they should be familiar with all technical aspects of the product line and all possible technical combinations, therefore, intensive training for sales people is strongly recommended

The classical personal selling process model

In order to focus on one theory, this study aims to build the largest part of its sales activity model based on approach of classical sales process paradigm of “seven steps”. The “seven steps” of the selling process are an old classical paradigm widely used in sales training and sales text books since the emergence of professional selling discipline (Moncrief and Marshall, 2005:13)

The classical selling process steps

Step 7	Post –sales follow up
Step 6	Sales Close
Step 5	Handling objections
Step 4	Sales presentations
Step 3	Approach
Step 2	Pre-approach
Step 1	Identifying and prospecting

Source: Author 2010 based on Dubinsky (1980-81:27-27)

In the context of this paradigm, the personal selling process is defined as a set of steps that a salesperson passes through when making a sale (Dubinsky, 1980-81:26; (Dwyer, Hill and Martin, 2000:151); Hite and Bellizzi, 1985:19). These steps are locating and prospecting for customers, pre-approach, approach, sales presentation, handling objections, close and post sales follow up

Step 1: Prospecting for customers

The prospecting step in its classic meaning involved searching and identifying leads or potential buyers who have the need , willingness, ability and authority to buy. This step included the

activities of gathering information about the prospect's name and contact information and receiving potential contact names from other sources (Dubinsky, 1980-81:21)

Prospecting is believed to be a future-oriented task which leads to the generation of a new customer base and a flow of sales (Anderson and Dubinsky, 2004: 70)

(Dubinsky, 1980-81) identified four main ways of identifying buyers: external and internal sources, through personal contact and others, and 13 techniques that underlie these factors (such as identification of prospects by using a variety of information sources: company directories, references, social, or professional contacts).

The qualification of a prospect is made based on the prospects need for company products, financial ability and customer profitability (Marshall and Johnston, 2009:510). The new qualification criteria are also long term profitability and the individual's accessibility (Anderson and Dubinsky, 2004: 73)

The studies on the relationship of prospecting activities and skills to sales delivered contradictory results. In the study of Marshall et al (2003), prospecting skills were put on the 2<sup>nd</sup> level of importance in hiring decisions by the sales managers.

In the study of Brashear et al (1997), time spent for prospecting had a significantly negative impact on the performance of insurance salespeople. They explained this outcome with the seller's avoidance behavior and call reluctance, and recommended not to invest too much time in this activity.

It is proposed that the prospecting step is no longer needed in organizations, and that the contemporary sales person should be released from this function, which could be taken over by other departments (Moncrief and Marshall, 2003)

#### Step 2: Pre- Approach

The classical sales process view of the pre-approach steps describes such activities as collecting more specific information about the prospect's needs and interests, further qualification of the prospect, developing an effective way to approach, tailoring the sales presentation, and arranging an interview (Dubinsky, 1980-81:26)

Dubinsky 1980-81 found two main factors combining ten different techniques used in performing the pre-approach : "interview pre-approaches" which include such activities as using mutual friends to arrange an interview , setting customer appointments per telephone , and information sources with activities of reading the newspapersto obtain necessary customer information and asking sales people in the same company about potential customers.

Moncrief and Marshall (2005) propose that, in view of the technological developments in the sales field, the pre approach step had changed its role and now includes the functions of contributing customer knowledge and gaining customer knowledge from the existing customer databases

The step of pre-approach and call preparation is defined as important for sales success in a number of different literature sources.

For e.g. Darmon(1998) pointed out that the effective management of relationship with prospects and customer's needs the deep awareness of customer and prospects needs, problems, buying processes, objectives, and constraints (1998:38)

Sujan, Weitz and Sujan (1998) suggested that successful selling requires detailed knowledge of different types of customers and sales situations

Jaramillo and Marshall (2004) found a significant positive relationship between sales performance and the pre-approach activity of gaining prospect information from different

sources. However, neither Dwyer et al. (2000) nor Brashear et al. (1997) found any evidence of a significant link between any pre-approach activities and sales performance in their studies

#### Step 3: Approach

The approach step can be done for existing and new customers (contacts for separate sales opportunities). Dubinsky (1980-81) classified approaches into “non-product related”, “peaking interest”, “consumer and product oriented” (Dubinsky 1980-81: 26). Jaramillo and Marshall (2004) proposed the “prospect focused”, “product benefit”, “statement” and “peak interest” approaches.

The approach is easier when a relationship exists (Moncrief and Marshall, 2005:20)

#### Step 4: Sales Presentation

The presentation to the customer is ‘the core of the selling process’. This is when the salesperson transmits information about the offering and tries to persuade the customer to buy. At this stage of the traditional process, the client’s representative presents the offering, demonstrating its strengths and advantages with the purpose of arousing the customer’s interest and trying to convince the customer to buy (Dubinsky, 1980-1981:26)

The contemporary selling includes the following selling types and techniques used in sales presentation: adaptive selling, consultative selling and value added selling (Moncrief and Marshall, 2005: 20). Active listening is now more valued than talking. The sales presentation now tends to be conducted through a number of meetings and usually by different sales team members rather than by single salesperson. In today’s contemporary sales setting, the salesperson performs more of a marketing function on the customer site, doing customer research and market segmentation than simply delivering sales presentation (Moncrief and Marshall, 2005:20)

Face-to- Face contacts demands high costs (Cannon and Homburg, 2001:22). It can be justified in transactions which involve consultative and relationship selling. Consultative selling is “best suited for a relationship, rather than a “transactional orientation” (Hawes, Strong and Winick, 1996:350), however, the disadvantage of consultative approach is its great time expenditure, the need for a broader product line, and the inability to use standardised presentations, if one has a large number of prospects (Hawes et al, 1996:350)

The value of a sales presentation, as pointed out by Daft and Lengel, 1984 cited in Cannon and Homburg (2001), is based on richer modes of communication, e.g. face-to-face, which allows for not only customer-oriented communication and feedback, but also makes it possible to gather non-verbal information through observation.

Along with consultative selling, IT product demonstrations, simulation and trial-size demos are an important part of the sales process in the IT environment. “Good demos move quickly to hold the customer’s interest” and make the customer “believe the software works” and the product meet expectations (Kiamy, 1993:219). Depending on the product sold, the presentations are too small or overly product-oriented, i.e. low key” selling is taking place.

A number of research studies proved the existence of a positive association between behavior characterized by adaptive selling (e.g. Giacobbe et al., 2006; Marks ,Vorhies, and Badovick, 1996; Predmore and Bonnice, 1994; Spiro and Weitz, 1990), consultative and solution selling (e.g. Eades, 2003) and the sales performance. The usage of customer language during the presentation and offering visualizations as well as the use of product benefit approach, which is consistent with consultative selling were the techniques that influenced the sales performance.

#### Step 5: Handling objections

Objections are “statements, questions, or actions by the prospect that indicate resistance or an unwillingness to buy” (Anderson and Dubinsky, 2004: 172). Objections can concern the product itself, product need, the company trust, pricing, etc. (Marshall and Johnston, 2009)

Dubinsky (1980-81) defined the four dimensions of activities underlying the sales objections step: “create strife techniques” (include techniques such as accept objections, tell a good story, smile and pass of objections), “offset objection” (includes techniques such as admit objection, minimize objection by comparing, describe how another customer purchased standardized presentation), the “clarify objections technique” and other techniques (include techniques such as asking questions about the objection and making comparisons with rival products).

The function of handling objections in solution selling has outgrown its boundaries. It is not enough to just assure the customer of the benefit of the product in question or assuage their concerns, the objections are to be solved, the techniques of solution selling need to be applied. Each of the customer’s problems needs to have a solution (Moncrief and Marshall 2005: 20)

The activity of answering customer objections involves much more sophisticated and complex information processing for a high-tech product salesperson than for a consumer product (Darmon 1998:35)

In the view of complexity of IT products, we would propose that the step of handling objections still exists as a consequential part of the presentation process, although it has taken a consultative form (i.e. it is a part of consultative selling approach to the customer presentation).

#### Step 6: Closing the sale

During the sales close, the seller negotiates, finalizes the details of the transaction, asks directly for the order (Dubinsky, 1980-81: 27)

During the close, the buyers often tend to delay the purchase decisions and the “the time it takes the salesperson to close the sale increases, the profit to be made from the sales may go down, the risk of losing the sales increases.” In this respect, the task of a salesperson is “to facilitate the client in making a timely final decision” (Johnston and Marshall, 2006: 56)

Closing is one of the most contradictory and complex steps in IT sales process in terms of its role in the successful sales completion and sales performance. This is the step where the buyer and the seller complete and commit to the deal.

The technique of clarification close was found to be linked to sales performance in the study if Jaramillo and Marshall (2004). The closing should be proper and highly skilled.

#### Step 7: Post Sale Follow-up

In the classical theory, the follow-up included activities that were undertaken to assuage customer’s negative post-purchase concerns, to reassure the customer of his/her purchase decision, to increase the possibility of future deals, to teach customer how to use the product, to organize credit if necessary (Dubinsky, 1980-1981:26)

Experienced salespeople realize that the customer not only buys a “great product” but also a “great service” that persuades them to be loyal customers. In this way, post-sale service is another pillar of successful customer relationships (Anderson and Dubinsky 2004:238)

Successful customer support is an attitude and it “can sell also products.” The primary goals for the product are to satisfy the customer and to follow through with customers by keeping commitments. These commitments are the basis of ongoing successful relationship (Kiamy, 1993:219)

Post-sale service may lead to the purchase of replacement goods and to the appearance of service contracts. The assurance of delivery schedule and quality of goods, appropriate financial billing, supervision of installation are the main activities of this step (Johnston and Marshall, 2006:57)

Depending on the characteristics of the product sold and on the company structure, the post-sales activities are usually performed by other departments, technicians or call centers, and the main activities include delivery, installations, training, effective resolution of customer problems, the customer complaint handling (Marshall and Johnston, 2009). Although they are usually not the part of the direct role of the salesperson, these activities are often coordinated by him / her to ensure effective completion, and the most difficult issues are solved face-to-face directly with the client.

Relationship maintenance activities are the crucial element of the follow-up. Meeting the customer socially to eat and drink together, organizing events and seminars build an excellent basis for a relationship (Piercy, 1995: 8). If customer complaints are responded to positively, this will provide a way to ensure customer loyalty (Piercy, 1995: 8)

Time invested in servicing clients or following-up after the sale additional to the time invested in direct selling activities proved to be significantly positive influence on the sales performance (Brashear et al. 1997)

Follow-up skills were rated as the most important (first level of importance) compared to all other sales processes skills (Marshall et al, 2003). It should also be mentioned that “follow-up” activities are ongoing. The border between servicing the account and prospecting for new contacts disappears. New contacts appears from old ones and from the past cooperation during past sales transactions (Moncrief and Marshall, 2005).

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## DATA ENVELOPMENT ANALYSIS (How DEA measure the efficiency of a faculty)

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### ABSTRACT:

*There are many methods are available to evaluate the performance of the faculty members, which are popularly known as "Performance Appraisal Methods". But these are all following the traditional statistical methods. The authors have applied the OR technique called DEA (Data Envelopment Analysis) to evaluate the efficiency of faculty based on various inputs of the faculty attributes and outputs at the student and institute level. The inputs for the study are grants for research, continuous feed-back forms from students, funding for IT initiatives, infrastructure facilities, secretarial or data entry operator assistance, incentives for case-study writing, incentives for book publishing, number of hours or days spent on organizing seminars or conferences at work place and monetary benefits for research journal publications. Outputs are consistency of ranking or teacher rating by students, number of books published, number of journal publications, number of case studies published, and number of presentations in conferences and seminars, satisfied delegates of conferences and seminars. The DMUs are faculty members in one institute or various educational institutions like schools offering education up to class ten, junior and community colleges offering bridge courses like plus two or intermediate or poly-technique, colleges/schools under various universities offering graduation courses, colleges/schools under various universities offering post-graduation courses and finally universities offering research degrees like Ph. D. or Fellow programs.*

**Keywords:** Data envelopment analysis; Efficiency; Cross-efficiency; Scales; Faculty attributes

**Respondents Size:** 100 from each DMU

### 1. INTRODUCTION

In today's extreme dynamic world the educational institutions are also forced to work, develop and organize like an industry or company in the corporate world. To meet this particular need educational institutions have to be efficient and verify the efficiency of other educational institutions to serve the very purpose of their vision. Moreover the competition among the educational institutions is so steep in terms of attracting 'talented students' and more number of students to various disciplines and programs. The talented students will help the institutions to be ranked among the best and number game is to strengthen the financial muscle of the organization. But, the students and parents are always eyeing on the institutions which are standing on the efficient teachers/faculty. In other words, efficiency of teachers/faculty has



become most important factor for the existence and development of any educational institution and intern decides the efficiency of an educational institution. Estimation of efficiency of teachers/faculty has been considered as very complex process because it is aligned with many resulting factors.

The study has considered various inputs to teachers/faculty which are main 'determinants' to give required outputs those are 'factors' to estimate efficiency of teachers/faculty. When determinants are less and factors are few, it is easy to use some statistical methods like factor analysis and/or chi-square test to verify the relationship between these determinants, factors and efficiency. But, estimation of efficiency of teachers/faculty has been seen as multi-determinant and multi factor process with many decision making units (DMUs).

In this particular study the total number of decision making units (DMUs) is five. They are schools offering education up to class ten, junior and community colleges offering bridge courses like plus two or intermediate or poly-technique, colleges/schools under various universities offering graduation courses, colleges/schools under various universities offering post-graduation courses and finally universities offering research degrees like Ph. D. or Fellow programs. The inputs for the study are grants for research, continuous feed-back forms from students, funding for IT initiatives, infrastructure facilities, secretarial or data entry operator assistance, incentives for case-study writing, incentives for book publishing, number of hours or days spent on organizing seminars or conferences at work place and monetary benefits for research journal publications. Outputs are consistency of ranking or teacher rating by students, number of books published, number of journal publications, number of case studies published, and number of presentations in conferences and seminars, satisfied delegates of conferences and seminars.

#### **Methodology followed for the Study:**

Performed CRS model from which the study identified the status of each DMU i.e., decreasing/ constant / increasing.

Secondly the study has carried out VRS model

- In this study Data Envelopment Analysis (DEA) measures the relative efficiencies of teachers/faculties of various organizations with multiple inputs and multiple outputs. The organizations are called the decision-making units, or DMUs.
- DEA assigns weights to the inputs and outputs of a DMU that give it the best possible efficiency. It thus arrives at a weighting of the relative importance of the input and output variables that reflects the emphasis that appears to have been placed on them for that particular DMU.
- At the same time, though, DEA then gives all the other DMUs the same weights and compares the resulting efficiencies with that for the DMU of focus.
- If the focus DMU looks at least as good as any other DMU, it receives a maximum efficiency score. But if some other DMU looks better than the focus DMU, the weights having been calculated to be most favorable to the focus DMU, then it will receive an efficiency score less than maximum.

