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SR. NO.	CONTENT PAGE	PAGE NO.
1.	<b>FARMING SYSTEMS AND CROPPING PATTERN IN HASSAN DISTRICT OF KARNATAKA</b> <b>DR.B.NCHANNAVEEREGOWDA, DR. K.G SURESH KUMAR</b>	1-13
2.	<b>CORPORATE ACTIONS AND IMPACT ON STOCK MARKETS PRICES – AN EMPIRICAL STUDY OF INDIAN MARKETS</b> <b>DR.KAMMILI KAMALAKARA RAO</b>	14-18
3.	<b>IMPACT OF CLOUD COMPUTING ON SMALL AND MEDIUM ENTERPRISES IN INDIA</b> <b>DR. P.BALARAM BABU, MAJ.P.S.CHAKRAVARTY</b>	19-37
4.	<b>THE QUALITY OF TEACHING AND LEARNING – A REVIEW OF RECENT LITERATURE</b> <b>DR.R.SEENIVASAN</b>	38-47
5.	<b>PRIORITIES FOR PRIMARY EDUCATION POLICY IN INDIA’S 12TH FIVE-YEAR PLAN</b> <b>DR.R.SEENIVASAN</b>	48-67
6.	<b>A STUDY ON CONSUMER BEHAVIOR AND OPPORTUNITIES FOR NOKIA SMART-PHONES IN INDIA</b> <b>DR. RITESH K. PATEL</b>	68-97
7.	<b>3R TECHNOLOGY A PARADIGM SHIFT IN WATER RESOURCE MANAGEMENT</b> <b>R. SENTHIL KUMAR, DR. K.ANANDANATARAJAN</b>	98-103

8.	<b>DETERMINANTS IN MAKING PUBLIC HEALTH SYSTEM OF INDIA – A COMPREHENSIVE STUDY</b>  PROF. DR. S.K. BARAL	104-108
9.	<b>THE MUTUAL FUND PERFORMANCE BETWEEN 2008 AND 2010: COMPARATIVE ANALYSIS</b>  MRS.V.SASIKALA, DR.A.LAKSHMI	109-136
10.	<b>INNOVATIONS IN TALENT ACQUISITION AND RETENTION IN SOCIAL ORGANIZATIONS IN INDIA.</b>  PROF. KRISHNA KISHORE, PROF. ASWATHI NAIR, PROF.VASANTH KIRAN	137-141
11.	<b>HER IDENTITY AND EMANCIPATION</b>  DR A.C.V.RAMA KUMAR	142-143
12.	<b>A RESEARCH PAPER CAPITAL STRUCTURE DETERMINANTS OF STEEL COMPANIES IN INDIA: A PANEL DATA ANALYSIS</b>  MS NEHA PODDAR, DR. MANISH MITTAL	144-158
13.	<b>E-COMMERCE SECURITY ISSUES AND SOLUTIONS: A SURVEY</b>  VIVEK AGGARWAL	159-163
14.	<b>A COMPARATIVE STUDY OF PERSONALITY OF BOXING AND ATHLETICS SPORTSMEN WITH REFERENCE TO THEIR SPORT’S ACHIEVEMENT</b>  DR.RAJESH KUMAR BHARDWAJ, DR. (MRS.) POONAM SHARMA	164-171
15.	<b>ASSESSING THE IMPACT OF ONLINE RETAILING ON MALL SHOPPERS AND INTERNET USERS</b>  RUBY S	172-177

16.	<b>A STUDY ON PERFORMANCE OF NPAS AND LOAN OUTSTANDINGS OF SHG LINKAGE PROGRAMME IN INDIA</b> <b>J.PAVITHRA</b>	178-188
17.	<b>ADVERTISING CREDIBILITY: A REVIEW OF LITERATURE</b> <b>ISHAVERMA</b>	189-199
18.	<b>KAMLA DAS AS A CONTROVERSIAL BUT AN HONEST INDO ANGLIAN POETESS</b> <b>VIKRANT RAJPUT</b>	200-203
19.	<b>TO ANALYZE THAT ADVERTISEMENTS BOOST UP THE STANDARD OF LIVING OF THE SOCIETY TOWARDS THE BRANDS OF CONSUMER'S GOODS</b> <b>-A STUDY CARRIED OUT AT BHIWANI DISTRICT</b> <b>DR SONIA, DR GARIMA DALAL</b>	204-212

## FARMING SYSTEMS AND CROPPING PATTERN IN HASSAN DISTRICT OF KARNATAKA

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### Abstract

This paper is considered the farming systems and cropping pattern in Hassan District of Karnataka. The study was undertaken in the Southern Transition Zone of Karnataka with the objectives of examine the farming system in the study region and to estimate farm income, and its composition as also the extent of commercialization of farm enterprises.

To develop efficient farming systems for increasing farm income and employment and reducing income sustainability in the area under study. The findings of study were. Regardless of the farm size, the existing farming systems are less efficient as the farming systems developed through normative farm plans exhibited potential for higher income and employment. The transition of existing farming systems from subsistence to commercialization needs emphasis in order to increase and stabilize income from horticulture and other livestock enterprises (like dairy, sheep and poultry) as they help in reducing risk of getting lower income on the one hand and generate additional income and employment to farmers on the other. Availability of family labour on full time basis for farming and the amount of own funds supplemented along with borrowings play a crucial role on the investment pattern in farming and nature of farming systems adopted on the farms. The normative farm plan which would facilitate the increase in net farm income, efficient resource use and minimized risk with minimum working capital based on the borrowing capacity of the farmers would be adopted by all categories of farmers.

The main implications of study were, since most of the dry land farmers had small land holdings with low net returns, the integration of subsidiary enterprises along with appropriate technologies facilitates to realize sustained stable net returns from the entire farm. The designed models should be demonstrated in the farmers' fields to convince the farmers about the advantages of the alternative farming systems. At the same time, appropriate extension strategies should be adopted to popularize the developed models. The results of parametric programming models recommended relatively large number of crops to be cultivated when compared to the deterministic model. This is due to risk minimization attitude incorporated in the model which is in accordance with general notion that crop diversification helped in minimization of risk. Landutilization increased along the net returns risk frontier. Higher returns were associated with higher risk.

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### Introduction

India is one of the world's largest and oldest agricultural societies, which has remained predominately rural despite decades of modernization. Even today, every aspect of the country's economy and polity and the day –to –day living of the majority of its on billion populations are governed by the performance of the agricultural sector. India's population is expected to increase by 150 millions by 2025 AD and requires 325 million tones of food

grains per year against the present rate of food grains of 3.2 million tones per year to meet the growing food demand. Hence with these challenges ahead, the stability and sustainability of Indian agriculture are of the paramount Importance.

Agriculture continuous to be the key sector of the Indian Economy, is as evident from its contribution of about 13.7 percent to the GDP. Besides for two-thirds of the population agriculture is the source of the subsistence. The performance of agricultural sector during the past three decades has been generally satisfactory with a growth rate of 2.59 percent per annual. However, lower growth rates recorded during the recent years is a cause for worry as it may affect the long-term prospects of the Indian agriculture. The phenomenal growth in population and rise in the standard of living as a result of economic development are exerting a greater pressure on the demand for agricultural commodities, which can be met only by increasing productivity as there is little scope for area expansion. As a result of the green revolution since the mid sixties, the total food grains production of the country has increased from a mere, 50.8 million tones during 1950-51 to 246.2 million tonnes in 2011-12 (Economic Survey, 2011-12). consequently paralyzing agro-ecological stability. Further, rising costs of inputs have not been offset by commensurate increases in product prices. Therefore the economic importance of the green revolution has been somewhat marginalized.

According to the records of the central agriculture ministry, government of India, the input costs have increased 2.35 times more than those of output prices. Therefore, agriculture sector has been suffering from adverse terms of trade.

An attempt has been made in the present study to evaluate the farming systems of various regions with different geographical areas in one of the ten-agro climatic zones of Karnataka state by taking Hassan district as the study area.

### **Objectives:**

The specific objectives of the study are as follows:

1. To examine the farming system in the study region.
2. To estimate farm income, and its composition as also the extent of commercialization of farm enterprises.

### **Special Feature of the study:**

So far, studies conducted on farming systems in Hassan district of Karnataka have been few and far between. Farming systems approach in analyzing the problems of agriculture is gaining lot of importance in recent years. Such a study would throw light on the problems associated with different farming systems in Hassan district of Karnataka and enable the academicians and policy makers to formulate and implement appropriate policies for a balanced, integrated agricultural development.

**Methodology:** A study of this kind needs a methodology to explain the important characteristics of the study area, sampling design, data collection and methods of analysis employed in the present study

**Description of the study area:** The present study was conducted in the Hassan district of Karnataka. Hassan is one of the the twenty-nine districts of Karnataka state, and is situated roughly in the mid-south of the state. The northern area of the district consists of a mountainous terrain while on the western side there is a striking transition from *Malnad*, semi-Malnad to *maidans* (plains).

**Collection of data:** The sample villages and farmers were selected on the basis of simple random sampling method. Thus 24 villages were selected from different geographical regions of the district of the sample farmers were selected on the basis of simple random sampling method. From each village, 10 farmers were selected to make a total sample of 240 farmers. The data were collected by personal interview method using a structured schedule. The date so collected relate to the agricultural year 2010-11..

**Techniques of analysis:**

1. To achieve the objectives simple statistical, linear programming and parametric risk programming (MOTAD) techniques was adopted.

**Farming systems and Cropping Pattern in Hassan District**

The data collected from the respondents were analyzed keeping in view the objectives of the study and the results are presented under the following heads

- Net farm income and employment of labour from the existing farming systems.
- Normative farm plan for different categories of farmers and

**Farming Systems and Cropping Pattern**

**Types of Farming Systems:** The details of the types of farming systems in three regions followed by the sample farmers are furnished in table 1 four types of farming systems were identified in the three regions under study. They were Crop + Horticulture, Crop + Dairy, Crop + Dairy + Horticulture + Sheepery, Crop + Dairy + Poultry type of farming systems.

**Table 1: Types of farming systems followed by farmers**

SI No	FS	SF	MF	LF	Total
1	C+H	18	22	8	48
2	C+D	32	76	58	166
3	C+D+H+Sh	4	6	4	14
4	C+D+P	4	4	4	12
5	Total	58	108	74	240

**Note:** C= Crop, D= Dairy, Sh= Sheep, H= Horticulture, P=Poultry

**Note:** FS= Farming Systems, SF=Small Farmers, MF=Medium Farmers, LF=Large Farmers

**Farm Costs and Returns**

Farming system is aimed at efficient use of resources to maximize the household income. It also minimizes production risk by spreading the risk to various enterprises instead of confining it to one activity. The details of costs and returns derived from the existing farming system are furnished in Table 2. It was found that the small farmers realised maximum cost of Rs 47,180 from C+H system followed by Rs 51,000 from C+D system with respect to Gross Returns of Rs 65,420 from C+H system followed by Rs 72,450 from C+D

system. With respect to medium farmers maximum cost of Rs 49,768 from C+H system followed by Rs 39,450 from C+D+H+Sh system followed by Rs 88,450 from C+D system with respect to large hired labour. Large farmers hired 250 mandays, 150 woman days and 6 bullock days under C+D+Sh system followed by C+D+H+Sh system with 220 mandays, 250 woman days and 7 bullockdays.

**Table 2: Costs and returns of existing farming systems in all regions(Value in Rs)**

Farming systems	Small farmers		Medium farmers		Large farmers	
	Costs	Returns	Costs	Returns	Costs	Returns
C+H	47180	65420	49768	71000	26700	64750
C+D	51000	72450	39450	82450	39265	95275
C+D+H+Sh	56431	87500	37225	88450	47983	140517
C+D+P	47627	74750	39111	91450	54903	126537

**Table 3: Net incomes under the existing farming systems in all regions (In Rs. /annum)**

SI. No	Farming systems	Small farmers	Medium farmers	Large farmers
1	C+H	18,240	21,232	64,750
2	C+D	21,450	43,000	95,275
3	C+D+H+Sh	31,069	51,225	1,40,517
4	C+D+P	27,123	52,339	1,26,537

Note: C= Crop, D= Dairy, Sh= Sheep, H= Horticulture, P=Poultry

**Table 4: Employment in existing farming system (in labour days)**

Farming systems	Small Farmers						Medium Farmers						Large Farmers					
	Family labour			Hired labour			Family labour			Hired labour			Family labour			Hired labour		
	M	W	BP	M	W	BP	M	W	BP	M	W	BP	M	W	BP	M	W	BP
C+H	190	212	0	32	41	12	189	102	12	135	145	13	269	211	21	169	196	15
C+D	215	232	0	12	11	16	156	132	18	162	187	16	287	264	18	198	185	17
C+D+H+Sh	232	214	0	26	23	13	192	125	21	168	156	21	258	264	16	210	162	21
C+D+P	210	217	0	57	29	21	201	142	12	111	123	13	267	297	12	209	138	12

Note: 1. C= Crop, D= Dairy, S= Sheep, H=Horticulture, P= Poultry 2. M=Man,W= Woman, BP= Bullock pair



**Normative farm plans for different categories of farmer’s  
 Farm business management objectives**

Based on the survey data on farmers' goal perceptions, two important short-term goals were identified. Accordingly, two farm business objectives were modeled for each category of farmers through linear programming technique. Different models were developed for the two farm business objectives under various farming systems for small, medium and large farmers. The details of the models are depicted in table.5.

**Normative farm plan for various farming systems**

The details of normative farm plan for various farming systems for different categories of farmers under the objectives of maximisation of net income and minimisation of net income instability are furnished in table.5 to 6.

**Small farmers**

In order to achieve the objective of maximization of net income, the farmers need to adopt a combination of the enterprises as indicated in the normative plan presented below.

The normative plans which are explained in below tables, developed for the purpose show an increase in the net farm income for small farmers from Rs. 18,240 in the existing farming system to Rs.20,450 ( by12.12 percent), Rs.21,450 to Rs.27,225 (by 27 percent), Rs.31,069 to Rs.71,350 (by 33 percent), Rs.27,123 to Rs.16,300 (by 30.40 percent), Rs.21232 to Rs.28,432 (by 34.40 percent), Rs. 43,000 to Rs. 55,140 (by 28.23 percent) and Rs. 51,225 to Rs. 64,410 (by 25.74 percent) from models S<sub>1</sub>, S<sub>2</sub>, S<sub>3</sub>, and S<sub>4</sub>, respectively. While accomplishing the objective of minimization of income instability, the percentage increase in the normative plan over the existing was about 6.09 per cent, 12.87 per cent, 24.64 per cent, 26.07 per cent, in S<sub>5</sub>, S<sub>6</sub>, M<sub>7</sub>,and M<sub>8</sub>, models, respectively. The standard deviations with respect to these models were found to be highest in models S<sub>1</sub>, S<sub>2</sub> and S<sub>3</sub> with extent of risk being Rs. 814, Rs.1150 and Rs.2940, respectively.

**Table: 5: Models developed for different categories of sample farmers in all regions**

Objectives	Models / Category of farmers	C+H	C+D	C+D+H+Sh	C+D+P
Maximization of net income	Small farmers	S <sub>1</sub>	S <sub>2</sub>	S <sub>3</sub>	S <sub>4</sub>
	Medium farmers	M <sub>1</sub>	M <sub>2</sub>	M <sub>3</sub>	M <sub>4</sub>
	Large farmers	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>
Minimization of net income deviation	Small farmers	S <sub>5</sub>	S <sub>6</sub>	S <sub>7</sub>	S <sub>8</sub>
	Medium farmers	M <sub>5</sub>	M <sub>6</sub>	M <sub>7</sub>	M <sub>8</sub>
	Large farmers	L <sub>5</sub>	L <sub>6</sub>	L <sub>7</sub>	L <sub>8</sub>

**Note:** C= Crop, D= Dairy, Sh= Sheep, H= Horticulture, P=Poultry

**Table: 6 normative farm plans for maximization of net income of Small farmers in all regions(Area in acres)**

Farming system Activity	C+H S <sub>1</sub>	C+D S <sub>2</sub>	C+D+H+Sh S <sub>3</sub>	C+D+P S <sub>4</sub>
Ragi	0.248	0.2	0.16	0.248
Maize	0.08	-	-	-
Paddy	0.352	0.34	0.32	0.236
Fodder maize		0.14	-	0.196
Arecanut	0.45	—	—	--
Mango	-	-	0.2	0.38
Dairy (in nos.)	1	2	2	3
Sheep (in nos.)	12	-	-	12
Poultry (in nos.)	-	-	-	4
Net income (in rupees)	20,450	27,225	71,350	35,252
Percentage increase in income over existing farming system	12.12	26.92	33.09	29.97

**Note:** C- Crop, D= Dairy, Sh= Sheep, H= Horticulture, P=Poultry

**Table 7: Normative farm plans for minimization of net income instability of Small farmers in all regions (area in acres)**

Farming system Activity	C+H S <sub>5</sub>	C+D S <sub>6</sub>	C+D+H+Sh S <sub>7</sub>	C+D+P S <sub>8</sub>
Ragi	0.16	0.08	-	0.088
Tomato	0.4	0.32	0.16	0.384
Fodder maize	-	0.28	—	0.104
Paddy	0.12	-	—	0.104
Arecanut	0.92	—	--	—
Mango	-	-	0.52	-
Dairy (in nos.)	1	2	2	3
Sheep (in nos.)	12	-	-	12
Poultry (in nos)	-	-	-	-
Net income (in rupees)	19,350(6.09)	24,210(12.87)	28,725 (24.64)	34195(26.07)
Standard deviation of net income (in rupees)	814	1150	2940	2020

**Note:** 1. C= Crop, D= Dairy, Sh= Sheep, H= Horticulture, P=Poultry

Note: Figures in parentheses indicate percentage increase in net income over existing farming systems

The farming systems suggested the optimum crop combination of 0.25 ha, 0.2 ha, 0.16 ha and 0.25 ha of Ragi with models, S<sub>1</sub>, S<sub>2</sub>, S<sub>3</sub>, and S<sub>4</sub>, respectively along with 0.352 ha 0.34 ha 0.32 ha 0.236 ha of Paddy in the model S<sub>1</sub>, S<sub>2</sub>, S<sub>3</sub>, and S<sub>4</sub>, respectively, to get maximum net income. Further, for minimization of income deviation it also suggested to cultivate 0.12ha 0.104 ha of paddy respectively, in the models S<sub>1</sub> to S<sub>4</sub>. Fodder maize is included in S<sub>2</sub>, and S<sub>4</sub>, models with area of 0.14 ha 0.196 ha for maximization of income and for minimization of income instability it suggested to take 0.28ha in S<sub>6</sub>, 0.104ha in S<sub>7</sub>, models, respectively. In order to stabilize income, 0.16 ha and 0.088 ha of Ragi was suggested for scenarios S<sub>1</sub>, S<sub>2</sub>, S<sub>3</sub> and S<sub>4</sub>, respectively.

In the case of dryland horticulture, mango needs to be grown in an area of 0.2ha 0.38ha S<sub>3</sub>, S<sub>4</sub> models, respectively, and for minimization of income instability it is better to go in for mango in an area of 0.52ha under model S<sub>7</sub>. With regard to livestock, one cross bred

cow is recommended under models S<sub>2</sub>, and S<sub>4</sub> and twelve sheep under models S<sub>1</sub>and S<sub>4</sub> and four poultry in the case of S<sub>4</sub> models.

### Medium farmers

With respect to the objective of maximization of net income, the farmers could increase their net income from Rs.28, 432 to Rs.55, 140 (29.44percent), from Rs.64, 410 to Rs.58, 223 (19.92percent), from Rs.20, 667 to Rs.24, 280 (17.48percent), respectively under models m<sub>1</sub>, M<sub>2</sub>, m<sub>3</sub>,M<sub>4</sub>, in the normative plans as suggested over the existing ones. With respect to minimization of income instability, farmers could increase their net income by 14.24 per cent, 23.22 per cent, 4.28 per cent, and 9.50 per cent respectively under models M<sub>5</sub>, M<sub>6</sub>, M<sub>7</sub> and M<sub>8</sub>. In order to achieve this increased income, farmers have to face additional risk at Rs. 1,603, Rs. 1,381, Rs.2,095 and Rs.3,572 under the respective models (Tables 8 and 9).

According to the normative farm plans, farmers are required to cultivate ragi under m<sub>1</sub>, and 0.436 ha and 0.564 ha of Maize under M<sub>2</sub> and M<sub>3</sub> models respectively, whereas Paddy was suggested to be taken up in 0.892 ha 0.556 ha and 0.328 ha under m<sub>1</sub>, M<sub>2</sub> and M<sub>4</sub> models. Horse gram was suggested in 0.48 ha 0.368ha and 0.114 ha respectively under models M<sub>2</sub>, M<sub>3</sub> and M<sub>4</sub>, and Banana in 0.360 ha under M<sub>2</sub> model, Arecanut 0.216 ha and 0.156 under for m<sub>1</sub>and M<sub>2</sub> models and coconut in an area of 1.00 ha under M<sub>4</sub> model.

**Table8: Normative farm plans for maximization of net income of medium farmers in all regions** (area in acres)

Farming system Activity	C+H M1	C+D M2	C+D+H+Sh M3	C+D+P M4
Ragi	0.364	-	-	-
Maize	-	0.436	0.564	-
Paddy	0.892	0.556	-	0.328
Horse gram	-	0.48	0.368	0.114
Banana	-	0.360	-	-
Arecanut	0.216	-	0.156	-
Coconut	-	-	-	1.00
Dairy (in nos.)	-	2	2	2
Sheep (in nos.)	7	-	7	-
Net income (in rupees)	28432	55140	64410	58223
Percentage increase in net income over existing farming system	33.91	28.23	25.74	11.24

**Note:** C= Crop, D= Dairy, Sh= Sheep, H= Horticulture, P=Poultry

**Table 9: Normative Farm Plans for minimization of net income instability of medium farmers in all regions (area in acres)**

Farming system Activity	C+H M <sub>5</sub>	C+D M <sub>6</sub>	C+D+H+Sh M <sub>7</sub>	C+D+P M <sub>8</sub>
Ragi	0.244	-	0.68	-
Maize	0.144	0.8	-	-
Paddy	0.884	0.272	2.08	0.26
Horse gram	-	0.4	-	0.312
Banana	0.2	-	0.92	-
Mango	0.6	-	-	-
Dairy (in nos.)	-	2	2	2
Sheep (in nos.)	7	-	7	-
Net income (in rupees)	24,256 (14.24)	31,986 (23.22)	43,729 (4.28)	48,309 (9.50)
Standard deviation of net income (in rupees)	1603	1381	2095	3572

**Note:** 1. C= Crop, D= Dairy, Sh= Sheep, H= Horticulture, P=Poultry

2. Figures in parentheses indicate percentage increase in net income over existing farming systems

With regard to livestock, two cross bred cows were suggested for M<sub>2</sub>, m<sub>3</sub>, M<sub>4</sub>, models, and seven sheep under m<sub>1</sub> and m<sub>3</sub> models. In the case of minimization of income instability, the area under crops are taken up in 0.884 ha, in M<sub>5</sub> Scenario and 0.272, 2.08, and 0.26 ha of paddy in M<sub>5</sub>, M<sub>6</sub>, M<sub>7</sub> and M<sub>8</sub> Scenarios and in case of Dairy two Cross bred cows each in case of M<sub>6</sub>, M<sub>7</sub> and M<sub>8</sub>.

### Large Farmers

In accomplishing the objective of maximization of net income, the farmers could increase their net income from Rs.64750 (under the existing plan) to Rs.85518 under the normative plan (32.07percent), from Rs.95275 to Rs. 115480 (21.21percent), from Rs.140517 to Rs.165540 (17.81percent) from Rs.126537 to Rs.146957 (16.13percent) under models L<sub>1</sub>, L<sub>2</sub>, L<sub>3</sub>, L<sub>4</sub>, respectively. With respect to minimization of income instability, farmers could increase their net income by 16.11 per cent, 13.35 per cent, 17.99 per cent, 16.70 per cent, under the models L<sub>5</sub>, L<sub>6</sub>, L<sub>7</sub>, L<sub>8</sub>, but they might have to face the associated risk to the extent

Rs.3, 180, Rs.2, 199, Rs.6, 800, and Rs.26, 175 in getting the increased income under the respective models.

The models/scenarios suggested that it would require cultivation of 0.136 ha 0.604 ha of ragi under models L<sub>1</sub> and L<sub>3</sub>. Chilly was suggested in an area of 0.808 ha, 0.408 ha 0.38 ha and 0.24 ha under the model L<sub>1</sub>, L<sub>2</sub>, L<sub>3</sub>, and L<sub>4</sub>. Paddy in an area of 0.8 ha under L<sub>3</sub> model, Arecanut in an area of 1.84 ha, 0.456 ha, 0.424 ha under the models L<sub>1</sub>, L<sub>2</sub>, L<sub>3</sub>, and Coconut in an area of 0.48 ha, 0.72 ha under the models L<sub>1</sub>, L<sub>3</sub>, and taking up of mango orchard in an area of 0.4 ha L<sub>2</sub>, model, respectively.

In order to accomplish the respective objectives, farmers need to maintain livestock of two cross bred cows each under models L<sub>1</sub>, L<sub>3</sub>, L<sub>4</sub>, and maintain four sheep under model L<sub>3</sub>.

### Labour employment under the normative farm plan

The quantum of employment opportunities under various farming systems among small, medium and large farmers under the normative farm plan are presented in Table 10. It could be observed that in the case of small farmers, C+D+P system provided the maximum employment to the extent of 300 mandays and 200 woman days followed by C+H with 220 mandays and 180 woman days of employment.

**Table 10: Normative Farm Plans for maximization of net income of large farmers in all regions** (area in acres)

Farming system Activity	C+H L <sub>1</sub>	C+D L <sub>2</sub>	C+D+H+Sh L <sub>3</sub>	C+D+P L <sub>4</sub>
Ragi	0.136	-	0.604	-
Chilli	0.808	0.408	0.38	0.24
Paddy	-	-	0.8	-
Arecanut	1.84	0.456	-	0.424
Coconut	0.48	-	0.72	-
Mango	-	0.4	-	2.5
Dairy (in nos.)	2	-	2	2
Sheep (in nos.)	-	-	4	-
Net income (in rupees)	85,518	1,15,480	1,65,540	1,46,957
Percentage increase over existing net income	32.07	21.21	17.81	16.13

Note: C= Crop, D= Dairy, Sh= Sheep, H= Horticulture, Pi=Poultry

**Table 11: Normative Farm Plans for minimization of net income instability of large farmers in all regions (area in acres)**

Farming system Activity	C+H L <sub>5</sub>	C+D L <sub>6</sub>	C+D+H+Sh L <sub>7</sub>	C+D+P L <sub>8</sub>
Ragi	0.72	0.4	0.64	-
Chilli	-	-	0.64	-
Paddy	2	0.6	1.584	0.4
Fodder maize	0.544	-	0.4	0.064
Arecanut	1.43			—
Coconut	0.72		—	—
Mango	-	2.264	-	2.8
Dairy (in nos.)	2	-	2	2
Sheep (in nos.)	-	-	4	-
Net income (in rupees)	75,180 (16.11)	1,07,990 (13.35)	1,52,800 (17.99)	1,34,675 (16.70)
Standard deviation of net income (in rupees)	3,180	2,199	6,800	26,175

Noted. C= Crop, D= Dairy, Sh= Sheep, H= Horticulture, P=Poultry

**Table 12: Labour Employment under normative farm plans in all regions**

Category Farming systems	Small farmers			Medium farmers			Large farmers		
	M	W	BP	M	W	BP	M	W	BP
C+H	220	180	-	136	120	9	120	120	-
C+D	119	161	-	184	172	15	120	90	25
C+D+H+Sh	65	50	-	-	-	-	180	136	22
C+D+P	300	200	-	120	185	10	225	260	30

Note: 1. C= Crop, D= Dairy, Sh= Sheep, H= Horticulture, P=Poultry 2. M= Man, W= Woman, BP= Bullock pair

In the small farmers' category, C+H system generated an additional employment of 100 mandays and 90 woman days followed by C+D+H+Sh system with 120 mandays and 40 woman days while C+D+P system generated with 45 mandays and 40 woman days.

In the medium farmers category, C+D+P system generated an additional employment of 109 mandays, 80 woman days and 4 bullockdays followed by C+D+H System with 82 mandays, 100 woman days and 8 bullockdays and 52 mandays and 100 woman days in case of C+H systems.

In the case of large farmers the normative farm plans provided additional employment of 178 mandays in C+D+H+Sh, 130 mandays in C+D+P and 57 mandays and 58 woman days in C+H systems, respectively.

In addition to family labour, each farmer would be hiring both human and bullock labour for conducting various operations in the normative farm plan. It is interesting to note that the three categories of farmers would gain additional employment opportunities under all the systems except in C+Sh system small farmers' category which did not provide for any additional employment over the existing farming system.

### **Conclusion**

A brief summary of the research conducted along with the salient findings is presented here the important conclusions drawn from this study and policy options developed for policy makers and administrators are also indicated here under.

The present study was undertaken in the Southern Transition Zone of Karnataka with the general objective to develop efficient farming systems for increasing farm income and employment and reducing income sustainability in the area under study. The following were Main finding and policy implications of the study.

The main findings of the study are present here

- 1) Regardless of the farm size, the existing farming systems are less efficient as the farming systems developed through normative farm plans exhibited potential for higher income and employment.
- 2) The transition of existing farming systems from subsistence to commercialization needs emphasis in order to increase and stabilize income from horticulture and other livestock enterprises (like dairy, sheep and poultry) as they help in reducing risk of getting lower income on the one hand and generate additional income and employment to farmers on the other.
- 3) Availability of family labour on full time basis for farming and the amount of own funds supplemented along with borrowings play a crucial role on the investment pattern in farming and nature of farming systems adopted on the farms.
- 4) The normative farm plan which would facilitate the increase in net farm income, efficient resource use and minimized risk with minimum working capital based on the borrowing capacity of the farmers would be adopted by all categories of farmers.

### **Policy Implications**

The following implications are drawn from the findings of the study:

1. Since most of the dry land farmers had small land holdings with low net returns, the integration of subsidiary enterprises along with appropriate technologies facilitates to realize sustained stable net returns from the entire farm.
2. The designed models should be demonstrated in the farmers' fields to convince the farmers about the advantages of the alternative farming systems. At the same time, appropriate extension strategies should be adopted to popularize the developed models.



3. The results of parametric programming models recommended relatively large number of crops to be cultivated when compared to the deterministic model. This is due to risk minimization attitude incorporated in the model which is in accordance with general notion that crop diversification helped in minimization of risk.
4. Land utilization increased along the net returns risk frontier.
5. Higher returns were associated with higher risk.

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## **CORPORATE ACTIONS AND IMPACT ON STOCK MARKETS PRICES – AN EMPIRICAL STUDY OF INDIAN MARKETS**

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### **Introduction**

Corporate actions are those actions taken by the management team of a corporate entity. One of the cardinal principles of a Corporate Management is to enhance the shareholder value. Corporate actions are a part of value enhancing exercise undertaken by the management. These corporate actions may or may not require further action on the part of investors. Corporate actions could be in the form of Dividend, Rights entitlement, Bonus, Mergers, Stock split, consolidation etc.

When a publicly-traded company issues a corporate action, it is initiating a process that will bring changes to its stock. Corporate actions attract the attention of Investors since the undertaken corporate action indicates a change in the company's financial affairs.

There is a belief among investors that market prices are affected by corporate actions because of this attention.

### **Stock Splits**

As the name implies, a stock split divides each of the outstanding shares of a company, thereby lowering the price per share - the market will adjust the price on the day the action is implemented. A stock split, however, is a non-event, meaning that it does not affect a company's equity, or its market capitalization. Only the number of shares outstanding change, so a stock split does not directly change the value or net assets of a company.

For instance, a company announcing a stock split from say Rs.10/- face value to Rs.2/- face value, will have an additional 5 shares for every one share, so the total shares outstanding will be five times but with reduced face value. At the same time, because the value of the company and its shares did not change, the price per share will drop by one fifth.

A company plans to split its stock only for the purpose of enhancing liquidity thus enabling more trades in the stock markets. Before stock split the price could be higher and many investors may not be able to afford the price quoted by the market. After the split, the prices becomes more affordable for the common investor and hence there could be more trading in the particular share.

### **Consolidation**

A consolidation is the reverse of split. In this, a company that would like to increase the price of its shares. For instance, a company whose shares have a face value of Rs.2/- presently may consolidate its shares to have a face value of Rs.10/-. In this case, the number of shares outstanding will be reduced by one fifth and retaining the same market capitalization. Except the change in the number of shares, there is no other financial change.

One of the motives for consolidation could be that the company wants to shed its status as a penny stock. Generally, penny stocks are not preferred by institutional investors. A company's image is enhanced when there are more institutional investors. Other times companies may use a reverse split to drive out small investors.