**DEA is categorized as follows:**

- Utility Functions
- Effectiveness
- Interpretation for Libraries

**LIMITATIONS OF THE STUDY**

The study has the following limitations.

- Sample size is small for the purpose of initial study.
- DEA is a well acclaimed method for the study of productivity. But it has its own limitations and they apply to the study.
- The primary data from teachers of schools and colleges is subject to errors like bias and incomplete understanding of the phenomenon under study. This is a common limitation to all studies in social sciences.

**Findings**

DMU 1: Schools offering classes up to 10<sup>th</sup>

DMU 2: Junior Colleges and Community Colleges offering Intermediate or Poly-technique

DMU 3: Colleges / Schools under various Universities offering Graduation Courses

DMU 4: Colleges / Schools offering Post-graduation Courses

DMU 5: Universities or Institutions offering Ph. D. or Fellow Research

DMU 1: Schools offering classes up to 10<sup>th</sup>

	Rank of teacher by students	Number of Books Published	Number of Journal Publications	Number of Cases Published	Number of presentations in conferences Seminars	Satisfied delegates
Grants for Research	5	17	30	22	26	0
Continuous Feed back	84	0	2	3	5	6
Funding IT initiatives	73	1	1	0	12	13

Funds for Infrastructure	5	1	22	25	2	45
Secretarial / Data-entry assistance	0	23	16	21	12	28
Incentives for Case writing	0	2	24	23	11	40
Incentives for Book Publication	0	10	39	51	0	0
Incentives for Paper Publication in Journal	0	1	59	40	0	0
Number of hours spent on Seminars, Conferences	59	0	0	0	0	41

## DMU 2: Junior Colleges and Community Colleges offering Intermediate or Poly-technique

	Rank of teacher by students	Number of Books Published	Number of Journal Publications	Number of Cases Published	Number of presentations in conferences Seminars	Satisfied delegates
Grants for Research	6	20	21	19	22	12
Continuous Feed back	89	0	3	4	3	1
Funding IT initiatives	84	2	3	0	7	10
Funds for Infrastructure	65	1	2	5	2	25
Secretarial / Data-entry assistance	60	3	6	11	2	18

Incentives for Case writing	0	2	4	83	7	4
Incentives for Book Publication	0	90	3	7	0	0
Incentives for Paper Publication in Journal	0	1	89	10	0	0
Number of hours spent on Seminars, Conferences	72	0	0	0	0	28

**DMU 3: Colleges / Schools under various Universities offering Graduation Courses**

	Rank of teacher by students	Number of Books Published	Number of Journal Publications	Number of Cases Published	Number of presentations in conferences Seminars	Satisfied delegates
Grants for Research	26	10	29	11	18	6
Continuous Feed back	80	0	3	4	3	10
Funding IT initiatives	72	4	13	0	6	5
Funds for Infrastructure	52	6	6	2	2	32
Secretarial / Data-entry assistance	49	10	16	5	12	8
Incentives for Case writing	19	6	14	46	10	5
Incentives for Book Publication	20	40	2	5	11	22

Incentives for Paper Publication in Journal	10	4	30	12	23	21
Number of hours spent on Seminars, Conferences	64	0	0	0	4	32

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## FOREIGN DIRECT INVESTMENT – IN A PERSPECTIVE OF INDIAN RETAIL

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### ABSTRACT

*Just back from first frenzied shopping experience in the UK, a four year old ever-inquisitive daughter asked to her father, “Why do we not have a Harrods in Delhi? Shopping there is so much fun!” Simple question for a four-year-old, but not so simple for her father to explain.*

*As per the current regulatory regime, retail trading (except under single-brand product retailing — FDI up to 51 per cent, under the Government route) is prohibited in India. Simply put, for a company to be able to get foreign funding, products sold by it to the general public should only be of a ‘single-brand’; this condition being in addition to a few other conditions to be adhered to. That explains why we do not have a Harrods in Delhi.*

*India being a signatory to World Trade Organization’s General Agreement on Trade in Services, which include wholesale and retailing services, had to open up the retail trade sector to foreign investment. There were initial reservations towards opening up of retail sector arising from fear of job losses, procurement from international market, competition and loss of entrepreneurial opportunities. However, the government in a series of moves has opened up the retail sector slowly to Foreign Direct Investment (FDI). In 1997, FDI in cash and carry (wholesale) with 100 percent ownership was allowed under the Government approval route. It was brought under the automatic route in 2006. 51 percent investment in a single brand retail outlet was also permitted in 2006 and further Government of India is planning to implement it in the year 2012-13.*

### INTRODUCTION OF RETAIL

In 2004, The High Court of Delhi defined the term ‘retail’ as a sale for final consumption in contrast to a sale for further sale or processing (i.e. wholesale). *A sale to the ultimate consumer.*

Thus, retailing can be said to be “The interface between the producer and the individual consumer buying for personal consumption”. This excludes direct interface between the manufacturer and institutional buyers such as the government and other bulk customers. Retailing is the last link that connects the individual consumer with the manufacturing and distribution chain. A retailer is involved in the act of selling goods to the individual consumer at a margin of profit.

### Division of Retail Industry – Organised and Unorganised Retailing

The retail industry is mainly divided into:-1) Organized and 2) Unorganized Retailing

1).Organized retailing refers to trading activities undertaken by licensed retailers, that is, those who are registered for sales tax, income tax, etc. These include the corporate-backed hypermarkets and retail chains, and also the privately owned large retail businesses.

2).Unorganized retailing, on the other hand, refers to the traditional formats of low-cost retailing, for example, the local *kirana* shops, owner manned general stores, *paan/beedi* shops, convenience stores, hand cart and pavement vendors, etc.

The Indian retail sector is highly fragmented with 97 per cent of its business being run by the unorganized retailers. The organized retail however is at a very nascent stage. The sector is the largest source of employment after agriculture, and has deep penetration into rural India generating more than 10 per cent of India's GDP.

### **FDI Policy in India**

FDI as defined in Dictionary of Economics (Graham Bannock et.al) is investment in a foreign country through the acquisition of a local company or the establishment there of an operation on a new (Greenfield) site. To put in simple words, FDI refers to capital inflows from abroad that is invested in or to enhance the production capacity of the economy.

Foreign Investment in India is governed by the FDI policy announced by the Government of India and the provision of the Foreign Exchange Management Act (FEMA) 1999. The Reserve Bank of India ('RBI') in this regard had issued a notification, which contains the Foreign Exchange Management (Transfer or issue of security by a person resident outside India) Regulations, 2000. This notification has been amended from time to time.

The Ministry of Commerce and Industry, Government of India is the nodal agency for motoring and reviewing the FDI policy on continued basis and changes in sectoral policy/ sectoral equity cap. The FDI policy is notified through Press Notes by the Secretariat for Industrial Assistance (SIA), Department of Industrial Policy and Promotion (DIPP).

The foreign investors are free to invest in India, except few sectors/activities, where prior approval from the RBI or Foreign Investment Promotion Board (FIPB) would be required.

### **FDI Policy with Regard to Retailing in India**

It will be prudent to look into Press Note 4 of 2006 issued by DIPP and consolidated FDI Policy issued in October 2010 which provide the sector specific guidelines for FDI with regard to the conduct of trading activities.

a) FDI up to 100% for cash and carry wholesale trading and export trading allowed under the automatic route.

b) FDI up to 51 % with prior Government approval (i.e. FIPB) for retail trade of 'Single Brand' products, subject to Press Note 3 (2006 Series).



c) FDI is not permitted in Multi Brand Retailing in India.

### **1. Franchise Agreements**

It is an easiest track to come in the Indian market. In franchising and commission agents' services, FDI (unless otherwise prohibited) is allowed with the approval of the Reserve Bank of India (RBI) under the Foreign Exchange Management Act. This is a most usual mode for entrance of quick food bondage opposite a world. Apart from quick food bondage identical to Pizza Hut, players such as Lacoste, Mango, Nike as good as Marks as good as Spencer, have entered Indian marketplace by this route.

### **2. Cash And Carry Wholesale Trading Entry Options For Foreign Players prior to FDI Policy**

Although prior to Jan 24, 2006, FDI was not authorized in retailing, most general players had been operating in the country. Some of entrance routes used by them have been discussed in sum as below:-

100% FDI is allowed in wholesale trading which involves building of a large distribution infrastructure to assist local manufacturers. The wholesaler deals only with smaller retailers and not Consumers. **Metro AG of Germany** was the first significant global player to enter India through this route.

### **3. Strategic Licensing Agreements**

Some foreign brands give exclusive licenses and distribution rights to Indian companies. Through these rights, Indian companies can either sell it through their own stores, or enter into shop-in-shop arrangements or distribute the brands to franchisees. Mango, the Spanish apparel brand has entered India through this route with an agreement with Pyramid, Mumbai, SPAR entered into a similar agreement with Radhakrishna Foodlands Pvt. Ltd

### **4. Manufacturing and Wholly Owned Subsidiaries.**

The foreign brands such as Nike, Reebok, Adidas, etc. that have wholly-owned subsidiaries in manufacturing are treated as Indian companies and are, therefore, allowed to do retail. These companies have been authorised to sell products to Indian consumers by franchising, internal distributors, existent Indian retailers, own outlets, etc. For instance, Nike entered through an exclusive licensing agreement with Sierra Enterprises but now has a wholly owned subsidiary, Nike India Private Limited.

### **FDI in Single Brand Retail**

The Government has not categorically defined the meaning of "Single Brand" anywhere neither in any of its circulars nor any notifications.

In single-brand retail, FDI up to 51 per cent is allowed, subject to Foreign Investment Promotion Board (FIPB) approval and subject to the conditions mentioned in Press Note 3 that (a) only single brand products would be sold (i.e., retail of goods of multi-brand even if produced by the same manufacturer would not be allowed), (b) products should be sold under the same brand internationally, (c) single-brand product retail would only cover products which are branded during manufacturing and (d) any addition to product categories to be sold under “single-brand” would require fresh approval from the government.

While the phrase ‘single brand’ has not been defined, it implies that foreign companies would be allowed to sell goods sold internationally under a ‘single brand’, viz., Reebok, Nokia, and Adidas. Retailing of goods of multiple brands, even if such products were produced by the same manufacturer, would not be allowed.

Going a step further, we examine the concept of ‘single brand’ and the associated conditions:

FDI in ‘Single brand’ retail implies that a retail store with foreign investment can only sell one brand. For example, if Adidas were to obtain permission to retail its flagship brand in India, those retail outlets could only sell products under the Adidas brand and not the Reebok brand, for which separate permission is required. If granted permission, Adidas could sell products under the Reebok brand in separate outlets.

#### ***But, what is a ‘brand’?***

Brands could be classified as products and multiple products, or could be manufacturer brands and own-label brands. Assume that a company owns two leading international brands in the footwear industry – say ‘A’ and ‘R’. If the corporate were to obtain permission to retail its brand in India with a local partner, it would need to specify which of the brands it would sell. A reading of the government release indicates that A and R would need separate approvals, separate legal entities, and may be even separate stores in which to operate in India. However, it should be noted that the retailers would be able to sell multiple products under the same brand, e.g., a product range under brand ‘A’ Further, it appears that the same joint venture partners could operate various brands, but under separate legal entities.

Now, taking an example of a large departmental grocery chain, prima facie it appears that it would not be able to enter India. These chains would, typically, source products and, thereafter, brand it under their private labels. Since the regulations require the products to be branded at the manufacturing stage, this model may not work. The regulations appear to discourage own-label products and appear to be tilted heavily towards the foreign manufacturer brands.

There is ambiguity in the interpretation of the term ‘single brand’. The existing policy does not clearly codify whether retailing of goods with sub-brands bunched under a major parent brand can be considered as single-brand retailing and, accordingly, eligible for 51 per cent FDI. Additionally, the question on whether co-branded goods (specifically branded as such at the time of manufacturing) would qualify as single brand retail trading remains unanswered.

#### **FDI in Multi Brand Retail**

The government has also not defined the term Multi Brand. FDI in Multi Brand retail implies that a retail store with a foreign investment can sell multiple brands under one roof.

In July 2010, Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce circulated a discussion paper on allowing FDI in multi-brand retail. The paper doesn't suggest any upper limit on FDI in multi-brand retail. If implemented, it would open the doors for global retail giants to enter and establish their footprints on the retail landscape of India. Opening up FDI in multi-brand retail will mean that global retailers including Wal-Mart, Carrefour and Tesco can open stores offering a range of household items and grocery directly to consumers in the same way as the ubiquitous '*kirana*' store.

### **Foreign Investor's Concern Regarding FDI Policy in India**

For those brands which adopt the franchising route as a matter of policy, the current FDI Policy will not make any difference. They would have preferred that the Government liberalize rules for maximizing their royalty and franchise fees. They must still rely on innovative structuring of franchise arrangements to maximize their returns. Consumer durable majors such as LG and Samsung, which have exclusive franchisee owned stores, are unlikely to shift from the preferred route

right

away.

For those companies which choose to adopt the route of 51% partnership, they must tie up with a local partner. The key is finding a partner which is reliable and who can also teach a trick or two about the domestic market and the Indian consumer. Currently, the organized retail sector is dominated by the likes of large business groups which decided to diversify into retail to cash in on the boom in the sector – corporate such as Tata through its brand Westside, RPG Group through Food world, Pantaloon of the Raheja Group and Shopper's Stop. Do foreign investors look to tie up with an existing retailer or look to others not necessarily in the business but looking to diversify, as many business groups are doing?

An arrangement in the short to medium term may work wonders but what happens if the Government decides to further liberalize the regulations as it is currently contemplating? Will the foreign investor terminate the agreement with Indian partner and trade in market without him? Either way, the foreign investor must negotiate its joint venture agreements carefully, with an option for a buy-out of the Indian partner's share if and when regulations so permit. They must also be aware of the regulation which states that once a foreign company enters into a technical or financial collaboration with an Indian partner, it cannot enter into another joint venture with another Indian company or set up its own subsidiary in the 'same' field' without the first partner's consent if the joint venture agreement does not provide for a 'conflict of interest' clause. In effect, it means that foreign brand owners must be extremely careful whom they choose as partners and the brand they introduce in India. The first brand could also be their last if they do not negotiate the strategic arrangement diligently.

### **Concerns for the Government for only Partially allowing FDI in Retail Sector**

A number of concerns were expressed with regard to partial opening of the retail sector for FDI. The Hon'ble Department Related Parliamentary Standing Committee on Commerce, in its 90th

Report, on 'Foreign and Domestic Investment in Retail Sector', laid in the Lok Sabha and the Rajya Sabha on 8 June, 2009, had made an in-depth study on the subject and identified a number of issues related to FDI in the retail sector. These included:

It would lead to unfair competition and ultimately result in large-scale exit of domestic retailers, especially the small family managed outlets, leading to large scale displacement of persons employed in the retail sector. Further, as the manufacturing sector has not been growing fast enough, the persons displaced from the retail sector would not be absorbed there.

Another concern is that the Indian retail sector, particularly organized retail, is still under-developed and in a nascent stage and that, therefore, it is important that the domestic retail sector is allowed to grow and consolidate first, before opening this sector to foreign investors.

Antagonists of FDI in retail sector oppose the same on various grounds, like, that the entry of large global retailers such as Wal-Mart would kill local shops and millions of jobs, since the unorganized retail sector employs an enormous percentage of Indian population after the agriculture sector; secondly that the global retailers would conspire and exercise monopolistic power to raise prices and monopolistic (big buying) power to reduce the prices received by the suppliers; thirdly, it would lead to asymmetrical growth in cities, causing discontent and social tension elsewhere. Hence, both the consumers and the suppliers would lose, while the profit margins of such retail chains would go up.

### **Limitations of the present setup**

#### **Infrastructure**

There has been a lack of investment in the logistics of the retail chain, leading to an inefficient market mechanism. Though India is the second largest producer of fruits and vegetables (about 180 million MT), it has a very limited integrated cold-chain infrastructure, with only 5386 stand-alone cold storages, having a total capacity of 23.6 million MT. , 80% of this is used only for potatoes. The chain is highly fragmented and hence, perishable horticultural commodities find it difficult to link to distant markets, including overseas markets, round the year. Storage infrastructure is necessary for carrying over the agricultural produce from production periods to the rest of the year and to prevent distress sales. Lack of adequate storage facilities cause heavy losses to farmers in terms of wastage in quality and quantity of produce in general. Though FDI is permitted in cold-chain to the extent of 100%, through the automatic route, in the absence of FDI in retailing; FDI flow to the sector has not been significant.

#### **Intermediaries dominate the value chain**

Intermediaries often flout *mandi* norms and their pricing lacks transparency. Wholesale regulated markets, governed by State APMC Acts, have developed a monopolistic and non-transparent character. According to some reports, Indian farmers realize only 1/3<sup>rd</sup> of the total price paid by the final consumer, as against 2/3<sup>rd</sup> by farmers in nations with a higher share of organized retail.

### **Improper Public Distribution System (“PDS”)**

There is a big question mark on the efficacy of the public procurement and PDS set-up and the bill on food subsidies is rising. In spite of such heavy subsidies, overall food based inflation has been a matter of great concern. The absence of a ‘farm-to-fork’ retail supply system has led to the ultimate customers paying a premium for shortages and a charge for wastages.

### **No Global Reach**

The Micro Small & Medium Enterprises (“MSME”) sector has also suffered due to lack of branding and lack of avenues to reach out to the vast world markets. While India has continued to provide emphasis on the development of MSME sector, the share of unorganized sector in overall manufacturing has declined from 34.5% in 1999-2000 to 30.1% in 2010-11. This has largely been due to the inability of this sector to access latest technology and improve its marketing interface.

### **Rationale behind Allowing FDI in Retail Sector**

FDI can be a powerful catalyst to spur competition in the retail industry, due to the current scenario of low competition and poor productivity.

The policy of single-brand retail was adopted to allow Indian consumers access to foreign brands. Since Indians spend a lot of money shopping abroad, this policy enables them to spend the same money on the same goods in India. FDI in single-brand retailing was permitted in 2006, up to 51 per cent of ownership. Between then and May 2010, a total of 94 proposals have been received. Of these, 57 proposals have been approved. An FDI inflow of US\$196.46 million under the category of single brand retailing was received between April 2006 and September 2010, comprising 0.16 per cent of the total FDI inflows during the period. Retail stocks rose by as much as 5%. Shares of Pantaloon Retail (India) Ltd ended 4.84% up at Rs 441 on the Bombay Stock Exchange. Shares of Shopper’s Stop Ltd rose 2.02% and Trent Ltd, 3.19%. The exchange’s key index rose 173.04 points, or 0.99%, to 17,614.48. But this is very less as compared to what it would have been had FDI upto 100% been allowed in India for single brand.

The policy of allowing 100% FDI in single brand retail can benefit both the foreign retailer and the Indian partner – foreign players get local market knowledge, while Indian companies can access global best management practices, designs and technological knowhow. By partially opening this sector, the government was able to reduce the pressure from its trading partners in bilateral/ multilateral negotiations and could demonstrate India’s intentions in liberalizing this sector in a phased manner.

Permitting foreign investment in food-based retailing is likely to ensure adequate flow of capital into the country & its productive use, in a manner likely to promote the welfare of all sections of society, particularly farmers and consumers. It would also help bring about improvements in farmer income & agricultural growth and assist in lowering consumer prices inflation.

Apart from this, by allowing FDI in retail trade, India will significantly flourish in terms of quality standards and consumer expectations, since the inflow of FDI in retail sector is bound to pull up the quality standards and cost-competitiveness of Indian producers in all the segments. It is therefore obvious that we should not only permit but encourage FDI in retail trade.

Lastly, it is to be noted that the Indian Council of Research in International Economic Relations (ICRIER), a premier economic think tank of the country, which was appointed to look into the impact of BIG capital in the retail sector, has projected the worth of Indian retail sector to reach \$496 billion by 2011-12 and ICRIER has also come to conclusion that investment of 'big' money (large corporate and FDI) in the retail sector would in the long run not harm interests of small, traditional, retailers.

In light of the above, it can be safely concluded that allowing healthy FDI in the retail sector would not only lead to a substantial surge in the country's GDP and overall economic development, but would *inter alia* also help in integrating the Indian retail market with that of the global retail market in addition to providing not just employment but a better paying employment, which the unorganized sector (kirana and other small time retailing shops) have undoubtedly failed to provide to the masses employed in them.

Industrial organizations such as CII, FICCI, US-India Business Council (USIBC), the American Chamber of Commerce in India, The Retail Association of India (RAI) and Shopping Centers Association of India (a 44 member association of Indian multi-brand retailers and shopping malls) favor a phased approach toward liberalizing FDI in multi-brand retailing, and most of them agree with considering a cap of 49-51 per cent to start with.

The international retail players such as Wal-Mart, Carrefour, Metro, IKEA, and TESCO share the same view and insist on a clear path towards 100 per cent opening up in near future. Large multinational retailers such as US-based Wal-Mart, Germany's Metro AG and Woolworths Ltd, the largest Australian retailer that operates in wholesale cash-and-carry ventures in India, have been demanding liberalization of FDI rules on multi-brand retail for some time.

Thus, as a matter of fact FDI in the buzzing Indian retail sector should not just be freely allowed but per contra should be significantly encouraged. Allowing FDI in multi brand retail can bring about Supply Chain Improvement, Investment in Technology, Manpower and Skill development, Tourism Development, Greater Sourcing From India, Up gradation in Agriculture, Efficient Small and Medium Scale Industries, Growth in market size and Benefits to government through greater GDP, tax income and employment generation.

### **Prerequisites before allowing FDI in Multi Brand Retail and Lifting Cap of Single Brand Retail**

FDI in multi-brand retailing must be dealt cautiously as it has direct impact on a large chunk of population. Left alone foreign capital will seek ways through which it can only multiply itself, and unthinking application of capital for profit, given our peculiar socio-economic conditions, may spell doom and deepen the gap between the rich and the poor. Thus the proliferation of foreign capital into multi-brand retailing needs to be anchored in such a way that it results in a

win-win situation for India. This can be done by integrating into the rules and regulations for FDI in multi-brand retailing certain inbuilt safety valves.

For example FDI in multi –brand retailing can be allowed in a calibrated manner with social safeguards so that the effect of possible labor dislocation can be analyzed and policy fine tuned accordingly. To ensure that the foreign investors make a genuine contribution to the development of infrastructure and logistics, it can be stipulated that a percentage of FDI should be spent towards building up of back end infrastructure, logistics or agro processing units.

Reconstituting the poverty stricken and stagnating rural sphere into a forward moving and prosperous rural sphere can be one of the justifications for introducing FDI in multi-brand retailing. To actualize this goal it can be stipulated that at least 50% of the jobs in the retail outlet should be reserved for rural youth and that a certain amount of farm produce be procured from the poor farmers. Similarly to develop our small and medium enterprise (SME), it can also be stipulated that a minimum percentage of manufactured products be sourced from the SME sector in India. PDS is still in many ways the life line of the people living below the poverty line. To ensure that the system is not weakened the government may reserve the right to procure a certain amount of food grains for replenishing the buffer.

To protect the interest of small retailers the government may also put in place an exclusive regulatory framework. It will ensure that the retailing giants do resort to predatory pricing or acquire monopolistic tendencies. Besides, the government and RBI need to evolve suitable policies to enable the retailers in the unorganized sector to expand and improve their efficiencies. If Government is allowing FDI, it must do it in a calibrated fashion because it is politically sensitive and link it (with) up some caveat from creating some back-end infrastructure.

Further, To take care of the concerns of the Government before allowing 100% FDI in Single Brand Retail and Multi- Brand Retail, the following recommendations are being proposed:-

- Preparation of a legal and regulatory framework and enforcement mechanism to ensure that large retailers are not able to dislocate small retailers by unfair means.
- Extension of institutional credit, at lower rates, by public sector banks, to help improve efficiencies of small retailers; undertaking of proactive programme for assisting small retailers to upgrade themselves.
- Enactment of a National Shopping Mall Regulation Act to regulate the fiscal and social aspects of the entire retail sector.
- Formulation of a Model Central Law regarding FDI of Retail Sector.

## **Conclusion**

### **A Start Has Been Made**

Wal-Mart has a joint venture with Bharti Enterprises for cash-and-carry (wholesale) business, which runs the 'Best Price' stores. It plans to have 15 stores by March and enter new states like Andhra Pradesh , Rajasthan, Madhya Pradesh and Karnataka. Duke, Wall mart's CEO opined that FDI in retail would contain inflation by reducing wastage of

farm output as 30% to 40% of the produce does not reach the end-consumer. “In India, there is an opportunity to work all the way up to farmers in the back-end chain. Part of inflation is due to the fact that produces do not reach the end-consumer,” Duke said, adding, that a similar trend was noticed when organized retail became popular in the US.

Many of the foreign brands would come to India if FDI in multi brand retail is permitted which can be a blessing in disguise for the economy.

### **Back-end logistics must for FDI in multi-brand retail**

The government has added an element of social benefit to its latest plan for calibrated opening of the multi-brand retail sector to foreign direct investment (FDI). Only those foreign retailers who first invest in the back-end supply chain and infrastructure would be allowed to set up multi brand retail outlets in the country. The idea is that the firms must have already created jobs for rural India before they venture into multi-brand retailing.

It can be said that the advantages of allowing unrestrained FDI in the retail sector evidently outweigh the disadvantages attached to it and the same can be deduced from the examples of successful experiments in countries like Thailand and China; where too the issue of allowing FDI in the retail sector was first met with incessant protests, but later turned out to be one of the most promising political and economical decisions of their governments and led not only to the commendable rise in the level of employment but also led to the enormous development of their country's GDP.

Moreover, in the fierce battle between the advocators and antagonist of unrestrained FDI flows in the Indian retail sector, the interests of the consumers have been blatantly and utterly disregarded. Therefore, one of the arguments which inevitably needs to be considered and addressed while deliberating upon the captioned issue is the interests of consumers at large in relation to the interests of retailers.

It is also pertinent to note here that it can be safely contended that with the possible advent of unrestrained FDI flows in retail market, the interests of the retailers constituting the unorganized retail sector will not be gravely undermined, since nobody can force a consumer to visit a mega shopping complex or a small retailer/sabji mandi. Consumers will shop in accordance with their utmost convenience, where ever they get the lowest price, max variety, and a good consumer experience.

The Industrial policy 1991 had crafted a trajectory of change whereby every sectors of Indian economy at one point of time or the other would be embraced by liberalization, privatization and globalization. FDI in multi-brand retailing and lifting the current cap of 51% on single brand retail is in that sense a steady progression of that trajectory. But the government has by far cushioned the adverse impact of the change that has ensued in the wake of the implementation of Industrial Policy 1991 through safety nets and social safeguards. But the change that the movement of retailing sector into the FDI regime would bring about will require more involved and informed support from the government. One hopes that the government would stand up to its responsibility, because what is at stake is the stability of the vital pillars of the economy-



retailing, agriculture, and manufacturing. In short, the socio economic equilibrium of the entire country.

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## HERITAGE TOURISTS' ATTITUDE: A CASE STUDY OF KOLKATA REGION

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### **ABSTRACT:**

*Heritage tourists are the tourists who like the heritage product. The main aim of this paper is to find out the reasons by which tourists are travelling to the different destinations. Another aim of this paper is to understand the attitude of the heritage tourists at destinations. If marketers know the attitudes of the tourists, marketers of the heritage tourism may make their strategy to fulfil the demand of the tourists, as a result, markers and tourists both will be benefitted and resource will be used effective and efficient way. To conduct this project, survey method was used and questionnaires were the main tools to collect the data from Primary sources.*

*Key words: Heritage Tourist, Heritage, Built heritage, Cultural Heritage, Natural Heritage, heritage Tourists' Attitude*

### **1. INTRODUCTION:**

Heritage is defined by scholars in different ways. Heritage means a situation where a history is present according to its own unique activity. Heritage includes such type of situation where a nation can indicate her as an identity of the resources. Oxford Dictionary's definition of the term tends to be deceptively straightforward. It says that is inherited lot, the condition of one's birth; anything transmitted from ancestor or past ages is heritage. Although the world heritage has been in existence for a long time, its usage in the present context is relatively recent, and is subject to a variety of presentation and interpretation. Heritage items are belonging in the prospect of tourism. Therefore, the appropriate measures should be taken into consideration which may be managed by the competent authorities. Heritage activities are the part of development, which may run and managed by tourism department of a nation. Heritage sites are precious for a country in tune with the policy of the nation.

The 1983 National Heritage Conference (USA) defined heritage as, " that which a past generations has preserved and handed on to the present and which a significant group of population wishes to hand on to the future" ( Hewison, 1989, P-6). This definition indicates culture choices its focus is on preservation and the fact that some people will adopt a conservation view heritage.

Heritage places are pivotal components of many forms of tourism. Visiting natural and cultural heritage places can be part of a range of activities undertaken by tourists or it can be the sole reason for travel. Specialist tourism ventures, whether nature-based, adventure, indigenous, historic, and cultural or ecotourism, all rely strongly on heritage and heritage places.

Heritage plays the role of a carrier of historical values from the past (Leslie David, Sigala Marianna 2005). Heritage can be tangible, intangible, cultural and natural manifestation of our history charting human evolution. According to UNESCO(2008) cultural heritage includes monuments, groups of buildings and sites with historical, aesthetic, archaeological, scientific, ethnological or anthropological value like those buildings, artifacts, structures, areas and

precincts and natural heritage refers to outstanding physical, biological and geological formations and areas with scientific, conservation or aesthetic value etc. Heritage tourism offers opportunity to portray the past in the present.