### **Share Buy Back**

Share buy back is an exercise in which the company purchases the shares from its investors and extinguishes the shares. This results in the number of shares getting reduced. Consequently, even with the same earnings, a higher EPS is reported. This leads to re rating the valuations of the share and subsequently raises the share prices.

For instance, if a company presently has 1000 shares in its capital and its net earnings are Rs.10000, its EPS is Rs.10/-. If the company goes for a share buy back of say 200 shares, the number of shares is now only 800. With the same Rs.10000/- net earnings, its EPS increases to 12.5.

There are strict laws in place for the company to make share buy back operational

There are several other corporate actions like Rights Issue, Bonus Issue, Dividend etc.

### **Literature Review**

Garcia de Andoin and Bacon (2009)<sup>1</sup> had studied the impact of stock split announcement on the stock prices of companies listed in NASDAQ. Their study had concluded that "firms' public stock split announcements did not affect stock price on the announcement day. Rather, for the two for one and three for two forward split samples, stock price exhibited a significant positive reaction up to 27 days prior to the announcement. For the reverse split sample, stock price exhibited a significant negative reaction up to 30 days prior to the announcement". They had also opined that "Investors greet forward stock split announcement with a positive sign, whereas they view reverse splits as bad news. Management may be using stock splits to adjust stock price to a more marketable range, downward with forward and upward for reverse splits"

Pavabutr and Sirodom (2008)<sup>2</sup> had studied the impact of price and liquidity on the stock exchange of Thailand. Their study "finds evidence that stock splits can have favorable impact on stock price through reduction of trade frictions such as bid-ask spreads and price impact measures. The reduction in bid-ask spread and price impact is a consequence of increased trading frequency of market participants who are expected to have a preferred trading range".

### **Methodology**

This paper examines the impact of Stock split, Consolidation and Share buy back on the sample companies.

A total of nine companies listed on the Bombay Stock Exchange have been randomly selected for the purpose of the study with 3 companies each for stock split, consolidation and share buy back.

**Table 1 Details of companies selected for the study**

Name of the company	Corporate Action
Tata Global Beverages Ltd	Stock Split
20 Microns Ltd	Stock Split
Asian Paints Ltd	Stock Split
Akzo Nobel India Ltd	Buy Back of shares
Mastek Ltd	Buy Back of Shares
Kanoria Chemicals Industries Ltd	Buy Back of Shares
Resurgere Mines Minerals India Ltd	Consolidation of Shares
Nissan Copper Limited	Consolidation of Shares
Arvind Remedies Limited	Consolidation of Shares

This study considers the date of intimation of the corporate action by the company to the Bombay Stock Exchange as the cut off date. The behaviour of the stock for a period of 90 days before intimation to the stock exchange and 90 days after intimation has been studied.

For the purpose of the study, the volume of trading has been considered. Market prices could have been considered, but the prices are influenced by several other factors other than corporate action. Trading volumes are technical indicators about the momentum in a particular counter. As already mentioned above, corporate actions attract the attention of the investors. If there is interest in the stock because of corporate actions, then volumes are bound to increase. Based on this logic, traded volumes have been selected as a criteria.

The required data for the study has been obtained from the official website of the Bombay Stock Exchange, [www.bseindia.com](http://www.bseindia.com)

Three hypothesis have been formed one each for Stock split, share buyback and consolidation.

The research has been designed to test the above hypothesis by “calculating the sample means and using the difference in the two sample means to test the difference in the two population means”<sup>3</sup>. The z score has been computed using the formula:

$$Z = \frac{(\bar{X}_1 - \bar{X}_2) - (\mu_1 - \mu_2)}{\sqrt{\frac{\sigma_{X_1}^2}{n_1} + \frac{\sigma_{X_2}^2}{n_2}}} = \frac{(\bar{X}_1 - \bar{X}_2) - (\mu_1 - \mu_2)}{\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}}$$

This research involves comparing two samples and testing whether there is a difference in the average volumes. Hence it is a two tailed test. The computed Z score is tested at 99% confidence level. Therefore, each of the two rejection regions has an area of 0.005 leaving 0.495 of the area in the distribution between each critical value and the mean of the distribution. When the computed Z score is less than the critical value obtained from the z table, the null hypothesis is accepted. In statistics, as a convention, when the calculated value is less than the tabled value, we do not say that the null hypothesis should be accepted but simply say that there is no reason to reject the null hypothesis.

## Hypothesis

### First Hypothesis:

H<sub>0</sub>: There is no impact of split on the volumes of shares traded before and after stock split.

H<sub>1</sub>: There is an impact of split on the volumes of shares traded before and after stock split

### Second Hypothesis

H<sub>0</sub>: There is no impact of consolidation on the volumes of shares traded before and after Consolidation

H<sub>1</sub>: There is an impact of consolidation on the volumes of shares traded before and after Consolidation

### Third Hypothesis

H<sub>0</sub>: There is no impact of Share buyback on the volumes of shares traded before and after the buy back decision

H<sub>1</sub>: There is impact of Share buyback on the volumes of shares traded before and after the buy back decision

## Data Analysis and Discussion of results

The results of the computation are given in Table 2.

**Table 2 z – Score**

Corporate Action	Company	z Score
Stock Split	Tata Global Beverages	4.2
Stock Split	20 Microns	-5
Stock Split	Asian Paints	-1.4
Consolidation	Akzo Nobel India	1.1
Consolidation	Mastek	2.5
Consolidation	Kanoria Chemicals	-2.11
Share Buy back	Resurgere Minerals	2.37
Share Buy back	Nissan Copper	3.36
Share Buyback	Arvind Remedies	0.47

The reference value of z score at 99% confidence level is +/- 2.58 in the case of two tailed test. The value is compared with the computed z scores given in table 2.

### Stock Split

The computed z score in table 2 shows that the two companies Tata Global beverages and 20 Microns fall outside the reference value of +/- 2.58 while that of Asian Paints is within the reference range.

### **Consolidation**

The computed z score in table 2 shows that all the three companies selected have z scores within the reference range.

### **Share buyback**

The computed z score in table 2 shows that Nissan Copper falls outside the reference value of +/- 2.58 while that of Resurgere Minerals and Arvind remedies is within the reference range.

### **Conclusion**

The purpose of this study was to analyze the impact of announcement of corporate actions of Stock Split, Consolidation and Share buyback on the traded volumes of the shares on the stock exchanges.

### **Stock Split**

Based on the above discussions, the null hypothesis needs to be rejected i.e.. there is an impact of stock split on these shares in the case of Tata Global and 20 Microns. In the case of Asian Paints, the computed z score falls within the reference range and hence there is no reason to reject the null hypothesis

### **Consolidation**

In the case of consolidation, since the value of the computed z score falls within the reference value, there is no reason to reject the null hypothesis, i.e. there is no impact of consolidation on the traded volumes.

### **Share Buyback**

Based on the above discussions, the null hypothesis needs to be rejected i.e..there is an impact of stock split on these shares in the case of Nissan Copper. In the case of Resurgere Minerals and Arvind Remedies, the computed z score falls within the reference range and hence there is no reason to reject the null hypothesis.

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## IMPACT OF CLOUD COMPUTING ON SMALL AND MEDIUM ENTERPRISES IN INDIA

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### ABSTRACT

Small and Medium Enterprises seek opportunities to rationalize the way they manage their resources. Information technology had a great impact in all aspects of life and the global economy is currently undergoing fundamental transformation. Information technology has very real impact in most of industries and in all aspects of economy, while businesses and enterprises continue to undergo considerable changes. Usage of these technologies is revolutionizing the rules of business, resulting in structural transformation of enterprises. Modern businesses are not possible without help of information technology, which is having a significant impact on the operations of Small and Medium Sized Enterprises (SME) and it is claimed to be essential for the survival and growth of economies in general.

It is argued in this article that cloud computing is likely to be one of those opportunities sought by the Small and Medium Sized Enterprises (SME) in these difficult times and could prove to be of immense benefit (and empowering in some situations) to them due to its flexibility and pay-as-you-go cost structure (Pay-per-use: You pay for cloud services only when you use them, either for the short term (for example, for CPU time) or for a longer duration (for example, for cloud-based storage or vault services). Cloud computing is an emerging new computing paradigm for delivering computing services. This computing approach relies on a number of existing technologies, e.g., the Internet, virtualization, grid computing, Web services, etc.

Cloud computing is an emerging area that affects IT infrastructure, network services, and applications. The term "cloud computing" has different connotations for IT professionals, depending upon their point of view and often their own products and offerings. As with all emerging areas, real-world deployments and customer success stories will generate a better understanding of the term

The provision of this service in a pay-as-you-go way through (largely) the popular medium of the Internet gives this service a new distinctiveness. In this article, some aspects of this distinctiveness will be highlighted and some light will be shed on the current concerns that might be preventing some organizations from adopting it.

**KEY WORDS :** Cloud computing, Web services, Virtualization, Grid computing, Small and medium enterprises (SMEs)

## **INTRODUCTION:**

Cloud computing is a new general purpose Internet-based technology through which information is stored in servers and provided as a service and on-demand to clients. It can provide a fundamental contribution to promote growth and competition, and it can help the economy to recover from a severe downturn.

“The cloud” can be implemented to varying degrees. Cloud computing in its simplest form involves moving data storage from in-house servers to a third-party service provider with centralized servers for many clients. It can also involve moving entire operating systems and software to “the cloud” so that users can connect via an internet connection to the application they want.

Cloud computing is an emerging new computing paradigm for delivering computing services. This computing approach relies on a number of existing technologies, e.g., the Internet, Virtualization, Grid Computing, Web Services, etc. The provision of this service in a pay-as-you-go way through (largely) the popular medium of the Internet gives this service a new distinctiveness.

Providing software as a service is not a new computing practice. Some companies, known as Application Service Providers (ASPs), were providing businesses with software programs as a service via the medium of the Internet during the 1990s. However, such attempts at “utility computing” did not take off. This was largely attributed to lack of sufficient bandwidth. During that period, broadband was neither cheap nor plentiful enough for utilities to deliver computing services with the speed and reliability that businesses enjoyed with their local machines (Carr, 2009). Then came Web services (especially those based on the XML-based SOAP message protocol) that represented a model of software delivery based on the notion that pieces of software applications could be developed and then published to a registry where they can be dynamically discovered and consumed by other client applications over different transport protocols (e.g., HTTP, TCP/IP, etc.) irrespective of the language used to develop those applications or the platforms (e.g., Operation systems, Internet servers) on which they are implemented. This was a dramatic improvement over the SOAP is an XML-based and open source message transport protocol. It stands for Simple Object Access Protocol services provided by ASPs which relied on proprietary (and hence un-portable) software.

The advent of Web services promised many exciting possibilities. Some of these promised possibilities initially received a great deal of attention and were a frequent subject of media discussions and futuristic scenarios (sometimes amounting to “hype”) such as the ability to automate the process of discovery, binding, and invocation of Web services on the Internet without human intervention (Manes, 2004; Nakhimovsky & Myers, 2004). One technology analyst and author (David Chappell) in 2003 even doubted if there was a business case for Web services (Chappell, 2003). However, Web services are nowhere near achieving the full potential that was hoped for. Nevertheless, the technology is being implemented successfully (and commercially) by many of the big players such as eBay, Amazon and Google (Iskold, 2006 ). Furthermore, the technology has also created the foundation for a new Enterprise Application Integration (EAI) paradigm known as Service-Oriented Architecture (SOA). The extensible XML-based nature of SOAP has enabled many organizations to expose some of their legacy and disparate systems as Web services in order to achieve total integration of their systems (Clark, 2007; Flinders, 2007; Mohamed,2007). Most importantly, SOAP-based Web services are now being used in the delivery of some aspects of a new computing



paradigm (namely cloud computing) which not only promises to deliver software remotely but also other computing-related functionality thanks also to other relatively new technologies such as virtualization and grid computing.

Firms will be able to adopt this service on demand, so as to avoid large up-front costs (that are currently necessary for hardware and software equipment) and spend in ICT according to their production necessities - Dubey and Wagle (2007) and Armbrust et al.(2009) for early reviews of the topic. This will have a large impact on the cost structure and through it on the production possibilities of all firms, especially small and medium size enterprises (SMEs). Cloud computing allows enterprises to get their applications up and running faster, with improved manageability and less maintenance, and enables IT to more rapidly adjust resources to meet fluctuating and unpredictable business demand. Application of cloud computing is going to reduce drastically the fixed costs of entry and production, turning part of them into variable costs related to the production necessities. This will have a positive impact on entry and competition in all. But for many organizations, in a short period of time may not be possible to make the transition to cloud computing, particularly as the cloud market is so new. Longer term, cloud computing is increasingly appearing to be a transformative change in the business landscape. Cloud computing is becoming part of the enterprise more and more. Customers every day are considering the cloud as a way to drive new business opps and it's becoming a reality for many.

Though cloud computing is the best thing for small business since the invention of the stapler. But that doesn't mean that every small business should immediately throw out all their servers and software and conduct all their business operations in the cloud. Small business owners have different needs and different comfort levels. It may be more advantageous for them to use cloud computing only for certain applications. Cloud computing is a great opportunity for small businesses to off-load the hassle and costs of IT management.

One approach might be to start cloud computing slowly; choose one or two of business applications to replace and see how it goes. Hopefully over time it will become more comfortable and able to reap even more. Security issues related to having their business data 'out' on the Internet seem to be the number one concern of small business owners.

### **WHAT IS CLOUD COMPUTING?**

There seems to be many definitions of cloud computing around. A study by McKinsey (the global management consulting firm) found that there are 22 possible separate definitions of cloud computing. In fact, no common standard or definition for cloud computing seems to exist (Grossman, 2009; Voas & Zhang, 2009).

According to National Institute of Standards and Technology (NIST) definition:

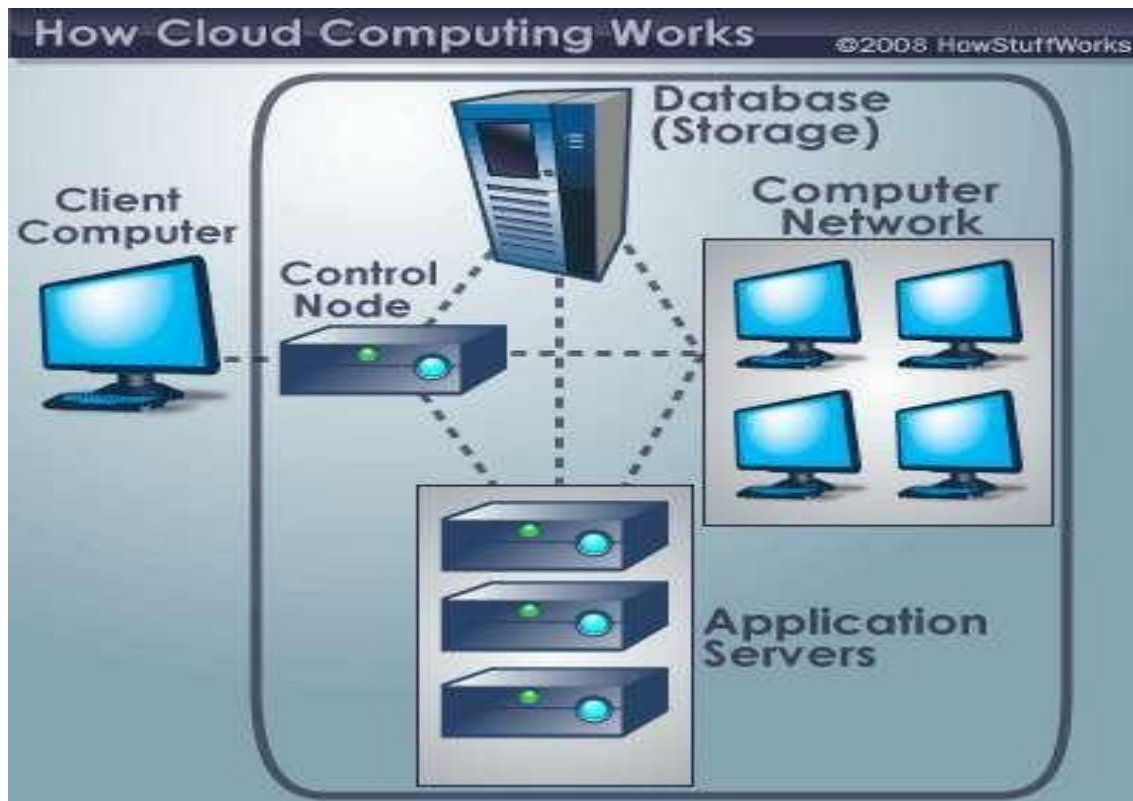
"Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (for example, networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction."

It is a service, a platform, and even an operating system. Some even link it to such concepts as grid computing -- which is a way of taking many different computers and linking them together to form one very big computer.

Cloud computing can mean a lot of things, but essentially, it refers to any service in which data is stored in a remote virtual environment instead of on your business premises. Generally, these services are subscription-based, and may be billed on a monthly basis, with rates dependent on the amount of data you're storing remotely, or in "the cloud".

A basic definition of cloud computing is the use of the Internet for the tasks of performing on computers. The "cloud" represents the Internet. Beyond just being used as a place to store and share information, cloud computing can be used to manipulate information. For example, instead of using a local database, businesses could rent CPU time on a web-based database. The major drawback of using cloud computing as a service is that it requires an Internet connection. So, while there are many benefits, some times it may cut off from the Web.

### HOW CLOUD COMPUTING WORKS:



(Fig. 1)

(Source: by Jonathan Strickland, Howstuffworks.com)

Although cloud computing is an emerging field of computer science, the idea has been around for a few years. It's called cloud computing because the data and applications exist on a "cloud" of Web servers.

For an executive of a large corporation responsibilities are more. Among all other responsibilities, particular responsibility includes providing the employees the right hardware and software they need to do their jobs. Buying computers for everyone isn't enough – they also have to purchase software or software licenses to give employees the tools they require. Whenever a new hire, they have to buy more software or make sure that current software license allows another user. It's so stressful for executives.

As such there is an alternative available for executives. Instead of installing a suite of software for each computer, they have to load one application. That application would allow workers to log into a Web-based service which hosts all the programs the user would need for his or her job. Remote machines owned by another company would run everything from e-

mail to word processing to complex data analysis programs. It's called cloud computing, and it could change the entire computer industry.

In a cloud computing system, there's a significant workload shift. Local computers no longer have to do all the heavy lifting when it comes to running applications. The network of computers that make up the cloud handles them instead. Hardware and software demands on the user's side decrease. The only thing the user's computer needs to be able to run is the cloud computing system's interface software, which can be as simple as a Web browser, and the cloud's network takes care of the rest.

For example, an e-mail account with a Web-based e-mail service like Hotmail, Yahoo! Mail or Gmail, then they have some experience with cloud computing. Instead of running an e-mail program on your computer, you log in to a Web e-mail account remotely. The software and storage account doesn't exist on computer -- it's on the service's computer cloud.

Some of the companies researching cloud computing are big names in the computer industry. Microsoft, IBM and Google are investing millions of dollars into research. Some people think Apple might investigate the possibility of producing interface hardware for cloud computing systems.

### **CLOUD COMPUTING IN INDIA**

Gartner estimated that SaaS market in India was US\$27 million in 2007. According to a study by Springboard Research, the Indian SaaS market would experience a CAGR (compound annual growth rate) of 77% during 2006-2010 and will reach US\$165 million in 2010 (IANS 2008). According to a study by India's National Association of Software and Services Companies (*NASSCOM*) and Mckinsey, remote infrastructure management will be a US\$15 billion industry in India by 2013.

In September 2008, IBM opened a cloud center in Bangalore, which targets mid-market vendors, universities, government bodies and microfinance and telecommunications companies (Channelworld 2008). Indian universities are banking on the cloud to develop innovative research and education activities. The Indian Institute of Technology (IIT),

Kanpur

and other academic institutions use the cloud (MacMillan 2009; Raghu (2008). In November 2009, Microsoft India announced commercial availability of cloud services such as e-mail, collaboration, conferencing and productivity starting US\$2 per user per month (HT 2009). These services are mainly targeted to SMEs. India also has a number of local cloud providers

In July 2009, VM ware opened a cloud center in Pune (eeherald.com 2009). Likewise, the U.S. Company, *Parallels* announced a plan to establish cloud operations in India (Desai 2009). The SaaS vendor, Salesforce.com, which started its operations in 2005, is focusing on cities such as Bangalore, Gurgaon and Mumbai and is taking measures to create cloud awareness. Salesforce.com's clients include big companies such as Bharti AXA General Insurance, eBay India, Sify Technologies, Polaris Software Labs, Lodha Group, Servion, Maytas Properties, HCL, Sasken Communication Technologies, Ocimum Biosolutions, and state owned National Research Development Corporation (NRDC) (Srikanth 2009).

The Indian offshoring industry is probably the prime example of an industry that is likely to feel the impact of cloud computing. The demand for cloud related services is especially high in the offshoring industry and technology hubs such as Bangalore and Delhi (Economic Times 2009).

### **SME'S AND IMPORTANCE OF INFORMATION TECHNOLOGY IN ITS FIELD:**

Small- and medium-scale enterprises (SMEs) occupy an important and strategic place in economic growth and equitable development in all countries. The post-liberalisation era in the Indian economy has enhanced the opportunities and challenges for the small industries sector. Constituting as high as 90% of enterprises in most countries worldwide, SMEs are the driving force behind a large number of innovations and contribute to the growth of the national economy through employment creation, investments and exports. Their contribution to poverty reduction and wider distribution of wealth in developing economies cannot be underrated. With their dynamism, flexibility and innovative drive they are increasingly focusing on improved production methods, penetrative marketing strategies and management capabilities to sustain and strengthen their operations. They are thus poised for global partnership and to absorb latest technologies in diverse industrial fields.

According to the newly enacted Micro, Small and Medium Enterprises Development Act 2006, which will come into effect from October 2, 2006, enterprises are classified into Micro, Small and Medium according to the following criteria:

Micro enterprise Does not exceed 25 Lakh rupees.

Small enterprise More than 25 Lakh rupees, but does not exceed 5 Crore rupees.

Medium enterprise More than 5 Crore rupees but does not exceed 10 Crore rupee.

The common definition of the Organisation for Economic Cooperation and Development [OECD, 2002], which is based on employment figures. The widely accepted definition points to Small Sized Enterprises with between 1 to 49 employees, while Medium Sized Enterprises are firms with between 50 to 100 employees [Mustafa & Gashi, 2006]. OECD noted that SME are fundamental for the economic growth in member countries and constitute over 95% of enterprises.

The factors – strengths coupled with opportunities – that work in favour of Indian SMEs include their high contribution to domestic production, significant export earnings, low investment requirements, operational flexibility, location wise mobility, low intensive imports, capacities to develop appropriate indigenous technology, import substitution, contribution towards defense production and competitiveness in domestic and export markets.

While we look into new approaches to strengthen them effectively, one has to understand the limitations of SMEs, which include low capital base, concentration of management functions in one/ two persons, inadequate exposure to international environment, inability to face impact of WTO regime, inadequate R&D and lack of professionalism. Besides these, the most formidable problem faced by the SMEs has been in accessing technology and maintaining competitiveness. The reasons for the inability of SMEs to identify their technology needs are;

- Poor financial situations and low levels of R&D
- Poor adaptability to changing trade trends;
- Desire to avoid risk;
- Non-availability of technically trained human resources;
- Emphasis on production and not on production costs;
- Lack of management skills;
- Lack of access to technological information and consultancy services;
- Isolation from technology hubs.

One of the main factors that influences in the success or failure of enterprise is technology. The best use of technology no doubt enables enterprise in reducing cost of production, maintain consistency in quality, improve productivity and finally develop the competitiveness of the enterprise.

*A lot of the technology they have is old, so it's time for a refresh.*

Technology had a great impact in all aspects of life and the global economy is currently undergoing fundamental transformation. Technical applications have very real impact in most of the industries and in all aspects of economy, while businesses and enterprises continue to undergo considerable changes. Usage of these technologies is revolutionizing the rules of business, resulting in structural transformation of enterprises.

Modern businesses are not possible without help of any sophisticated technology, which is having a significant impact on the operations of Small and Medium Sized Enterprises (SME) and it is claimed to be essential for the survival and growth of economies in general. SME is drawing attention in developed and developing countries as well as in transition countries. It is generally recognized that SME play a key role in the revitalization and development of national economy in many countries and particular in the context of India. It is encouraging the development of SME and the role that SME sector can play in promoting economic and social development by creating opportunities for employment.

Several theories elaborate on connection between information technology, economic development and social change. Almost all agree on the importance of information and communication technology adoption in SME, while the importance of SME as engines to economic growth is well acknowledged worldwide. Information technology, particularly the Inte

ernet is having a significant impact on the operations of SME and it is claimed to be essential for the survival and growth of nations economies in general and SME in particular. Especially information technology are changing the economy and traditional business become more dependent on new technologies. Compared with traditional business new technologies facilitate an increased interactivity, flexibility, cheap business transactions as well as improve interconnection with business partners and costumers. Information technology is having a significant impact in sector of Small and Medium Sized Enterprises (SME), especially where industries are in decline or when unemployment levels are high. In the last part of the twentieth century, the Internet and mobile phones not only changed the face of communications, but also gave the impetus to economic growth.

Globalization of world economy and technological developments in the two decades of twentieth century have transformed the majority of wealth creating work from physically based to knowledge based and has greatly enhanced the values of information to business organisation by offering new business opportunities. While, for the last two hundred years, economics has recognized only two factors of production: labour and capital, this is known changing. Information and knowledge are replacing capital and energy as the primary wealth creating assets.

Information has become a critical resource, a priceless product and basic input to progress and development. Information has become synonymous with power. Therefore, accurate, rapid and relevant information are considered to be essential for SME [Combs, 1995:67].

SME would need as well as effective information systems to support and to deliver information to the different users. Such information systems would include those technology that support decision making, provide effective interface between users and computer technology and provide information for the managers on the day-to-day operations of the enterprises. Information is needed for various purposes and serve as an invaluable commodity or product. Information is very important aspect of decision making in all levels of management in enterprises [Hicks,1993:648], especially in competitive business environment and managers utilize information as a resource to plan, organize, staff administer and control activities in ways that achieve the enterprises objectives.

The ability of SME's to realize their goals depends on how well the organisation acquires, interprets, synthesizes, evaluate and understands information and how well its information channels supports organizational processes. Combs [1995:124] noted that information technology is one of the most important factors of any production activity and technological changes can have profound consequences. This technology will continue to enable the growth of global work, where SME operate across national boundaries. Today, new technologies, especially Internet technology are changing the global flows of information, trade and investment and the competitiveness.

### **IS CLOUD COMPUTING GOOD FOR SMALL BUSINESS?**

Cloud computing refers to software applications and data storage services that are delivered in real time over a network, usually the Internet. These services include basically anything that you can do on a PC: e-mail, data storage, and communications and productivity applications. The benefits of cloud computing may include lower costs, greater mobility and enhanced collaboration.

Cloud services may be considerably less expensive than the comparable desktop software and user licenses. Prominent IT companies offer free suites of productivity applications as well as the more feature-rich subscription services. The subscription services are pay for usage, but they offer priority customer support and premium features. Additionally, by leveraging cloud services small business can reduce the need for in-house exchange servers and IT staff, thereby potentially reducing operation expenditures.

Having such productivity applications and storage "in the cloud" enables access to your files anytime and anywhere there is a network connection. It can also make it easier for colleagues to collaborate on projects regardless of time zone or location.

One area where the results of cloud computing is mixed is reliability. On the upside, commercial cloud service providers need to have very solid data back-up systems. With cloud computing it is unlikely that your data will be lost as service providers will typically have data recovery systems in place. However, a more frequent problem is accessibility. While 24-7 access is one of the promises of cloud computing, the reality is that outages do occur. From time to time even major providers have services go offline due to system failures or maintenance. Additionally, you will need stable internet access at your end in order to ensure your access to the available services.

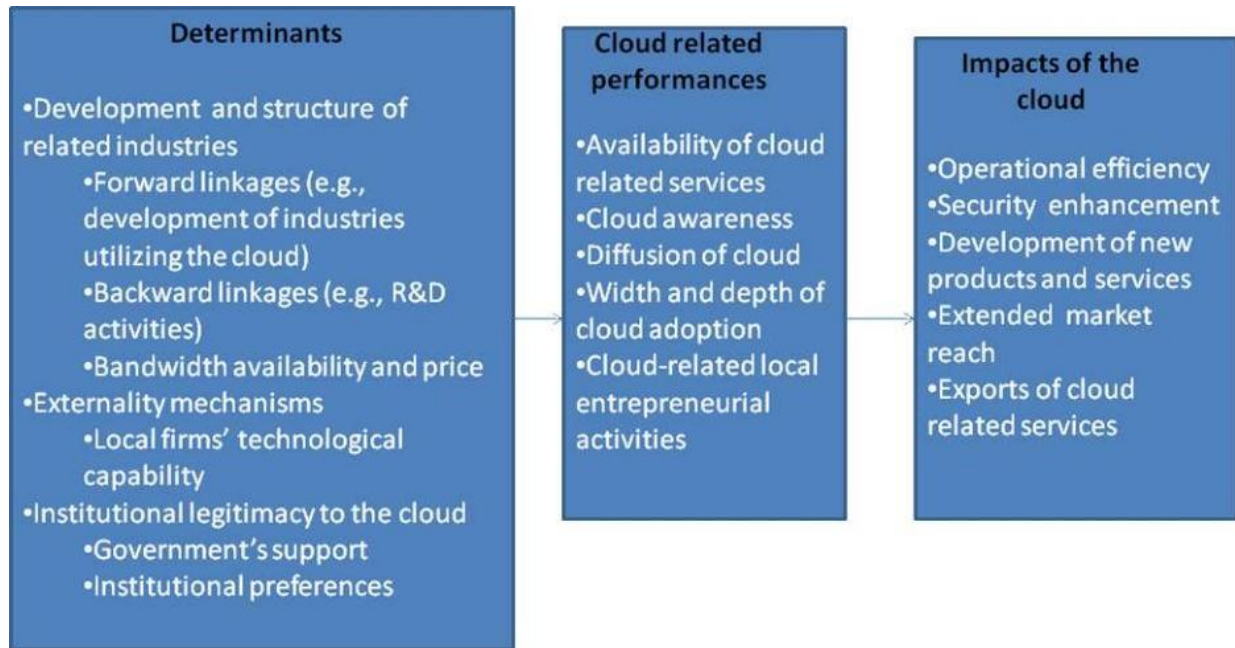
Still, as every computer user knows, physical in-office systems and networks also fail. When considering moving to the cloud, a question you have to ask is: "how often do your own office systems go offline?" Assess your tolerance to the risk of network outages. If a cloud-computing system's stability is consistent with your needs, cloud computing might be advantageous to your operations.

A bigger consideration is security. By taking your data and workflow into the cloud, you are trusting a third party with your data. As well, by increasing access points to your data – for instance by allowing employees to access data from remote locations – you run a greater risk

that third parties could access it. Although switching to cloud computing may be a good choice for some businesses, it is also likely to be a growing practice in the future, and something that all businesses may ponder.

Most major computer firms are heavily investing in cloud offerings; therefore it is likely that some of the services you already use will be moved to the cloud (if they haven't been already).

## A FRAMEWORK FOR CLOUD RELATED INDICATORS IN DEVELOPING COUNTRIES



(Fig.2)

Source: **Cloud Computing In Developing Economies: Drivers, Effects and Policy Measures**

**Nir Kshetri**

### How Small Businesses Can Use Cloud Computing:

**Document storage.** Many cloud document storage services allow you to store and access Word files, PDFs, audio files, spreadsheets, and other data through your Internet connection, so you can access your files from any computer as long as you can get online. A typical provider allows up to one gigabyte of free storage per account; if your business needs more space, it can be purchased on a per-unit basis.

**Website hosting.** Instead of purchasing a physical server to host your website, many users have now switched to “cloud hosting,” which operates on one or more connected servers online. This means that you can quickly scale up or down if your bandwidth needs increase or decrease. It’s also far more cost-effective than a dedicated server, as you only need to pay for the amount of computing power you’re using, instead of paying the full cost of running an entire server. On the downside, because you are not physically in control of your data storage, there are some security risks as far as cloud hosting is concerned. Nonetheless, it’s a great option for many small businesses.

**Accounting and billing.** If you and your employees need to keep track of your hours, expenses, and invoices, one way to make sure everything's in order is to use an accounting system that's hosted in the cloud, so users can access the service from anywhere. Many accounting services even offer programs that let you track your time as you are working, and monitor how timely your clients are with paying your invoices.

**Project management.** If you're managing a team of workers who frequently need to upload files for feedback and editing, it makes a lot of sense to switch from an internal project management system to one that's hosted online. This is particularly useful if you have employees who work remotely or travel for business, or if you're managing a project that involves freelance contractors. In addition to file sharing, such systems can be used to send messages within a group, and to set up milestones and email reminders.

**Web analytics.** You could track your own server logs for data about who's visiting your business website, but many cloud-based web analytics platforms offer far more advanced solutions for tracking and parsing your data than you could do independently. There are a number of popular free analytics options that allow you to track measures including browser type, country, referring link, and conversion rate (i.e., completing a desired action). If you're willing to pay a small monthly fee, you can even sign up for real-time reporting services that let you track what users are doing on your site at this very second.