The Central Government protects Historical and Archaeological monuments which are 100 years old through Archaeological Survey of India (ASI) and these monuments are national importance as per Govt. notifications. State Governments are also protecting monuments through their respective departments of Archaeology. However, existing legislation covers about 5000 monuments to be looked after by the central Government and approximately 3500 including other heritage buildings by states. Several sites are neither covered by the Central nor does state Governments still remain unprotected and neglected. However, we are fortunate enough as 28 World Heritage sites which are declared by World Heritage centre by UNESCO are located in the Country.

Tourism is one of India's largest and fastest growing industries. It makes an important contribution to rural and regional economies throughout India, embracing a diverse range of service providers including accommodation, transport, hospitality and tour operators etc.

Experience in India and overseas shows the value of improving links between tourism and heritage places- as the quality and diversity of tourism product improves, heritage places are better cared for and regional development is stimulated.

Heritage tourists include travellers who incorporate at least one visit to a historic site or landmark among other activities, and also the smaller subset of visitors whose primary reason for travelling is to visit historic places.

Heritage tourism is gaining tremendous ground in India and is an important aspect of Tourism, which affects the historic and cultural portrayal of this country. Heritage tourism is rapidly increasing due to information which is easily available through various mode of communication system due to advent of technology. Heritage tourists gather information related to heritage from various sources. The bridging the gap of qualitative information on heritage sites to proper heritage tourists is an important factor for developing the heritage tourism in India. This is the one of the actual deficiencies of heritage tourism development in India

Kolkata is not an ancient city like Delhi, with its impressive relics of the past. In fact, it is largely a British creation that dates back only some 300 years. It was the capital of British India until the beginning of the last Century. In 1686 the British abandoned Hooghly, their trading post 38 Km up the Hooghly River from present day Kolkata and moved downriver to the three small villages-Sutanati, Govindpur and Kalikata. Job Charnock, an English merchant who later married an Indian widow whom he dissuaded from committing sati( widow's act of suicide on her husband's funeral pyre), was the leader of the British merchants who made this move. At first the post was not a great success and was abandoned on a number of occasions, but in 1696 a fort was laid out near present day BBD Bag (Dalhousie square) and in 1698, the Mughal ruler Aurangzeb's grandson gave the British official permission to occupy the villages.

Kolkata then grew steadily until 1756, when Siraj-ud-daula, the nawab of Murshidabad, attacked the town. Most of the British inhabitants escaped, but those captured were packed into an underground **cellar** where, during the night, most of them suffocated in what became known as 'black hole of Calcutta.'

Early in 1757 the British, under Robert Clive, retook Kolkata made peace with the Nawab. Later the same year, however, Siraj-ud daula sided with the French and was defeated at the battle of Plassey (now Palashi), a turning point in British-Indian history. A stronger fort was built in Kolkata and the town became British India's capital.

Much of Kolkata's most enduring development took place between 1780 and 1820. British transferred the capital Calcutta to Delhi in 1911. Loss of political power did not alter Kolkata's economics control and the city prospered until after World War-II.

Partition affected Kolkata more than any other major Indian City. Bengal and Punjab were the two areas of India with mixed Hindu and Muslim populations and the dividing line was drawn through them. The result in Bengal was that Kolkata, the jute producing and export centre of India, became a city without a hinterland, while across the border in East Pakistan (now Bangladesh), jute ( a plant fibre used in making sacking and mats) was grown without anywhere to process or export it. Further-more, West Bengal and Kolkata were disrupted by tens of thousands of refugees fleeing from east Bengal, although fortunately without the communal violence and bloodshed that Partition brought to Punjab.

The massive influx of refugees, combined with India's own postwar population explosion, led to Kolkata becoming an international urban horror story. The work of Mother Teresa's Kolkata mission focused worldwide attention on the city's festering problems. In 1971 the India Pakistan conflict and the creation of Bangladesh led to another flood of refugees, and Kolkata's already chaotic condition further deteriorated.

Kolkata is the city of Palaces which has unique built heritage which is an under-utilized asset. In the Kolkata region, Chandannagar is the place where French colonial was existed. In that particular place, some buildings including heritage are also important tourism product which are also an **under-utilized** asset.

Following principles as per 'the international Council on Monuments and Sites (ICOMOS), are given below;

- I) Tourism is a strong vehicle for cultural action
- II) Since the relation between heritage and tourism is dynamic, and may involve conflicting values, conscious management in a sustainable way is responsibility of the Government.
- III) Tourism and conservation activities should benefit the host community
- IV) Tourism promotion programme should protect and enhance natural and cultural heritage characteristics.

## 2.1 Literature Review:

Heritage is treated as one of the most significant and valuable growing component of tourism. Ashworth Gregory (1988) defines that selling the past, in various forms, to the present has become one of the largest and most profitable parts of the tourism industry in many different contexts worldwide. Timothy (1997) finds that tourism serves to preserve artifacts found in many parts of the world. Historical artifacts and their association have always been one of the tourism industry's most marketable commodities. Australian heritage commission (2001) has also stressed upon the value of themes in heritage tourism. In addition to the evaluation of specific sites, there is also important value in understanding the heritage themes for areas to be considered a cultural site. Aparna Raj and Parul Parihar (2007) also find that majority of Jhansi residents are positive about the impacts of tourism on their community. Residents' participation in the planning process will enable them to express their views which are an essential element in the development of tourism in the region. Leader- Elliot (2001), gives more value to the economic benefit of the heritage tourism. They find of heritage tourism is being recognized by local communities, particularly in rural regional areas only if they get economic benefits as for some heritage tourists, specific heritage sites are their destinations; for others, heritage visitors

attractions provide a break in their journey. For local economics, this has an economic spin-off, as local businesses cater for this market by establishing visitor information centers and providing accommodation, food and other services, all of which contribute to the local economy and regional job creation. A study by Cultural Heritage Tourism Research Projects on Pennsylvania (1999) identified tourists in three different levels i.e., core heritage travellers, heritage tourism was a very important factor in their decision to visit Pennsylvania on their most recent trip, moderate heritage travelers, heritage tourism was moderately important factor in their decision to visit Pennsylvania and low heritage travelers, heritage tourism was not an important factor in their decision to visit Pennsylvania. Bill Bramwell (1998) examines how greater understanding of the satisfaction of users with the tourism products in cities and elsewhere may improve planning for the development of these products in Sheffield, U.K. Residents' views on the city's tourism products were also considered based on argument that the views of residents on tourism products should be given far more prominence than generally occurs at present.

In discussing the relationship between tourism and regional development Williams and Shaw (1995) analyses the facts that tourism has gone under the process of restructuring that has seen the development of a variety of different forms of tourism such as cultural and heritage exhibits that have different special attributes. Some of these different types of tourism benefit the core while others benefit the periphery. Chantarachoti (2005) described that in the eyes of foreigners Bangladesh is seen as a business destination rather than as a tourist destination. He blamed that though Bangladesh has its abundant potential for growth of tourism industry, it could not utilize it properly due to lack of government support.

Indian National Trust for Art and Cultural Heritage (INTACH) is an NGO who is doing to create awareness among the local resident through their activities (local resident's activity. For this purpose, INTACH is undertaking Heritage Tourism Management Plan project to protect the heritage sites as well as whole product of heritage

The above-state review brings the following observation about heritage tourism;

- Heritage has immense tourism potential and is popular world over
- Living heritage is associated with sentiments of locals and demand controlled presence of outsiders.
- Interpretation of heritage in right perspective is important.

## 2.2 Past studies about Heritage

Sl. No	Name of the resource persons and year of publication about their views	Views regarding heritage
01	Hewison (1989)	Heritage tourism can be seen as heritage is derived from past images of history translated into reality.
02	Ashworth and Godall (1990)	Heritage tourism can be seen as emotions such as nostalgia, romanticism, aesthetic pleasure and a sense of belongingness towards the time and space of a particular historic event or episode.
03	Zeppel and Hall	Heritage tourism can be seen as a form of specialty

	(1992)	travel, based on nostalgia of the past and the desire to experience diverse cultural landscapes.
<b>04</b>	Prentice (1993); Carter and Horneman (2001)	Heritage tourism can be seen as landscapes, natural history, buildings, artefacts, cultural traditions passed on from generation to the next in the form of a tourism product (build, natural or cultural heritage product).
<b>05</b>	Sharpley (1993)	Heritage tourism can be seen as everything associated with the nation's past inherited history, culture, wildlife and landscape.
<b>06</b>	Peterson (1994)	Heritage tourism can be seen as visiting areas or sites that make visitors think of an earlier time.
<b>07</b>	Lane (1994)	Heritage tourism can be seen as one of the activities of rural tourism.
<b>08</b>	Fyall and Garrod (1998)	Heritage tourism can be seen as economic activity driven that makes use of socio-cultural assets to attract tourists and visitors.
<b>09</b>	Poria et al. (2001, p.1047)	Heritage tourism can be seen as heritage activities to be perceptions and motivations of tourists and visitors rather than a specific site or attribute of the actual site itself.
<b>10</b>	Graham (2002)	Heritage tourism can be seen as sites or activities associated with the past, which is selected in the present for contemporary purposes.
<b>11</b>	Howard (2003).	Heritage tourism can be seen as anything that some one wishes to conserve or collect, and to pass on to future generations
<b>12</b>	Timothy and Boyd (2003)	Heritage tourism can be seen as representing some sort of inheritance to be passed down to current and future generations.
<b>13</b>	Hitchcock and King (2003)	Heritage tourism can be seen as narrow and broad definitions. From a narrow perspective of heritage definition, it looks at what sites or areas that may be inherited. A broader definition relates heritage tourism as notions of activities relating to ethnicity, nationalism and global identity.
<b>14</b>	Tourism Australia	Heritage tourism can be seen as tourists participating in

	(2009)	at least one of the following activities: attend theatre, concerts or performing arts; visit museums or art galleries; visit art, craft workshops; attend festivals, fairs or cultural events; experience aboriginal art, craft and cultural displays; visit an aboriginal site or community; and visit heritage buildings, sites or monuments.
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### 3. Objectives of the study

The study is proposed with following objectives:

1. To find out the attitude of the Heritage tourists
2. To study attitude along with satisfaction level of current tourists with the existing tourism attraction in the region.
3. To study opinion of residents towards tourism with respect to potential for tourism development in the region.
4. To suggest strategy for Kolkata's heritage tourism resources.

### 4. Hypothesis

It is hypothesized that:

1. Majority of tourists come for heritage tourism in Kolkata region
2. Less number of heritage sites negatively affects tourist's attitudes, satisfaction level and behaviours.
3. Residents' are not positive about development of heritage tourism in their region.
4. Planning, development and management of heritage tourism in Kolkata region is not satisfactory.
5. Current marketing strategy is simply ineffective

To achieve the objectives and test the hypothesis, specific research methodology is applied for this project.

### 5. Research Methodology

#### 5.1. Study Area

The Research area of this study is Kolkata Region. **Bank of the Ganges** (Natural Heritage), two heritage buildings i.e., **Victoria Memorial Hall** ,**2. Belur Math** (Built heritage) from Heritage Buildings list of Kolkata Municipal Corporation which is the authority to prepare the list as per criteria & **Durga Puja** (**Cultural heritage**) are the main heritage product in this project.

#### 5.2 Study Design

##### 3.2.1 Sample and sample size

The direct and indirect respondents of heritage products in Kolkata region are the sample units of this project. Charts about sample units and sizes are given below.

Sample unit	Sample size ( Number of Respondents tentative)
Tourist i) Domestic	24 03
ii) International	

iii) Student	25
Service Providers	
i) Travel agency	05
	04
ii) Tour Operator	04
	03
iii) Guide	06
	12
iv) Escorts	
v) Hoteliers	07
vi) Transporters including Rickshaw pullers	
vii) Caterers including roadside food seller	
Local residents	30
Others:	
i) Touts	04
ii) Brokers	05
iii) Artist	09
iv) Performers	04
v) Musicians	06
vi) Employees of Heritage Buildings	
vii) Devotees of Durga Puja	12
	30
Total	193

### 5.2.2 Sampling time

The sampling time of this project was from January, 2012 to 31<sup>st</sup> October 2012. Survey was conducted twice in a week at three different places where tourists are frequently visited. But in Durga Puja, the survey was conducted all days from 10 A.M. to 10 P.M. Distribution of questionnaires was carried out only during the day time from 11 A.M to 4 P.M. except Durga Puja, in Puja Questionnaires were distributed upto 10 P.M

### 5.2.3 Sample collection Method and Tools (instruments)

Survey method was used to collect the data from primary sources for this project. Questionnaires were tools under survey method were used.

1. Which heritage destinations have you visited before or intend to visit? Why?
2. Are there any Heritage destinations that you would not consider visiting? why?
3. Who are the important people whose opinions you value in the context of heritage tourism?
4. What factors make it difficult or impossible for you to engage in Heritage tourism
5. What are the unique features of the heritage at Kolkata that you are attracted?



6. How are influenced to visit to Kolkata?

7. What are the influencing factors by which you are attracted to visit Kolkata region?

Questions No. 1 & 2 were designed to capture the attitudes of tourist who are interested to know the heritage. Question No. 3 was designed to capture the subjective norms variables and Question No. 4 was designed to appraise the perceived behavioral control variable. Question No. 5 designed to capture main attraction in Kolkata for tourism purpose and their special features. Question No. 6 & 7 designed to capture the influencing factors and way. 197 respondents were approached for written survey and 163 respondents out of 197 agreed to participate to respond above-stated questions. The response rate was 82.74%. 10 tourists were approached to answer 07 questions under long interview condition. These face to face were informal, unstructured and taped. The tapes were analyzed to identify recurring themes and provided preparation for the focus group session.

The main reasons by which tourists are not interested to visit to Kolkata, these are:

1. Boring and not interested
2. Poor supporting facilities
3. Lack of proper infrastructure for tourism

Eight positive points were identified, these are:

- i) Famous reputation site at the British colonial period
- ii) Well knowledgeable service staff
- iii) Limited life span of Built heritage, natural Heritage and cultural heritage
- iv) Cooperation of the local people
- v) Well connection of road transport, railway, air and water transport
- vi) Location of the heritage buildings
- vii) Rich history of the heritage of Kolkata
- viii) Educational value of the heritage

Reference group were taking difficulties during their tour in Kolkata, which are given below.

1. lack of information
2. Lack /poor accommodation facilities for middle class people
3. Financial cost
4. Less number of service providers provide heritage tour to Kolkata

Result suggests that tourists are motivated to go to Kolkata for different purpose (annexed in appendix 1). Educational value of heritage was found to be most stimuli to visit Kolkata. Positive feed-back from previous tourists and famous reputation of the Kolkata are the stimuli to the heritage tourists. This shows that the strongest motivator to visit heritage site is to explore and gain new knowledge (Masberg and Silverman,1996). Reasons why tourists avoid visiting heritage destinations were because they have been there before, poor supporting facilities and lack of interest. This shows that parents have different attitudes towards visiting a heritage destination. This is in support of prior findings by Khalek et al.(1997) and Chen 1996) who reported that some tourists do hold bipolar attitudes and can have contradicting attitudes towards heritage tourism.

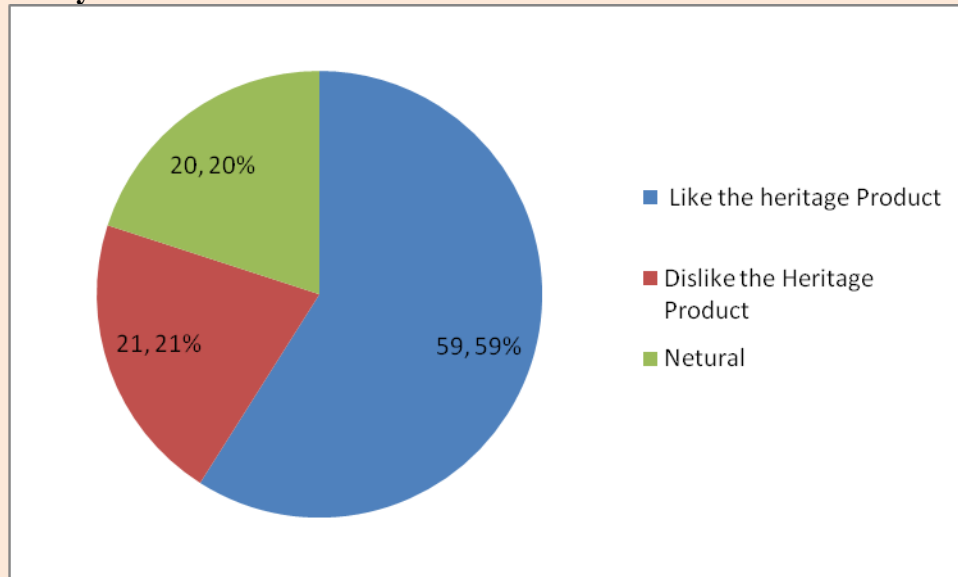
#### 5.2.4 Incentive to the sample units

Rasagulla (Kolkata), sweet curd, soft drinks, Potato-chips were incentives to International tourists, Domestic tourists, Travel Agency and others respectively to conduct the survey of this project and were asked to participate the survey.

#### 5.2.5. Pretest of the Survey Instrument

The survey instrument was revised, and to strengthen its validity, the questionnaires were circulated to 15 Post graduate students of Tourism Management of IGNOU at Kolkata. Based on the feedback received from pretested sources, the questionnaire was modified. The main purpose of the pre-test was to validate the questions of the study.

#### 5.2.6 Data Analysis



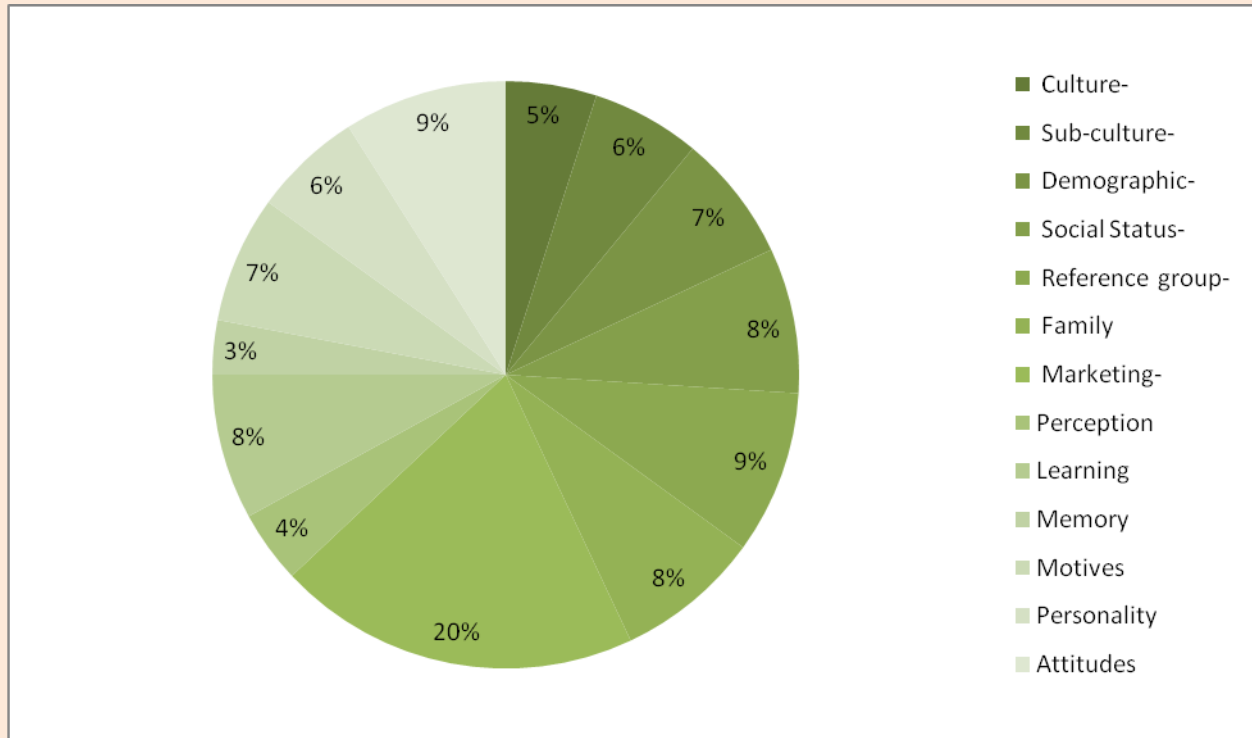
**Like and Dislike percentage of the Heritage Product**

External influences of Heritage Tourism in Kolkata are;

1. Culture- 5%
2. Sub-culture- 6%
3. Demographic- 7%
4. Social Status- 8%
5. Reference group- 9%
6. Family -8%
7. Marketing- 20%

Internal Influences of Heritage heritage Tourism in Kolkata are:

8. Perception 4%
9. Learning 8%
10. Memory 3%
11. Motives 7%
12. Personality 6%
13. Attitudes 9%



**Details percentage of influences of Heritage Tourism in Kolkata**

## 6. Expected contribution (Significance of present study)

The study is justified on the basis that it may provide several benefits to heritage destinations. The contribution to the field is three-fold.

- First, comprehending what tourists seek at heritage attractions. It may help tourism marketers to understand their customers better.
- Second, identifying which attributes satisfy tourists who visit heritage destinations.
- Third, knowing what is the attitude of the residents towards tourists who visit their place of residence. It could help tourism planners develop strategies to attract customers and maintain the destination's sustainability.

## 9. Direction for Future Research:

- This research study on Heritage tourists' buying decision is perhaps first to its kind in India, will positively be of huge benefit to different service providers' organization in both Public & Private sector in India.
- This study will help further research on Heritage tourism.
- Organizations in the field of service providers of Travel and Tourism shall be benefited by using the findings of this research study for future Research on Heritage tourism in India.

## 10. Limitations

The researchers foresee the following limitations in the study with suggested design.

- As one of the major data collection methods is by filling a questionnaire from the tourists and , there can be no conclusive proof to ascertain the authenticity of the data.
- To receive adequate response, tourists below 15 years of age will be omitted.

3. The researcher will have to evolve his own financial sources as no outside help is available.

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## Appendix-1

### Results and discussion:

Elicited salient beliefs and brand image association (n=193)

Elicited beliefs	Frequency	Brand association	Image

<u>Positive attitude</u>		
Educational Value	75	Experimental
Positive feedback from previous tourist	48	Symbolic
Famous reputation site	54	Brand Attitude
Well Knowledgeable service staff in Kolkata	32	Experimental
Limited life span in Kolkata	29	Functional
Beautiful scenery /environment. Heritage buildings	39	Functional
Eco-tourism reason in Kolkata	2	Brand Attitude
Not been there before	8	Symbolic/experimental
Social class status reason	18	Symbolic
<u>Negative Attitudes</u>		
Been there before	71	Symbolic/Experimental
Boring/ not interested	34	Brand Attitude
Poor supporting facilities	78	Functional
<u>Subjective norms</u>		
Online discussion boards/websites	09	N/A
Friends/ relatives	56	N/A
Other tourists	45	N/A
Tourism Authorities	15	N/A
Accommodation employees/Owner	08	N/A
<u>Perceive difficulties</u>		
Lack of proper information	78	N/A
Lack of modern amenities	65	N/A
Dangerous terrain	18	N/A
Lack/poor accommodation for budget tourists	38	N/A

## KNOWLEDGE AND INFORMATION MANAGEMENT: EFFECTIVE SYSTEM FOR ORGANIZATIONAL GROWTH

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### ABSTRACT

*Knowledge Management is necessary in organizations to enhance competitive advantage and decision making. Through Knowledge Management, we can share, develop and apply this knowledge for organizational growth. The purpose of paper is to elicit knowledge from the information collected from faculty and students of learning institutions, academies so that in-house training on skills required for training purpose can be planned. The objective is to identify the type of skill required by potential candidates based on IT industry need, resources in terms of skilled trainer available to train students. Another aspect is to identify the gap of skill required, skill available for training and to identify, plan the area where in-house training is required for faculty members.*

**Keywords:** Knowledge, Skill, Information, In-house trainings, Information, Organization.

### I. INTRODUCTION:

Knowledge Management is recognized at the enterprise level and is helpful for decision support system [1]. According to Petersen and Poufelt, Knowledge management (KM) is about developing, sharing and applying knowledge within the organization to gain and sustain a competitive advantage. Human resource management (HRM) is integrated with Knowledge Management. Strategy, selection and hiring, training, performance management, and remuneration work as motivational factors for the creation and distribution of knowledge within firms [2]. ICT (Information and communication technologies) plays important role in knowledge sharing. Regular advancements in Information technology and systems drive the organizations. [3]. According to Handzic et al., knowledge resources should be utilized effectively by organizations to survive in extremely competitive environment. Knowledge Management involves the process of collection and integrates knowledge to increase competitiveness [4].

#### A. Types of Knowledge:

**Explicit Knowledge:** Explicit knowledge is considered to be formal and objective, and can be expressed unambiguously in words, numbers and specifications. Hence, it can be transferred via formal and systematic methods in the form of official statements, rules and procedures and so is easy to codify. According to Brown & Duguid, this type of knowledge is formalized and codified, and is sometimes referred to as “know-what”. This is the type of knowledge most easily



handled by KMS, which are very effective at facilitating the storage, retrieval, and modification of documents and texts.

**Tacit Knowledge:** is subjective, situational and intimately tied to the knower's experience. Thus, it is difficult to formalize, document and communicate to others. It is sometimes referred to as "know-how" and refers to intuitive, hard to define knowledge that is largely experience based. Because of this, tacit knowledge is often context dependent and personal in nature. According to Nonaka, it is hard to communicate and deeply rooted in action, commitment, and involvement [5].

#### B. Knowledge and Information Management System Approach:

A Knowledge Management approach is the conscious integration of the people, processes, and technology involved in designing, capturing, and implementing the intellectual infrastructure of an organization. It encompasses not only design and implementation of information systems but also the necessary changes in management attitudes, organizational behavior, and policy. It is what enables people within an organization to develop the ability to collect information and share what they know, leading to action that improves services and outcomes. A Knowledge Management and Information System approach can be used to provide educational institutions with a method to focus their strategies and practices, making best use of their energies and resources. This approach provides a framework that can be used to focus attention on three specific areas-people, processes and technology-as a way to illuminate and address organizational obstacles regarding issues of information use and access. Each of these three areas functions as an integral part of the ongoing organizational dynamics, and institutions need to devise strategies to determine how the organization's structures and institutional processes can give shape to how people use both technology and information systems in meeting their information needs. The basis of Knowledge Management and Information Systems is a process of shaping, supporting, and managing this endeavor through a delicate balance among attention to organizational processes, the people who partake in them, and technology investments.

#### C. Information Systems:

An Information System is an arrangement of people, data, processes, interfaces, networks and technology that interacts to support and improve both day-to-day operations in a business as well as support the problem-solving and decision-making needs of management. An information system collects, processes, analyzes and disseminates information for a specific purpose. Due to the rapid advancement in technology, our society has changed from an industrial to an information society. Information is an important resource just like any other physical resource such as men, materials, machines and money. Today Information systems are the back-bones of any organization. Information Systems have created such an impact on the organizations that it has almost become impossible for organizations to survive without an information system.

## II. ROLE OF KNOWLEDGE MANAGEMENT IN ORGANIZATIONS:

The information collected through primary and secondary data can act as input and that information is processed through computerized way, database is collected and makes it available to top management as well training officers for effective decision making related to training and software development. It acts like creating an expert system computer programs that include

such knowledge are called knowledge-based system and it is used to create knowledge Repository which involves finding and collecting internal knowledge and best practices. Some of the knowledge is collected through presentations, report, Detailed Project Reports and other knowledge is discovered through discussion.

**Improve Knowledge Access:** It involves determining ways to facilitate finding the person with the required knowledge and transferring the knowledge to another person. It becomes very helpful in conducting in-house training as it decreases our dependency on a single resource person.

**Enhance Knowledge Environment:** Employees should be encouraged to share knowledge as well as reuse existing knowledge. Coaching and training in learning and sharing practices will probably be necessary.

### III. ROLE OF MANAGEMENT INFORMATION SYSTEM IN ORGANIZATIONS:

Management Information System in organization aims at supplying information from the processed data to various cadres of management like Branch Managers, Training Officers to support their decision making process. The use of computers for processing of data actually started with data processing. These systems are designed for providing information to the key functionaries in an organization. The information can be collected through questionnaires; feedback forms, group discussions among staff members. These systems make use of this data and generate information reports after processing data. Formal information system is followed in organizations where all those who are using information are authorized to use it and is also responsible for dissemination of specific information. Formal information systems follow the hierarchical structure of the organization. Computerised information systems are developed and utilized to increase in-house capability. It results in better decision making as it depends on the vital input of information so as to support the functions that a manager performs. The information systems make use of resources such as hardware, software, men and as well as procedures. Information could be defined as a set of facts, figures, information collected from men for the current decision making situation. The information systems are designed for the job positions rather than for individuals. Regardless of who is the individual holding the job position, the information systems are designed keeping in mind the job responsibilities that the individual is supposed to perform and depends upon the information needs of the individual in the organizational hierarchy. Information can be integrated by way of databases. The redundancy in storage of data, processing of data and generation of reports is avoided by way of integration of information systems. This information system becomes helpful for supplying information to managers in different functional areas like marketing, finance, production, personnel, materials etc. This information systems are facilitated with electronic equipment such as computers.