#### **Where to get Cloud services or Cloud Offerings:**

Cloud computing is not just a concept technology that promises to deliver many exciting things. It is already a reality and there are many commercial implementations of it. For example, Amazon's Elastic Compute Cloud (EC2) offers a variety of services and it represents a virtual computing environment that allows users to use Web service interfaces in order to launch instances with a variety of operating systems, load them with customers' custom application environment and manage customers' network's access permissions. Amazon's other cloud, known as S3 (or simple storage service), provides a Web services interface that can be used to store and retrieve any amount of data, at any time, from anywhere on the Web. It provides developers with access to "the same highly scalable, reliable, fast, inexpensive data storage infrastructure that Amazon uses to run its own global network of Websites", according to Amazon's description of this service. A number of clouds serving different needs are also provided by Google. One popular service is Google Apps. Google Apps is a collection of Web-based messaging (e.g., Gmail, Google Talk, and Google Calendar) and productivity and collaboration tools (Google Docs: text files, spreadsheets, and presentations).

IBM has a number of cloud products under its Smart Business portfolio. They include Smart Market (a portal service to compare and manage different business applications that run in IBM's cloud environment), Smart Cube (an all-in-one appliance that has networking, storage, and office software built in), Smart Desk, (a dashboard software package that enables users to manage applications and services from the Market and Cube clouds). IBM is also trying to address the concerns of IT staff who claim that their top challenge is finding enough available resources to perform tests before moving new applications into production. IBM response was the introduction of Smart Business Test Cloud (designed, according to IBM, to reduce costs to organizations substantially) which includes a pre-integrated set of services, from planning through management, for a test environment implementation. Delivered through hardened services methods for the design and deployment of integrated cloud solutions, this



cloud can leverage existing investments in hardware, software, storage, and virtualization management, or utilize the newly announced IBM Cloudburst (a complete IBM service management package) as the infrastructure solution.

Like other major vendors, Microsoft is also investing heavily in this new computing service delivery model and has introduced Azure, as its cloud offering. Azure has three components: Windows Azure(which provides developers with on-demand compute and storage to host, scale, and manage Internet or cloud applications), SQL Azure (which extends the capabilities of Microsoft SQL Server into the cloud as a Web-based distributed relational database) and Azure. Net Services (which include a set of Microsoft hosted, highly scalable, developer-oriented services that provide key building blocks required by many cloud-based and cloud-aware applications). The above examples are intended to provide an impression of the type of cloud services on offer by some of the major players in this field.

There is no space here to list the many other cloud services that currently exist. However, some Web sites and blogs maintain a list of those suppliers which can be found easily by “google-ing” one’s search. This, no doubt, is a manifestation of the growing number of cloud providers and vendors.

India’s CRL and AdventNet are among the high-profile Indian cloud providers. Other Indian IT companies such as TCS and Wipro have plans to enter the cloud market. Wipro has built a "private cloud" for its internal use. The company is also considering other services: public cloud, hybrid cloud, and helping independent software vendors design and implement SaaS (Foley 2009). Likewise, TCS is exploring the possibilities of cloud through pilot projects (Morgan 2009). Other IT players such as HCL Technologies and Bharti Airtel have also embraced the cloud.

As noted above, the Indian company Advent Net’s Zoho division operates a popular suite of web-based applications (Economist 2008a). Likewise, Hyderabad-based Pressmart provides SaaS based e-publishing and digitization services to the print industry. Pressmart solution can help firms deliver contents across multiple platforms such as Web, mobile, RSS, podcasts, blogs, social networking sites, articles directories and search engines (Sanyal 2008). In 2008, Pressmart received VC investment from Draper Fisher Jurveston and NEA-IndoUS Ventures.

### CLOUD-RELATED ENTREPRENEURSHIP OF DEVELOPING WORLD-BASED FIRMS

Table-1

Infosys	India	• Partnered with its major clients in cloud research[].	• Provides cloud computing-based services for the auto sector[].
Computational Research Laboratories (CRL)	India	• March 2008: Yahoo signed a research pact with CRL to support cloud research.	• A lab run by the Tata Group • CLR would provide EKA supercomputer, which was the world’s fourth fastest in March
AdventNet	India	• Zoho division operates a popular suite of web-based applications. • Zoho had over 1.5 million users in March 2009, 2 million In September 2009 (400,000 users, 20% of total, in India and China) .	• The ICICI bank’s insurance arm uses Zoho’s applications to develop innovative services such as a personalized insurance for diabetes. Premiums are adjusted depending on how well policyholders stick to a fitness

## **IMPACT OF CLOUD COMPUTING ON SME'S:**

### **Operational Efficiency: Productivity and Efficiency Gains:**

Operational efficiency is related to the costs of accomplishing corporate functions. Anecdotal evidence from developing countries such as China, India and South Africa indicates that adoption of the cloud may lead to productivity and efficiency gains. As noted earlier, cloud has enabled some South African call centers to increase productivity by 20% (Firth 2009). The Indian cloud Provider, Netmagic reported that the company's cloud services helped its clients cut costs by 25-30% (Abrar 2009). Microsoft claimed that its cloud services offered in India would help reduce IT costs by 10 -50% (HT 2009). Likewise, the cloud-based model has helped Chinese software start-ups access to infrastructures and data centers and utilize virtualized computing resources, which has led to a reduction of the upfront investments and product development costs.

### **Security Enhancement**

Most organizations in the developing world have weak defense mechanisms. In 2002, North America accounted for 58% of the global IT security market (Europemedia 2002). An estimate suggested that in 2006, about 3 million of Brazil's SMEs lacked anti-virus software in their PCs (Business Wire 2006). Likewise, 60% of Kenyan banks reportedly have insecure systems (Kinyanjui 2009). The cloud thus has a possibility to enhance security for these companies. In this regard, the concept of "hollow diffusion" of e-commerce can be helpful in understanding weak defense (Otis & Evans 2003). Many companies in developing countries arguably lack technological and human resources to focus on security. "Hollow diffusion" can take place in human terms (lack of skill and experience) as well as in technological terms (failure to use security products) (Otis & Evans 2003). Some ISPs in industrialized countries reportedly block contents originated from problematic networks in developing countries (Garfinkel 2002).

The cloud's economies of scale allow a business model in which third parties can provide a cost-effective security for smaller companies by integrating security applications into cloud services (Grossman 2009). Delivery of security on the cloud can address some of the human (e.g., problems to install and maintain software) and technological issues and may strengthen the defense mechanisms.

### **Development of New Products And Services**

The cloud has also helped some developing world-based firms develop new products and services. Zoho's applications are used by hospitals and banks in India to develop new products. As another example of cloud use to develop new products and services, consider the Computational Intelligence Research Group at the University of Pretoria. As noted earlier, students in the university use the cloud to develop new drugs.

### **Extending Market Reach**

The cloud can also extend market reach of SMEs. Consider for instance, healthcare off shoring industry. Industrialized world-based healthcare providers are increasingly off shoring services related to medical transcription, billing and insurance claims teleimaging and telepathology to India. Most of these are currently dominated by big players such as Wipro and Teleradiology solutions. Cloud computing is likely to open the door for small Indian players to participate in the global healthcare off shoring industry. Availability of web-based applications such as those offered by Zoho reduces the up-front investments for small Indian off shoring companies.

### **Exports of Cloud Related Services**

There has been some achievement on the export of cloud related applications and services. Unbelievable as it may sound some developing world-based technology companies such as AdventNet have been exporting cloud -based applications.

### **ADVANTAGES OF CLOUD COMPUTING**

Cloud computing offers numerous advantages both to end users and businesses of all sizes. The obvious huge advantage is that one has to support more for infrastructure or should have the knowledge necessary to develop and maintain the infrastructure, development environment or application, as were things up until recently. The burden has been lifted and someone else is taking care of all that. Business are now able to focus on their core business by outsourcing all the hassle of IT infrastructure.

As with any major business decision, if you are considering the use of a cloud-based system in your organization, you should carefully evaluate both its advantages and disadvantages to ensure it is in line with your business goals and specific network needs.

#### **Advantages:**

**1. Easy Implementation:** Cloud hosting allows businesses to retain the same applications and

business processes without having to deal with the backend technicalities. Readily manageable by the Internet, a cloud infrastructure can be accessed by enterprises easily and quickly. Another advantage is a lesser cost for in-house IT infrastructure maintenance. While a backup can be an extra cost, it can be worth it in the event of a technical failure within the cloud.

**2. Accessibility:** . A major advantage of cloud storage is the ability to access data from any location. Offices in two or more locations can access the same files. For companies with people telecommuting or working out of multiple locations, it provides continuity and effectiveness. Business travelers can also access data from anywhere in the world. An internet cloud infrastructure maximizes enterprise productivity and efficiency by ensuring the application is accessible from any place anytime, allowing collaboration and sharing among users in multiple locations.

**3. No Hardware Required:** A physical storage center is no longer needed as it is hosted in the cloud. Again, a backup could be worth looking into in the event of a disaster that could leave the company's productivity stagnant. Recovering from a disaster is easier with this data storage configuration. Any company can retrieve data when needed, assuming that cloud storage provider wasn't effected. This option helps with disaster recovery planning efforts. If any company is hit with a disaster, it's highly likely that the data remains safe on the third-party servers. It can be the difference between a company coming back from disaster or closing its doors. It is not unheard of for businesses to fold following the failure of an inadequate data storage solution.

**4 . Cost Per Head:** Overhead technology costs are kept at a minimum with cloud hosting services, enabling businesses to use the extra time and resources for improving the company infrastructure. Costs are usually lower with cloud computing. The company pays a monthly or annual fee for a certain amount of storage space. That fee is much lower than the initial cost of hardware backup solutions and expertise to configure and manage them.

**5...Troubleshooting, installation and configuring:** Cloud hosting provides easy, optimal utilization and management. In addition to 24x7x365 monitoring, Stratosphere Networks will install, troubleshoot and configure the cloud software and handle any customization and upgrades the enterprises.

**6.Flexibility for Growth:** Flexible storage requirements are easy with cloud storage. Instead of adding extra hard drives when storage needs change, company has virtually endless storage available in the cloud. Renting space in this manor allows a company to scale cost against storage and pay for what they are actually utilizing.

**7.Efficient Recovery:** Cloud computing delivers faster and more accurate retrieval of applications and data. With less downtime, it is the most efficient recovery plan.

#### **DISADVANTAGES OF CLOUD COMPUTING:**

1.**Security :** If you use the Cloud Computing, then be clear in mind that you are sharing your important files with the cloud service provider. you are relying on a third party to effectively secure your data. There may be security issues later on and your private or crucial files may get accessed by Cloud service provider. It is important to thoroughly check the security features offered by any cloud storage provider you are considering, read reviews and compare providers before making choices. Although, it's a big risk to use the Cloud technology for your files" storage but you can put an end to this fear by opting for the most trusted service provider than going with any new or unknown provider. The choice is yours and extent of risk depends on your choice only.

2.**Technical Problems :** Well, don't forget that at last it's another sort of technology and technology faces issues as well. This may be downtime issues or may be any other like hack etc. So it's quite possible that you may also have to suffer from it, while using the Cloud technology. Nothing can be more wired than the situation, when you need to access your files stored in the Cloud urgently and at the same time, your service provider is facing some technical issues. In such situations, you can't do anything but just can wait for your service provider to solve all the issues. Well, who knows that how much time it's going to take.

3.**Access :** To access your cloud storage, you will need an Internet connection up and running, or choose a provider with offline sync (which has its own draw backs). In areas with no internet connectivity, be that 3G or POTS retrieving this data could be impossible, you would also need to think about connectivity failure scenarios too.

4.**Control:** You give up some control when you place your data on a third-party solution. You do not control the servers. You do not control where those servers sit, and you always run the chance of having your cloud storage company go out of business. Choosing a company with a good track record and a reliable client base is very important for this reason.

5.**Bandwidth:** constraints limit the amount of data exchange that happens, when you're in an office with a local server the cables or wifi can (usually) pass data much faster than traditional internet connections, if you transfer large files and have a slow connection then cloud storage is probably not an option for you right now.

6. **Swapping:** providers can be very difficult. Your company would need to download all data to your local network then upload it again to the new provider, which would require

storage capacity, enough to store all of the data you were hosting with the third party, this could get expensive and consider all that redundant hardware, look for companies which can migrate your data for you from your previous provider.

Cloud Computing is boon of modern technology and really makes your tasks to get done with convenience at its best. Though there are some disadvantages it is better to adopt.

### **TO WHAT EXTENT ARE SMALL & MEDIUM-SIZED BUSINESSES MAKING USE CLOUD COMPUTING? – A SURVEY REPORT OF THE GFI SOFTWARE SME TECHNOLOGY**

Only 10% of senior business decision makers in Small and Medium-sized enterprises (SMEs) claim to fully understand what cloud computing means. 62% have never heard of cloud computing. A further 13% have heard of it but don't know what it means.

24% of IT professionals have either never heard of cloud computing or don't know what the term means.

Security fears are not the main concern for organisations considering cloud computing. Although security is the second highest perceived disadvantage (after vendor lock-in), only 12% cite it as a main reason for not actually pursuing cloud computing.

Over half of all respondents (56%) will not pursue cloud computing because their needs are met by the current in-house set-up.

Despite the IT industry's emphasis on the financial benefits of cloud computing, 44% of respondents cite „too expensive“ as a reason for not adopting.

The top three perceived benefits of cloud computing are: expertise of service provider, lower costs and accountability.

There is growing resistance to the on-premise and hosted polarization. SMEs are increasingly embracing a hybrid model that mixes and matches services to reflect business needs and existing IT skills/infrastructure.

#### **SUGGESTIONS:**

Businesses should consider the following hints and tips when selecting a cloud service provider:

- Proceed with caution. This may mean that a move to “the cloud” will take longer than expected but the outcome may be better.
- Look for a provider you have a business relationship with – don't just go for price.
- Look for good governance arrangements, for example, will the provider's client manager meet regularly with the business?
- Do a full cost-benefit analysis to determine what it costs to have in-house IT. You may find that it costs more than you think.

- Consider the jurisdiction the contract is signed in. For example, if you have a dispute with your cloud service provider, the dispute may only be able to be resolved getting Judiciary help.
- Be conscious of your privacy risks. Your data may be stored offshore and there may be consequences under privacy laws.
- Make sure that data is backed up as part of the service. Do not assume it is part of the service.
- Ask about the level of security provided.
- Make sure you have a Service Level Agreement (SLA) and that you read the terms carefully to understand the limitations to the service. The SLA should have clauses on response times, business continuity and disaster recovery.
- Do your due diligence on your preferred cloud service provider. For example, look for any certification they have, such as Information Technology Infrastructure Library Certification, do online searches of the service provider and look at the track record and scale of the service provider.
- Ask what happens to your data if you choose to leave a service provider, such as deletion of data.
- Do not make your decision on your preferred service provider based on cost. A large reputable service provider may cost you more but may provide you the level of service you require and it can help mitigate some of the risks highlighted in this document.
- Run trials to test whether the cloud solution meets your needs.
- When starting out in “the cloud”, do not outsource important business-critical software, outsource general software such as “point of sale” software or email.
- Advise your clients where and how their data is stored. It may also be necessary to amend your agreements with clients to allow you to store confidential client information in “the cloud”.
- Be aware of the different types of services cloud service providers can offer. These services are generally grouped into the following categories:
  - Infrastructure as a Service (IaaS) – this lets you relocate your servers to the cloud computing service provider, but you remain in control of, and responsible for, your software and data.
  - Platform as a Service (PaaS) – this lets you relocate your servers and operating system, while you remain responsible for your data.

- Software as a Service (SaaS) – this is the full cloud package, where the applications you run, your data and the server is managed and operated offsite by your cloud service provider. A good quality cloud solution can provide your business, regardless of size, with greater IT flexibility at a lower cost.

A good quality cloud solution can provide your business, regardless of size, with greater IT flexibility at a lower cost.

### **CONCLUSION:**

Cloud computing can be good for small business. It is cheap, easy to set up and requires little maintenance at the end. However there are risks associated with it in terms of security and stability. If you are not processing large amounts of personal or financial data about your customers, or if the work you are doing in the cloud is not business critical, then these may not be major considerations. Many business use a hybrid option, running software on their own computers for some services, running others in the cloud. Whatever way you choose to run your IT systems you always need to make sure that you have a backup plan if things do go wrong.

Like everything else, cloud computing too has its pros and cons. While the technology can prove to be a great asset to your company, it could also cause harm if not understood and used properly. \

Despite its disadvantages and the fact that it is still in an infant age, cloud computing remains strong and has great potential for the future. Its user base grows constantly and more big players are attracted to it, offering better and more fine tuned services and solutions. We can only hope that the advantages will further grow and the disadvantages will be mitigated, since cloud computing seems to have made IT a little bit easier.

The high rate at which IT technology changes will continue to place a great deal of pressure on organizations' budgets. Continuous upgrades of software and hardware have become important

items on many of those organizations' resource meetings and will continue to put pressure on the budgets of those organizations. This situation is likely to be made worse in the current difficult

economic conditions.

Cloud computing is an Internet-based network model that enables on-demand access to a shared pool of computing resources such as networks, servers, storage, applications and services provided by a third party. It is becoming a standard method of software and hardware systems operation and provides several advantages including potential cost savings for many businesses. Recently though, as witnessed with the Amazon cloud outage that rocked the IT world in April and knocked several popular websites offline including Qurora, Foursquare and Reddit, the risks and disadvantages associated with cloud computing were highlighted. For many, this incident called the cloud's overall reliability into question.

This article introduced the still-evolving area of cloud computing, including the technologies and some deployment concerns. Definitions and standardization in this area are a work in progress, but there is clear value in cloud computing as a solution for several IT requirements.

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## THE QUALITY OF TEACHING AND LEARNING – A REVIEW OF RECENT LITERATURE

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### ABSTRACT

This paper reviews recent literature relating to quality of teaching and learning processes within schools in low income countries illustrated with analyses of specific initiatives to improve quality. The paper focuses on three key areas of meeting diverse learners' needs, trends in curriculum change and enabling teachers including the provision of teaching and learning resources. As progress is made to universalizing access to primary education, attention is turning to the hardest to reach groups who have historically been excluded from formal education. Literature published since 2005 focuses on meeting the needs of girls, children affected by HIV/AIDS and learners with special education needs. The Gansu Basic Education Project is an example of an imitative aimed at inclusion of children from ethnic minority groups in rural Western China. As school populations are becoming more diverse, new goals for education are being expressed through the introduction of Life Skills subjects. This paper takes a closer look at uptake and implementation of the Life Skills approach to HIV/AIDS prevention and an example of a Peace Education Project being implemented in refugee camps. Meeting learners' needs implies the use of learner-centred pedagogies. A second curricular trend is towards learner-centred and outcomes-based pedagogies. The example of South Africa is briefly analysed as exemplifying the challenges involved in implementing pedagogic change. The rapid expansion of enrolments in many countries is resulting in large class-sizes and, as teacher supply fails to keep pace, multi-grade classes, up with demand. This review found very little literature on effective practice for teaching large classes and that new initiatives targeting multi-grade settings are mostly small scale. Quality education requires well-educated and trained teachers. Those countries that have to expand the most rapidly to meet EFA targets also tend to have the greatest shortage in teachers. As a region, sub-Saharan Africa faces the greatest challenge. In response, large-scale distance education programmes for unqualified and under qualified teachers are being initiated across Africa. However, evidence of their effectiveness is yet to emerge. An initiative to tackle teacher deployment discrepancies in the Philippines is outlined and a teacher professional development initiative in Pakistan that has potential to go to scale is analysed. Teachers and learners need resources such as textbooks. The evidence from large-scale school

effectiveness studies on the importance of textbooks and other resources is reviewed. The potential of ICTs to improve teaching and learning is explored through an analysis of the *Enlaces* project in Chile. It is argued that the three-way relationship between learner, teacher and materials lies at the heart of the education quality and that all examples of successful initiatives described in the paper injected materials carefully designed to meet learners' needs in their particular environments and related training for teachers. The paper concludes by highlighting areas in which his review found a lack of research evidence, despite their importance for the achievement of Education for All, this review found a lack of research evidence.

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## INTRODUCTION

This paper reviews recent literature relating to quality of teaching and learning processes within schools in low income countries. As more countries move closer to universalising access to education, the school population is becoming increasingly diverse and attention is turning to the hardest to reach educationally disadvantaged groups. summaries some of the recent research on meeting the needs of learners with disabilities, affected by HIV/AIDS and girls. The Gansu Basic Education Project in West China (box 1) is an example of an initiative where quality

was conceived as meeting learners' needs. Section three is concerned with contemporary trends in curricular change. It covers trends with respect to curriculum goals, focussing on the increasing prominence of Life Skills within national curricula pedagogical changes towards more learner-centered curricula; language of instruction policies and the adoption of curricula for multi-grade and large classes. The growing popularity of large-scale distance education programmes of teachers is considered in the light of demands created by Education for All (EFA). Evidence from school effectiveness studies on the importance of textbooks and other materials is reviewed. ICTs are often mentioned as having the potential to support teachers' professional development and classroom practice. The conclusion highlights the common features of successful initiatives to improve the quality of teaching and learning processes. It finishes by pointing out the areas in which the review has revealed a lack of research evidence readily available in the international arena despite their importance to the achievement of quality Education for All.

### **Curricula to promote relevant learning**

Curricula specify what children are expected to learn and how much in terms of content, level of proficiency and time. Whilst there are inter-relationships between these categories and reform can simultaneously target two or more of them, the categorisation is used to order current global trends.

#### ***Trends with respect to curriculum goals: Life Skills***

Governments have always set goals for national curricula that broadly align with their vision for human welfare, social cohesion and economic prosperity although relative importance placed on each may vary. The contemporary context for setting these goals is globalization of the economy, media and communications infrastructure, escalating warfare, democratization, environmental degradation and, particularly in sub-Saharan Africa, the HIV/AIDS pandemic. Globalisation has implications for the skill required by the labour force now and governments preferred models of citizenship. Peace education is a response to escalating conflict and displaced populations. Human rights education, values education and developments in citizenship education are responsive to democratization. Environmental degradation has prompted the rise of Education for Sustainable Development, currently being promoted through the United Nations Decade of Education for Sustainable Development. The HIV/AIDS epidemic has presented education with a complex set of challenges, leading to the regeneration of health education and adding urgency to arguments for gender-sensitive curricula. All these „new“ subjects fall under the broad curriculum area of Life Skills, that has been promoted internationally by UNESCO, often in collaboration with other relevant United Nations organizations. e.g. United Nations High Commission for Refugees, in the case of peace education (Reardon, 2002). Life Skills encompasses social attitudes, basic knowledge and practical skills. It includes but is considerably broader than vocational skills, practical skills and knowledge that lay the foundation for children to be economically productive when they enter the world of work.

Both the Jomtien World Declaration on Education for All (World Conference on Education for All, 1990) and the Dakar Framework for Action (World Education Forum, 2000) define quality basic education as enabling learners to acquire literacy, numeracy and essential Life Skills. The Dakar Framework for Action draws on the Delors (1996) report's pillars of education to elaborate on skill areas:

- **Learning to know:** Thinking abilities, such as problem-solving, critical thinking, decision-making, understanding consequences

- **Learning to be:** Personal abilities, such as managing stress and feelings, self-awareness, self-confidence

- **Learning to live together:** Social abilities, such as communication, negotiation, assertiveness, teamwork, empathy

- **Learning to do:** Manual skills, such as practising know-how required for work and tasks. Hence, curricular goals of promoting equity and social justice can lead to the planned incorporation of Life Skills in areas of learning to be and live together. Education for Sustainability Development or Environmental Education often integrates practical skills of conservation with „live together“ skills in the form of a sense of social responsibility and stewardship. Peace education can be viewed as focusing on Life Skills for learning to live together and learning to do (Dubois and Trabelsi, 2007).

Life Skills are increasingly being incorporated into national curricula. They may be a theme that cuts across subjects, as in Bosnia and Herzegovina and Jordan. They may be incorporated within a specific subject, such as the Nepal National Life Skills Education Programme infused into its health curriculum. The India National Curriculum Framework for School Education includes Life Skills linked to health, consumer rights and legal literacy. Other countries, such as Afghanistan, Lesotho and Sri Lanka, have established Life Skills within their curriculum as a subject area in itself.

### **Life Skills and HIV/AIDS:**

Responses to the HIV/AIDS pandemic have been a major catalyst for the incorporation of Life Skills. The Focusing Resources on Effective School Health (FRESH) initiative, launched at the Education For All forum in Dakar and supported by the WHO, UNICEF, UNESCO the World Bank and other key donors explicitly advocates a Life Skills approach to HIV/ AIDS prevention. Students acquire skills needed for positive behavioral change, including interpersonal communication, value

clarification, decision-making, negotiation, goal setting, self-assertion, and stress management (World Bank, 2002: 34). A recent survey of 70 countries found that 55 reported including HIV/AIDS in their primary school curriculum and 62 in their secondary school curriculum (UNAIDS Interagency Task Team on Education, 2005:112). However, implementation has proved challenging. In a survey of 18 low income countries, The Global Campaign found that although nearly all had developed a HIV/AIDS curriculum, implementation was limited (Boler and Jellema, 2005). Boler and Aggleton (2005) list key barriers to effective implementation of Life Skills programmes for HIV/ AIDS prevention and make the following broad recommendations:

- o There must be clearer definitions of Life Skills and what is needed in the curriculum;

- o there is a need for greater political commitment at national level from a range of ministries;

- o Life Skills approaches need to be more educationally driven, building upon evidence regarding which educational processes have transformative capacity;
- o there is a need for research into how Life Skills can be adapted to the formal education system;
- o whole-school approaches are needed;
- o a massive injection of resources is needed to train teachers to deliver Life Skills;
- o there is a need to take local contexts into account, in a way that is cognizant of the power structures within communities; and
- o there is a need to take seriously the structural barriers that affect susceptibility to HIV, including poverty, gender, age, and race.

### ***Trends with respect to pedagogy: competence and competencies***

A shift or transformation in curriculum purpose can also have profound implications for pedagogical practice. Hence, the shift towards Life Skills complements a pedagogical shift towards competence pedagogies. Competence pedagogies broadly correspond to „learner-centred“ teaching. The term „competence“ is used here because competence pedagogies have been more tightly defined, principally in the work of Basil Bernstein (1975; , 2000). Competence approaches are associated with the constructivist view of learners as active and creative in constructing meaning. There is an underlying assumption of a “universal democracy of acquisition” (Bernstein, 2000:43) , i.e. learners of all abilities, all social, racial and ethnic groups, and genders are inherently competent and hence able to achieve, that sits comfortably with curriculum goals of promoting equity, social justice and inclusion. Traditional content-based curricula specify knowledge to be reproduced, so that learners are assessed according to the deficit in efforts to reproduce texts. By contrast, within competence modes evaluation is conceived as oriented towards celebration of what is present in the learner’s output (Bernstein, 2000:46-47). Competence approaches break down the rigid boundaries between subjects, for example, by using „projects“ that draw together knowledge from different subject areas within the curriculum. Rigid structures that circumscribe selection, pacing and sequencing of learning are also broken down, giving teachers and learners more control. Social boundaries are eroded as teachers assume the role of „facilitators“, giving learners greater apparent control of social interactions in the classroom.

### **Designing and adapting curricula for multi-grade settings**

The first way is through the development of materials for use by learners, allowing individuals within in a class to work at different levels at the same time. The second develops materials for teachers to use in planning their teaching. Both *Escuela Nueva* programme, which originated in Colombia in the 1980s and has been adapted for use in many other countries, and the Rishi Valley elementary school programme in the state of Andhra Pradesh, India have developed learning materials to help the learner progress through the curriculum sequence. Assessment tasks and in the case of the Rishi Valley, also remedial activities, are built into learner guides. This approach relies on a plentiful supply of high quality self-study materials that engage learners. Teachers are trained not only in how to integrate learners’ use of these materials within their teaching but also in associated theories of how learning occurs. In a series of evaluations spread over its lifetime *Escuela Nueva* has been found to lead to better cognitive achievements as well as improved civic, democratic and social behaviour than traditional schools, (Forero-Pineda, et al., 2006). In Sri Lanka, the Learning and Teaching in Multi-grade Settings (LATIMS) project has developed learner guides in collaboration with teachers for grades 3-5 of the mathematics and language

curriculum (Little, et al., 2006). Teacher education materials were also developed to go alongside these materials. The second approach focuses on teachers. Central curriculum development teams re-organise the curriculum to enable teachers to address the same topic across grades. The LATIMS team in Nepal used this approach to re-organise the Natural and Social Science curriculum, once again, developing complementary teacher education materials. Pridmore and Vu (2006) give a detailed description of a similar curriculum development exercise in Vietnam. Starting with a primary curriculum presented for mono-grades, the team developed health education lesson plans for multi-grade teachers using an enquiry-based approach. Field-tests in ten multi-grade schools and a complementary research study (Vu, 2005) showed that teachers were able to follow the lesson plans and students had significantly higher cognitive scores compared to a control group who had received traditional health teaching. In extending this work to seven sub-Saharan African countries and Bhutan Pridmore has found that deep-seated cultures of curriculum design are a significant barrier to the introduction of multiple-grade cycles (Pridmore and Vu, 2006:187-188). Nonetheless, multiple-grade cycles have been introduced into multi-grade demonstration schools in Zambia. Both approaches relieve teachers, who are often working in difficult circumstances (see, for example, Aikman and Pridmore's description of single class schools in rural Vietnam, , 2001), of the burden of redeveloping curriculum. With the exception of *Escuela Nueva*, initiatives to re-organise curriculum for multigrade classes have tended to be small scale. Yet, given the prevalence of small schools with fewer teachers than grades, scaling up such initiatives is essential if children in remote areas or overcrowded schools are to be offered primary education of a reasonable quality.

### **Effective practice for large classes**

The abolition of user fees in many low income countries, particularly in sub-Saharan Africa over the last decade has led to mushrooming class-sizes, most especially in the lower grades. Given this situation, the paucity of research and initiatives, at least in the English language, on effective practice for large classes is surprising. Dembélé and Ndoye (2005:160) mention that Burkino Faso, Cameroon and Senegal have experimented with large-class pedagogy on a small scale for several years. A few individual researchers have observed on a small scale the practices that teachers in sub-Saharan African countries employ with large classes. Croft (2006) describes how teachers in Malawi use a variety of oral techniques to manage large classes and meet the needs of learners, who, with the implementation of Education for All, are increasingly diverse. On the basis of a review of the literature and her observation of “more effective teachers” in Uganda, O’Sullivan (2006a) recommends that narrow-based academic curricula are easier to deliver to large classes than a broad curriculum with vocational elements, suggesting that the introduction of Life Skills subjects is likely to be especially challenging when enrolments are growing. O’Sullivan also points out that assessment and medium of instruction policies limit strategies that teachers of large classes can use. It is worth noting that these observations, like those made by Barrett (2007) in Tanzania suggest that teachers employ practices that may be perceived as being „teacher-centred“, such as whole class question-and-answer or singing because they find them to be relatively effective with large classes and minimal teaching and learning resources. As Croft (2006) points out, many strategies recommended for multi-grade classes, such as „learning from friends“, may also work well in mono-grade large classes. This is an area of inquiry that deserves more investigation, most especially as the patchy evidence available suggests that strategies that work best in poorly-resourced settings may be different from those that are most successful in well-resourced settings.

### **Enabling teachers**

This section looks at the challenges of recruiting and deploying teachers and providing them with the education and professional development they need to be effective. It finishes by looking at evidence on the importance of resources, particularly textbooks and learning materials, in enhancing learning achievement. The potential of ICTs to support both teacher education and teaching and learning in schools is considered. The previous section stated that shifts in curriculum design that are currently occurring in various low income countries need to be supported by teacher education. This is one important part of the composite teacher recruitment, education and deployment puzzle posed by Education for All. It is estimated that the achievement of the educational millennium development goal of universal primary education by the year 2015 will depend on the recruitment of 18 million new teachers across the world. Sub-Saharan Africa faces the greatest challenge where the total number of teachers will have to increase by 68%, requiring an inflow of 3.8 million teachers (UNESCO Institute for Statistics, 2006:45). However, the reality is that the countries with the greatest shortfall in teachers also have low secondary enrolment ratios, and hence a small pool of educated adults from which to recruit teachers. In these countries also, teachers' salaries represent a large part of the education budget. Yet, because primary school teachers are numerous, in real terms their wages are low and have tended to fall over the last thirty years (Bennell, 2004; Lambert, 2004; Siniscalco, 2004). This state of affairs means that many countries face a choice between recruiting under-qualified and allowing pupil to teacher ratios to escalate. Many low income countries either at present or at some time in the past have opted to recruit under-qualified teachers. This may occur unofficially, as in Ghana, where desperate schools plug vacancies with unqualified teachers (Ankomah, 2006). Alternatively, recruitment of under-qualified teachers may be legitimised at the national level through the creation of „contract“ positions or the creation of a lower grade of teacher, who is trained but has received fewer years of schooling prior to training. As a consequence, in many countries, a significant proportion of teachers, who themselves only received a lower secondary education or even primary education (UNESCO Institute for Statistics, 2006). The least qualified teachers tend to be concentrated in remote hard-to-staff schools (UNESCO Institute for Statistics, 2006). Further, research suggests that trainee teachers have typically left school with low academic grades (Lewin and Stuart, 2003). So, even fully qualified teachers are likely to need support with academic content and also in the language of instruction, where this is not a widespread lingua franca, in addition to professional development to improve pedagogical skills.