### IV. RESEARCH METHODOLOGY:

Questionnaire, Feedback Forms, Delphi Techniques, Group Discussions are various methodologies for collecting data. Apart from it, there are journals, magazines, surveys of government organizations and agencies.

In Section A, there is sample questionnaire to gather information and opinion from students on teaching methods and programmes. It acts as the primary data for effective decision making in Academic Institutions.



methods for collection of data which includes primary and secondary methods are discussed. Questionnaires and feedbacks collected from employees, students and trainers become primary data. Collections from journals, research papers, conferences become secondary data. This data can act like an Expert System. These methods are also helpful in forecasting about the changing scenario in technologies. But for making this approach successful and to increase its scope, students, employees of other institutions, universities can be involved.

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## CONSUMER KNOWLEDGE AND PERCEPTION OF MUTUAL FUNDS IN DEHRADUN

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### ABSTRACT

*Mutual funds is an investment vehicle which have become a favorite of millions of people all over the world. Wealth creation over the years has changed its avenues and area of interest for the investors in India also. The prototype investment where the post offices and typically the scheduled banks through savings and fixed deposits have changed and with the awareness of finance, Mutual fund has become an excellent route to create wealth for the public at large.*

*“Mutual fund is a pool of money is invested in accordance with the common objective stated before the investment to the investors.”*

*Here is the concept of mutual fund which is a suitable for the common man as it offers an opportunity to invest and diversified, professionally managed basket of securities comparatively at low cost. The investors pool their money to the fund manager and the fund managers invest the money in the securities and after generating returns passed back to the investors.*

*The study examines the **consumer knowledge and perception of mutual funds in Dehradun**. The study covers the working of mutual funds and it also provides the broad picture of mutual funds in the mind of the investors.*

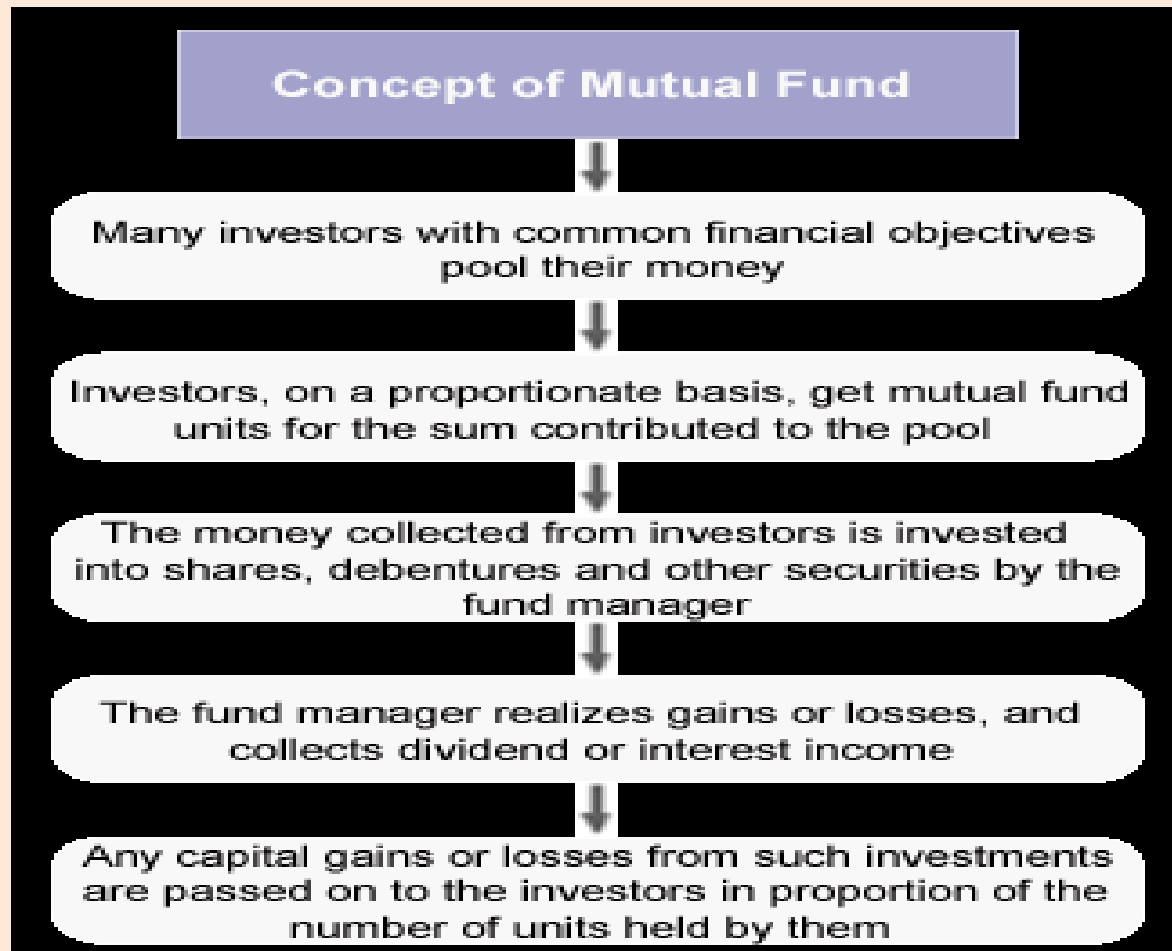
### INTRODUCTION

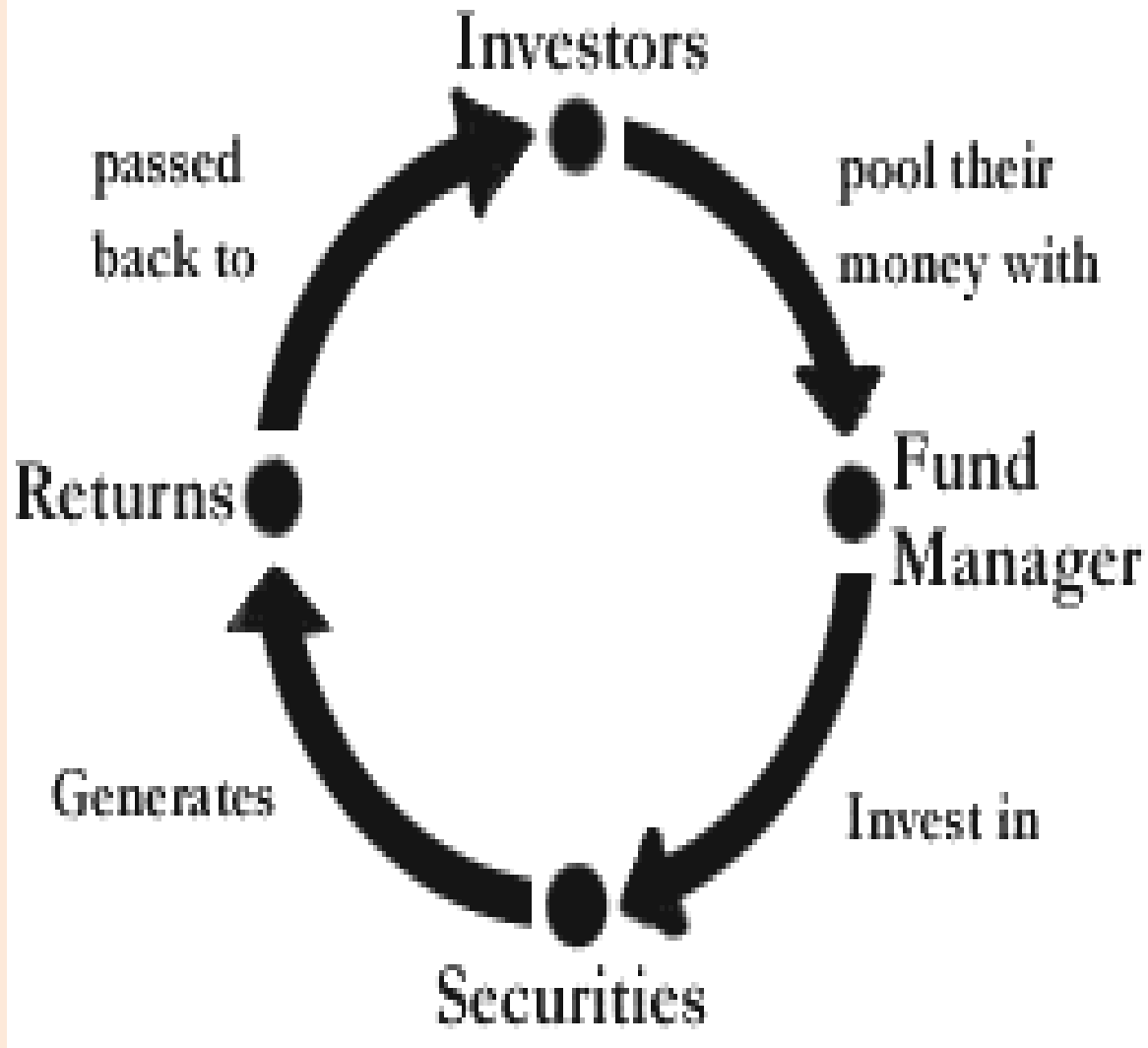
The mutual fund industry in India started in 1963 with the formation of Unit Trust of India, at the initiative of the Reserve Bank and the Government of India. The objective was to attract small investors and introduce them to market investments. Since then, the history of mutual fund in India can be broadly divided into three distinct phases. Phase 1- 1964-1987 (Unit Trust of India) An Act of Parliament established Unit Trust of India (UTI) on 1963. It was set up by the Reserve Bank of India and functioned under the Regulatory and administrative control of the Reserve Bank of India. In 1978 UTI was de-linked from the RBI and the Industrial Development Bank of India (IDBI) took over the regulatory and administrative control in place of RBI. The first scheme launched by UTI was Unit Scheme 1964, followed by ULIP in 1971, CGGA 1986 Mastershare 1987. UTI was the only player in the market enjoying the monopoly. At the end of 1988 UTI had Rs.6, 700 crores of assets under management .It was huge mobilization on funds.

So, Unit Trust of India was the first mutual fund set up in India in the year 1963. In early 1990s, Government allowed public sector banks and institutions to set up mutual funds. In the year 1992, Securities and exchange Board of India (SEBI) Act was passed. The objectives of SEBI are – to protect the interest of investors in securities and to promote the development of and to regulate the securities market. As far as mutual funds are concerned, SEBI formulates policies and regulates the mutual funds to protect the interest of the investors. SEBI notified regulations for the mutual funds in 1993. Thereafter, mutual funds sponsored by private sector entities were allowed to enter the capital market. The regulations were fully revised in 1996 and have been amended thereafter from time to time. SEBI has also issued guidelines to the mutual funds from time to time to protect the interests of investors. All mutual funds whether promoted by public sector or private sector entities including those promoted by foreign entities are governed by the same set of Regulations. There is no distinction in regulatory requirements for these mutual funds and all are subject to monitoring and inspections by SEBI.

Mutual fund is a pool of money collected from investors and is invested according to certain investment options. A mutual fund is a trust that pools the saving of a no. of investors who share a common financial goal. A mutual fund is created when investors put their money together. It is, therefore, a pool of investor's fund. The money thus collected is then invested in capital market instruments such as shares, debentures and other securities.

The income earned through these investments and the capital appreciations realized are shared by its unit holders in proportion to the no. of units owned by them. The most important characteristics of a fund are that the contributors and the beneficiaries of the fund are the same class of people namely the investors. The term mutual fund means the investors contribute to the pool and also benefit from the pool. The pool of funds held mutually by investors is the mutual fund. A mutual fund business is to invest the funds thus collected according to the wishes of the investors who created the pool. Usually the investors appoint professional investment managers create a product and offer it for investment to the investors. This project represents a share in the pool and pre status investment objectives. Thus, a mutual fund is the most suitable investment for a common man as it offers an opportunity to invest in a diversified, professionally managed basket of securities at relatively low cost.







## REVIEW OF LITRATURE

Literature on mutual fund performance evaluation is enormous. Herewith some of the research studies that have influenced the preparation of this study substantially are discussed in this section.

1. The Research “A study on Analysis of the performance of mutual fund with reference to HDFC” was done by Prasath.R.H in Anna University (2009) . The study is trying to emphasize the core values of mutual fund investment, benefits of mutual funds, types of mutual funds, etc., The study is going to be conducted by taking the NAV values of different types of HDFC mutual fund products. The study concludes that before choosing the mutual fund scheme, the investor should undergo fact sheet thoroughly and he has to choose the best one by calculating Sharpe Ratio, Treynor Ratio, Jensen Ratio, IR Ratio and NAV calculation. If the investor finds difficulty of getting  $R_p$ ,  $R_f$ , Standard deviation, and Beta parameters, NAV calculations are the best alternative to assess the performance.

The Research on “Performance Evaluation of Indian Mutual Funds” was done by Dr S Narayan Rao in IITB (2002) . The Study is conducted to understand whether most of the mutual fund schemes were able to satisfy investors expectations by giving excess returns over expected returns .The objective of this study was to evaluate the performance of Indian Mutual Fund Schemes during bear market through relative performance index (RPI), risk- return analysis, Treynor ratio, Sharpe ratio, Sharp measure, Jensen measure, and Fama measure .The research study concluded that out of 269 schemes, 49 were under performers, 102 were par performers and 118 were out performers of the market and Medium Term Debt Funds were the best .It was also concluded that 58 of 269 open ended mutual funds have provided better returns than the market during the bear period of September 98-April 2002. Some of the funds provided excess returns over expected returns based on both premium for systematic risk and total risk.

The research “Characteristics and Performance Evaluation of Selected Mutual Funds in India” was done by Sharad Panwar and Dr. R. Madhumathi , in IIT, Madras (2005). The objective of the study is to identify differences in characteristics of public-sector sponsored & private-sector sponsored mutual funds and to find the extent of diversification in the portfolio of securities of public-sector sponsored and private-sector sponsored mutual funds and to compare the performance of public-sector sponsored and private-sector sponsored mutual funds using traditional investment measures.

The study found that public-sector sponsored , private-sector Indian sponsored and private-sector foreign sponsored mutual funds do not differ statistically in terms of portfolio characteristics such as net assets, common stock%, market capitalization, holdings, Top Ten %. Portfolio risk characteristics measured through private-sector Indian sponsored mutual funds seems to have outperformed both Public- sector sponsored and Private-sector foreign sponsored mutual funds.

4. The research “Fund Performance measurement without benchmark – A case of selected Indian Mutual funds” is complete by Mr. Kaushik Bhattacharjee and Prof. Bijan Roy in ICFAI University (2008). This study is actually a replication of the study conducted by Grinblatt & Titman and calculates PCM for a sample of 50 Indian mutual funds over a period of 26 months, with a view of validating their study in the Indian context. To understand whether or not the selected mutual funds (hence forth called funds) are able to outperform the market on the average over the studied time period. The study concluded that there are positive signals of

information asymmetry in the market with mutual fund managers having superior information about the returns of stocks as a whole. For assessing the true performance of a particular mutual fund, a longer time horizon is better.

## OBJECTIVE OF THE STUDY

- 1) To know various factors considered by the customers while going to invest in the mutual fund.
- 2) To study the working of mutual fund.
- 3) To study the characteristics of mutual fund which attracts the customers?
- 4) What an investors consider for safe investment and better returns.

## RESEARCH METHODOLOGY

The study is based on both primary and secondary data .primary data was collected through the survey in which questionnaire was prepared. The secondary data from historic literature and other information regarding the company profile and strategic planning were taken from secondary sources like bank bouchers ,staff and through websites.

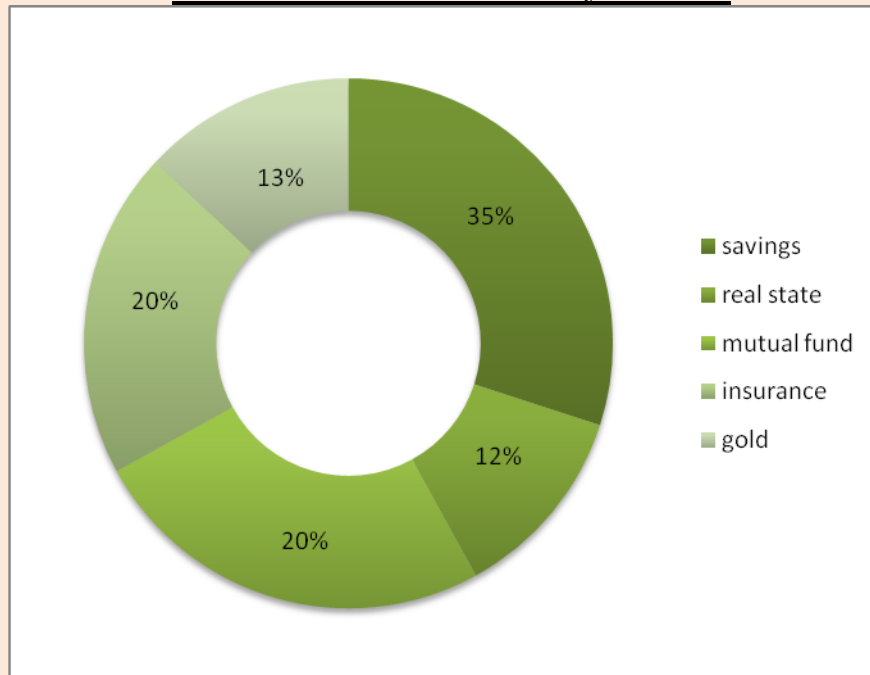
## ANALYSIS AND INTERPRETATION

### 1. Financial condition of the Investors :-

According to their responses, we analyzed that 60% sample population come under the slab of 1 lac to 3 lac who are interested mostly in saving account, and deposits and other 40% sample population comes above 3 lac slab who are interested in every type of investment which give them higher return and save tax.

### 2. The average time taken by investors in framing investments:-

The results clearly highlight that a major proportion of the sample are long term investors and seek the returns to grow over a period of time to give them suitable returns. People who are short-term investors (10%) are basically those investors, who engage in quick returns from the equity markets.

**3. Investment avenues chosen by investors:-**

The results show that the maximum percentage of the sample has their investments in savings a/c, PPF & FD'S. This clearly underlines the fact that most Indians are inclined towards investing in safe investment avenues, which are backed by government and offer suitable returns over a period of time. Thus, Indians are conservative investors by nature. 35% of the sample had invested in savings. Only 20% of sample had invested in insurance sector and 20% in mutual funds. Most people who invest in mutual funds are professionals, who have awareness about their benefits and are well versed with these investments but the fluctuation on market from last times encourage people to invest in gold and real state who give him good return in comparison market and savings so people attract on these investment alternatives now a days.

**4. Criteria which investor keep in mind while doing investment :-**

Most of the individual are interested in the returns from the investment no matter how that happens. Many individual also give importance to the time duration till they have to invest. Very moderate individuals are interested to take tax benefits.

**5. Expectation of return by investors while making investment:-**

The study shows that more than 22% of the sample expects their returns to be between 8% - 15%. The fact is that the fixed securities give a return of just about 10%. To get better results one has to invest in riskier avenues. These avenues are equity, mutual funds etc. thus, as the expectations are rising, more and more people are heading towards equity markets. The people who expect more than 15% are 78% of sample size, aggressive investors and represent the young professionals in the sample. They are ready to take risks and thus, expect high returns on their investors. The attitude of most of the investors is changing towards the financial markets due to robust growth and norms of SEBI. There is a growing investor trust in the markets.

**6. Managing of the funds by investors**

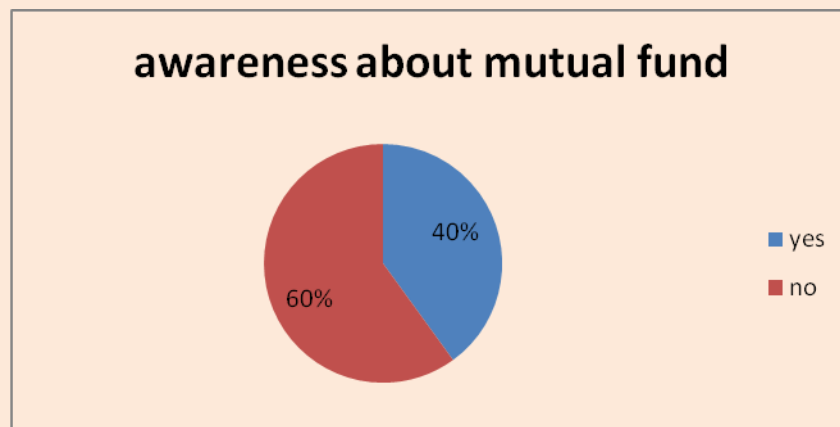
The results show that 27% of the sample do whatever their friends or family say or advice them upon. Due, to the strong family values in India, people undertake advice from their family and

friends before investing in any asset. These people are usually aged between 40- 56 yrs in the sample. This may be the helpful, but one must park their finances only when they have analyzed the instrument efficiently, after knowing the pros and cons.

27% people in the sample rely on their own knowledge and they are usually professionals who are well versed with the financial markets or are conservative in nature. 21% of the sample takes help from information available on Internet and other literature. These are sound investors mostly investing in equity markets. Websites of various financial services companies and newspapers are the important sources of information.

The study shows that 46% of the sample is having a professional financial planner for their help. In this 46%, 80% are servicemen, 10% are housewives, 5% are businessmen and 5% are senior citizens who rely on the service of professional financial planner.

### 7. Awareness of mutual funds among investors:-



The result is not very positive approximately 40% respondents are aware about the mutual funds and remaining doesn't know about it.

### 8. Perception of investors about mutual funds:-

35% of the respondents think that mutual fund give high returns with moderate risk.

### 9. Investment owned by any investor:-

30% sample population own mutual funds of different fund houses. This clearly highlights that the awareness is increasing but many people think that bank fix deposits are secure than mutual funds because market is uncertain and the risk of people in investment is more.

## CONCLUSION

The following conclusions may be drawn on the basis of this study:

- i- Investors like to invest according to their financial conditions/position.
- ii- Most of the investor like to invest in long term.
- iii- Investors are inclined towards investing in safe or risk free investments like saving accounts,PPF and FD's.
- iv- Investors are interested in fixed returns on their investment.
- v- Investors are mostly influenced by their friends and family members etc .
- vi- Awareness of mutual funds is very low among the investors

vii- Most investors perceive that mutual funds will give higher returns.

viii- Investors like to do investment in risk free return on investment.

## RECOMMENDATIONS

Based on the analysis, results and conclusions of this study the following recommendations are made, which will be helpful to the investors.

- The investors don't have proper knowledge about mutual funds which should be provided to them by the concerned firms.
- Investors should have awareness about the mutual funds.
- The investors should get good return on their investment.
- The investors should not get influenced by their family members or friends infact they should make their own decision after studying different funds.
- Investor before investing must take help from the authorized person.

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## ENTREPRENEURSHIP DEVELOPMENT IN SMALL AND MEDIUM SCALE INDUSTRIES IN UTTARAKHAND

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### ABSTRACT

*In this study we will focus on entrepreneurship development within the, Small and Medium Enterprise (SME) sector in Uttarakhand. The SME sector has often been termed the 'engine of growth' for developing economies. Over the last few years, there have been major policy changes at the federal and state level aimed at consolidating and developing this sector. The SME Development Act of 2006 is perhaps the most crucial of these recent policy changes.*

*The study examines the entrepreneurship development in small and medium scale industries in Uttarakhand. The study further covers the Development of SMEs in Uttarakhand especially it is focused on Industrial Policy, Industrial profile of Uttarakhand and Small-Scale Industries and employment.*

### INTRODUCTION

In recent years, Uttarakhand has emerged as one of the most attractive industrial destinations in India. The government is encouraging private participation in all industrial activities and as a result big players such as HLL and Dabur have set up units in the state. The New Industrial Policy announced in 2003 by the state government puts in place the regulatory framework for Uttarakhand's industrialisation. The New Industrial Policy indicates that private resources may be tapped while promoting integrated Industrial Estates in Uttarakhand.

State Uttaranchal is a land of scenic beauty, temples, lakes, mountains, glaciers and green lush meadows. Therefore the main industry of this state is tourism industry and it had almost 80% of U.P.'s tourism centres in it before it became a separate state. But the tourism industry of Uttaranchal is lagging behind in the lack of good infrastructure and facilities. The govt. has also not given proper attention to this sector. We hope the state Govt. will take appropriate action to boost this sector and one day Uttaranchal will become a major tourist destination in all over India. Although some other revenue earning sectors of state Uttaranchal are:

#### Industrial sector

- Sugar Mills
- Cloth Mills
- Paper Mills
- Flour and Rice Mills
- Pharmaceuticals
- Mentha Oil Units

- Stone Rolling Mill
- **Agricultural Sector s**
  
- Dairy Products
- Production Of Rice And Wheat
- Fish Farming
- Poultry Farming
- Floriculture
- Horticulture
- Pickle and Sauce Industry

### **Tourism Industry**

- Hotel Industry
- Traveling Agency etc.
- All Hospitality Related Business

Uttaranchal State has come into being at a time when its extraordinarily well-placed to benefit from the new information economy as it is able to play by the rules of the new era and is responsive to the demands of the global services economy, which when it seeks the best locations for itself looks for several factors. if a clean and pollution-free environment is going to serve as a competitive advantage it stands to reason that the new state will do everything it can to promote it. this might include a programme to encourage cleaner, environment-friendly transportation systems and efforts at large scale afforestation.

Uttaranchal is 27th State (Birth November 9, 2000). It covers an area of about 54483 Sq Kms. The State has population of 84.809 approx. The literacy rate is 72% . The city is beautifully surrounded with 70% land under forest. The GDP is INR 126593.3 Millions. The NDP is INR 113420 Millions. The state has an unique Ecosystems diverse Flora and Fauna ,Sanctuaries, Wildlife Parks etc. There are roughly 56 banks with 1036 branches.

### **Reasons to invest in Uttarakhand :**

- **UDYOG MITRA** - State level facilitation body set up under the Chairmanship of Hon'ble CM.
- New Industrial Policy with wide range of physical and non-physical incentives.
- Concessional Industrial Package Announced.
- **Land Bank** - A dedicated land bank being created to provide land for projects across the table.
- Peaceful and Secure Industrial Environment.
- **Hydro Power Resource** - Potential powerhouse of the Nation. Only 9% of the total hydro power potential has been tapped till now.
- **Tourism Potential Unmatched** - Mountain, leisure, Spiritual, Adventure, Religious, Eco-traditional and high-end tourism along with related services.

- **Good Quality of Life** - Healthy climate and Pollution free environment.
- Major Climate Zones in close Geographical proximity.
- 175 species of Medicinal Herbs found in Uttaranchal.
- Proactive Government.

## REVIEW OF LITRATURE

*.Easwaran (1994) study focused on “Entry strategies for success : small business in the post liberalization”. The study suggested that the immediate impact of the new economic policy has not been very favorable for small units which are robust and have planed for growth will be an important factor in success of these unit.*

*Jamwar (1992) Study focused on present position and problems of small scale and cottage industry with special reference to factors causing industrial sickness. The study traced lack of marketing attention as one such reason causing industrial sickness.*

*Sengupta Senkar and Debnath Suraj (2000) His study is based on rural/village small scale industries in Indian scenario measures under taken for their promotion. He pointed out that the small scale industries play strategic role in the economic development and progress of the nation. These industries ensure equitable distribution of nations income and wealth. Rural India can draw the benefit of industrialisation through the proper functioning of industries.*

**Todor Balabanov (2002)** This paper makes an overview of the status and prospects of the most important support service for the private Small and Medium Enterprises (SME’s), namely their financing. The analysis is targeted at opportunities that may be realisable under the new political and economic climate. As a result of successive international programmes for the development of Business Support Institutions, a number of Non-Governmental Agencies have been created and their staff trained to provide support services to local business communities.

*Lado and Vozikis (1996) in their paper, “Transfer of Technology to Promote Entrepreneurship in Developing Countries: An Integration and Proposed Framework” tried to explore the role of technology transfer to promote entrepreneurship in the LDCs. They argue that entrepreneurial development depends, among other things, on the technology content and context, mode of technology transfer, the recipient country’s level of economic development, and the absorptive capacity of local firms.*

*Pandit (1984) Conducted a study of industrial development in Punjab. The study showed that identification of factors influencing or shaping the development and location of foot loose industries would be relatively an easier task in a region where such industries have developed recently.*

**Balabanov (2002)** This paper makes an overview of the status and prospects of the most important support service for the private Small Enterprises, namely their financing. The analysis is targeted at opportunities that may be realisable under the new political and economic climate. As a result of successive international programmes for the development of Business Support Institutions, a number of Non-Governmental Agencies have been created and their staff trained to provide support services to local business communitie



## **RESEARCH METHODOLOGY**

The study is based both the primary and secondary data.. The secondary data was collected from published and unpublished records and reports of the central Government and Government of Uttarakhand. For this purpose, personal visits were made to several organizations of which the following are important:

Uttarakhand Small Industries and Export Corporation, Uttarakhand State Industrial Development Corporation, Labour Commission Uttarakhand, Economics and Statistical Organisation Uttarakhand, Director of Industries Uttarakhand, Uttarakhand Small Industries and Export Corporation, Uttarakhand Small Industries Corporation and Economics and Statistical Organization Uttarakhand

## **OBJECTIVE OF STUDY**

- 1) To study the industrial policy of Uttarakhand .
- 2) To study the industrial profile of Uttarakhand.
- 3) To study the growth of employment in small and medium scale industries in Uttarakhand.