### ***Teacher deployment***

The sheer quantitative challenge of recruitment is compounded by one of deployment. It is common to find that schools in remote areas are vulnerable to under-staffing at the same time that there is a surplus of unemployed teachers in large cities. Disparities in deployment of female teachers tends to be greater as it is generally accepted that married women should not be separated from their husbands and families are reluctant to see young unmarried women move to distant locations perceived as unsafe, in large part due to lack of medical facilities. Strategies that have been tried to attract teachers to hard-to-staff schools include building or improving staff housing, recruiting teachers locally in the expectation that they will return to the districts where they have family and cultural ties and offering financial incentives. The second of these options is the most affordable and even more so when unqualified contract teachers are recruited, as occurs in India. However, as an initiative in the Philippines demonstrates, the implementation of policies to reduce disparities requires an enabling environment with respect to effective Education Management Information Systems and

transparent management practices. Teacher shortages in rural schools are often exaggerated in official statistics by blanket national policies of one teacher per grade.

### ***Teacher education and development***

A small number of high profile projects have experimented with the use of ICT to support distance education for teachers. The DFID-funded Digital Education Enhancement Project (DEEP) developed locally relevant professional development programmes for teachers in twelve primary schools in South Africa and another twelve in Egypt using ICTs. DEEP found that teachers and students quickly gained confidence in the use of ICTs. An evaluation found that learning to use ICTs had “a significant impact on the self-image, confidence and professionalism of teachers” (Leach, et al., 2005:ix). However, a study on primary teacher connectivity in sub-Saharan Africa, concluded that although it is possible that hand-held technologies will in future become widely available, “the dominant scenario remains lack of access to any form of ICTs in the school environment” (South African Institute for Distance Education, 2005:52). Large-scale trials of SMS to support in-service training of thousands of teachers are currently being conducted in Kenya (Traxler, 2007). An earlier scoping study concluded that, as pay-as-you-go mobile networks cover 70% of Kenya’s population and teachers are „early adopters of new technologies“, there is potential to use bulk SMS messages to support in-service teacher training and for school census returns (Traxler and Dearden, c. 2005). At the current time, however, field-based teacher training programmes in the region still overwhelmingly rely on print-based materials with very little use of ICTs. The web is, however, being used at the level of teacher education institutions to share and support development of materials for distance education cross-nationally. The Teacher Education in Sub Saharan Africa (TESSA) Programme, led by the Open University in UK in collaboration with teacher training institutions in nine African countries, is creating web-based 'open content' multimedia resources and course design guidance for teachers and teacher educators.

### **Conclusion**

This paper has reviewed recent literature relating to prominent themes in recent literature on the quality of teaching and learning in formal basic education in low income countries. In the process it has presented brief analyses of six specific initiatives. At the beginning of the twenty-first century, a quality education is expected to be inclusive in the sense that it meets the needs of diverse learners, including girls and boys, minority ethnic groups that have historically been excluded from or underachieved in schools, learners living in remote areas, children with special education needs and those speaking minority languages. An inclusive education is conceived as being learner-centred, rooted in a constructivist understanding of the learning process and drawing on participative or interactive pedagogic strategies. As well as the basic academic skills of literacy and numeracy, a quality education is also expected to provide children with Life Skills to tackle challenges in their societies such as the prevalence of HIV/AIDs and environmental degradation and skills to promote peace, human rights and democracy. These demanding expectations are being upheld internationally at the same time that enrolments in many countries are expanding out of proportion to teacher recruitment with the consequence that teachers on low salaries, many of whom are not formally qualified, are faced with large or multi-grade classes. The literature review has also revealed examples of initiatives that have successfully addressed these challenges, through provision of resources, professional development for teachers and the use of ICTs. All these initiatives succeeded in strengthening what Little (2006:320) describes as the three-way relationship between learner, teacher and materials that lies at the heart of teaching and learning. Further, initiatives also consider



elements of the broader context in which schools and classrooms exist. The Interagency Peace Education Programme had a community strand that was at least as equally important as the formal school strand described in this paper. Enlaces adapted its programme to the specific needs of rural schools through working with school communities. CBMP in Pakistan included capacity-building activities for administrators as well as teachers. In the course of reviewing literature for this paper, it has become clear that there is a lack of research evidence readily available in the international arena in some key priority areas for the EFA movement. These are:

- Gender-sensitive processes of teaching and learning;
- The ways that multiple forms of disadvantage interact (e.g. orphans with disabilities);
- Ways to integrate Life Skills into formal education systems that are responsive to social structures and inequalities, school realities and teacher capacity;
- Effective strategies for teaching large classes, including teaching of „new“ Life Skills subjects, such as HIV/AIDS awareness and peace education;
- The effectiveness of the recently implemented large-scale distance education programmes for teachers;
- Effective ways to introduce ICTs, including mobile technologies, to improve the quality of teaching and learning, including teachers“ professional learning, in areas with limited connectivity and low density of computers. Addressing these gaps in our knowledge will be a key part of the next steps towards quality Education for All.

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## **A STUDY ON CONSUMER BEHAVIOR AND OPPORTUNITIES FOR NOKIA SMART-PHONES IN INDIA**

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### **ABSTRACT**

Nokia has been a major player in the Indian mobile market until 2008. As of 2008, it was the undisputed king of the Indian market with 72% market share. But from then on, with advent of competitors with innovative product offerings and models, Nokia lost its market share in India which is now currently at around 23%. Even globally, the Finnish giant has lost from a position of 40% market share in 2008 to about 20% currently. In the quest for re-gaining its position, it has tied up with Microsoft and has come up with its latest talk of the town smart-phone –Nokia Lumia with Windows OS. With sales over 10 million in 2012, Lumia does appear to be a beacon for Nokia in this time of crisis.

The aim of this study therefore was to assess the current smart-phone market in India and identify opportunities for Lumia. The study focused on customer buying behavior, their needs, what offerings they perceived as useful and finally what contributed to their satisfaction. The study also focused on the existing Lumia customers, their assessment of its performance and suggested areas for improvement. The study was done by means of qualitative and quantitative research through focus group discussions, expert interviews, online surveys, etc.

The study indicated certain crucial insights regarding the purchase behavior of consumers regarding the purchase triggers, frequency of purchase, brand loyalty, valued offerings etc. From the current study it emerged that about 85% of customer satisfaction can be attributed to 4 main offerings in a smart-phone, namely Camera Quality & Images, Touch Screen Performance, Functionality and Application Support Capability. Though Lumia was performing well on most of these and other factors, it severely lacks in terms of Functionality and Application support as compared to its competitors. Though ‘Windows’ is seen as an OS for the future, it is Android that rules the roost now with significant acceptability among consumers where Nokia does not have a presence. It also emerged that the existing functionalities of Nokia are not communicated well enough with even significant number of users not being aware of these capabilities.

In light of these prevailing market conditions, the report makes the following 3 broad strategic recommendations: 1) Continuous Innovation, 2) Android Presence, 3) Functionality Centered R & D and Marketing Campaigns.

**KEY WORDS** : Indian Cell Phone Market, Consumer Behavior, Competitor Analysis, Market Opportunities, etc.

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## **Background**

Nokia, the Cell phone manufacturing company from Finland, has faced turmoil in the last few years. Globally, it has fallen flat from 40% market share (Q1, 2008) to 20%. Even in India, its undisputed territory, the market share has fallen from 72% in 2008 to 23% in Q-2 2012.

With the advent of smart-phones and android OS, it lost its position as market leader to Samsung in the high-end segment. Even the low-end segment, Nokia's bread-and-butter category, has become highly competitive. Chinese and some domestic players have flooded the market with cheap cell phones with comparable features. In the quest for re-gaining its position, it has tied up with Microsoft and has come up with its latest talk of the town phone –Nokia Lumia with Windows OS. With sales over 10 million in 2012, Lumia does appear to be a beacon for Nokia in this time of crisis. This instigated us to delve deeper into this strategy of Nokia and analyse it further. So, researcher decided to understand the customers' buying behavior and the parameters on which they evaluate a smart-phone before making the purchase decision.

## **Literature Review**

Worldwide sales of mobile phones to end users reached almost 428 million units in the third quarter of 2012, a 3.1 percent decline from the third quarter of 2011, according to Gartner, Inc. Smartphone sales accounted for 39.6 percent of total mobile phone sales, as smartphone sales increased 46.9 percent from the third quarter of 2011<sup>1</sup>.

While the mobile phone market declined year-on-year, Gartner analysts said there were positive signs for the industry during the third quarter. "After two consecutive quarter of decline in mobile phone sales, demand has improved in both mature and emerging markets as sales increased sequentially," said Anshul Gupta, principal research analyst at Gartner. –In China, sales of mobile phones grew driven by sales of smartphones, while demand of feature phones remained weak. In mature markets, we finally saw replacement sales pick up with the launch of new devices in the quarter.¶

Smartphones continued to fuel sales of mobile phones worldwide with sales rising to 169.2 million units in the third quarter of 2012. The smartphone market was dominated by Apple and Samsung. –Both vendors together controlled 46.5 percent of smartphone market leaving a handful of vendors fighting over a distant third spot,¶ said Mr. Gupta.

Nokia slipped from No. 3 in the second quarter of 2012 to No. 7 in smartphone sales in the third quarter of 2012. RIM moved to the No. 3 spot with HTC not far behind, at No. 4. –Both HTC and RIM have seen their sales declining in past few quarters, and the challenges might prevent them from holding on to their current rankings in coming quarters,¶ added Mr. Gupta.

While seasonality in the fourth quarter of 2012 will help end-of-year mobile phone sales to end users, Gartner analysts said that there will be a lower-than-usual boost from the holiday season. Consumers are either cautious with their spending or finding new gadgets like tablets, as more attractive presents.

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<sup>1</sup> <http://www.gartner.com/newsroom/id/2237315>

Samsung's mobile phones sales continued to accelerate, totaling almost 98 million units in the third quarter of 2012 (see Table 1), up 18.6 percent year-on-year. Samsung saw strong demand for Galaxy smartphones across different price points, and it further widened the gap with Apple in the smartphone market, selling 55 million smartphones in the third quarter of 2012. It commanded 32.5 percent of the global smartphone market in the third quarter of 2012.

**Table 1 Worldwide Mobile Device Sales to End Users by Vendor in 3Q12 (Thousands of Units)**

Company	3Q12 Units	3Q12 Market Share (%)	3Q11 Units	3Q11 Market Share (%)
Samsung	97,956.8	22.9	82,612.2	18.7
Nokia	82,300.6	19.2	105,353.5	23.9
Apple	23,550.3	5.5	17,295.3	3.9
ZTE	16,654.2	3.9	14,107.8	3.2
LG Electronics	13,968.8	3.3	21,014.6	4.8
Huawei Device	11,918.9	2.8	10,668.2	2.4
TCL Communication	9,326.7	2.2	9,004.7	2.0
Research in Motion	8,946.8	2.1	12,701.1	2.9
Motorola	8,562.7	2.0	11,182.7	2.5
HTC	8,428.6	2.0	12,099.9	2.7
Others	146,115.1	34.2	145,462.2	32.9
<b>Total</b>	<b>427,729.5</b>	<b>100.0</b>	<b>441,502.2</b>	<b>100.0</b>

Source: Gartner (November 2012)

Nokia's mobile phone sales declined 21.9 percent in the third quarter of 2012, but overall sales at 82.3 million were better than Gartner's early estimate, largely driven by increased sales of the Asha full touch range. Nokia had a particularly bad quarter with smartphone sales, and it tumbled to the No. 7 worldwide position with 7.2 million smartphones sold in the third quarter. The arrival of the new Lumia devices on Windows 8 should help to halt the decline in share in the fourth quarter of 2012, although it won't be until 2013 to see a significant improvement in Nokia's position.

Apple's sales to end users totaled 23.6 million units in the third quarter of 2012, up 36.2 percent year-on-year. "We saw inventory built up into the channel as Apple prepared for the coming holiday season, global expansions and the launch into China in the fourth quarter of 2012," said Mr. Gupta. With iPhone 5 launching in more territories in the fourth quarter of 2012, including China, and the upcoming holiday season Gartner analysts expect Apple will have its traditionally strongest quarter.

In the smartphone market, Android continued to increase its market share, up 19.9 percentage points in the third quarter of 2012. Although RIM lost market share, it climbed to the No. 3 position as Symbian is nearing the end of its lifecycle. There was also channel destocking in preparation of new device launches for RIM, which resulted into 8.9 million sales to end users in the third quarter of 2012. With the launch of iPhone 5, Gartner analysts expect iOS share will grow strongly in the fourth quarter of 2012 because users held on to their replacements in many markets ahead of the iPhone 5 wider roll out. Windows Phone's share

weakened quarter-on-quarter as the Windows Phone 8 launch dampened demand of Windows Phone 7 devices<sup>2</sup>.

**Table 2 Worldwide Mobile Device Sales to End Users by Operating System in 3Q12 (Thousands of Units)**

Operating System	3Q12 Units	3Q12 Market Share (%)	3Q11 Units	3Q11 Market Share (%)
Android	122,480.0	72.4	60,490.4	52.5
iOS	23,550.3	13.9	17,295.3	15.0
Research In Motion	8,946.8	5.3	12,701.1	11.0
Bada	5,054.7	3.0	2,478.5	2.2
Symbian	4,404.9	2.6	19,500.1	16.9
Microsoft	4,058.2	2.4	1,701.9	1.5
Others	683.7	0.4	1,018.1	0.9
<b>Total</b>	<b>169,178.6</b>	<b>100.0</b>	<b>115,185.4</b>	<b>100.0</b>

Source: Gartner (November 2012)

FRAMINGHAM, Mass. February 14, 2013<sup>3</sup> – Android and iOS, the number one and number two ranked smartphone operating systems (OS) worldwide, combined for 91.1% of all smartphone shipments during the fourth quarter of 2012 (4Q12). According to the International Data Corporation (IDC) Worldwide Quarterly Mobile Phone Tracker, Android smartphone vendors and Apple shipped a total of 207.6 million units worldwide during 4Q12, up 70.2% from the 122.0 million units shipped during 4Q11. For calendar year 2012, Android and iOS combined for 87.6% of the 722.4 million smartphones shipped worldwide, up from 68.1% of the 494.5 million units shipped during calendar year 2011. "The dominance of Android and Apple reached a new watermark in the fourth quarter," said Ramon Llamas, research manager with IDC's Mobile Phone team. "Android boasted a broad selection of smartphones, and an equally deep list of smartphone vendor partners. Finding an Android smartphone for nearly any budget, taste, size, and price was all but guaranteed during 2012. As a result, Android was rewarded with market-beating growth."

"Likewise, demand for Apple's iPhone 5 kept iOS out in front and in the hands of many smartphone users," added Llamas. "At the same time, lower prices on the iPhone 4 and the iPhone 4S brought iOS within reach of more users and sustained volume success of older models. Even with the Apple Maps debacle, iPhone owners were not deterred from purchasing new iPhones."

The two horse race between Android and iOS has collectively accounted for more than 50% share of the smartphone OS market over the past two years. At the same time both BlackBerry and Microsoft have been working on competing platforms that have recently launched and are poised for competition. Microsoft launched Windows Phone 8 in 4Q12, and BlackBerry more recently released BB10 in January, marking the first time two new platforms have been introduced to the smartphone space in the past several years.

<sup>2</sup> Additional information can be found in the Gartner report "Market Share: Mobile Phones by Region and Country, 3Q12." The report is available on Gartner's website at <http://www.gartner.com/resId=2236115>.

<sup>3</sup> Android and iOS Combine for 91.1% of the Worldwide Smartphone OS Market in 4Q12 and 87.6% for the Year, According to IDC, 14 Feb 2013, <http://www.idc.com/getdoc.jsp?containerId=prUS23946013>

"With the recent introductions of two new smartphone platforms we expect some ground to be made by the new entrants over the coming years," said Ryan Reith, program manager with IDC's Mobile Device Trackers. "There is no question the road ahead is uphill for both Microsoft and BlackBerry, but history shows us consumers are open to change. Platform diversity is something not only the consumers have asked for, but also the operators.

**Table 3 Top Five Smartphone Operating Systems, Shipments, and Market Share, 2012 (Units in Millions)**

Operating System	2012 Unit Shipments	2012 Market Share	2011 Unit Shipments	2011 Market Share	Year over Year Change
Android	497.1	68.8%	243.5	49.2%	104.1%
iOS	135.9	18.8%	93.1	18.8%	46.0%
BlackBerry	32.5	4.5%	51.1	10.3%	-36.4%
Symbian	23.9	3.3%	81.5	16.5%	-70.7%
Windows Phone/ Windows Mobile	17.9	2.5%	9.0	1.8%	98.9%
Others	15.1	2.1%	16.3	3.3%	-7.4%
<b>Total</b>	<b>722.4</b>	<b>100.0%</b>	<b>494.5</b>	<b>100.0%</b>	<b>46.1%</b>

Source: <http://www.idc.com/getdoc.jsp?containerId=prUS23946013>

#### **Nokia loses its India plot, market share tanks 20%<sup>4</sup>**

India's 30,000 crore-a-year mobile handset market witnessed a skirmish between two big global names on Tuesday, with market leader Nokia disputing figures from influential research firm IDC that showed its hold over the domestic market was weakening — and at an alarming pace.

IDC, whose data are closely tracked around the world, said Nokia's share of the Indian handset market — its second biggest after China — plunged to 36.3% at the end of June from 54% at the end of 2009, providing the Finnish giant's critics more proof of its failure to keep pace with rapidly changing customer preferences.

The IDC report showed that sprightly domestic handset makers led by Micromax, Spice, Karbon and Lava had capitalised on Nokia's misfortunes, with their share of the market doubling to 33% during the last six months.

Nokia, which analysts say is struggling to compete at the top end against rivals such as Apple's iPhone and BlackBerry devices, disputed IDC's findings, saying there were flaws in the numbers.

Nokia disputes IDC figures on market share

"The figures are way off the mark. They are not correct," Nokia India managing director D Shivakumar told ET. "Nokia continues to do well in India across all segments," the company said in a statement which questioned IDC's figures and said that the so-called 'shipments' cited by IDC "were not equivalent to actual sales and market shares" . "According to IDC, the dual-SIM category accounted for 38.5% of the overall market. As per our estimates, the dual-SIM segment represents 22% of the Indian handset market currently," Nokia said, adding that IDC did not count shipments from its Chennai factory.

But Vishaal Bhatnagar, associate vice-president at IDC India said the research firm's figures were subjected to 'vigorous' vetting both in India and overseas and it tracked sales and

<sup>4</sup> [http://articles.economictimes.indiatimes.com/2010-09-29/news/27585145\\_1\\_dual-sim-category-handset-market-dual-sim-segment](http://articles.economictimes.indiatimes.com/2010-09-29/news/27585145_1_dual-sim-category-handset-market-dual-sim-segment)



shipments extensively before issuing its report . "In India we have been in this business for six years, while globally, we have been engaged in tracking handset sales for 10 years. We stick by our numbers," said Mr Bhatnagar, adding IDC's research calculated that most of the handsets produced at Nokia's Chennai plant are exported.

The figures will add to the sense of siege enveloping one of Finland's proudest corporate names, which transformed itself from a conglomerate that produced rubber boots to toilet paper to become the undisputed leader of the handset market in 1998.

The numbers are particularly embarrassing for Nokia, which commanded a market share of more than 70% just two years ago. By contrast , homegrown handset makers had a meagre 0.9% share of the market in 2008, their stupendous rise almost entirely on the back of so-called dual-SIM phones (even triple-SIM ) which allowed thrifty consumers to have two numbers on a single device and effectively exploit plunging tariffs in a cut-throat mobile services market.

Data compiled by IDC showed that nearly 39% of all handsets sold in the country during January to June this year were dual-SIM phones, a segment that Nokia did not have a single model until recently. Nokia introduced its first dual-SIM handset — C2 — in India in August , a move some analysts called a 'startlingly late reaction' .

IDC's conclusions got qualified support from rival research firm Gartner, whose lead analyst in India, Anshul Gupta, said Nokia was losing market share, although he declined to comment on IDC's figures or give his firm's assessment of Nokia's market share. "Of course, Nokia's share is dropping. In India, they are being hurt in the low-end segment as competition is much more fierce there. Initially, the domestic players were just competitively priced, but now they richer in features. Therefore, they offer value for money," he said.

Founded in 1865 as a paper mill, Nokia was the toast of Finland — the company is that country's largest private employer and accounts for 1.6% of its GDP and more than 10% of exports — for a decade beginning the late 1990s on the strength of its cutting-edge and reliable phones, but its failure to keep pace with the touch-phone revolution triggered by Apple's iPhone launch in 2007 has cost it dearly.

Its top management ranks have seen major upheaval, its shares have fallen and in Millward Brown Optimor's ranking of global brands this year, Nokia dropped 30 places to No. 43.

Correcting the slide in India will rank as one of the top priorities of Nokia's new CEO, Stephen Elop, a Canadian who headed Microsoft's business division and the first non-Finn to head the company in its 145-year history. Mr Elop begins his tenure this week.

### **The era of the smartphone**

Smartphone use is booming in India and is quickly becoming the dominant way many of the country's 900 million mobile phone users stay connected while they're on the go. Looking at recent trends, the country may have as many as 40 million of these devices in use by early this year. The dramatic growth is being driven by a desire among users to stay connected and have instant access to social networking sites – a global trend that represents an exponential growth opportunity in developing countries like India<sup>5</sup>.

Decreasing device and data costs, coupled with a wide range of features that today's smartphones offer, are also readily encouraging consumers to trade in their traditional cell phones for handsets with much more functionality. To gain a sense of how this new breed of smartphone user is staying connected, Nielsen Informat Mobile Insights, an alliance between Nielsen and Informat Mobile Intelligence, polled more than 10,000 consumers in

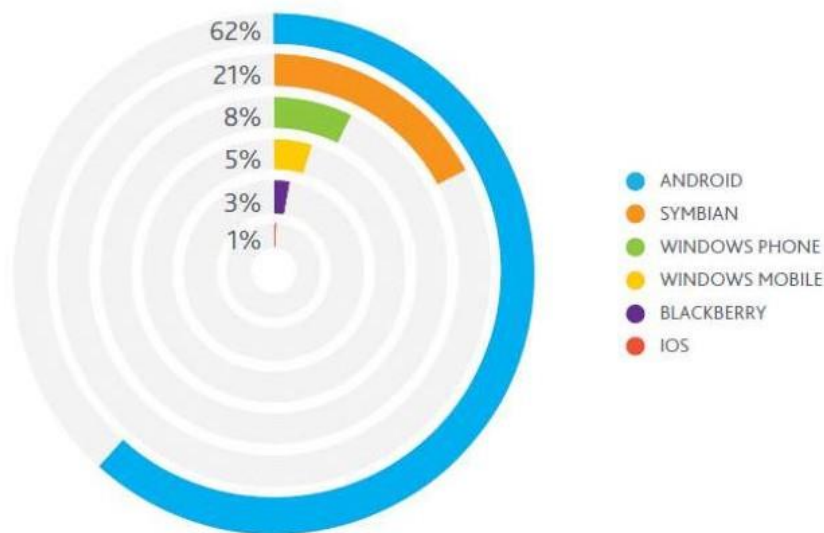
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<sup>5</sup> By: Prashant Singh, MD – Media, Nielsen India Region, Smartphones are keeping users in India plugged in, Nielsen Featured Insights -Delivering consumer clarity.

September and October 2012 across 46 cities in India to assess overall usage and device preferences.

### Android leads the pack

The Indian Smartphone User study found that 93 percent of smartphone users own only one handset, making it their single source of infotainment on the go. The Nielsen Informat Mobile Insights data revealed that smartphone users in India overwhelmingly prefer mobile devices that operate on the Android operating system. On studying the share of purchases among operating systems, Nielsen Informat Mobile Insights found that three out of five consumers, who recently bought a smartphone, preferred Android device - a preference that highlights Indian consumers' desire for a platform that is open and available across multiple brands and prices. While Symbian usage is also high in India, Windows, BlackBerry and iOS devices each only have single-digit figures when it comes to share of purchase.



Source: Nielsen Informat Mobile Insights

Fieldwork: Sept. - Oct. 2012

### Tablet ownership set to spike

Consumer interest in tablets is also on the rise. While only three percent of respondents who participated in the study in the last quarter of 2012 said they already own a tablet, 11 percent said they intended to purchase one, indicating a growing interest in media consumption on a bigger screen. Consumers are also spending notably more time on their tablets than their Android smartphones - about an hour more, likely because they find tablets more engaging.

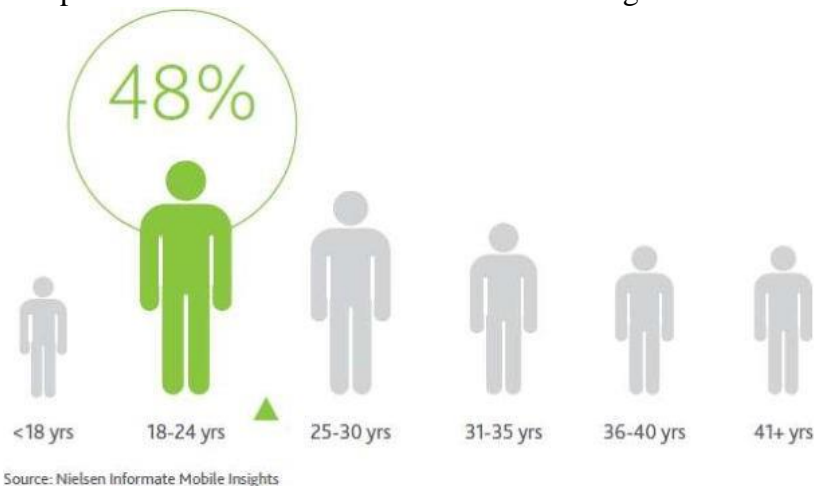
### Game apps most popular

Not surprisingly, the study found that voice and text communication via smartphone is declining. In fact, voice calls and texting accounted for only 25 percent of smartphone usage; multimedia, games, apps and internet browsing made up the rest. Among those who purchased smartphone apps, nearly three out of five users (58%) paid for games making it the most popular paid category. Other popular paid app categories among smartphone users include chat and instant messaging (53%) and streaming music (45%).

### Mobile internet access: Room for growth

Mobile internet connectivity and smartphone usage go hand-in-hand, but only half of the smartphone users polled have active data access. While this percentage may be significantly higher than the mobile data penetration for feature phone users, it indicates that millions of smartphone users still don't have access to mobile internet connectivity.

It is interesting to note that the youth are quick to adopt internet connectivity on their smartphones with over half of all data users falling in the sub-25 year bracket.



Looking at recent trends, it is clear that India offers a significant opportunity for smartphone makers, application developers and content providers. With only about 40 million smartphones in play at the start of 2013, it is a market that is set to grow exponentially. The Indian Smartphone User study also suggests that consumers will continue to gravitate toward open and flexible operating systems to facilitate their preference for mobile gaming, chat and streaming music applications.

### Management Objectives of Research

- Understanding Consumer Purchase patterns and expectations of smart-phone devices and incorporate the findings into subsequent product launches.
- To understand the various factors that contributed to the success of competitors in the smart-phone segment and find out potential gaps where the opportunity can be tapped
- To gauge the perception of Nokia Lumia series of smart-phones among modern day consumers and suitably launch modified versions if the need be.

### Problem Statement

#### Management Decision Problem

To explore the possibility of launching a new smart-phone into the market based on consumer preferences.

#### Management Research Problem

- Primary: What is the relative performance perception of Lumia in the customers' minds? What is the customers' reaction to Lumia and how well is it accepted by its consumers
- Secondary: What is buying behavior of customers with respect to smart-phones? What are the features that are valued by customer?

## **Research Design**

### **Exploratory Research**

At this stage of research, researcher has conducted one-on-one interviews with mobile enthusiasts and gathered their opinion on Nokia Lumia Series and gathered some key insights which helped us figure out how Nokia Lumia is being perceived by the users. A focus group discussion was also conducted which aimed at collating the views of smart-phone users. The discussion predominantly aimed at generating factors/variables that customers perceive as important in a smart-phone. Researcher also focused on the customers purchase behavior.

### **Quantitative Research**

The factors/concepts generated during our qualitative research helped us in creating 2 questionnaires to be filled by respondents. The aim of the quantitative research was to test the concepts generated during the exploratory research, determine the predominance of one over the other and the extent of influence each factor has on the overall consumer satisfaction level.

### **Data Collection Approach**

The information was collected through means of a survey. There would be 2 surveys that would be used to test our findings from the exploratory research. The first survey was filled by a set of randomly chosen existing Nokia Lumia Customers. The survey typically contained questions regarding the critical criterion that affect a smart-phone's perception and how Lumia stands in this regard (based on consumer perception). Care would be taken to sample the consumers from as diverse back grounds as possible so that it will be able to identify the diverse perceptions of the brand.

The second survey was filled by a set of randomly chosen people at through an online survey. This survey contained questions regarding an individual's purchase behavior such as price consideration, look, size, ease of use, frequency of purchase, purchase influencers, purchase discouragers, affect of advertising etc.

#### **Inferences from Exploratory Study**

The following salient points have emerged from the Focus Group discussion:

1. Calling, Messaging and staying connected seem to be the most important requirements being fulfilled by a smart-phone.
2. The most important features desired in a mobile are Camera, Internet and Wi-Fi connectivity
3. The awareness of brands, the technical details such as the operating system is quite sound among modern day consumers.

Android seems to be the most favorite OS among the smart-phone users due to its functionality and customizability

5. The brand image of Nokia is that of a sturdy phone. But still, Nokia has managed to change that perception a little and Lumia is showing positive vibes among non-users and they seem to be aware of functionalities the phone gives.

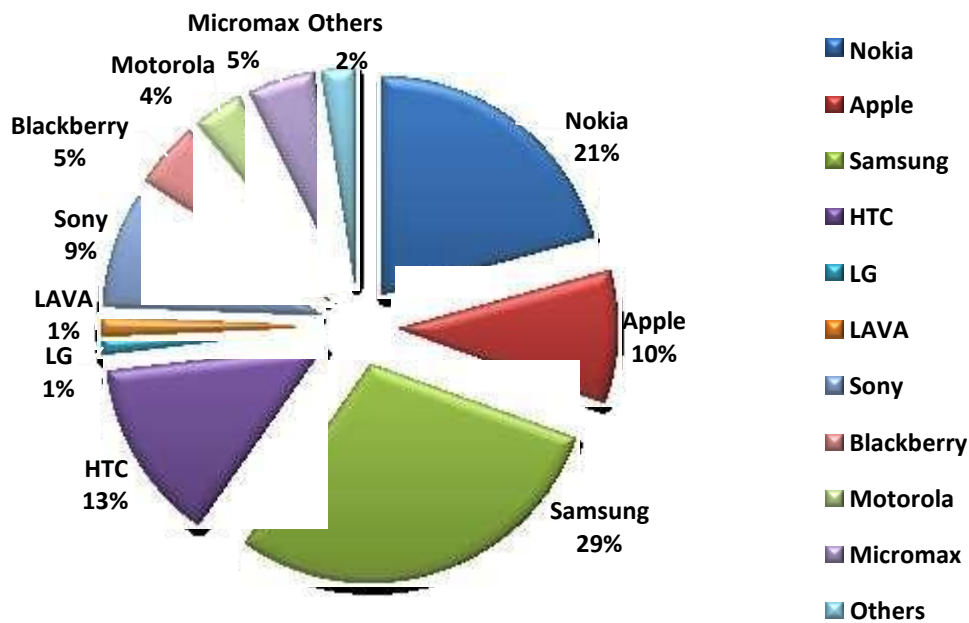
From the personal interviews, it emerged that the strength of Lumia lies in its great design look and feel of the touch screen with camera being of top quality. But still there seem to be a wide range of customers who would not buy it for the simple reason that, the OS is not Android. Though they believe there might be future for Windows OS, it is too early to comment. Various surveys on the Indian smart-phone consumers show that smart-phones are

now a sign of status than merely being an electronic gadget. This makes brand, design etc very important. Most of the smart-phone users are youth and they change their phones as frequently as a year. Though brand loyalty exists, what drives it is the constant innovation in terms of design, functions, capabilities and capacity Smart-phone has started penetration into the SEC B & SEC C segments and price is not a factor that is stopping consumers from buying smart-phones. The focus is on buying the best rather than getting the cheapest. A high percentage of consumers favor the Android versions and most of them use the smart-phone to stay connected via social media sites, net browsing and as a source of entertainment. There has been a growing demand for sleeker, stylish and phones with wider screens so as to cater to needs such as games, watching movies, mobile TV etc. In short, the smart-phone has been able to considerably reduce time spent on TV or a computer and is now a high involvement product, consumers take really seriously.

### **Data Analysis of “Purchasing Behavior” Study**

#### **Brands of phones used/currently using by the consumers**

<b>Sr. No.</b>	<b>Brand</b>	<b>Count</b>	<b>Perc.</b>
1	Nokia	17	21
2	Apple	8	10
3	Samsung	24	29
4	HTC	11	13
5	LG	1	1
6	LAVA	1	1
7	Sony	7	9
8	Blackberry	4	5
9	Motorola	3	4
10	Micromax	4	5
11	Others	2	2



Inference: This shows that about 50% of the respondents have owned a Samsung phone as compared to 34% for Nokia. However, this figure needs to be taken from a perspective that about 5 years ago Nokia was the market leader with more than 60% market share. The loss of market share can be attributed to the strong performance of Samsung due to the brilliant performance of its smart-phone segment. It shows how important it is to perform in the smart-phone segment to capture market share.

### Smart-phone Usage

Sr.	Question	1	2	3	4	5	Total Responses	Mean
1	Calling	6	6	4	2	21	39	3.67
2	Messaging	1	3	10	7	18	39	3.97
3	Music	1	6	10	11	11	39	3.64
4	Internet Browsing	4	1	14	5	15	39	3.67
5	Gaming	10	4	10	10	5	39	2.90

Inference: Among the uses listed here, the respondents seem to be using for the smart-phone for messaging for majority of the instances.

### Contributors of Style

Sr.	Question	1	2	3	4	5	Total Response	Mean
1	Screen Size	4	3	15	11	13	46	3.57
2	Phone Sleekness	4	5	11	16	9	45	3.47
3	Colour	8	11	12	10	5	46	2.85
4	Shape	3	8	17	12	5	45	3.18
5	Keypad Interface	2	7	9	17	10	45	3.58
6	Surface Finish & Feel	3	5	11	16	11	46	3.59

Inferences: Screen Size, Phone Sleekness, Keypad Interface and Surface Finish can be considered to be the key components of style as perceived by the consumers. Colour, on the other hand does not seem to be contributing significantly to the style aspect of the smart-phone.

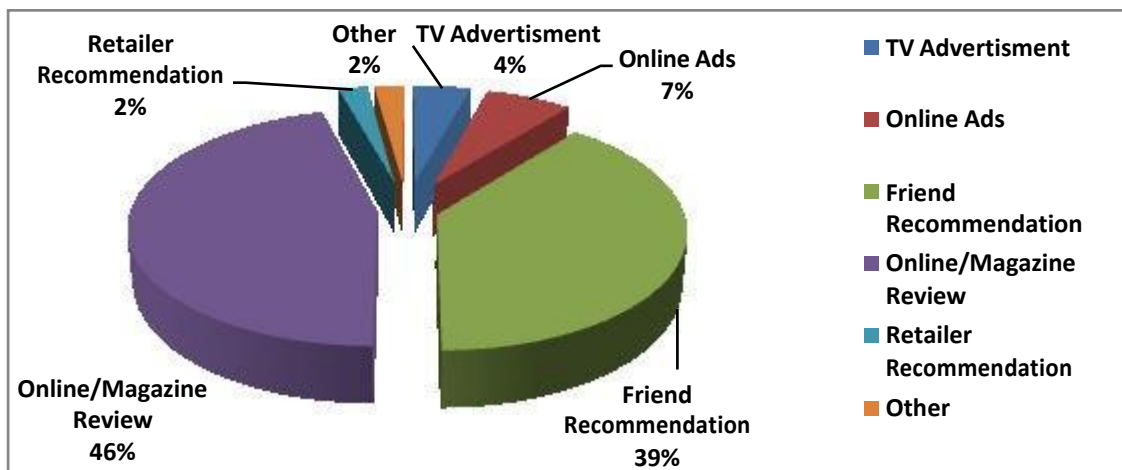
### Smart-phone Feature Preferences

Sr.	Question	1	2	3	4	5	Total Response	Mean
1	Camera	2	7	5	12	20	46	3.89
2	Music	2	4	13	8	18	45	3.80
3	Video	2	8	7	13	16	46	3.72
4	Bluetooth	4	10	7	9	15	45	3.47
5	Wi-Fi	3	4	3	11	24	45	4.09
6	3G	3	5	7	13	18	46	3.83
7	Social Media Applications	3	8	11	8	16	46	3.57
8	E-mail Applications	8	7	1	8	22	46	3.63
9	Office Applications	5	9	5	13	12	44	3.41
10	GPS/Maps	3	6	9	10	17	45	3.71

Inferences: Customers value almost all of the above given features. They expect these features to be present in a smart-phone. Among these, it can be seen that Wi-Fi, 3G and camera are the most preferred (Rating of 4 & 5). However this data says that customers need almost all of the features and none of the features is considerably less desirable than the others. The order of preferences is the following Wi-Fi>Camera>3G.

**Purchase Triggers**

Purchase Triggers	Count	Perc.
TV Advertisement	2	4
Online Ads	3	7
Friend Recommendation	18	39
Online/Magazine Review	21	46
Retailer Recommendation	1	2
Other	1	2
Total	46	100

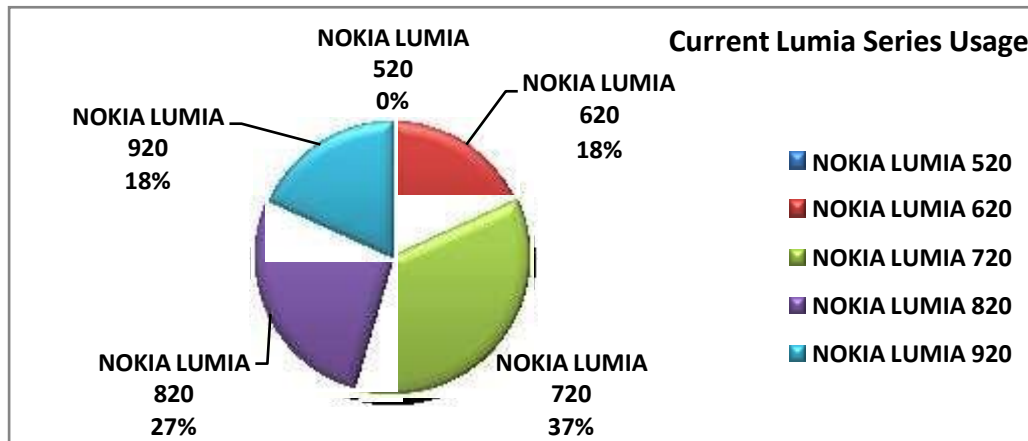


Inference: From the data collected, it can be seen that peer recommendations, reviews from users and other commentators play a major role in triggering the purchase decision. This shows the importance of phone being liked by the „first movers“ or trial customers as it is likely that the success of a smart-phone depends to a large extent on the initial feedback provided.

**Current Lumia Series Usage**

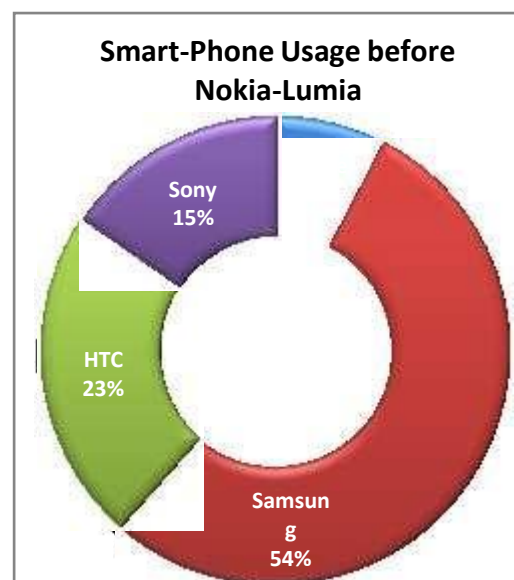
Sr.	LUMIA SERIES	Count	Perc.
1	NOKIA LUMIA 520	0	0
2	NOKIA LUMIA 620	2	18
3	NOKIA LUMIA 720	4	37
4	NOKIA LUMIA 820	3	27
5	NOKIA LUMIA 920	2	18





Inference: The mid-range Lumia Series of smart-phones seems to be most used.  
**Smart-phone Usage before Lumia**

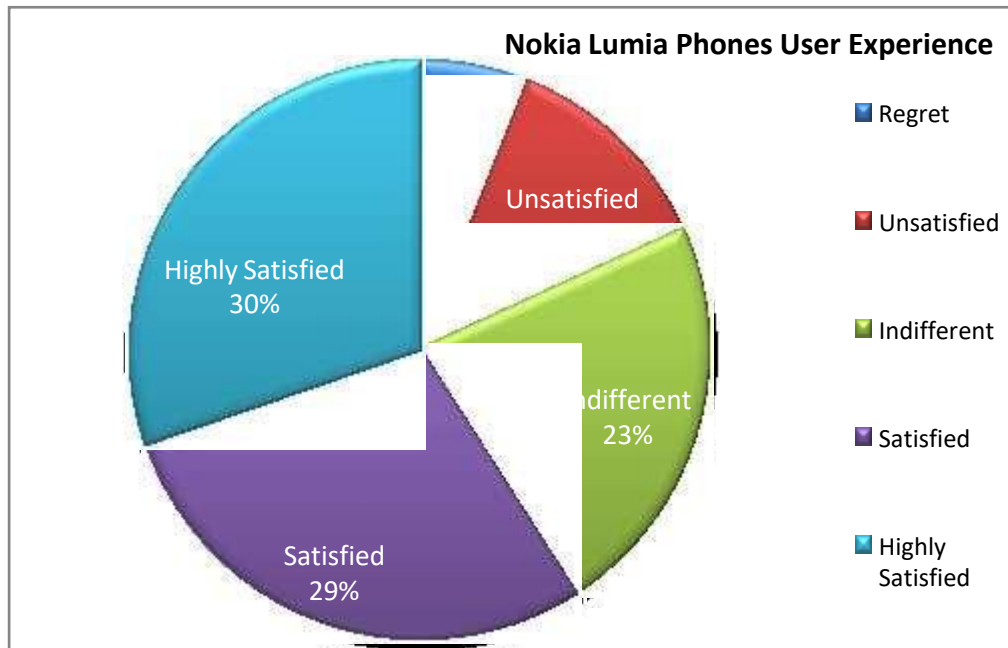
Sr. No.	Brand	Count	Perc.
1	Apple	1	11
2	Samsung	7	78
3	HTC	3	22
4	Sony	2	11



Inference: All the current Lumia Consumers of the survey were using a smart-phone prior to Nokia Lumia. This indicates that, probably Nokia Lumia Series of smart-phones might not be a choice of first time smart-phone buyers. It definitely indicates the high penetration of smart-phones.

**Nokia Lumia Phones User Experience**

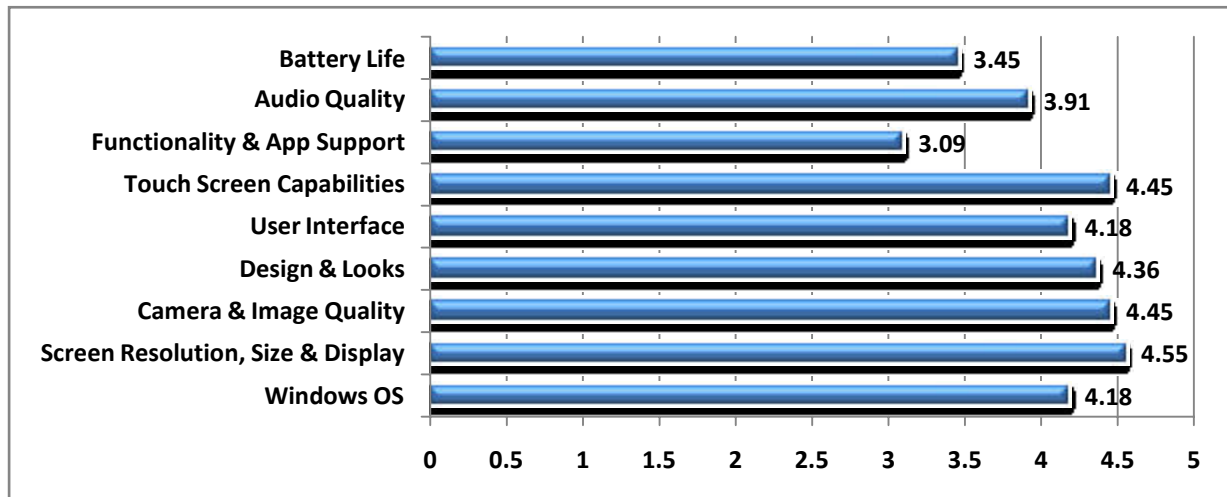
Level	Count	Perc.
Regret	4	6
Unsatisfied	8	12
Indifferent	15	23
Satisfied	19	29
Highly Satisfied	20	30



Inference: This is a very crucial finding that 59% of the customers are happy with their Nokia Lumia's performance. About 18% are unsatisfied with Nokia Lumia. This shows that Lumia has been received positively by its customers.

**Nokia Lumia Series Feedback**

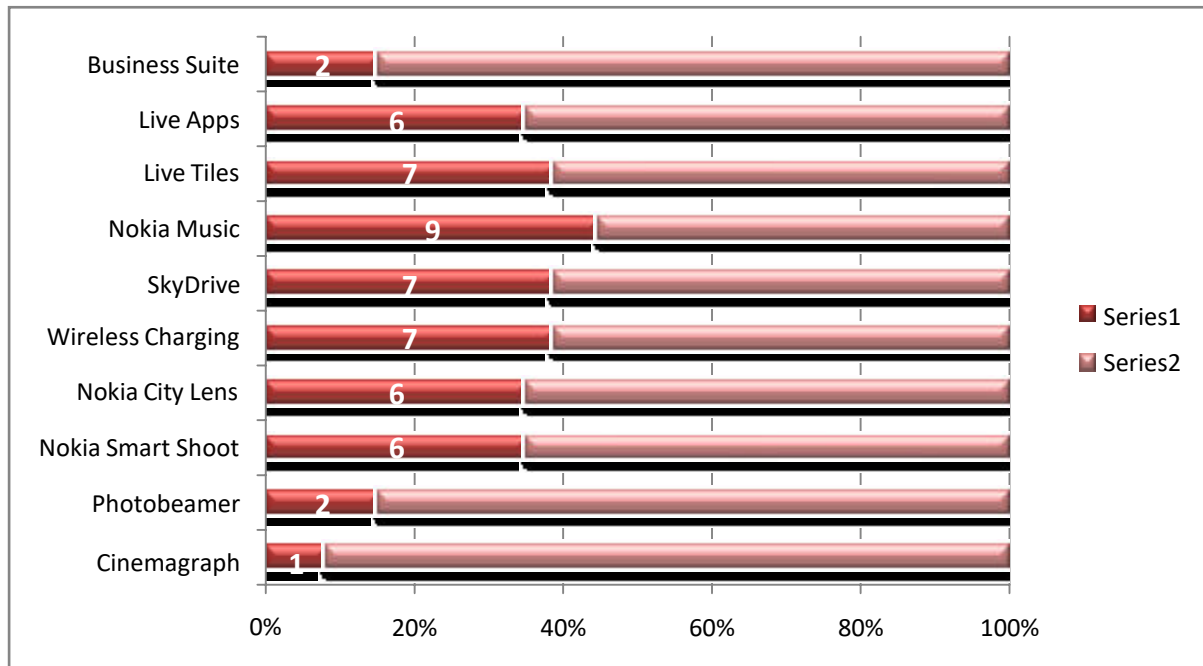
Sr.	Question	1	2	3	4	5	Total Responses	Mean
1	Windows OS	0	0	2	5	4	11	4.18
2	Screen Resolution, Size & Display	0	0	0	5	6	11	4.55
3	Camera & Image Quality	0	0	0	6	5	11	4.45
4	Design & Looks	0	0	1	5	5	11	4.36
5	User Interface	0	0	2	5	4	11	4.18
6	Touch Screen Capabilities	0	0	2	2	7	11	4.45
7	Functionality & App Support	0	4	2	5	0	11	3.09
8	Audio Quality	0	0	4	4	3	11	3.91
9	Battery Life	0	2	3	5	1	11	3.45



**Inferences:** Nokia Lumia beats competitor’s phones on most parameters and by a decent margin. However when it comes to Functionality & Application Support, Nokia lags behind the competitors. As it is seen in the regression analysis, these 2 features are mightily significant for the overall consumer satisfaction.

### Nokia Lumia Applications Awareness

Sr.	Question	Count	Total Response	Perc.
1	Cinemagraph	1	11	9
2	Photobeamer	2	11	18
3	Nokia Smart Shoot	6	11	55
4	Nokia City Lens	6	11	55
5	Wireless Charging	7	11	64
6	SkyDrive	7	11	64
7	Nokia Music	9	11	82
8	Live Tiles	7	11	64
9	Live Apps	6	11	55
10	Business Suite	2	11	18



**Inference:** Even among the people who owned/are owning a Lumia, many are still not aware of the features and functionality it provides. The figure would be much worse for people who do not own a Lumia. Future Advertising campaigns should project the following features so that awareness is much higher.

**Regression Analysis (Buying Behavior)**

**Table 4 Correlation Matrix of the Various Features**

	Looks	Functionality	Audio	Clarity	Interface	Battery	Touch Screen	Camera	Screen Size	Apps	Overall
Looks	1										
Func.	0.131	1									
Aud.	0.105	0.395	1								
Clar.	0.368	0.321	0.591	1							
Inter.	0.390	0.421	0.541	0.475	1						
Bat.	-0.109	0.278	0.451	0.154	0.488	1					
Touch.	0.382	0.374	0.291	0.518	0.648	0.200	1				
Cam.	0.543	0.513	0.274	0.500	0.583	0.046	0.704	1			
Size	0.298	0.510	0.283	0.283	0.441	0	0.513	0.603	1		
App.	-0.036	0.335	0.183	0.102	0.160	0.053	0.150	0.151	0.439	1	
Over.	0.201	0.708	0.454	0.378	0.561	0.329	0.611	0.627	0.649	0.664	1

**Inference:** Certain pairs of variables have a high degree of correlation up to 0.71 which suggests multi-collinearity. The highest correlation of 0.71 can be seen from the relation between Touch Screen- Camera Ratings closely followed by the correlation between Touch

Screen- Interface ratings. If correlation is taken with the overall dependent variable, „functionality“ seem to be affecting the overall satisfaction the most with a correlation of 0.7. Camera, Touch Screen and Interface also seem to be significantly affecting the overall consumer satisfaction with correlations around the 0.55 mark.

### Multi-Collinearity Studies

#### 1. Looks Vs Rest of Variables

**Table 5 Summary Output for Regression Model (Look Vs Rest of Variables)**

Regression Statistics			
Multiple R	0.640161	VIF	1.694357
R Square	0.409806		
Adjusted R Square	0.248844		
Standard Error	0.636482		
Observations	43		

Inference: The VIF factor has been arrived by regressing Looks against all the remaining variables. As the VIF factor < 5, it cannot be dropped from the model.

#### 2. Functionality Vs Rest of Variables

**Table 6 Summary Output for Regression Model (Functionality Vs Rest of Variables)**

Regression Statistics			
Multiple R	0.635792	VIF	1.678505
R Square	0.404232		
Adjusted R Square	0.24175		
Standard Error	0.598793		
Observations	43		

Inference: The VIF factor has been arrived by regressing „Functionality“ against all the remaining variables. As the VIF factor < 5, it cannot be dropped from the model.

#### 3. Audio Vs Rest of Variables

**Table 7 Summary Output for Regression Model (Audio Vs Rest of Variables)**

Regression Statistics			
Multiple R	0.750914	VIF	2.292906
R Square	0.563872		
Adjusted R Square	0.444928		
Standard Error	0.627221		
Observations	43		

Inference: The VIF factor has been arrived by regressing –Audio“ against all the remaining variables. As the VIF factor < 5, it cannot be dropped from the model.

#### 4. Screen Clarity Vs Rest of Variables

Regression Statistics			
Multiple R	0.711336	VIF	2.024286
R Square	0.505999		
Adjusted R Square	0.371271		
Standard Error	0.653308		
Observations	43		

Inference: The VIF factor has been arrived by regressing –Screen Clarity|| against all the remaining variables. As the VIF factor < 5, it cannot be dropped from the model.

5. Interface Vs Rest of Variables

Regression Statistics			
Multiple R	0.851158	VIF	3.629366
R Square	0.72447		
Adjusted R Square	0.649325		
Standard Error	0.510089		
Observations	43		

Inference: The VIF factor has been arrived by regressing –Interface“ against all the remaining variables. As the VIF factor < 5, it cannot be dropped from the model.

6. Battery Life Vs Rest of Variables

Regression Statistics			
Multiple R	0.698464	VIF	1.952562
R Square	0.487852		
Adjusted R Square	0.348176		
Standard Error	0.851735		
Observations	43		

7. Touch Screen Vs Rest of Variables

Regression Statistics			
Multiple R	0.80062	VIF	2.785462
R Square	0.640993		
Adjusted R Square	0.543082		
Standard Error	0.658899		
Observations	43		

Inference: The VIF factor has been arrived by regressing –Touch Screen“ against all the remaining variables. As the VIF factor < 5, it cannot be dropped from the model.

8. Camera Vs Rest of Variables

Regression Statistics			
Multiple R	<b>0.844149262</b>	VIF	<b>3.479326</b>
R Square	<b>0.712587977</b>		
Adjusted R Square	<b>0.63420288</b>		
Standard Error	<b>0.587828694</b>		
Observations	43		

Inference: The VIF factor has been arrived by regressing –Camera Performance“ against all the remaining variables. As the VIF factor < 5, it cannot be dropped from the model.

9. Screen Size Vs Rest of Variables

Regression Statistics			
Multiple R	0.758678	VIF	2.356222
R Square	0.575592		
Adjusted R Square	0.459844		
Standard Error	0.717241		
Observations	43		

Inference: The VIF factor has been arrived by regressing –Screen Size” against all the remaining variables. As the VIF factor < 5, it cannot be dropped from the model.

**10. Application Compatibility Vs Rest of Variables**

Regression Statistics			
Multiple R	0.534672	VIF	1.400313
R Square	0.285874		
Adjusted R Square	0.091113		
Standard Error	1.00576		
Observations	43		

Inference: The VIF factor has been arrived by regressing –Application Compatibility” against all the remaining variables. As the VIF factor < 5, it cannot be dropped from the model.

**Conclusions from Multi-Collinearity Studies**

All the independent variables under consideration are actually independent of each other as inferred from the above mentioned multi-collinearity diagnostics and hence none of them needs to be dropped from the regression study.

**Regression Equation**

**Table 8 Regression Model Summary**

R Square	0.882929937
Adjusted R Square	0.843906582
Standard Error	0.37455803
Observations	41

**Table 9 ANOVA**

	df	SS	MS	F	Significance F
Regression	10	31.74240797	3.174241	22.62568	2.58982E-11
Residual	30	4.208811543	0.140294		
Total	40	35.95121951			

**Table 10 Regression Model**

	Coefficients	Standard Error	t Stat	P-value
Intercept [c]	2.172185517	0.513645126	4.228962	0.000203
looks[l]	-0.007323087	0.111288792	-0.0658	0.947972
fun[f]	0.359695812	0.113586632	3.166709	0.003528
aud[a]	0.151172988	0.111452313	1.356392	0.185096
clar[x]	-0.11983943	0.109071506	-1.09872	0.280629
int[i]	-0.063829829	0.128059989	-0.49844	0.621811
bat[b]	0.133438483	0.077037246	1.732129	0.093522
touc[t]	0.267773011	0.102731907	2.606522	0.014108
cam[y]	0.257008607	0.116341652	2.209085	0.034947
size[s]	0.033631225	0.091163408	0.368911	0.714785
apps[p]	0.4230331	0.065406866	6.467717	3.8E-07

Inferences:

1. 88% of the variation in customer satisfaction can be explained by the 10 variables considered in this model. This is indicated by the value of R – Square.

2. The regression equation as found out from the above study is as follows:

$$O = 2.17 - 0.007i + 0.36f + 0.15a - 0.11x - 0.06i + 0.13b + 0.27t + 0.26y + 0.033s + 0.42p$$

Where O = Overall Customer Satisfaction (on scale of 10) and remaining variables are as shown in the table

### Hypothesis Testing

H<sub>0</sub>: b<sub>k</sub> = 0 (Co-efficient of the kth variable is 0)

H<sub>a</sub>: b<sub>k</sub> is not equal to 0

At alpha = 0.05, it is inferred that the coefficient of a particular variable is 0(negligible) if the corresponding p – value > 0.05, else it can be inferred that the co-efficient is Non-Zero and significant. Applying these criteria, the following characteristics are significant (b not equal to 0) and affect the overall customer rating much more than the other variables.

$$O = 2.17 + 0.36f + 0.42p + 0.27t + 0.26y + \text{negligible other factors}$$

By considering only the 4 variables mentioned above and running a regression of these 4 variables over the overall customer rating, it is found as below:

**Table 11 Regression Model Summary**

Multiple R	0.921944866
R Square	0.849982336
Adjusted R Square	0.833313707
Standard Error	0.387058636
Observations	41

**Table 12 ANOVA**

	Df	SS	MS	F	Significance F
Regression	4	30.55790154	7.639475	50.99294	2.41403E-14
Residual	36	5.393317969	0.149814		
Total	40	35.95121951			

**Table 13 Regression Model**

	Coefficients	Standard Error	t Stat	P-value
Intercept	2.319418491	0.39892969	5.814103	1.23E-06
Applications	0.430771655	0.062012227	6.94656	3.86E-08
Camera	0.175178451	0.099738873	1.756371	0.08753
Touch Screen	0.285876133	0.091018499	3.140857	0.00336
Functionality	0.4744368	0.106441434	4.457257	7.78E-05



$$O = 2.31 + 0.43p + 0.17y + 0.28t + 0.47f$$

An R-Square value of 0.85 is quite high and significant in explaining the variation in the overall customer ratings and hence can be treated as a very good model for predicting consumer satisfaction. Given below are the various plots that show the robustness of the model in terms of linearity and normal distribution assumptions

### **Conclusions**

Smart-phone consumer uses the device not just for general and traditional uses such as calling, messaging but it has emerged as a source of entertainment, social connection and a device that makes everyday life easier.

The knowledge, awareness levels of consumers about various smart-phones, their features, prices etc are increasing and consumers now make an informed choice through online reviews, peer recommendations, etc.

Applications & Functionality are the prime determiners in a purchase decision. Consumers make a choice after knowing the kind of capabilities and functions the device can support. Consumers, though they prefer certain brands and have a liking towards them, they do switch their devices/brands if they perceive the new model is better than the existing one. This highlights the constant need for innovation and updating and complementing the existing products in the market with enhancements.

Most of the customers of smart-phones being in the age of 20-40, with earning capacity to support them, they change phones as rapidly as once every year.

Through the regression results, it has emerged that Camera Capabilities, Touch Screen Performance, Application Support and Functionality are the key ingredients that contribute to consumer satisfaction. Moreover since most purchase decisions are through word of mouth, it is customer satisfaction that drives further sales.

Nokia is performing better than its competitors in most metrics but lags behind in the application support and functionality metrics. Though the performance of the Windows OS has been good, its weak apps capabilities limit its acceptability among the users.

The existing features of the Nokia Lumia are not made known to the public. Most features of the Lumia series are not known even to Lumia Customers.

Samsung seems to be the main competitor for Nokia due to the similarity in product offerings as well as similar price points

### **Recommendations**

Be on the drive to constantly innovate the existing Nokia Lumia Series, launching new products, enhancements and providing for add-on capabilities as frequently as once every year.

Rationale: New Purchase every 2 years by majority of consumers. Need to have an offering from our brand to not lose them to competitors

Invest capabilities in developing the Apps market for Windows. Develop innovative and smart apps that are likely to be accepted by consumers.

Introduce an android based Nokia offering targeting the youth (affiliation towards applications-high).

Rationale: High Apps focus of consumers leaves us no other choice but to launch phones with high App compatibility which highlights the need for above two recommendations.

Introduce two broad segments of phones:

- a. With multiple features and functionalities along with emphasis on the 4 most important features like the Camera, Touch Screen, App support and Functionality (Higher end smart-phones).
- b. With minimal additional features but with the 4 important features as before.

Set the prices of these 2 at two different price points to cater to different levels of price sensitive customers (Lower end smart-phones).

Rationale: Many of consumers who do not use a smart-phone cite price as a reason for not purchasing. Many users also say that Price is not constraint when the phone has the desired features. Clearly based on price sensitivity, there are 2 different segments. There is a need to cater to both segments to drive volumes in the low price segment and earn premium in high price segment.

The focus of future launches should be on these broad 4 important categories of variables. However since the market is characterized by sudden changes through disruptive innovation, the market should be closely followed for such changes and react suitably.

Rationale: Study stated that these 4 factors account for 85% of customer satisfaction

R & D investments for improvements at various levels of customer experience should be preceded by thorough market research so as to identify the latent needs of consumers so as to provide a suitable value proposition.

Communicate the existing Lumia's application capabilities through innovate ad and marketing campaigns so as to make people aware of Nokia's offerings.

Rationale: Low awareness among users and Non Users alike

### **Areas of improvement**

A continuous scale for measuring the various independent and dependent variables could have shown much finer variations and hence built a much more robust model.

A more diverse population through stratified random sampling should/could have yielded much more variation in terms of the sampled population.

A comparative study of each competitors' offerings could have given us more key insights but the sample space was heavily loaded in favour of Samsung Phones.