## **1 Development of SMEs**

### **1.1 Industrial Policy**

Uttarakhand has seen strong industrialization during the past five years, but that was mainly in the plains, following the special package announced by the Centre in 2003. Thus an Integrated Industrial Development Policy 2008 was launched in February especially for the industrial development of hilly and remote areas in the state. This policy has aimed at the economic development of the hill region. With the objective of inclusive growth, the main concentration is now on the hill districts. This policy aims to accelerate industrial development in the industrially backward and remote hill districts of the state, to develop industrial infrastructure, and to encourage entrepreneurial development through market encouragement and financial support to entrepreneurs. The creation of employment opportunities along with the removal of economic backwardness is expected to help control the migration of the population towards the plains and other states in search of better livelihoods. This policy targets industries in the manufacturing and services sectors. These steps are in addition to the Industrial Policy, 2003, which aimed to provide a comprehensive framework to enable a facilitative, investor-friendly environment to ensure rapid and sustainable industrial development in Uttarakhand and, through this, to generate additional employment opportunities and to bring about a significant increase in the State Domestic Product and eventual widening of the resource base of the state. The policy looks at providing single-window facilitation in the state to expedite project clearances and to provide an investor-friendly climate. It also looks to provide and facilitate expeditious land availability for setting up industrial ventures and infrastructure projects. The policy aims to provide assured, good quality, uninterrupted and affordable power for industries and to simplify and rationalize labour laws and procedures in line with current requirements while ensuring that workers get their due share in the economic prosperity of the state. For small-scale industries, cottage, khadi and village industries, handicrafts, and the silk and handloom sectors, it will assist them in modernization and technological upgrading and provide necessary common facilities and backward and forward linkages, including product design and marketing support so as to make

them globally competitive and remunerative. The State Infrastructure & Industrial Development Corporation of Uttarakhand Limited<sup>21</sup> (SI CUL), a government of Uttarakhand enterprise, was incorporated as a limited company in the year 2002 to promote industrial development in the state. It provides financial assistance to promote industries and develop industrial infrastructure in the state of Uttarakhand directly or through Special Purpose Vehicles, Joint Ventures, assisted companies, etc. Most of its major industrial infrastructure has been developed in the plains with limited concentration in the hills. Some of its major projects include the Integrated Industrial Estate at BHEL in Haridwar, the Integrated Industrial Estate at Pantnagar, an IT Park in Dehradun, Pharma City in Selaqui, Dehradun, the Growth Centre at Pauri, and the Integrated Industrial Estate at Sitarganj. SIDCUL enables industrial projects to be set up in a short time. The Corporation administers all promotional schemes of the government for industries and uses the single-window system.

### 1.2 Industrial profile of Uttarakhand

Against this background, this section of the paper examines the status of industrialization and employment in the state of Uttarakhand and hill districts of the state. Table 21 presents the overall comparison of the state of industrialization in Uttarakhand and India. There has been an impressive increase of 18 per cent in SSI units in India from 2001-02 to 2006-07 and in Uttarakhand this increase is 22.8 per cent. Of these SSIs registered units showed an increase of about 50 per cent and unregistered of about 15 per cent in Uttarakhand, whereas the figures for India are 32 per cent and 15 per cent, respectively. This increase in scale of SSIs in Uttarakhand can be attributed to the industrial policy of 2003. Thus, after the industrial policy of 2008 is implemented, the industrialization process is expected to strengthen even in the hill regions.

**Table 21 : Number of small-scale industrial units in India and Uttarakhand (2001-02 and 2006-07)**

Type of Industry	Uttarakhand 2001-02	2006-07	India	
			2001-02	2006-07
Small-scale Industry units	106484	137618	10521190	12843774
Registered	15285	30268	1374974	2031910
Un-registered	91199	107350	9146216	10811864

Source: Indiastat ([www.indiastat.com](http://www.indiastat.com)). Outsourced from Annual Report 2001-02, 2003-04 Ministry of SSI, Govt. of India and various Annual Surveys of India.

**Table 22 : Factories (registered under Factories Act 2M I and 2M II Act, 1948)**

(Units: Value Rs. in Lakhs & Others in Number)

	Uttarakhand	India	Uttarakhand	India	Uttarakhand	India
	2001-02		2004-05		Per cent increase	
No. of factories	698	128549	752	136353	7.18	5.72
No of workers	27317	5857848	35349	6599298	22.72	11.24
Total persons engaged	40880	7750366	51762	8453624	21.02	8.32

Net Value Added	82468	14430212	194801	25990686	57.67	44.48
Gross fixed capital formation	22028	7015145	77726	7458995	71.66	71.66
Profits	2439	3488385	105677	14460199	97.69	75.88

Source: *Indiastat (www.indiastat.com) Outsourced from Annual Report 2001-02, 2003-04 Ministry of SSI, Govt. of India and Various Annual Surveys of India.*

Similarly, **Table 22** shows that the relative improvement in industrialisation in Uttarakhand has been much better than in the country over the period 2001-04. In Uttarakhand over the periods 2001-02 and 2004-05 the number of factories increased by 7.2 per cent with an increase in workers of about 23 per cent. Gross fixed capital formation increased by 72 per cent and profits by 98 per cent. This shows a very positive impact on the employment status in the state as a result of industrialisation.

**Table 23** shows the status of industrialisation in the districts of Uttarakhand. Table shows these numbers as a percentage of the total for Uttarakhand. It is clear from the table that industrialisation took place in the plains of Uttarakhand much before it did in the hill regions. Dehradun, aridwar, Nainital and Udham Singh Nagar have about 89 per cent of the factories set up in Uttarakhand. Also of all the workers engaged in Uttarakhand, 94 per cent are employed in the plains. Many of these workers have migrated from the hill districts or even from neighbouring states. Among the hill regions it is only Almora that has set up small-scale industries and Khadi/ Gram Udyogs. Almora has about 31.3 per cent of the state's small-scale industries, which is similar to that in Haridwar and also about 13.7 per cent of the Khadi and Gram Udyogs. The number of employees of khadi units and SSIs in Almora are about 9.8 per cent and 38.9 per cent, respectively. Pithoragarh has shown a relatively better setting up of Khadi and Gram Udyogs in relation to other hill districts. Bageshwar, Champawat, Rudraprayag and Utrakhshi are the least industrialised hill districts, where even the setting up of Khadi and Gram Udyogs is almost negligible. It is expected that the new industrial policy will focus on these districts.

**Table 23 : Status of industrialisation in districts of Uttarakhand, 2004**

District	Khadi/ Gram Udyog units	Small- Scale Industries (SSIs)	Total employees of khadi units	Total employees of SSIs Factories act	No. of factories	No. of workers
Almora	1608	3463	2154	14906	9	486
Bageshwar	47	614	104	823	5	375
Chamoli	1299	185	1305	364		
Champawat	190	422	400	985	7	33
Pauri Garhwal	1523	542	1759	1175	49	3189
Pithoragarh	1689	1106	2637	1660	2	94
Rudraprayag	72	289	143	627		
Tehri	1129	254	2162	613	34	780

Garhwal						
Uttarkashi		155		231	1	160
Dehradun	2529	346	8651	1353	171	22156
Hardwar	1608	3463	2154	14906	127	14654
Nainital	18	152	80	486	118	8875
US Nagar	42	76	375	208	438	27490

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**Table 24 : Per cent share in industrialisation of districts in Uttarakhand, 2004**

District	Khadi/ Gram Udyog units	Small- Scale Industries (SSIs)	Total employees of khadi units	Total employees of SSIs Factories act	No. of factories	No. of workers
Almora	13.7	31.3	9.8	38.9	0.9	0.6
Bageshwar	0.4	5.5	0.5	2.1	0.5	0.5
Chamoli	11.1	1.7	6.0	0.9		
Champawat	1.6	3.8	1.8	2.6	.7 00.0	00.0
Pauri Garhwal	13.0	4.9	8.0	3.1	5.1	4.1
Pithoragarh	14.4	10.0	12.0	4.3	0.2	0.1
Rudraprayag	0.6	2.6	0.7	1.6		
Tehri Garhwal	9.6	2.3	9.9	1.6	3.5	1.0
Uttarkashi		1.4		0.6	0.1	0.2
Dehradun	21.5	3.1	39.5	3.5	17.8	28.3
Hardwar	13.7	31.3	9.8	38.9	13.2	18.7
Nainital	0.2	1.4	0.4	1.3	12.3	11.3
US Nagar	0.4	0.7	1.7	0.5	45.6	35.1

The public sector has remained the major source of employment in the organized sector for Uttarakhand as well as for India. It is evident from Table 25 that employment in the state public sector has registered a negative growth rate between the period 2001 to 2005. However, the state private sector has reported positive employment growth.

**Table 25 : Employment in Organized sector***(Unit: employment in '000)*

Year	Uttarakhand			India		
	Public	Private	Total	Public	Private	Total

2001-02	228.4	36.9	265.3	18773.4	8432.1	27205.5
2002-03	214.6	32.3	246.9	18449	26983.2	26983.2
2003-04	220.8	36.8	257.6	18196.7	8246	26442.7
2004-05	224.0	37.3	261.3	18006.6	8451.1	26457.7
<b>-0.3</b>	<b>1.64</b>	<b>-0.03</b>	<b>-1.38</b>	<b>-0.28</b>	<b>-1.03</b>	

Source: *Indiastat* ([www.indiastat.com](http://www.indiastat.com)). Outsourced from Ministry of Labor and Employment.

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### 1.3 Small and medium Scale Industries and employment

Industrialization is an opportunity for people of the hill regions and it is not only production but also activities related to tourism and agriculture that can be given the status of industries. For successful industrialization, participation of women and in-house employment need to be given importance. For the development of the hill regions, creation of feasible employment opportunities is very important. Industrial activity in the hill regions can be tapped in local agro-based industries (e.g. herbs, fruits, frozen tulsi, fruit juices, and jams) and handicraft industries (e.g., shawls which are warmer than quilts). There is a need to provide the latest technology and easy accessibility to raw materials in order to improve the output. At the local level it is necessary to create cooperatives of small-scale industries, as well as good artisan cooperatives that will coordinate with an external marketing agency to sell the products. Most crucial for the development of any business is the development of entrepreneurial skills. Since in the hill regions men have migrated towards the plains and it is the women who are engaged in various activities, it is important to develop the entrepreneurial skills of women. There are a number of alternative economic activities that women can engage in but these petty businesses are unable to yield reasonable levels of income to the households. This is due to various constraints like raw materials and services in the case of dairy farming, lack of technical guidance and marketing in bee-keeping, and lack of awareness and marketing facilities in the case of mushroom cultivation. Households engaged in petty business mainly face credit problems. Here the role of micro-credit institutions becomes very important. In the case of small home-processed food products, marketing facilities pose a major bottleneck. The government should adopt successful models like "lizzat papad" to make some of these activities economically viable. The study by Sekhar, 2007 showed that development of entrepreneurship levels in women helps provide them with a level of income that is higher than poverty line income (Table 26). Although there is potential for income generation in the case of mushroom cultivation and beekeeping, it remained untapped mainly because of constraints and indicates that certain corrective action should be taken (Table 27). A case study of Rural Litigation and Entitlement Kendra (RLEK) shows how creating awareness and training can also help in the development of entrepreneurial skills.

**Table 26 : Proportion of total household income by category of entrepreneurship**

(Unit in per cent)

Activity	Farm income	Entrepreneurial income	Wage income
Dairy farming	74	23	3
Poultry farming	40	58	3
Papad-making	0	86	14

Mushroom cultivation	100	0	0
Bee-keeping	80	20	0
Quilt-making	59	13	28
Petty business	19	70	12

Source: IEG Working paper, C.S.C. Sekhar.

**Table 27 : Summary of constraints and proposed corrective action**

Activity	Problems/Constraints	Suggested Action	Corrective
Dairy farming	Feed/fodder, animal health services	Provision of health-care facilities	
Papad-making	Availability of finance, marketing facilities	Credit provision through rural banks, SHGs and thrift groups, collectivizing marketing through co-operatives	
Mushroom cultivation	Technical guidance and marketing facilities	Provision of training and developing marketing	
Bee-keeping	Technical guidance and marketing facilities	Provision of training and developing marketing	
Quilt- making	Inadequate payment by contractors, health problems Ensure timely and adequate payment, provision of health-care	Ensure timely and adequate payment, provision of health-care	
Petty business	Availability of finance	Credit provision through rural banks, development of SHGs and thrift groups	

Source: Sekhar (2007).

## CONCLUSION

Industrial policy of Uttarakhand provides a wide range of financial incentives to the industries. Many industrial estates have been setup in the state. The aim of the policy is to provide a comprehensive framework to enable a facilitating, investor friendly environment for ensuring rapid and sustainable industrial development in Uttarakhand and, through this, generate

additional employment opportunities and to bring about a significant increase in the State Domestic Product and eventual widening of the resource base of the State.

Infrastructure development is a thrust area of the state government. Power is available in surplus to both domestic and industrial segments.

Thus from the above study we conclude (Table 21) that there has been an impressive increase in SSI units in Uttarakhand as well as overall India. This increase in scale of SSIs in Uttarakhand can be attributed to the industrial policy of 2003. Thus, after the industrial policy of 2008 is implemented, the industrialization process is expected to strengthen even in the hill regions.

Industrialization in Uttarakhand has been the major source of employment for Uttarakhand as well as for India.

## RECOMMENDATIONS

The hill regions are lacking behind in terms of infrastructure, i.e., electricity, roads and irrigation facilities. The inter-regions inequality in infrastructure leads to increasing disparity in terms of income and livelihood. Thus, it is essential to adopt a different approach for the development of backward hill areas.

The vast natural resources add to the state's attractiveness as an investment destination, especially for tourism, agro-processing and forest-based industries. The state has managed to get good industrial investments during the last few years. There is a lot of scope to accelerate the investment volumes, going forward. However, the state should provide investment facilitation policies such as providing single-window facilitation to investors. Lack of credit and marketing facilities make the situation worse for agriculture in this state. An integrated approach should be adopted to facilitate development of agriculture & food processing industry in the state. Development of farm mandis and creating linkages between producers and buyers will boost the farm output growth. Special focus on seasonal fruits like Litchi, Apple, Plum, Peach, high-value herbal, medicinal and aromatic plantation etc, will help in improving income of the farmers. There is huge potential for tourism in this state, with demand emanating from both the domestic and international tourists. The main challenge to the tourism sector in the state is lack of proper infrastructure facilities. Thus, tourist zones need to be connected by formal and informal links in the form of roads, rails, and airports.

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