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### Annexure

#### Code Book for Questionnaire Part-1

Variable No.	Q. No.	Description	Range of Code Values	Scale Type	Codes
1	1	Whether smart-phone is used	1-2	Nominal	1: Yes 2: No
2-14	2	Brand of Smart-phone used	1-13	Nominal	1: Nokia 2: Samsung 3: Apple 4: HTC 5: Sony 6:Blackberry 7: Motorola 8: LG 9: Micromax 10: Videocon 11: Lava 12: Spice 13: Other(Please Specify)
	3	Ranking in terms of purchase decision			
15		Looks/Design/Styling	1-7	Ordinal	Rank 1: Most Considered Rank 7: Least Considered
16		Platform Support Capabilities (Operating System etc.)	1-7	Ordinal	Rank 1: Most Considered Rank 7: Least Considered
17		Applications/Features	1-7	Ordinal	Rank 1: Most Considered Rank 7: Least Considered
18		Battery Life	1-7	Ordinal	Rank 1: Most Considered Rank 7: Least Considered

					Least Considered
19		Screen Resolution/Clarity	1-7	Ordinal	Rank 1: Most Considered Rank 7: Least Considered
20		Brand name	1-7	Ordinal	Rank 1: Most Considered Rank 7: Least Considered
21		Price	1-7	Ordinal	Rank 1: Most Considered Rank 7: Least Considered
	4	Important of Style Quotient			
22		Screen Size	1-5	Ordinal	Rating 1: Rare Activity Rating 5: Very frequent Activity
23		Phone Sleekness	1-5	Ordinal	Rating 1: Rare Activity Rating 5: Very frequent Activity
24		Colour	1-5	Ordinal	Rating 1: Rare Activity Rating 5: Very frequent Activity
25		Shape	1-5	Ordinal	Rating 1: Rare Activity Rating 5: Very frequent Activity
26		Keypad Interface	1-5	Ordinal	Rating 1: Rare Activity Rating 5: Very frequent Activity
27		Surface Finish & Feel	1-5	Ordinal	Rating 1: Rare Activity Rating 5: Very frequent Activity
	5	Activities based on frequency of use			
28		Calling	1-5	Ordinal	Rating 1: Rare Activity Rating 5: Very frequent Activity
29		Messaging	1-5	Ordinal	Rating 1: Rare Activity Rating 5: Very frequent Activity
30		Music	1-5	Ordinal	Rating 1: Rare Activity Rating 5: Very frequent Activity
31		Internet Browsing	1-5	Ordinal	Rating 1: Rare Activity Rating 5: Very frequent Activity
32		Gaming	1-5	Ordinal	Rating 1: Rare Activity Rating 5: Very frequent Activity

	6	Rating of Smart-phone's Feature			
33		Camera	1-5	Ordinal	Rating1: Not very Important Rating 5: Extremely Important
34		Music	1-5	Ordinal	Rating1: Not very Important Rating 5: Extremely Important
35		video	1-5	Ordinal	Rating1: Not very Important Rating 5: Extremely Important
36		Bluetooth	1-5	Ordinal	Rating1: Not very Important Rating 5: Extremely Important
37		Wi-Fi	1-5	Ordinal	Rating1: Not very Important Rating 5: Extremely Important
38		3G	1-5	Ordinal	Rating1: Not very Important Rating 5: Extremely Important
39		Social Media Applications	1-5	Ordinal	Rating1: Not very Important Rating 5: Extremely Important
40		Email Applications	1-5	Ordinal	Rating1: Not very Important Rating 5: Extremely Important
41		Office Applications	1-5	Ordinal	Rating1: Not very Important Rating 5: Extremely Important
42		GPS/Maps	1-5	Nominal	Rating1: Not very Important Rating 5: Extremely Important
43		Best Fit	1-5	Nominal	1: Easy to Use and navigation 2: Best Functionality 3: Best Looks 4: Good Looks with certain features 5: None
44		Medium of Phone Purchase	1-7	Nominal	1: TV Advertisement 2: Print ads 3: Online Ads 4: Friend Recommendation 5: Online/Magzine Reviews 6: Retailer Recommendation 7: Others
45-48		Number of phones used in	1-4	Nominal	1: One 2: Two 3: Three

		last 2 year			4: More than Three
49		Loyalty to Current Brand	1-5	Ordinal	1: Strongly Agree 5: Strongly Disagree
50		Switch to new innovative mobile	1-5	Ordinal	1: Strongly Agree 5: Strongly Disagree
51		Decision to buy depends on my peers	1-5	Ordinal	1: Strongly Agree 5: Strongly Disagree
52		Price insensitivity			
53		Willingness to change phone for better features	1-5	Ordinal	1: Strongly Agree 5: Strongly Disagree
54		Price charged for	1-5	Nominal	1: Best Feature 2: Best look 3: Wow factor among peer group 4: Easy to use 5: Don't care for price
	16	Rating of following features for current phone			
55		Looks	1-5	Interval	1: Best Look 5: Worst Look
56		Functionality	1-5	Interval	1: Superior Functionality 5: Minimal Functionality
57		Audio	1-5	Interval	1: Perfect Audio 5: Poor Audio
58		Screen	1-5	Interval	1: Crystal Clear 5: Poor Resolution
59		User Interface	1-5	Interval	1: Smooth UI 5: Poor UI
60		Battery backup	1-5	Interval	1: Superior 5: Poor backup
61		Touch	1-5	Interval	1: Superior 5: No/Poor
62		Resolution	1-5	Interval	1: High 5: Low
63		Screen Size	1-5	Interval	1: Sufficient 5: Very large/small
64		Application	1-5	Interval	1: A lot 5: No/Minimal
65		Overall Experience	1	Ordinal	1: Very Satisfactory 10: Very Unsatisfactory

**Code Book for Questionnaire Part-2**

66	18	Whether user of Nokia Lumia	1-2	Nominal	1: Yes 2: No
67-71	19	Version of Nokia Lumia Used	1-5	Nominal	1: Lumia 520 2: Lumia 620 3: Lumia 720 4: Lumia 820 5: Lumia 920
72	20	Whether used any smart-phone before Nokia Lumia	1-2	Nominal	1: Yes 2: No
73-84	21	Which Smart-phone was used	1-12	Nominal	1: Samsung 2: Apple 3: HTC 4: Sony 5: Blackberry 6: Motorola 7: LG 8: Micromax 9: Videocon 10: Lava 11: Spice 12: Others
	22	Rating in terms of features			
85		Windows OS	1-5	Ordinal	1: Worst in the market 5: Best in the market
86		Screen Resolution, size & Display	1-5	Ordinal	1: Worst in the market 5: Best in the market
87		Camera & Image Quality	1-5	Ordinal	1: Worst in the market 5: Best in the market
88		Design & Looks	1-5	Ordinal	1: Worst in the market 5: Best in the market
89		User Interface	1-5	Ordinal	1: Worst in the market 5: Best in the market
90		Touch Screen Capabilities	1-5	Ordinal	1: Worst in the market 5: Best in the market
91		Functionality & Applications	1-5	Ordinal	1: Worst in the market 5: Best in the market
92		Audio	1-5	Ordinal	1: Worst in the market 5: Best in the market
93		Battery Life	1-5	Ordinal	1: Worst in the market 5: Best in the market
94	23	Overall User Experience	1-5	Ordinal	1: Worst Possible User Experience 5: Best Possible User Experience
95-104	24	Awareness of features	1-10	Nominal	1: Cinemagraph 2: Photobeamer 3: Nokia Smart Shoot 4: Nokia City Lens 5: Wireless Charging 6: SkyDrive 7: Nokia Music 8: Live Tiles 9: Live Apps 10: Business Suite
	25	Rating of Nokia Lumia's Features			



105		Windows OS	1-5	Ordinal	1: Worst in the market 5: Best in the market
106		Screen Resolution, size & Display	1-5	Ordinal	1: Worst in the market 5: Best in the market
107		Camera & Image Quality	1-5	Ordinal	1: Worst in the market 5: Best in the market
108		Design & Looks	1-5	Ordinal	1: Worst in the market 5: Best in the market
109		User Interface	1-5	Ordinal	1: Worst in the market 5: Best in the market
110		Touch Screen Capabilities	1-5	Ordinal	1: Worst in the market 5: Best in the market
111		Functionality & Applications	1-5	Ordinal	1: Worst in the market 5: Best in the market
112		Audio	1-5	Ordinal	1: Worst in the market 5: Best in the market
113		Battery Life	1-5	Ordinal	1: Worst in the market 5: Best in the market
114	26	Is Nokia Lumia the best	1-2	Nominal	1: Yes 2: No
115	27	Preferable OS for Nokia Lumia	1-4	Nominal	1: Windows OS 2: Android 3: Symbian 4: Indifferent

## 3R TECHNOLOGY A PARADIGM SHIFT IN WATER RESOURCE MANAGEMENT

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### ABSTRACT

The management of water is a global concern and particularly in India. In India millions do not have enough water, particularly during summer months, and women and girls have to walk long distances to fetch water. In the search for water, people are going deeper into the ground, lowering the groundwater table and leaving wells dry. The per capita availability of water for India in 2001 is expected to be half its 1947 level. Poor sanitation and unsafe drinking water account for a substantial part of the disease burden in India, contributing to diarrhoea, dysentery, typhoid, worms, jaundice and cholera. Each drought destroys the abilities of rural communities to cope. It makes them weaker and more disabled to deal with the vagaries of the monsoon. And in that way drought becomes permanent and long lasting and eats away at the very insides of the country. Challenges faced by more and more countries in their struggle for economic and social development are increasingly related to water. Water shortages, quality deterioration and flood impacts are among the problems which require greater attention and action. The world population has increased by a factor of about three during the 20th century whereas water withdrawals have increased by a factor of about seven. It is estimated that currently one third of the world's population live in countries that experience medium to high water stress. This ratio is expected to grow to two thirds by 2025. The more time and effort spent on these problems today, the greater will be the reward for those who have the foresight, diligence and ability to see the challenge and meet it successfully. Every country has to mind its water business. But for a country like India, where it rains for roughly 100 hours of the year, the management of water becomes even more critical. It literally determines if the country remains poor or becomes rich; diseased or healthy. In other words, water is the determinant of its future. The issue of water is not about scarcity but about its careful use and about its equitable and distributed access. Water is the starting point for the removal of poverty in the country. It becomes the basis of food and livelihood security. But what is clear is that water management strategies will need to be carefully designed so that they lead to *distributed* wealth generation. This will require reworking the paradigm of water management, so that it is designed to harvest, augment and use local water resources so that it leads to local and distributed wealth generation. It is also clear that local and distributed water infrastructure, will require new forms of institutional management as water bureaucracies will find it difficult to management such vast and disparate systems. Under these contexts a technology that can be befitting for water management will be 3R technology. This paper analyses the prospects of 3R technology in water management.

**KEY WORDS :** Water resource Management, 3R technology, Reduce, Reuse and Recycle

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## **Introduction**

The growth of industries in the Indian context is highly phenomenal in different segments; one among them is the field of water management. According to Central Pollution Control Board, 90% of the watersupplied in India to the town and cities are polluted, out of which only 1.6% gets treated. Therefore, water quality management is fundamental for the human welfare (Gupta1991). Globally water management has become a vital problem due to the depletion in the water sources, increase in population, pollution and global warming. It necessitates new strategies and technologies to face and solve the problem. Lots of techniques have come up in this field, needless to say that many were not able to sustain in the field due to various reasons. The present study is to analyse the scope, prospects and problems of 3R technology. This study is intended to provide insights into the prospects of establishing such a Technology.

## **The Main Challenges in Water Resource Management**

### **Populations under Water Stress**

The world population has increased by a factor of about three during the 20th century whereas water withdrawals have increased by a factor of about seven. It is estimated that currently one third of the world's population live in countries that experience medium to high water stress. This ratio is expected to grow to two thirds by 2025.

### **The Impact of Pollution**

Pollution of water is inherently connected with human activities. In addition to serving the basic requirement of biotic life and industrial processes, water also acts as a sink and transport mechanism for domestic, agricultural and industrial waste causing pollution. Deteriorating water quality caused by pollution influences water usability downstream, threatens human health and the functioning of aquatic ecosystems so reducing effective availability and increasing competition for water of adequate quality.

### **Securing Water for People**

Although most countries give first priority to satisfaction of basic human needs for water, one fifth of the world's population is without access to safe drinking water and half of the population is without access to adequate sanitation. These service deficiencies primarily affect the poorest segments of the population in developing countries. In these countries, water supply and sanitation for urban and rural areas represents one of the most serious challenges in the years ahead.

### **Securing Water for Food Production**

Population projections indicate that over the next 25 years food will be required for another 2-3 billion people. Water is increasingly seen as a key constraint on food production, on a par with, if not more crucial than, land scarcity. Irrigated agriculture is already responsible for more than 70% of all water withdrawals (more than 90% of all consumptive use of water). Even with an estimated need for an additional 15-20% of irrigation water over the next 25 years - which is probably on the low side – serious conflicts are likely to arise between water for irrigated agriculture and water for other human and ecosystem uses. Difficulties will be exacerbated if individual water-short countries strive for food self-sufficiency rather than achieving food security through trade; by importing food countries can in effect import water from more generously endowed areas (the concept of “virtual water”) (Sunita Narain, 2006).

### **Main Challenges in Water Requirements**

Although most countries give first priority to satisfaction of basic human needs for water, one fifth of the world's population is without access to safe drinking water and half of the population is without access to adequate sanitation. These service deficiencies primarily affect the poorest segments of the population in developing countries. In these countries, water supply and sanitation for urban and rural areas represents one of the most serious challenges in the years ahead. Water is increasingly seen as a key constraint on food production, on a par with, if not more crucial than, land scarcity. All human activities need water and produce waste, but some of them need more water or produce more waste per job than others. This consideration has to be taken into account in economic development strategies, especially in regions with scarce water resources. Water has a value as an economic good. Many past failures in water resources management are attributable to the fact that water has been – and is still – viewed as a free good, or at least that the full value of water has not been recognized. . In order to extract the maximum benefits from the available water resources there is a need to change perceptions about water values and to recognize the opportunity costs involved in current allocate patterns.

### **Management of Water Resources**

In evaluating the range of available management tools, the role of and scope for technological advances should still be carefully considered as a factor that may help achieve sustainable water resources management. There is scope for substantial progress both in technology refinement within the water sector itself and in those other productive sectors which critically affect the supply of and demand for water services. Traditional technologies like rainwater harvesting can also play a key role.

### **3R TECHNOLOGY**

3R stands for Reduce, Reuse and Recycle units and systems. In the competitive world, profits of industries come mainly from efficient use of raw materials and energy. That is optimum utilization of raw materials and energy with minimum waste or Zero Discharge through Reduces, Reuse and Recycles systems. This has been termed under Cleaner Technology of UN Resolution for sustainable business development. 3R Technology acknowledges the facts of Cleaner Technology and intends to offer suitable solutions and energy efficient systems for Reduce, Reuse and Recycle options.

### **Definition of the 3Rs**

The principle of reducing waste, reusing and recycling resources and products is often called the "3Rs". Reducing means choosing to use things with care to reduce the amount of waste generated. Reusing involves the repeated use of items or parts of items which still have potential for use. Recycling means the use of waste itself as a resource.

Waste minimization can be achieved in an efficient way by focusing primarily on the first of the 3Rs, "reduce," followed by "reuse" and then "recycle" and finally "energy recovery". Things which cannot be used by any means have to be disposed of appropriately.

The purpose of "reduce" is to save resources and to reduce waste, in other words, to reduce the amount of natural resources input into the production process and to reduce the amount of disposed waste.

**Reduce** can be achieved by the following measures.

- Reducing the amount of raw materials and energy used per product by changing the design of the product or changing the production process
- Reducing the quantity of production by extending the life of products or improving repair and maintenance technologies
- Reducing the amount of disposed waste by reducing the volume of waste or by selecting recyclable raw materials

**Reuse** can be achieved by the following measures.

- Repeatedly using products after washing or other proper measures
- Reusing parts derived from dismantled used products

**Recycle** is to use all or a part of a used product as a raw material in the same or other products by shredding, recovery of valuable metals or other proper measures. PET to PET recycling and recycled paper are typical examples of "recycle".

Wastes which cannot be materially recycled are incinerated for volume reduction, stabilization and detoxification in Japan. In the incineration process, much thermal energy is generated and can be utilized for electric power generation or heating public and other facilities near incineration plants. Incineration ash is also used as a raw material for cement production and as a soil conditioner.

### **Categories of 3Rs technologies and techniques**

Technologies related to a wide range of activities from simple waste segregation to complicated reuse and recycle of automobiles are considered to be "3R technologies." "3R technologies" can be categorized into five divisions, mainly reduce, reuse and recycle technologies, and additionally appropriate disposal technologies and common fundamental technologies.

### **Application of 3Rs technologies**

3R technologies are essential tools to promote a sound material-cycle society. The basic concept is to reduce the amount of raw material input, the final disposal of waste and the energy consumed in the production and transportation systems of products. "Reduce" should be considered as the first priority as it has the most direct effect on the reduction of wastes. It can directly reduce the scale of production process, energy consumption and the amount of waste produced by reducing the amount of input in the production process. "Reuse" is regarded as the second priority. "Recycle" is also important, however, it cannot be denied that environmental burdens such as energy conservation are brought about by the intermediate treatment and manufacturing processes of recycled products. In the case that 3R technologies are applied, this priority setting should be emphasized.

### **Benefits of Reduce, Reuse and Recycle Systems and Best Available Technologies**

- Zero Discharge or minimum waste
- Recovery of chemicals and metals
- Low operating cost
- Low capital cost
- Return on investment within 2 to 3 years
- Ease of operation and maintenance
- Compliance to meet pollution control board requirements on discharges

### **BAT (Best Available Technologies) Technologies and Products from 3R Technology**

- Counter current rinsing – reduces water consumption during rinsing up to 90%.
- Effluent Evaporators for concentrating process solutions, rinse waters, membrane rejects, heat sensitive liquids, recovery of solvents, waste heat recovery, industrial wastewaters etc.
- 3R Technology offers Modular units of MF, UF, NF and RO for reducing the volume of the wastewater and other process liquids for recovery of water or chemicals in the concentrate.

#### **Figure:1**

- Membrane Bio Reactors [membrane filtration combined with biological process] for treatment and recycle of industrial effluents and sewage waste waters.
- Advanced oxidation using UV, Ozone, Hydrogen Peroxide, and photo catalyst for complete reaction with high molecular organic contaminants.
- Zero Discharge Systems and Package ETP and STP units integrated with above technologies.
- Effluent Treatment Plant with emphasis on Cotton Dye Waste Water
- Sewage Treatment Plant
- Membrane Based Desalination Plant for Treatment of Brackish Water and Sea Water
- Demineralization Plant (Ministry of the Environment, 2005)

Technical advantages of this System are:

- Smaller Foot Print Area
- Modular & Easily Scalability
- Low Chemical Consumption
- Low Sludge Generation
- Consistent & Superior Quality of Permeate
- Colourless Pure Brine for Reuse

### **Zero Liquid Discharge**

Waste minimization can be achieved in an efficient way by focusing primarily on the first of the 3Rs, "reduce," followed by "reuse" and then "recycle" and finally "energy recovery". Things which cannot be used by any means have to be disposed of appropriately.

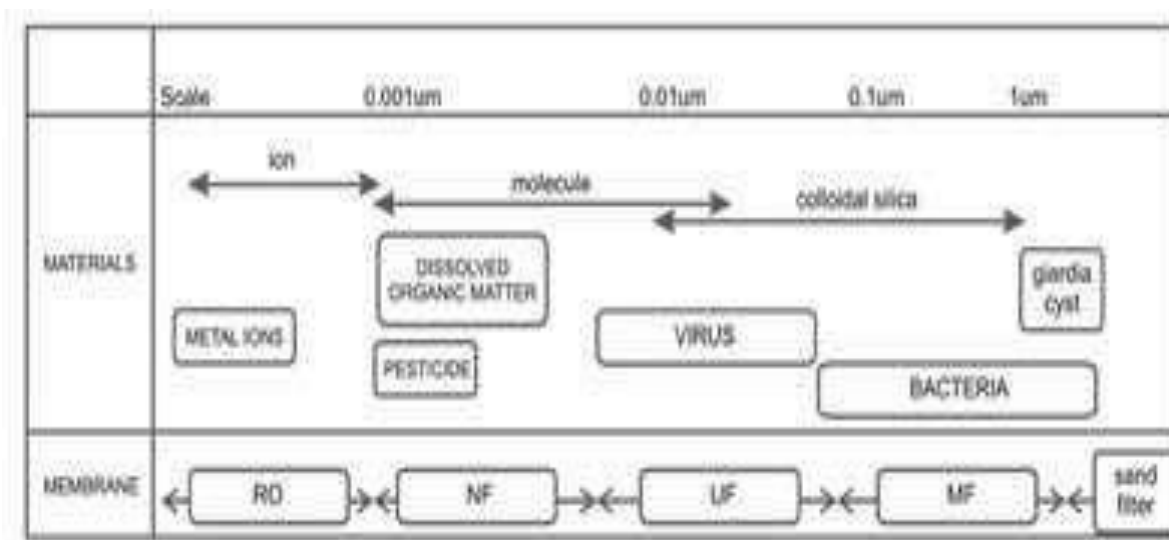
### **Suggestions**

The demand for water and water treatment is a never ending phenomenon in human life owing to the growth in population, technological and industrial development, depletion in natural water resources etc. In this context knowledge about water, understanding the importance of water treatment and developing an attitude towards water treatment are of utmost importance. In this direction the industrial growth and development towards water treatment is the present scenario of industrial sector. We observe „World Water Day 22<sup>nd</sup> March,,in order to remind the people the importance of water in human life. But still people are not aware of and they lack sufficient knowledge about water. The general public are to be educated in the directions of significance of water, knowledge about water treatment and various technologies behind water treatment particularly technology behind water treatment and its worthiness. More over the industries involved in using water extensively are to be informed then and then about various modern technologies involved in water treatment. Accordingly they will implement the newer technologies so that it would help in saving water and the effective and economic way of using water. At this juncture it is imperative to think about a viable water resource management and obviously the 3R technology could certainly be a befitting technology in the water resource management in the present day contest.

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**Figure:1**



## **DETERMINANTS IN MAKING PUBLIC HEALTH SYSTEM OF INDIA – A COMPREHENSIVE STUDY**

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PIRA BAZAR, INFRONT OF SADAR PS,  
CUTTACK

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### **ABSTRACT**

The Indian healthcare system is rapidly changing. Healthcare at its essential core is widely recognized as public good. This cannot be left in the hands of the market forces although role of private sector may be present as supplementary. It is known that the social determinants of health in which people grow, live, work and age are very important for the health status of the people. At the same time the socio economic status like income levels, gender and caste affect healthy life. This paper deals with the determinants influence the public health system of India and its impact on individuals.

**KEY WORDS :** Healthcare; Healthy Life; Health Crisis; Health Condition; Expenditure.

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### **INRODUCTION**

Public health in the 21st century is a multidisciplinary endeavour ranging from the surveillance of health and disease in populations, through to the provision of health advice and information. It occurs at all levels, from the actions taken by individuals through to those taken by national and international agencies. It also takes place in many different settings; for example, in homes, workplaces, schools, hospitals, youth centres, nightclubs, and on the street. There is a misconception regarding the idea of the public health system and medical facilities funded by the government at any level, be it the union government or the state or any local body. Public health actually means the overall situation of the health condition of the people of a country. It is dependent not only on availability of nutritious food, pure drinking water, but also regular source of income, quality of work, less environmental hazard, easy reach of health centres, immunization programme of a country, etc. There are other factors in India such as social caste, literacy and level of education, level of superstitions, etc. which affect the health condition of its citizens. Good health offers a person or group freedom from illness - and the ability to realize one's potential. Health is therefore best understood as the indispensable basis for defining a person's sense of well being. Health care at its essential core is widely recognized as public good. This cannot be left in the hands of the market forces although the role of private sector may be present as supplementary.

There are a lot of studies on different aspects on public health in India. Here some of the findings of a very important study (EPW May I012). The access to public health is affected by the location of the villages and availability of all-season transport to health centres. This in turn depends on the development of states and the local areas. The study found that Tamil Nadu, in this regard, is the best state in India whereas Maharashtra (MH), HP and MP are in the lower rungs. Curiously enough the health centres are generally at the central places locality or a village, where upper caste people stay. The lower caste people and other marginalized groups (Muslims, Christians, etc.) are at the periphery of the villages and get fewer benefits from the health centres.



## HEALTHCARE SCENARIO

The unsatisfactory health condition of the economically and socially deprived sections of the communities is caused by unequal distribution of income, goods and services. Their vulnerability makes it difficult for them to achieve satisfactory health status since they are continuously affected by poor social policies and programmes, unfair economic arrangements and decades of economic and social deprivation. Their health condition can be substantially altered only by a social determinants approach, which improves their daily living conditions, help to tackle inequitable distribution of power and resources. Health statuses in some places in India are dependent on caste- based location of the rural people which in turn decides economic status and political power in several places. The situation also varies among states. For example, it is not the same among the schedule castes of TN and those of MH. Gender decides health condition in India. In TN, MH and HP alcoholism was found to be the major cause of death among the males. Whereas in UP it was occupation related injuries, such as silicosis and tuberculosis that led to a larger number of deaths among males.

Social determinants influence a wide range of health vulnerabilities and capacities, health behaviours and health management. Individuals, communities and nations that experience inequalities in the social determinants of health not only carry an additional burden of health problems, but they are often restricted from access to resources that might ameliorate problems. Not only do social determinants influence diverse dimensions of health, but they also create health issues that often lead to circumstances and environments that, in turn, represent subsequent determinants of health. For instance, living in conditions of low income have been linked to increased illness and disability, which in turn represents a social determinant, which is linked to diminished opportunities to engage in gainful employment, thereby aggravating poverty.

Juvenile sex ratio (0-6 years) is also a matter of public health. It shows whether the number of girls per 1000 boys goes against girls or not. It is found to be the lowest, less than 800, in Meerut district. In several backward villages of better performing states of TN, MH and HP the ratio is very low which going against girls. Interestingly, in some of the less developed districts of low performing states like MP, UP and Odisha (OD) the sex ratios are high in favour of the girls. The study considers that in very underdeveloped places there is little scope of health facilities and no sex selection technologies. Curiously enough, underdevelopment of some regions can play a positive role! In Meerut district it is reported that sex selection is practised by relatively affluent, upper caste families.

The livelihood and income of the people are connected with economic status. They in turn determine the accessibility of health facilities and medical care. In agrarian economy the pattern of landholdings, wage rate, the numbers of days to be employed, road connectivity of the villages and markets, irrigation facilities, etc. are matters to be considered as agricultural income of the rural people. Presently agricultural economy has been losing its status for several reasons. As more than 60% of the people are involved directly or indirectly in this sector, public health of a large section of people is deteriorating.

The tribal people are also in a crisis as „development terrorism“, as has been stated by Professor Amit Bhaduri, is thrust upon them. These people fear losing their age old livelihood due to threat of development projects of the big corporates. This will affect the health condition of the entire community.

**Table-1: Public Expenditure on Health, 2010**

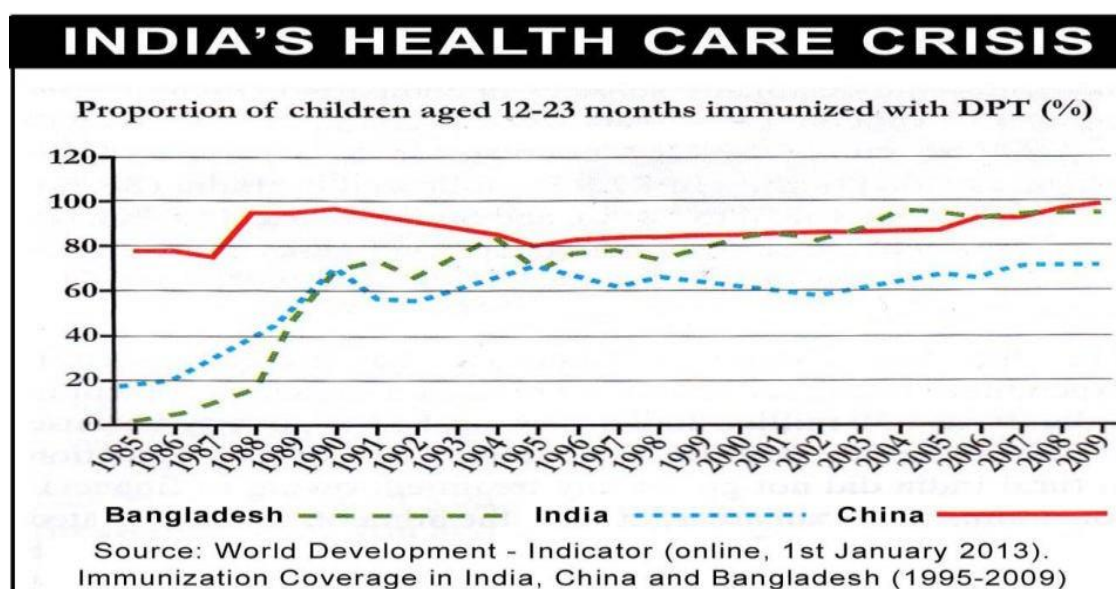
	As a share of GDP (%)	As a share of total health expenditure (%)	In absolute terms (2005 PPP international dollars) <sup>a</sup>
India	1.2	29	39
South Asia	1.2	30	36
Sub-Saharan Africa*	2.9	45	66
East Asia & Pacific*	2.5	53	167
Middle East & North Africa*	2.9	50	199
Latin America & Caribbean*	3.8	50	424
Europe & Central Asia*	3.8	50	424
<b>World Average</b>	<b>3.8</b>	<b>65</b>	<b>585</b>
European Union	8.1	77	2499

- Calculate from per capita expenditure on health and share of public health expenditure in total health expenditure.

\* Developing countries only.

**Sources:** *World development – Indicator (online, 1st January 2013)*

The body mass index is one of the important determinants of health of people. It is found that even in the better performing states like TN, 70% of the adult population is undernourished. It is noteworthy that at the time of the study TN was the only state which had universal access to PDS with more than 90% of the households possessing ration cards. It is also found in UP where almost all the population was undernourished. In India possession of ration cards does not mean receiving allocated commodities.



**Fig-1: India's Health Care Crisis**

It is known that the social determinants of health in which people grow, live, work and age are very important for the health status of the people. At the same time the socio economic status like income levels, gender and caste affect healthy life. It is claimed from different

quarters that the status of public health depends on the economic growth of a country. But the logic is not on a solid basis. As „many countries have been able to achieve big improvements in the health and nutrition status of their respective populations in a shorter time, even with lower rates of economic growth“ (Dreze & Sen: An Uncertain Glory). In a short period of time how several countries like China Brazil, Mexico, and Thailand, have achieved considerably high status in public health is an inspiring guideline to Indian policy makers. In India also one can find in TN and Kerala where health services have been in a better position. Dreze & Sen think the commitment to universal health coverage would require a major transformation in Indian health care mainly in two respects. First, they consider we should stop believing that India's transition from poor health to good health could easily be achieved through private health care and insurance. Actually the overarching objective of ensuring access to good health 'to all members of the community irrespective of their ability to pay' is intrinsically a public responsibility. Secondly, there is a need to go „back to basic' as far as public provision of health care services- both of a preventive and curative kind- is concerned, with renewed focus on primary health centres, village level health workers, preventive health measures, and other means of ensuring timely health care on a regular basis.

More than a fifth of under five-year old child deaths in the world in 2012 occurred in India. A UNICEF report published in the month of September 2013 observes that 6.6 million children worldwide died before reaching their fifth birthday in 2012. About half of deaths occurred in only five countries, i.e. China, Congo, India, Nigeria and Pakistan. Healthcare is a priority area in the 12 Plan and Approach Paper had declared that the main focus of the plan would be on health sector reforms, especially the strengthening of primary healthcare, based on availability of more health personnel and on extending these facilities to remote and inaccessible areas. The budgetary allocation made by the Government of India is just about 7% of the total expenditure plan during the year 2012-13. Incidentally, medical and public health's share in the total plan expenditure was 8.7% ten years ago, in 2004-05.

## CONCLUSION

The world Health Organisation (WHO) is concerned about the growing out-of-pocket (OOP) medical expenditure incurred by Indians. One out of every three rural Indians cannot afford to go to hospitals. One out of every five urban Indians remain under-treated due to financial problems. According to Dr. Kathleen A Holloway, regional adviser of the WHO, about 70% Indians are spending their OOP income on medicines and healthcare services in comparison to 30% - 40% in other Asian countries. India stood second in terms of OOP expenditure amongst BRICS countries in 2011. Russia's OOP expenses stood highest at 89.9%, followed by India 86%, China 78.8%, Brazil 57.8% and South Africa 13.8%. On the other hand, the corresponding expense figure in developed economies such as the US and the UK stood at 20.9% and 53.1% respectively. The increasing trend of OOP expenditure to pay for healthcare costs is a growing problem in India. About 39 millions Indians are pushed into poverty because of ill health every year.

The new agenda for Public Health in India includes the epidemiological transition, demographical transition, environmental changes and social determinants of health. Based on the principles outlined at Alma-Ata in 1978, there is an urgent call for revitalizing primary health care in order to meet these challenges. The role of the government in influencing population health is not limited within the health sector but also by various sectors outside the health systems. This article is a literature review of the existing government machinery for public health needs in India, its success, limitations and future scope. Health system strengthening, human resource development and capacity building and regulation in public health are important areas within the health sector. Contribution to health of a population also

derives from social determinants of health like living conditions, nutrition, safe drinking water, sanitation, education, early child development and social security measures. Population stabilization, gender mainstreaming and empowerment, reducing the impact of climate change and disasters on health, improving community participation and governance issues are other important areas for action. Making public health a shared value across the various sectors is a politically challenging strategy, but such collective action is crucial.

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## THE MUTUAL FUND PERFORMANCE BETWEEN 2008 AND 2010: COMPARATIVE ANALYSIS

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### ABSTRACT

The paper entitled “comparative analysis of mutual fund performance between 2008 & 2010”. The paper was undertaken to know the after meltdown period risks and returns of 2008 top hundred mutual funds and compare with 2010 top hundred mutual funds published in Business today. The analysis of alpha, beta, standard deviation, Sharpe ratio and R-squared are declare high, low, average, above average and below average of risks and return of funds.

**KEY WORDS:** analysis , alpha, beta, standard deviation, Sharpe ratio.

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### Introduction

The Indian financial system in general and the mutual fund industry in particular have taken a turn – around during the first half of 1990s. The new government which assumed office in 1991 initiated a series of policy measures intending to make the financial sector more viable and efficient and to bring it closer to international standards.

In the emergence phase (1993 – 2003) of Mutual Funds, international players came to India. Some have wound up their operations & a few of them are looking for re – entry. And now we are entering phase v of the industry, when not only are newer players reading to enter the market but are also looking at penetration & Market expansion.

Mutual funds are gearing up in a big way as an avenue yielding moderate – to – high returns while exposing the investor to – low – to moderate level of risk. A wide variety of schemes are offered to investors such as diversified equity funds, growth funds, balanced funds, money market funds, Sector – specific funds, tax saving funds.

As on Feb 2008, Association of Mutual Fund in India reported that there are 33 Asset management companies offering more than 1644 Schemes that has crossed 36 million folios available in Investment Avenue. Indian Mutual funds ranks 25 in the AUM of the global mutual fund Industry. According to a report by clipper a leading market research agency for the past decade 8 Indian funds have been figuring among the top 10 ranks globally. This gives tremendous opportunity for mutual fund operation.

Out of 321 million individual wage earners in the age group of 18 – 59, among which only 5.3 million investors were in mutual funds. Further 90% of savers are not aware of mutual funds or

ways to access the market. There is also lack of clarity above the risks associated with new schemes, transparency in Net Asset Value (NAV) computation of mutual funds.

There are different risk attitudes for mutual funds with various investments policy. Then the holding periods for invested asset as well as tune gab to gust the portfolio composition and weights under management differ for various funds. However many investment companies report the performance of mutual funds only based on the returns for a fixed investment horizon.

Conventional wisdom of investment industry that the first places to look into predicts the future performance of mutual funds in past performance.

### **Objectives of the Study:**

This paper wants to find the difficulty of risk and variance of return of top performed mutual funds during the before meltdown period and after meltdown period and to evaluate the fund performance of the mutual fund sectors. Also To suggest the investor to choose the best funds among the 100 best Funds of different sectors in 2008 and their present position.

### **Reviews of Related Literature:**

- a) Jiong Liu using daily data from May 2000 to January 2004 for the study of Investment Fund Performance in China and US. This study examines the risk, return, security selection and market timing performance of China. Security investment funds (SIFs), in comparison with the performance of SIFs in the U.S. The results indicate that China investment funds show superior marketing timing performance while U.S. fund managers display stronger security selection ability. These results imply that the potential synergy for Sino-U.S. joint venture investment funds could be tremendous. Additional analysis of the trading volume of closed-end funds in China illustrates those investors. Interests in SIFs are strongly and positively related to fund performance.

Results also indicate that Chinese investors favor professionally managed funds more than direct investment in stocks during negative market conditions.

- b). Mei – chen lin (2006) intends to investigate how the length of investment horizon is related to the performance of mutual fund. The sample covers the period from January 1995 to December 2002. This data contains 72 aggressive growth funds, 111 growth funds and 35 growth and income funds

This paper employed fund characteristics of mutual fund such as funds style, NAV, current yield, turnover rate, expense ratio & load determinate of mutual fund performance and to analyze the determinants of mutual fund performance, cross – sectional regression model has been performed Simulation is also used here to generate sample return distribution for holding periods from one season to five years. This paper concluded that the performance measure are positively related to NAV but inversely related to expenses ratio and the investor's differ in their attitudes and in holding horizons.

- c). Aneal Keswani and David Stolin (2006) want to examine how mutual fund performance persistence at the fund sector level is influenced by competition within the sector. More competitive sectors has less persistence in fund performance.

This article has been taken data from 1991 – 2001 and included names of funds and their management groups, annual returns, funds AUM, launch dates and name of the sector to which each fund belongs. This study has adopted measurement of persistence at the one year frequency.

The paper concludes by the competitiveness of a fund sector influences the persistence in the relative performance of its members.

d). Ronald N.Kahn and Andrew Rudd investigate persistence of performance for equity & fixed – income mutual fund. This study monitor performance in accounting for the effect of fund expenses and fees in the particular historical period investigated. The data has been taken for the study was equity funds (January 1983 to December 1993) and fixed income funds (October 1986 to September 1993). Equity funds January 1983 to December 1993 and fixed income funds October 1986 to September 1993. This paper investigated the persistence of mutual fund through Regression analysis & Chi - square distribution.

The paper has found that no evidence for persistence of performance among equity & mutual fund, but there is evidence of persistence of fixed income selection returns and information ratios, even after accounting for expenses.

**Data and methodology:**

The secondary data has been collected from the company records, business world in 2008 & 2010 and various websites. The data are analyzed through statistical method. There are various statistical tools to analyze the data. That includes Alpha, beta, standard deviation, R-squared and Sharpe ratio is used for the purpose of to know about the real fact.

**Data Analysis and Interpretation**

**Table.1. Top 100 Mutual Funds In March 2008**

Fund name	score	1-yr return (%)	3-yr return (%)	Worst 3-month return (%)	Risk grade	Sharpe ratio	Fund size (Rs crore)	NAV (Rs)
<b>AGGRESSIVE EQUITY</b>								
Tata Infrastructure	10	51.3	53.85	-26.24	-Avg	1.54	2,666.15	36.67
<b>DSPML T.I.G.E.R. Reg</b>	<b>9.8</b>	<b>45.8</b>	<b>53.11</b>	<b>-24.09</b>	<b>-Avg</b>	<b>1.57</b>	<b>4,600.19</b>	<b>49.72</b>
Sundaram BNP Paribas midcap	9.2	26.31	48.92	-16.75	Low	1.54	2,048.40	119.34
UTI Infrastructure	8.5	37.51	52.21	-26.43	Avg	1.44	1,608.41	40.29
<b>Reliance Growth</b>	<b>8.3</b>	<b>41.3</b>	<b>51.74</b>	<b>-44.99</b>	<b>Avg</b>	<b>1.57</b>	<b>5,696.39</b>	<b>390.86</b>
Magnum Emerging Businesses	7.1	36.42	50.66	-29.49	+Avg	1.55	296.78	42.51
<b>Birla Mid Cap</b>	<b>6.3</b>	<b>42.72</b>	<b>45.75</b>	<b>-25.17</b>	<b>Avg</b>	<b>1.46</b>	<b>771.09</b>	<b>95.34</b>
Birla Sun Life Basic Industries	3.8	46.41	42.16	-25.1	Avg	1.3	166.71	103.03
<b>Birla Sun Life Buy India</b>	<b>2.5</b>	<b>12.56</b>	<b>33.39</b>	<b>-41.55</b>	<b>Low</b>	<b>1.22</b>	<b>60.65</b>	<b>31.64</b>
DBS Chola Midcap Fund	1	27.58	35.8	-28.34	+Avg	1.15	27.28	35.06

<b>DIVERSIFIED EQUITY</b>								
<b>Kotak Opportunities</b>	<b>10</b>	<b>56.03</b>	<b>53.28</b>	<b>-23.78</b>	<b>-Avg</b>	<b>1.61</b>	<b>647.27</b>	<b>45.8</b>
<b>Magnum Contra</b>	<b>9.7</b>	<b>33.42</b>	<b>52.85</b>	<b>-42.69</b>	<b>-Avg</b>	<b>1.65</b>	<b>2,453.58</b>	<b>51.74</b>
Magnum Multiplier Plus	9.3	34.32	52.43	-60.58	-Avg	1.64	1,115.27	74.13
Magnum Global	7.6	21.54	52.83	-56.71	Avg	1.61	1,753.33	55.69
Taurus Starshare	7.4	58.72	59.46	-39.4	High	1.56	252.74	66.9
<b>BirlaSunLife FrontlineEquity</b>	<b>6.7</b>	<b>31.53</b>	<b>42.42</b>	<b>-20.31</b>	<b>Low</b>	<b>1.61</b>	<b>332.62</b>	<b>68.12</b>
Birla Sun Life Equity	5.4	35.89	47.25	-47.7	-Avg	1.51	1,380.77	253.93
<b>HDFC Top 200</b>	<b>5.4</b>	<b>31.47</b>	<b>43.09</b>	<b>-42.9</b>	<b>Low</b>	<b>1.55</b>	<b>2,363.26</b>	<b>147.72</b>
<b>HDFC Equity</b>	<b>5</b>	<b>24.46</b>	<b>43.43</b>	<b>-34.72</b>	<b>Low</b>	<b>1.53</b>	<b>4,716.57</b>	<b>188.42</b>
ICICI Prudential Dynamic	4.9	18.67	46.84	-26.85	Avg	1.53	2,102.60	80.46
Franklin India Prima Plus	4.5	29.05	44.55	-39.73	-Avg	1.56	1,776.37	184.44
DBS Chola Opportunities	4.4	53.48	44.57	-24.44	-Avg	1.4	66.29	43.45
Magnum Equity	4.4	36.84	45.99	-58.9	Avg	1.47	398.14	39.04
<b>Kotak 30</b>	<b>3.7</b>	<b>40.91</b>	<b>45.95</b>	<b>-41.29</b>	<b>Avg</b>	<b>1.5</b>	<b>607.32</b>	<b>98.8</b>
<b>HDFC Growth Fund</b>	<b>3.2</b>	<b>39.89</b>	<b>42.32</b>	<b>-26.33</b>	<b>-Avg</b>	<b>1.45</b>	<b>894.71</b>	<b>68.43</b>
<b>Tata Pure Equity</b>	<b>3.2</b>	<b>35.43</b>	<b>41.85</b>	<b>-39.1</b>	<b>-Avg</b>	<b>1.42</b>	<b>359.95</b>	<b>84.66</b>
Reliance Vision	3.2	33.83	43.97	-39.59	-Avg	1.48	4,286.63	246.44
ING Domestic Opportunities	3	31.02	41.19	-20.15	-Avg	1.43	112.29	36.28
<b>DSPML Top 100 Equity Reg</b>	<b>2.7</b>	<b>33.89</b>	<b>43.18</b>	<b>-21.84</b>	<b>-Avg</b>	<b>1.42</b>	<b>757.53</b>	<b>78.02</b>
Taurus Bonanza Exclusive	2.6	39.49	46.11	-36.81	Avg	1.43	53.72	49.49
DSPML Opportunities	2.2	33.43	42.94	-28.6	Avg	1.43	1,548.92	75.36
<b>DSPML Equity Fund</b>	<b>2.1</b>	<b>33.01</b>	<b>44.93</b>	<b>-46.03</b>	<b>Avg</b>	<b>1.42</b>	<b>1,169.53</b>	<b>46.92</b>
ICICI Prudential Emerging ST AR	2.1	27.54	49.41	-27.72	+Avg	1.4	917.4	38.16
Tata Equity Opportunities	1.6	42.58	45.33	-26.9	+Avg	1.37	584.54	84.91
HDFC Core & Satellite	1.4	23.13	39.36	-23.31	-Avg	1.35	511.15	31.83
Tata Select Equity	1.4	31.23	45.74	-26.92	+Avg	1.37	157.69	65.62
<b>Sahara Growth</b>	<b>1.3</b>	<b>35.45</b>	<b>40.64</b>	<b>-22.63</b>	<b>-Avg</b>	<b>1.37</b>	<b>6.65</b>	<b>68.88</b>
<b>Sundaram BNP Paribas Select</b>	<b>1.2</b>	<b>39.12</b>	<b>45.66</b>	<b>-21.6</b>	<b>+Avg</b>	<b>1.28</b>	<b>701.08</b>	<b>85.74</b>
ING Select Stocks	1.1	31.85	41.17	-62.56	Avg	1.34	36.55	36.8
HSBC Equity	1	37.38	40.22	-20.91	-Avg	1.34	1,370.37	100.32
<b>BALANCED FUNDS</b>								
<b>HDFC Prudence</b>	<b>10</b>	<b>23.71</b>	<b>36.63</b>	<b>-17.95</b>	<b>-Avg</b>	<b>1.79</b>	<b>3,163.84</b>	<b>144.74</b>
<b>Principal Child Benefit</b>	<b>9.3</b>	<b>39</b>	<b>40.13</b>	<b>-17.1</b>	<b>-Avg</b>	<b>1.78</b>	<b>23.99</b>	<b>81.54</b>
Magnum Balanced	5.6	24.84	36.21	-48.28	Avg	1.48	392.37	45.13
Kotak Balance	5	31.85	35.42	-25.42	Avg	1.52	84.4	29.49



<b>Tata Balanced</b>	<b>4.7</b>	<b>33.16</b>	<b>34.29</b>	<b>-33.7</b>	<b>Avg</b>	<b>1.43</b>	<b>232.5</b>	<b>67.31</b>
<b>Birla Sun Life 95</b>	<b>4.2</b>	<b>30.36</b>	<b>32.34</b>	<b>-34.69</b>	<b>-Avg</b>	<b>1.43</b>	<b>183.78</b>	<b>234.36</b>
<b>Canara Robeco Balance II</b>	<b>3.2</b>	<b>21.52</b>	<b>34.41</b>	<b>-20.43</b>	<b>+Avg</b>	<b>1.3</b>	<b>82.85</b>	<b>46.48</b>
<b>DSPML Balanced</b>	<b>2.9</b>	<b>28.29</b>	<b>31.78</b>	<b>-31.91</b>	<b>Avg</b>	<b>1.37</b>	<b>512.08</b>	<b>50.15</b>
Birla Asset Allocation Moderate	2.7	19.58	23.46	-12.43	Low	1.32	4.81	21.6
ICICI Prudential Advisor Moder	2.7	17.54	23.18	-10.1	Low	1.43	9.08	20.64
ICICI Prudential ChildCare-Gift	2.6	35.6	35.39	-22.03	+Avg	1.3	156.95	57.06
ICICI Prudential Advisor-Aggre	2.5	18.75	30.09	-17.1	-Avg	1.41	8.5	25.49
FT India Balanced	2.3	25.07	31.05	-29.26	Avg	1.42	323	41.91
FT India Life Stage FoF 30s	1.2	17.2	21.75	-10.79	Low	1.37	11.99	21.85
SundaramBNPParibas Balanced	1	25.45	27.03	-16.69	-Avg	1.23	46.04	41.2
<b>DEBT-ORIENTED HYBRID</b>								
<b>DBS Chola MIP</b>	<b>10</b>	<b>21.85</b>	<b>12.14</b>	<b>-2.12</b>	<b>-Avg</b>	<b>1.96</b>	<b>4.2</b>	<b>16.26</b>
ICICI Prudential ChildCare Study	9.7	13.82	14.75	-8.23	-Avg	1.47	30.24	22.6
<b>Principal MIP Plus</b>	<b>7.5</b>	<b>20.23</b>	<b>12.87</b>	<b>-4.22</b>	<b>Avg</b>	<b>2.24</b>	<b>77.07</b>	<b>15.35</b>
<b>Principal MIP</b>	<b>5.4</b>	<b>16.89</b>	<b>10.2</b>	<b>-3.15</b>	<b>-Avg</b>	<b>2.41</b>	<b>88.12</b>	<b>17.7</b>
<b>HSBC MIP Savings</b>	<b>4.8</b>	<b>16.25</b>	<b>13.16</b>	<b>-3.24</b>	<b>Avg</b>	<b>2.3</b>	<b>114.98</b>	<b>15.42</b>
Templeton India Pension	4	18.72	18.62	-7.83	High	1.37	177.69	52.57
Birla Asset Allocation Cons	4	14.01	13.96	-3.55	Avg	1.55	5.62	16.23
LICMF Floater MIP Plan A	2.8	15.39	12.9	-6.37	Avg	2.12	56.32	14.7
Birla Sun Life MIP	2.7	12.56	11.16	-4.45	-Avg	2.21	172.49	28.58
<b>ICICI Prudential Income Mult</b>	<b>2.5</b>	<b>11.27</b>	<b>14.9</b>	<b>-3.59</b>	<b>Avg</b>	<b>2.05</b>	<b>401.33</b>	<b>16.17</b>
HSBC MIP Regular	2.3	13.21	10.05	-2.23	-Avg	2.39	61.32	13.97
Canara Robeco Cigo	2.1	15.83	17.34	-7.24	+Avg	1.49	10.59	22.54
LICMF Floater MIP plan B	1.8	16.67	9.91	-1.82	low	1.72	6.97	13.46
FT india life stage FoF 50s plus	1.5	14.1	11.87	-4.81	Avg	1.4	13.78	15.06
LICMF children's	1	20.28	12.97	-10.87	High	0.51	13.33	18.19
<b>DEBT FUNDS</b>								
Birla Sun Life Income	10	16.25	9.33	-3.09	-Avg	3.43	194.96	29.92
Birla Income Plus	5.3	15.84	8.35	-3.78	Avg	2.45	896.81	35.22
<b>Kotak Bond Regular</b>	<b>4.7</b>	<b>12.25</b>	<b>7.91</b>	<b>-3.57</b>	<b>-Avg</b>	<b>3.11</b>	<b>111.48</b>	<b>21.88</b>
Birla Gilt Plus Regular	4.4	14.6	8.84	-6.53	+Avg	2.14	97.6	26.78
ICICI Prudential Gilt Invest	3.3	13.33	8.13	-6.75	+Avg	2.24	130.37	25.3

Principal Income	2.7	10.28	7.34	-2.54	-Avg	2.72	487.55	11.55
<b>Sahara Income</b>	2.5	<b>8.46</b>	<b>6.39</b>	<b>-2.58</b>	<b>Low</b>	<b>2.54</b>	<b>114.57</b>	<b>14.05</b>
Grindlays Dynamic Bond	2.4	11.27	7.65	-1.53	Avg	2.42	6.41	14.99
ABN AMRO Flexi Debt Reg	2.1	9.03	7.27	0.06	-Avg	4.04	1,466.13	12.47
ICICI Prudential Flexible Inc	1.7	8.71	6.89	-2.04	Low	17.09	5,250.51	14.72
ING Income	1.6	10.88	6.17	-2.61	-Avg	1.98	14.04	20.13
Kotak Flexi Debt	1.6	8.58	7.25	1.29	Low	23.07	3,944.60	12.47
Reliance Income	1.4	11.67	7.53	-2.93	Avg	2.28	124.68	25.93
Birla Dynamic Bond Retail	1.2	10.04	7.22	0.34	Low	3.38	1,393.20	12.49
ICICI Prudential Gilt Invest	1	13.89	8.98	-4	High	1.89	65.24	13.35
<b>SHORT-TERM DEBT</b>								
Templeton India MMA	10	9.38	7.02	0.85	-Avg	14.22	205.64	1
HDFC Cash Mgmt Saving	5.7	8.18	6.86	1.1	-Avg	17.63	2,524.35	16.68
DWS Insta Cash Plus	4.1	7.99	6.72	1.08	Low	13.02	2,405.72	13.42
Tata Liquid	4	7.97	6.62	-1.31	-Avg	19.04	3,223.93	1,849.23
Sahara Liquid Fixed Pricing	3.3	7.98	6.58	1.1	Low	19.47	20.57	1,430.51
Birla Cash Plus Retail	3.2	7.89	6.63	1.02	Low	16.97	9,916.91	21.47
HDFC Liquid	2.9	8.09	6.73	1.01	Avg	16.1	2,494.64	15.87
Fidelity MultiManager Cash	2.5	7.77	n.a.	1.43	-Avg	14.69	32.31	11.53
ICICI Prudential Liquid Inst I	2	8.61	n.a.	1.67	Avg	15.43	N.A.	11.51
HSBC Cash	2	7.77	6.5	1.07	-Avg	14.14	2,648.29	13.42
<b>LICMF Liquid</b>	2	<b>8.03</b>	<b>7.01</b>	<b>1.13</b>	<b>Avg</b>	<b>17.89</b>	<b>4,334.00</b>	<b>14.51</b>
ICICI Prudential Liquid	1.9	7.99	6.58	1.03	-Avg	14.47	24,999.7	19.57
Canara Robeco Liquid Retail	1.7	7.86	6.79	1.06	-Avg	16.52	636.04	14.55
<b>Reliance Liquid Treasury</b>	1.4	<b>7.64</b>	<b>6.32</b>	<b>0.1</b>	<b>Low</b>	<b>15.75</b>	<b>2,369.34</b>	<b>19.21</b>
Birla sun life cash manager	1	7.73	6.52	1.07	-Avg	13.16	595.4	19.58

Source from Business World March 2008

**Table.2. Top 100 Mutual Funds in March 2010**

Fund name	Score	1-year returns (%)	3-year returns (%)	Worst quarter returns (%)	Sharpe ratio	Risk score	NAV (Rs)	AAUM (Rs crore)
<b>Equity: Large Cap</b>								
DSPBR Top 100 Equity Reg	10	77.13	16.74	-30.99	0.5	0.81	91.12	2,406.60
Sahara Growth	9.28	69.71	15.65	-30.25	0.46	0.83	77.97	6.06
DWS Alpha Equity Regular	7.15	65.17	12.59	-36.08	0.38	0.88	73.04	204.22
Sundaram BNP Paribas Select	7.07	65.52	12.15	-34.69	0.35	1.05	85.6	1,294.83
Franklin India Bluechip	6.72	84.49	12.14	-35.29	0.36	0.93	185.7	2,728.03
HDFC Index Sensex Plus	6.47	80.6	11.9	-35.04	0.35	0.95	205.3	51.55
Kotak 30	6.31	66.71	11.3	-41.29	0.34	0.92	94.23	1,044.83
ICICI Prudential Growth Inst I	6.28	76.84	11.4	-36.25	0.35	0.86	17.1	12.94
ICICI Prudential Index Retail	6.08	75.57	10.89	-41.33	0.33	1.03	47.99	85.29
UTI Sunder	5.75	75.45	10.44	-40.62	0.32	1.02	544.8	6.35
<b>Equity: Large Cap and Mid Cap</b>								
UTI Opportunities	10	97.62	19.94	-31.4	0.56	0.83	24.07	1,011.99
Baroda Pioneer Growth	9.18	90.9	18.33	-39.65	0.51	0.93	49.9	54.22
HDFC Top 200	8.91	94.46	17.97	-42.9	0.51	0.9	180.5	5,909.76
Templeton India Growth	8.87	104.7	17.83	-41.23	0.5	0.99	107	448.49
Birla Sun Life Frontline Equity	8.39	90.45	16.75	-35.11	0.48	0.91	79.78	1,597.44
Canara Robeco Equity	7.91	92.98	15.74	-35.9	0.44	1.03	47.55	265.02
Templeton India Equity Income	7.69	104.22	15.06	-46.68	0.43	1.03	18.01	1,190.76
Principal Large Cap	7.32	110.14	14.34	-43.91	0.41	1.08	25.49	451.42
UTI Equity	7.15	85.17	14.35	-35.67	0.44	0.83	48.68	1,904.44
Tata Pure Equity	6.92	77.18	13.23	-39.1	0.39	0.88	89.49	451.96
<b>Equity: Mid Cap and</b>								
IDFC Premier Equity Plan A	10	102.12	25.85	-40.28	0.68	0.8	26.35	1,145.33
Sundaram BNP Paribas	8.81	120.44	19.16	-43.56	0.5	0.98	31.83	506.94
ING Dividend Yield	8.68	104.77	19.95	-39.65	0.54	0.86	19.33	29.3
Birla Sun Life Dividend YieldPlus	8.39	89.74	18.25	-32.57	0.52	0.7	69.35	340.33
Birla Sun Life Mid Cap Plan A	8.39	119.79	17.63	-39.21	0.47	0.92	104.8	1,142.48
Reliance Growth	7.95	97.4	17.01	-44.99	0.47	0.87	427.4	6,564.87
Tata Dividend Yield	7.66	88.45	15.67	-38.74	0.45	0.82	26.62	128.79
Sahara Mid Cap Fund	7.49	105.24	14.19	-42.31	0.4	0.98	26.65	9.58
Sundaram BNP Paribas Select	7.47	114.63	13.41	-40.43	0.38	1	135	1,857.07
ICICI Prudential Discovery	7.38	134.32	14.13	-43.25	0.4	0.94	40.35	561.88
<b>Equity: Multi Cap</b>								
1 Reliance Regular Savings uity	10	102.88	21.13	-42.07	0.54	1.03	27.79	1,925.12
1 UTI Dividend Yield	9.76	85.78	20.75	-30.2	0.61	0.75	27.57	1,704.78
1 Tata Equity PE	9.48	103.59	19.94	-41.65	0.54	0.99	43.6	275.27

DSPBR Equity	8.8	90.65	17.76	-46.03	0.5	0.84	52.96	1,631.51
HDFC Equity	8.38	105.57	16.69	-40.02	0.47	0.92	231	5,305.02
DWS Investment Opportunity	7.89	73.69	14.98	-40.48	0.43	0.9	35.78	185.23
Kotak Opportunities	7.67	80.13	14.15	-41.01	0.4	0.98	42.19	1,092.23
HDFC Growth	7.65	75.26	14.67	-35.54	0.43	0.84	73	1,348.45
Magnum Contra	7.5	90.55	14.08	-42.69	0.41	0.93	55.68	3,311.98
Nifty Junior BeES	7.35	122.7	12.74	-48.05	0.38	1.24	103.7	61.14
<b>Equity: Tax</b>								
Taurus Tax Shield	10	94.85	23.59	-54.91	0.59	1.07	32.15	32.34
Canara Robeco Equity Tax Save	8.13	89.4	18.48	-40.68	0.5	0.93	21.8	80.57
Sahara Tax Gain	7.29	90.57	16.54	-43.56	0.46	0.93	33.07	8.74
Sundaram BNP Paribas Taxsave	6.75	72.02	14.94	-32.65	0.42	0.91	42.29	1,270.10
Fidelity Tax Advantage	6.34	86.66	13.93	-36.29	0.42	0.82	18.25	1,133.94
Franklin India Taxshield	5.75	78.81	12.31	-34.66	0.37	0.87	178.1	745.55
Birla Sun Life Tax Relief 96	5.36	102.77	10.05	-45.04	0.31	1.11	87.85	1,195.70
HDFC Tax saver	5.14	99.07	10.38	-39.75	0.31	0.92	197	2,084.05
Principal Personal Tax Saver	4.96	86.87	9.84	-47.97	0.31	1.07	90.22	583.06
ICICI Prudential Tax Plan	4.82	112	9.53	-55.59	0.3	1.04	121.7	1,011.02
<b>Hybrid: Equity Oriented</b>								
Reliance Regular Savings Balc	10	75.74	18.92	-29.4	0.58	0.98	19.36	176.09
DSPBR Balanced	9.13	64.98	15.68	-31.91	0.51	0.86	59.57	667
Birla Sun Life 95	9.07	70.2	15.69	-34.69	0.48	0.99	269.5	241.45
HDFC Prudence	8.98	84.84	15.28	-31.22	0.46	1.02	174.3	3,370.08
Tata Balanced	8.87	75.04	14.77	-33.7	0.46	0.94	74.58	261.72
Principal Child Benefit	8.58	63.59	14.4	-35.22	0.44	1.04	82.89	29.68
UTI CCP Advantage	8.13	50.65	10.81	-18.06	0.43	0.42	14.98	43.79
Canara Robeco Balance	7.95	61.68	12.48	-27.88	0.38	1.1	53.24	161.54
Sundaram BNP Paribas Balance	7.94	71.01	12.05	-33	0.36	1.02	45.37	54.19
HDFC Balanced	7.91	73.42	12.04	-31.66	0.38	0.93	45	134
<b>Hybrid: Monthly</b>								
Birla Sun Life MIP II Savings5	10	1.57	12.44	-8.01	0.84	0.4	16.35	1,508.53
DBS Chola MIP	8.66	12.76	12.03	-4.25	0.95	0.73	18.68	22.5
Reliance MIP	8.14	21.17	12.93	-6.66	0.73	1.2	19.97	2,221.76
Principal MIP Plus	7.66	20.67	12.09	-8.79	0.76	1.12	17.86	87.89
HDFC MIP Long-term	7.33	30.73	12.34	-9.34	0.69	1.32	20.74	3,458.37
Principal MIP	7.1	15.48	10.57	-6.72	0.72	0.86	20.37	98.02
HSBC MIP Savings	7.07	18.44	11.39	-6.04	0.75	1.11	18.22	268.92
UTI Monthly Income Scheme	6.82	17.9	10.01	-3.59	0.84	0.77	18.38	163.81
Canara Robeco Income	10	6.84	13.91	-1.19	2.72	0.51	19.37	237.66
ICICI Prudential Short-term	7.56	5.82	10.65	-0.07	1.97	0.34	19.12	2,011.72
Sahara Income	7.38	2.07	10.64	-3.42	1.15	1.23	17.43	5.02

ICICI Prudential Income Inst	7.4	1.12	11.86	-6.89	1.22	0.44	30.99	728.98
DWS Premier Bond Reg	6.47	-0.37	7.93	-6.29	1.11	1.17	15.34	29.7
Fortis Flexi Debt Reg	6.39	3.12	11.45	-5.87	0.78	1.21	15.72	385.29
IDFC SSI Medium-term PlanA	6.28	5.63	9.35	-4.38	1.02	0.75	15.33	41.09
Kotak Bond Regular	6.23	-0.15	10.08	-6.04	0.94	1.03	25.97	217.7
<b>Debt: Short-term Income Funds</b>								
Reliance Short-term	10	8.85	10.26	0.63	2.6	0.83	17.19	2,875.12
UTI Short-term Income Regu	9.94	9.51	8.78	0.41	1.83	0.48	15.55	56.82
HDFC HI Short-term	9.87	9.35	10.59	0.48	3.13	0.88	18.12	1,831.56
JM Short-term Institutional	9.73	6.41	-	-20.74	2.61	1.16	12.83	32.03
Magnum Floating Rate ST	9.31	5.34	7.09	0.91	2.06	0.26	14.02	18.69
DWS Short Maturity Reg	9.27	7.69	9.71	-0.04	2.27	1.12	16.37	79.56
HSBC Income Short-term Inst	8.71	7.26	-	-20.64	3.07	0.42	12.23	46.11
ING Short Term Income	8.57	7.56	9.34	0.65	2.61	0.73	17.05	64.13
<b>Debt: Ultra Short-Term Income Funds</b>								
Birla Sun Life Floating Rate	10	8.17	8.73	1.1	16.19	0.12	15.53	138.91
Fortis Short-term Income Reg	9.98	6.95	-	1.08	6.75	0.04	14.11	34.05
Fortis Money Plus Inst	9.97	6.58	8.32	1.18	8.98	0	13.73	6,372.72
Templeton Floating Rate LT	9.94	7.62	-	1.3	9.57	0.21	12.45	2,217.47
JM Money Manager Super	9.92	6.51	-	1.07	9.15	0	12.75	42.43
LICMF Floating Rate ST	9.8	6.41	8.39	0.95	9.74	0.08	14.94	4,571.83
UTI Floating Rate ST Reg	9.74	5.95	7.33	-0.41	8.03	0.01	1,484.92	710.6
Tata Treasury Manager HI	9.71	5.79	-	1.1	3.99	0.13	1,208.16	76.62
<b>Debt: Liquid Funds</b>								
Sahara Liquid Variable Pricing	10	6.71	7.97	1.1	10.66	0.02	1,661.54	16.6
LICMF Liquid	9.78	5.86	7.76	0.78	8.39	0	16.7	13,398.60
Canara Robeco Floating Rate	9.76	5.78	7.81	1.02	7.27	0	14.08	118.83
Reliance Floating Rate	9.72	5.86	7.81	1.1	8.43	0	14.34	893.68
Fortis Overnight Inst Plus	9.68	6.12	-	-10.98	7.6	0.08	11.35	124.31
ICICI Prudential Liquid Super	9.64	5.56	7.8	1.05	7.49	0	134.71	12,762.67
Reliance Liquidity	9.61	5.48	7.63	1.02	7.14	0	13.73	11,810.34
Reliance Liquid Treasury Inst	9.59	5.5	7.51	1.02	7.29	0	22.23	2,989.21

Source from Business World March 2010

**Table.3. Top 100 Mutual Funds of 2008 in 2010 Performance**

<b>Fund name</b>	<b>R-squared</b>	<b>Alpha</b>	<b>Beta</b>	<b>S.D</b>	<b>Sharpe Ratio</b>	<b>Fundrisk grade</b>
Tata infrastructure G	0.96	-5.11	1.04	36.05	-0.09	Avg
DSPML T.I.G.E.R. Reg(DSPBR)	0.95	-2.64	1.03	35.78	-0.02	Avg
Sundaram BNP paribas select midcap	0.86	9.03	1.22	44.79	0.25	Avg
Uti infrastructure	0.96	-10.22	0.92	32.04	-0.26	Avg
Reliance growth	0.92	5.24	1.01	35.69	0.2	below avg
Magnum emerging business	0.86	0.41	1.3	47.62	0.06	above avg
Birla mid cap	0.88	6.7	1.13	40.88	0.22	Avg
Birla sun life basic industries	0.92	-0.16	1.08	38.35	0.05	no avg
Birla sun life buy india(taxrelief 96-D )	0.94	-3.38	1.13	39.5	-0.05	above avg
DBS chola midcap fund(L&T)	0.92	6.6	1.22	43.33	0.21	above avg
Kotak opportunities	0.93	0.92	1.03	36.46	0.08	Avg
Magnum contra	0.97	1.26	1.01	34.82	0.09	Avg
Magnum multiplier plus	0.93	0.69	0.91	32.22	0.08	Avg
Magnum global	0.9	0.87	1.22	43.88	0.07	above avg
Taurus starshare	0.87	-3.67	1.23	44.76	-0.03	High
Birla sun life frontline equity	0.97	4.55	0.95	32.58	0.18	below avg
Birla sun life equity	0.93	-1.85	1.01	35.42	-0.01	above avg
HDFC top 200	0.96	8.91	0.93	32.11	0.32	below avg
HDFC equity	0.94	9.95	1	35.09	0.32	below avg
ICICI prudential dynamic	0.93	5.01	0.83	29.04	0.21	below avg
Franklin india prima plus	0.95	1.86	0.9	31.44	0.1	Avg
DBS chola opportunities (L&T)	0.95	0.26	1.24	43.31	0.04	above avg
Magnum equity	0.96	-0.68	1.01	34.92	0.02	Avg
Kotak 30	0.97	-2.4	0.86	29.62	-0.04	below avg
HDFC growth fund	0.94	3.94	0.88	30.78	0.17	below avg
Tata pure equity	0.94	1.47	0.89	31.26	0.09	below avg
Reliance vision	0.95	0.03	0.96	33.36	0.04	Avg

Fund name	R-squared	Alpha	Beta	S.D	Sharpe Ratio	Fundrisk grade
ING domestic opportunities	0.7	0.23	0.95	22.43	0.9	below avg
DSPML top 100 equity reg(DSPBR)	0.96	2.5	0.82	28.37	0.13	Low
Taurus bonanza exclusive	0.94	-6.58	1.12	39.09	-0.13	high
DSPML opportunities(DSPBR)	0.95	0.62	0.9	31.43	0.06	Avg
DSPML equity fund(DSPBR)	0.94	4.08	0.92	32.09	0.17	below avg
ICICI prudential emerging star	0.89	-5.98	1.13	40.89	-0.11	above avg
Tata equity opportunities	0.92	-5.22	1.02	36.28	-0.11	above avg
HDFC core & satellite	0.93	6.44	1.05	37.04	0.21	Avg
Tata select equity	0.93	-3.57	1.05	37.12	-0.06	Avg
Sahara growth	0.97	0.74	0.84	28.94	0.06	below avg
Sundaram BNP paribas select focus	0.93	-4.28	0.95	33.64	-0.09	high
ING select stocks( core equity)	0.97	-2.59	0.94	32.32	-0.04	Avg
HSBC equity	0.97	-2.76	0.78	26.74	-0.06	below avg
HDFC prudence	0.89	10.09	1.1	28.39	0.34	Avg
Principal child benefit(conservative)	0.88	0.45	1.04	26.92	0	above avg
Magnum balanced	0.96	0.38	1.08	26.87	0	above avg
Kodak balance	0.95	-1.36	0.95	23.7	-0.07	Avg
Tata balanced	0.93	3.08	1.03	25.95	0.1	Avg
Birla sunlife 95	0.92	6.08	1.06	26.77	0.21	Avg
Canara roboeco balance II	0.94	4.86	1.1	27.58	0.16	above avg
DSPML balanced(DSPBR)	0.94	4.46	0.95	23.91	0.17	beloe avg
Birla asset allocation moderate	0.87	3.17	0.25	6.42	0.48	Avg
ICICI prudential advisor-moderate	0.87	2.3	0.76	7.98	0.16	above avg
ICICI prudential child care-gift	0.86	-1.25	1.29	33.84	-0.05	high
ICICI prudential advisor-aggressive	0.28	1.7	0.36	8.34	0.06	below avg
FT india balanced	0.95	1.09	0.89	22.21	0.03	below avg
FT indialife stage fof 30s	0.96	3.01	0.25	6.19	0.47	below avg
Sundram bnp paribas balanced	0.93	-4.28	0.95	33.64	-0.09	high
DBS chola MIP(L&T)	0.23	3.67	0.35	5.71	0.71	below

Fund name	R-squared	Alpha	Beta	S.D	Sharpe Ratio	Fundrisk grade
						avg
ICICI prudential childcare-study	0.61	4.43	0.24	7.54	0.57	Avg
Principal MIP plus	0.74	0.39	0.91	8.11	0.17	above avg
Principal MIP	0.65	0.56	0.72	6.87	0.2	Avg
HSBC MIP savings	0.7	1.99	0.87	7.97	0.37	Avg
Templeton india pension	0.91	-1.11	0.49	12.65	-0.1	Avg
Birla asset allocation conservative	0.87	3.17	0.25	6.42	0.48	Avg
LICMF floater MIP plan A	0.75	1.27	0.69	6.12	0.33	Avg
Birla sun life MIP	0.62	0.84	0.76	7.36	0.23	Avg
ICICI prudential income multiplier reg	0.71	0.27	1.18	10.8	0.15	high
HSBC MIP regular	0.66	1.35	0.62	5.88	0.35	below avg
Canara roboeco cigo	0.64	3.24	0.31	9.32	0.33	above avg
LICMF floater MIP plan B	0.75	1.27	0.69	6.12	0.33	Avg
FT india life stage FoF 50s plus	0.96	3.01	0.25	6.19	0.47	below avg
LICMF children's	0.9	-19.76	1.51	38.78	-0.53	high
Birla sun life income	0.07	-0.93	0.12	2.57	-0.4	high
Birla income plus	0.07	-0.93	0.12	2.57	-0.4	high
Kotak bond regular	0.01	-0.1	0.04	2.38	-0.06	Avg
Birla gilt plus regular	0.08	-2.51	0.09	2.91	-0.93	Avg
ICICI prudential gilt investment	0.08	-1.58	0.1	3.39	-0.52	high
Principal income	0.67	2.09	0.82	7.7	0.39	above avg
Sahara income	0	1.84	0	0.21	8.78	Low
Grindlays dynamic bond(IDFC)	0	-2.28	0	2.44	-0.94	above avg
ABNAMROflexi debt (BNPparibas)	0.04	-0.5	0.05	1.54	-0.35	Avg
ICICI prudential flexible income	0	1.65	0	0.13	12.56	below avg
ING income(Treasury advantage inst)	0	1.07	0	0.19	5.7	Avg
kotak flexi debt	0	0.7	0	0.11	6.64	Avg
Reliance income	0.01	-0.16	0.03	2.04	-0.09	Avg
Birla dynamic bond retail	0.01	1.95	0.01	0.68	2.88	Low
ICICI prudential gilt investment PF	0.06	-0.86	0.1	4.08	-0.26	high
Templeton india MMA	0.1	0.68	0.1	4.76	0.61	above avg
HDFC cash mgmt savings	0	1.34	0	0.12	10.85	below avg



<b>Fund name</b>	<b>R-squared</b>	<b>Alpha</b>	<b>Beta</b>	<b>S.D</b>	<b>Sharpe Ratio</b>	<b>Fundrisk grade</b>
DWS insta cash plus	0	1.36	0.01	0.16	8.36	below avg
Tata liquid	0	0.84	0	0.15	5.75	Avg
Sahara liquid fixed pricing	0.88	7.28	0.91	32.92	0.26	above avg
Birla cash plus retail	0	0.62	0	0.16	3.92	above avg
HDFC liquid	0	1.1	0.01	0.14	7.92	below avg
Fidelity multimanager cash	0	0.44	0	0.19	2.33	above avg
ICICI prudential liquid inst I	0.1	2.51	-0.42	1.71	1.08	above avg
HSBC cash	0	0.05	0	0.21	0.25	high
LICMF liquid	0	1.55	0	0.09	17.05	below avg
ICICI prudential liquid	0	0.57	0.01	0.15	3.79	above avg
Canara roboeco liquid retail	0.1	2.34	0.2	0.21	1.08	below avg
Reliance liquid treasury	0	1.04	0	0.12	8.86	Low
Birla sun life cash manager	-	-	-	-	-	-

**Table 3(A). Top 100 Mutual Funds of 2008 in 2010 Performance**

Fund name	1-year return	2-year return	3-year return	NAV (RS)	fund return grade
Tata infrastructure G	9.95	36.67	-7.02	35.688	above avg
DSPML T.I.G.E.R. Reg(DSPBR)	14.55	39.87	-6.4	49.735	above avg
Sundaram BNP paribas select midcap	21.81	57.54	2.06	161.751	above avg
Uti infrastructure	1.74	28.09	-10.13	35.95	Avg
Reliance growth	18.02	50.26	1.12	504.3416	above avg
Magnum emerging business	32.38	62.54	-5.86	43.54	Avg
Birla mid cap	14.15	56.22	0.26	119.68	above avg
Birla sun life basic industries	13.13	47.39	-5.06	110.34	no avg
Birla sun life buy india(taxrelief 96-D )	12.88	49.07	-5.98	91.76	Avg
DBS chola midcap fund(L&T)	23.04	57.73	-1.08	44.01	above avg
Kotak opportunities	19.04	44.43	-3.42	50.222	Avg
Magnum contra	10.47	42.83	-1.08	61.51	Avg
Magnum multiplier plus	19.9	47.33	-0.43	89.76	Avg
Magnum global	18.6	57.7	-5.62	58.59	Avg
Taurus starshare	24.09	48.64	-9.42	61.2	below avg
Birla sun life frontline equity	17.69	48.33	4.33	94.85	High
Birla sun life equity	13.56	44.57	-3.02	288.23	Avg
HDFC top 200	24.34	53.83	9.22	225.586	High
HDFC equity	28.13	60.35	9.47	297.956	above avg
ICICI prudential dynamic	20.81	45.51	5.39	111.6371	above avg
Franklin india prima plus	19.04	41.92	2.19	231.6433	above avg
DBS chola opportunities (L&T)	15.79	48.78	-3.4	47.97	Avg
Magnum equity	17.47	47.01	-1.84	45.86	above avg
Kotak 30	15.67	37.6	-2.05	109.705	below avg
HDFC growth fund	26.49	47.85	4.43	93.215	Avg
Tata pure equity	17.71	43.61	1.21	106.6799	above avg
Reliance vision	14.49	42.96	-0.66	291.1049	above avg
ING domestic opportunities	11.07	9.61	10.62	11.96	below avg
DSPML top 100 equity reg(DSPBR)	16.39	42.99	3.54	106.979	above avg
Taurus bonanza exclusive	14.36	41.62	-8.85	46.27	Avg
DSPML opportunities(DSPBR)	25.53	50.66	0.09	93.633	above avg

Fund name	1-year return	2-year return	3-year return	NAV (RS)	fund return grade
DSPML equity fund(DSPBR)	19.08	49.98	3.73	17.659	Avg
ICICI prudential emerging star	18.02	52.09	-9.2	35.69	Avg
Tata equity opportunities	9.18	44.59	-7.03	86.2659	below avg
HDFC core & satellite	27.83	58.63	5.04	43.878	above avg
Tata select equity	19.69	55.3	-5.04	70.4167	Avg
Sahara growth	9.48	35.83	0.95	86.4031	above avg
Sundaram BNP paribas select focus	11.75	34.99	-4.86	96.8508	Low
ING select stocks( core equity)	19.64	44.08	-2.62	41.31	Avg
HSBC equity	17.08	35.53	-1.83	111.6381	below avg
HDFC prudence	25.82	50.99	9.73	219.981	High
Principal child benefit(conservative)	11.51	34.59	0.06	93.49	Avg
Magnum balanced	12.24	34.16	0.24	53.82	Avg
Kodak balance	11.61	29.98	-0.97	23.764	below avg
Tata balanced	14.16	40.2	2.92	86.0209	Avg
Birla sunlife 95	19.3	40.99	5.42	322.43	above avg
Canara robeco balance II	17.45	35.71	4.81	62.53	above avg
DSPML balanced(DSPBR)	15.1	37.42	4.97	69.12	above avg
Birla asset allocation moderate	7.5	14.31	7.24	20.8328	above avg
ICICI prudential advisor-moderate	11.52	9.78	10.67	28.976	below avg
ICICI prudential child care-gift	23.53	50.13	-4.19	61.69	below avg
ICICI prudential advisor-aggressive	13.02	7.45	9.56	27.234	below avg
FT india balanced	14.65	31.18	2.4	50.4654	Avg
FT indialife stage fof 30s	7.88	14.15	7.21	19.4539	Avg
Sundram bnp paribas balanced	11.75	34.99	-4.86	96.8508	Low
DBS chola MIP(L&T)	5.41	8.89	7.85	19.7206	above avg
ICICI prudential childcare-study	12.83	17.3	8.45	29.3154	above avg
Principal MIP plus	5.13	12.39	5.22	18.8182	Avg
Principal MIP	4.82	9.87	5.38	21.3746	Avg
HSBC MIP savings	6.34	12.1	6.76	19.4453	above avg
Templeton india pension	9.4	18.03	1.94	58.8579	above avg
Birla asset allocation conservative	7.26	14.31	7.14	20.8326	above avg
LICMF floater MIP plan A	8.22	11.57	6.01	18.2481	Avg
Birla sun life MIP	7.27	10.46	5.67	26.3827	Avg
ICICI prudential income multiplier reg	8.86	15.13	5.16	19.5374	Avg
HSBC MIP regular	4.78	9.18	6.08	17.0375	Avg
Canara robeco cigo	8.85	13.51	6.91	29.3125	above avg
LICMF floater MIP plan B	8.22	11.57	6.01	10.8707	Avg

Fund name	1-year return	2-year return	3-year return	NAV (RS)	fund return grade
FT india life stage FoF 50s plus	7.88	14.15	7.21	19.4539	Avg
LICMF children's	3.21	23.09	-22.26	11.1312	Low
Birla sun life income	3.21	0.09	7.73	43.0562	below avg
Birla income plus	3.21	0.09	7.73	43.0562	below avg
Kotak bond regular	4.43	1.53	8.18	27.1364	Avg
Birla gilt plus regular	2.98	-2.97	6.74	31.5459	Avg
ICICI prudential gilt investment	5.1	-1.76	10.16	32.945	above avg
Principal income	7.32	10.7	6.82	36.2779	below avg
Sahara income	5.44	3.22	9.85	18.3904	above avg
Grindlays dynamic bond(IDFC)	3.21	-1.3	8.15	18.6432	below avg
ABNAMRO flexi debt (BNP paribas)	3.86	2.84	9.75	16.3325	Avg
ICICI prudential flexible income	5.79	5.81	6.99	179.215 5	above avg
ING income(Treasury advantage inst)	5.36	5.29	6.61	12.8853	Avg
kotak flexi debt	4.72	4.89	6.27	14.8719	below avg
Reliance income	4.02	1.06	7.63	31.8068	Avg
Birla dynamic bond retail	5.57	6.13	9.15	16.0801	above avg
ICICI prudential gilt investment PF	5.36	0.2	13.82	19.1578	High
Templeton india MMA	6.78	3.34	7.45	25.4433	below avg
HDFC cash mgmt savings	5.43	5.44	6.53	20.8557	Avg
DWS insta cash plus	5.61	5.5	6.74	12.4933	above avg
Tata liquid	5.08	4.91	6.19	2201.54	below avg
Sahara liquid fixed pricing	4.9	5.7	6.9	1025.6	Avg
Birla cash plus retail	4.73	4.68	6.3	25.4443	below avg
HDFC liquid	5.19	5.21	6.43	19.0189	Avg
Fidelity multimanager cash	4.81	4.58	5.78	12.8272	below avg
ICICI prudential liquid inst I	6.79	5.43	6.18	13.36	Avg
HSBC cash	4.62	3.73	5.23	15.6107	Low
LICMF liquid	5.49	5.74	7.1	12.8917	Avg
ICICI prudential liquid	4.74	4.65	5.95	231.444 8	below avg
Canara robeco liquid retail	5.05	4.06	6.43	20.5467	below avg
Reliance liquid treasury	5.05	5.17	6.37	22.9896	Avg
Birla sun life cash manager	-	-	-	23.417	-

**Table 4.i. Funds Comparisons of 2008 And 2010**

S.NO	FUND NAME	SCORE	SCORE	CATEGORY	CATEGORY	FUND SIZE (RS CRORE)	AAUM (RS CRORE)
		2008	2010	2008	2010	2008	2010
1	DSPBR Top 100 Equity	2.7	10	Diversified equity funds	Equity large cap	757.53	2406.6
2	Sahara Growth	1.3	9.28	Diversified equity funds	Equity large cap	6.65	6.06
3	Kotak 30	3.7	6.31	Diversified equity funds	Equity large cap	607.32	1044.83
4	HDFC Top 200	5.4	8.91	Diversified equity funds	Equity large cap&mid cap	2363.26	5909.7
5	Birla Sun Life Frontline	6.7	8.39	Diversified equity funds	Equity large cap&mid cap	332.62	1597.44
6	Tata Pure Equity	3.2	6.92	Diversified equity funds	Equity large cap&mid cap	359.95	451.96
7	Birla Sun Life Mid Cap	6.3	8.39	Aggressive equity funds	Equity mid cap	771.09	1142.48
8	Reliance Growth	8.3	7.95	Aggressive equity funds	Equity mid cap	5696.39	6564.87
9	DSPBR Equity	2.1	8.8	Diversified equity funds	Equity multi cap	1169.53	1631.51
10	HDFC Equity	5	8.38	Diversified equity funds	Equity multi cap	4716.57	5305.02
11	Kotak Opportunities	10	7.67	Diversified equity funds	Equity multi cap	647.27	1092.23
12	HDFC Growth	3.2	7.65	Diversified equity funds	Equity multi cap	894.71	1348.45
13	Magnum Contra	9.7	7.5	Diversified equity funds	Equity multi cap	2453.58	3311.98
14	Birla Sun Life Tax Relief96	2.5	5.36	Aggressive equity funds	Equity tax	60.65	1195.7

15	DSPBR Balanced	2.9	9.13	Balanced funds	Hybrid equity oriented	512.08	667	
<b>S.NO</b>	<b>FUND NAME</b>	<b>SCORE</b>	<b>SCORE</b>	<b>CATEGORY</b>	<b>CATEGORY</b>	<b>FUND SIZE (RS CRORE)</b>	<b>AAUM (RS CRORE)</b>	
		<b>2008</b>	<b>2010</b>	<b>2008</b>	<b>2010</b>	<b>2008</b>	<b>2010</b>	
16	Birla Sun Life 95	4.2	9.07	Balanced funds	Hybrid equity oriented	183.78	241.45	
17	HDFC Prudence	10	8.98	Balanced funds	Hybrid equity oriented	3163.84	3370.08	
18	Tata Balanced	4.7	8.87	Balanced funds	Hybrid equity oriented	232.5	261.72	
19	Principal Child Benefit	9.3	8.58	Balanced funds	Hybrid equity oriented	23.99	29.68	
20	Canara Robeco Balance	3.2	7.95	Balanced funds	Hybrid equity oriented	82.85	161.54	
21	DBS Chola MIP	10	8.66	Debt-oriented funds	Hybrid	Hybrid monthly	4.2	22.5
22	Principal MIP Plus	7.5	7.66	Debt-oriented funds	Hybrid	Hybrid monthly	77.07	87.89
23	Principal MIP	5.4	7.1	Debt-oriented funds	Hybrid	Hybrid monthly	88.12	98.02
24	HSBC MIP Savings	4.8	7.07	Debt-oriented funds	Hybrid	Hybrid monthly	114.98	268.92
25	Sahara Income	2.5	7.38	Debt funds		Debt income funds	114.57	5.02
26	ICICI Prudential Income Inst	2.5	7.4	Debt-oriented funds	Hybrid	Debt income funds	401.33	728.98
27	Kotak Bond Regular	4.7	6.23	Debt funds		Debt income funds	111.48	217.7
28	LICMF Liquid	2	9.78	Short-term debt funds		Debt liquid funds	4334	13398.6
29	Reliance Liquid Treasury Inst	1.4	9.59	Short-term debt funds		Debt liquid funds	2369.34	2989.21

30	Sundaram BNP Paribas	9.2	7.07	Aggressive equity funds	Equity large cap	2048.4	1294.83
31	SundaramBNP Paribas focus	1.2	7.47	Diversified equity funds	Equity mid cap	701.08	1857.07

**Table 4.ii.Funds Comparisons of 2008 And 2010**

S.NO	Fund name	1-YEAR RETURN (%)	1-YEAR RETURN (%)	3- YEAR RETURN (%)	3- YEAR RETURN (%)	SHARPE RATIO	SHARPE RATIO	NAV (RS)	NAV (RS)
		2008	2010	2008	2010	2008	2010	2008	2010
1	DSPBR Top 100 Equity	33.89	77.13	43.18	16.74	1.42	0.5	78.02	91.12
2	Sahara Growth	35.45	69.71	40.64	15.65	1.37	0.46	68.88	77.97
3	Kotak 30	40.91	66.71	45.95	11.3	1.5	0.34	98.8	94.23
4	HDFC Top 200	31.47	94.46	43.09	17.97	1.55	0.51	147.72	180.46
5	Birla Sun Life Frontline	31.53	90.45	42.42	16.75	1.61	0.48	68.12	79.78
6	Tata Pure Equity	35.43	77.18	41.85	13.23	1.42	0.39	84.66	89.49
7	Birla Sun Life Mid Cap	42.72	119.79	45.75	17.63	1.46	0.47	95.34	104.84
8	Reliance Growth	41.3	97.4	51.74	17.01	1.57	0.47	390.86	427.35
9	DSPBR Equity	33.01	8.8	44.93	17.76	1.42	0.5	46.92	52.96
10	HDFC Equity	24.86	105.57	43.43	16.69	1.53	0.47	188.42	231.01
11	Kotak Opportunities	56.03	80.13	53.28	14.15	1.61	0.4	45.8	42.19
12	HDFC Growth	39.89	75.26	42.32	14.67	1.45	0.43	68.43	73
13	Magnum Contra	33.42	90.55	52.85	14.08	1.65	0.41	51.74	55.68
14	Birla Sun Life Tax Relief96	12.56	102.77	33.39	10.05	1.22	0.31	31.64	87.85
S.NO	Fund name	1-YEAR RETURN	1-YEAR RETURN	3- YEAR RETURN	3- YEAR RETURN	SHARPE RATIO	SHARPE RATIO	NAV (RS)	NAV (RS)

		(%)	(%)	(%)	(%)				
		2008	2010	2008	2010	2008	2010	2008	2010
15	DSPBR Balanced	28.29	64.98	31.78	15.68	1.37	0.51	50.15	59.57
16	Birla Sun Life 95	30.36	70.2	32.34	15.69	1.43	0.48	234.36	269.47
17	HDFC Prudence	23.71	84.84	36.63	15.28	1.79	0.46	144.74	174.26
18	Tata Balanced	33.16	75.04	34.29	14.77	1.43	0.46	67.31	74.58
19	Principal Child Benefit	39	63.59	40.13	14.4	1.78	0.44	81.54	82.89
20	Canara Robeco Balance	21.52	61.68	34.41	12.48	1.3	0.38	46.48	53.24
21	DBS Chola MIP	21.85	12.76	12.14	12.03	1.96	0.95	16.26	18.68
22	Principal MIP Plus	20.23	20.67	12.87	12.09	2.24	0.76	15.35	17.86
23	Principal MIP	16.89	15.48	10.2	10.57	2.41	0.72	17.7	20.37
24	HSBC MIP Savings	16.25	18.44	13.16	11.39	2.3	0.75	15.42	18.22
25	Sahara Income	8.46	2.07	6.39	10.64	2.54	1.15	14.05	17.43
26	ICICI Prudential Income Inst	11.27	1.12	14.9	11.86	2.05	1.22	16.17	30.99
27	Kotak Bond Regular	12.25	-0.15	7.91	10.08	3.11	0.94	21.88	25.97
28	LICMF Liquid	8.03	5.86	7.01	7.76	17.89	8.39	14.51	16.7
29	Reliance Liquid Treasury Inst	7.64	5.5	6.32	7.51	15.75	7.29	19.21	7.29
30	Sundaram BNP Paribas	26.31	65.52	48.92	12.15	1.54	0.35	119.34	85.6
31	Sundaram BNP Paribas focus	39.12	114.63	45.66	13.41	1.28	0.38	85.74	134.99



**Table 4.iii.Funds Performance**

S.N	FUND NAME	R-squared	Alpha	Beta	S.D	Sharpe ratio	Fund risk grade	Fund return grade
1	Sundaram BNP paribas select midcap	0.86	9.03	1.22	44.79	0.25	Avg	
2	Reliance growth	0.92	5.24	1.01	35.69	0.2	below avg	above avg
3	Birla mid cap	0.88	6.7	1.13	40.88	0.22	Avg	above avg
4	Birla sun life buy india(taxrelief 96-D )	0.94	-3.38	1.13	39.5	-0.05	above avg	avg
5	Kotak opportunities	0.93	0.92	1.03	36.46	0.08	Avg	avg
6	Magnum contra	0.97	1.26	1.01	34.82	0.09	Avg	avg
7	Birla sun life frontline equity	0.97	4.55	0.95	32.58	0.18	below avg	high
8	HDFC top 200	0.96	8.91	0.93	32.11	0.32	below avg	high
9	HDFC equity	0.94	9.95	1	35.09	0.32	below avg	above avg
10	HDFC growth fund	0.94	3.94	0.88	30.78	0.17	below avg	avg
11	Tata pure equity	0.94	1.47	0.89	31.26	0.09	below avg	above avg
12	DSPML top 100 equity reg(DSPBR)	0.96	2.5	0.82	28.37	0.13	Low	above avg
13	DSPML equity fund(DSPBR)	0.94	4.08	0.92	32.09	0.17	below avg	avg
14	Sahara growth	0.97	0.74	0.84	28.94	0.06	below avg	above avg
15	Sundaram BNP paribas select focus	0.93	-4.28	0.95	33.64	-0.09	High	low

	<b>FUND NAME</b>	<b>R-squared</b>	<b>Alpha</b>	<b>Beta</b>	<b>S.D</b>	<b>Sharpe ratio</b>	<b>Fund risk grade</b>	<b>Fund return grade</b>
16	HDFC prudence	0.89	10.09	1.1	28.39	0.34	Avg	high
17	Principal child benefit(conservative)	0.88	0.45	1.04	26.92	0	above avg	avg
18	Tata balanced	0.93	3.08	1.03	25.95	0.1	Avg	avg
19	Birla sunlife 95	0.92	6.08	1.06	26.77	0.21	Avg	above avg
20	Canara roboeco balance II	0.94	4.86	1.1	27.58	0.16	above avg	above avg
21	DSPML balanced(DSPBR)	0.94	4.46	0.95	23.91	0.17	below avg	above avg
22	DBS chola MIP(L&T)	0.23	3.67	0.35	5.71	0.71	below avg	above avg
23	Principal MIP	0.65	0.56	0.72	6.87	0.2	Avg	avg
24	HSBC MIP savings	0.7	1.99	0.87	7.97	0.37	Avg	above avg
25	ICICI prudential income multiplier reg	0.71	0.27	1.18	10.8	0.15	High	avg
26	Kotak bond regular	0.01	-0.1	0.04	2.38	-0.06	Avg	avg
27	Sahara income	0	1.84	0	0.21	8.78	Low	above avg
28	LICMF liquid	0	1.55	0	0.09	17.05	below avg	avg
29	Reliance liquid treasury	0	1.04	0	0.12	8.86	Low	avg
30	Kotak 30	0.97	-2.4	0.86	29.62	-0.04	below avg	below avg
31	Principal MIP plus	0.74	0.39	0.91	8.11	0.17	above avg	avg

**Table.5. Fund Category Based On Average Risk**

<b>Fund Name</b>	<b>R-squared</b>	<b>Alpha</b>	<b>Beta</b>	<b>S.D</b>	<b>Sharpe Ratio</b>
Tata infrastructure G	0.96	-5.11	1.04	36.05	-0.09
DSPML T.I.G.E.R. Reg	0.95	-2.64	1.03	35.78	-0.02
Sundaram BNP paribas select midcap	0.86	9.03	1.22	44.79	0.25
Uti infrastructure	0.96	-10.22	0.92	32.04	-0.26
Birla mid cap	0.88	6.7	1.13	40.88	0.22
Kotak opportunities	0.93	0.92	1.03	36.46	0.08
Magnum contra	0.97	1.26	1.01	34.82	0.09
Magnum multiplier plus	0.93	0.69	0.91	32.22	0.08
Franklin india prima plus	0.95	1.86	0.9	31.44	0.1
Magnum equity	0.96	-0.68	1.01	34.92	0.02
Reliance vision	0.95	0.03	0.96	33.36	0.04
DSPML opportunities(DSPBR)	0.95	0.62	0.9	31.43	0.06
HDFC core & satellite	0.93	6.44	1.05	37.04	0.21
Tata select equity	0.93	-3.57	1.05	37.12	-0.06
ING select stocks( core equity)	0.97	-2.59	0.94	32.32	-0.04
HDFC prudence	0.89	10.09	1.1	28.39	0.34
Kodak balance	0.95	-1.36	0.95	23.7	-0.07
Tata balanced	0.93	3.08	1.03	25.95	0.1
Birla sunlife 95	0.92	6.08	1.06	26.77	0.21
Birla asset allocation moderate	0.87	3.17	0.25	6.42	0.48
ICICI prudential childcare-study	0.61	4.43	0.24	7.54	0.57
Principal MIP	0.65	0.56	0.72	6.87	0.2
HSBC MIP savings	0.7	1.99	0.87	7.97	0.37
Templeton india pension	0.91	-1.11	0.49	12.65	-0.1
Birla asset allocation conservative	0.87	3.17	0.25	6.42	0.48
LICMF floater MIP plan A	0.75	1.27	0.69	6.12	0.33
Birla sun life MIP	0.62	0.84	0.76	7.36	0.23
LICMF floater MIP plan B	0.75	1.27	0.69	6.12	0.33
Kotak bond regular	0.01	-0.1	0.04	2.38	-0.06
Birla gilt plus regular	0.08	-2.51	0.09	2.91	-0.93
ABN AMRO flexi debt reg(BNP paribas)	0.04	-0.5	0.05	1.54	-0.35
ING income(Treasury advantage inst)	0	1.07	0	0.19	5.7
kotak flexi debt	0	0.7	0	0.11	6.64
Reliance income	0.01	-0.16	0.03	2.04	-0.09
Tata liquid	0	0.84	0	0.15	5.75

**TABLE.6.FUND CATEGORY BASED ON HIGH RISK**

<b>Fund name</b>	<b>R-squared</b>	<b>Alpha</b>	<b>Beta</b>	<b>S.D</b>	<b>Sharpe ratio</b>
Taurus starshare	0.87	-3.67	1.23	44.76	-0.03
Taurus bonanza exclusive	0.94	-6.58	1.12	39.09	-0.13
Sundaram BNP paribas select focus	0.93	-4.28	0.95	33.64	-0.09
ICICI prudential child care-gift	0.86	-1.25	1.29	33.84	-0.05
Sundram bnp paribas balanced	0.93	-4.28	0.95	33.64	-0.09
ICICI prudential income multiplier reg	0.71	0.27	1.18	10.8	0.15
LICMF children's	0.9	-19.76	1.51	38.78	-0.53
Birla sun life income	0.07	-0.93	0.12	2.57	-0.4
Birla income plus	0.07	-0.93	0.12	2.57	-0.4
ICICI prudential gilt investment	0.08	-1.58	0.1	3.39	-0.52
ICICI prudential gilt investment PF	0.06	-0.86	0.1	4.08	-0.26
HSBC cash	0	0.05	0	0.21	0.25

**Table .7 Fund Category Based On Low Risk**

<b>Fund name</b>	<b>R-squared</b>	<b>Alpha</b>	<b>Beta</b>	<b>S.D</b>	<b>Sharpe ratio</b>
DSPML top 100 equity reg(DSPBR)	0.96	2.5	0.82	28.37	0.13
Sahara income	0	1.84	0	0.21	8.78
Birla dynamic bond retail	0.01	1.95	0.01	0.68	2.88
Reliance liquid treasury	0	1.04	0	0.12	8.86

**Table .8 Fund Category Based On Average Return**

<b>Fund name</b>	<b>1-year return</b>	<b>2-year return</b>	<b>3-year return</b>	<b>NAV (RS)</b>
Uti infrastructure	1.74	28.09	-10.13	35.95
Magnum emerging business	32.38	62.54	-5.86	43.54
Birla sun life buy india(taxrelief 96-D )	12.88	49.07	-5.98	91.76
Kotak opportunities	19.04	44.43	-3.42	50.222
Magnum contra	10.47	42.83	-1.08	61.51
Magnum multiplier plus	19.9	47.33	-0.43	89.76
Magnum global	18.6	57.7	-5.62	58.59
Birla sun life equity	13.56	44.57	-3.02	288.23
DBS chola opportunities (L&T)	15.79	48.78	-3.4	47.97
HDFC growth fund	26.49	47.85	4.43	93.215
Taurus bonanza exclusive	14.36	41.62	-8.85	46.27
DSPML equity fund(DSPBR)	19.08	49.98	3.73	17.659
ICICI prudential emerging star	18.02	52.09	-9.2	35.69
Tata select equity	19.69	55.3	-5.04	70.4167
ING select stocks( core equity)	19.64	44.08	-2.62	41.31
Principal child benefit(conservative)	11.51	34.59	0.06	93.49
Magnum balanced	12.24	34.16	0.24	53.82
Tata balanced	14.16	40.2	2.92	86.0209
ICICI prudential advisor-moderate	11.52	9.78	10.67	28.976
ICICI prudential advisor-aggressive	13.02	7.45	9.56	27.234
FT india balanced	14.65	31.18	2.4	50.4654
FT india life stage fof 30s	7.88	14.15	7.21	19.4539
Principal MIP plus	5.13	12.39	5.22	18.8182
Principal MIP	4.82	9.87	5.38	21.3746
LICMF floater MIP plan A	8.22	11.57	6.01	18.2481
Birla sun life MIP	7.27	10.46	5.67	26.3827
ICICI prudential income multiplier reg	8.86	15.13	5.16	19.5374
HSBC MIP regular	4.78	9.18	6.08	17.0375
LICMF floater MIP plan B	8.22	11.57	6.01	10.8707
FT india life stage FoF 50s plus	7.88	14.15	7.21	19.4539
Kotak bond regular	4.43	1.53	8.18	27.1364
Birla gilt plus regular	2.98	-2.97	6.74	31.5459
Principal income	7.32	10.7	6.82	36.2779
ABN AMRO flexi debt reg(BNP paribas)	3.86	2.84	9.75	16.3325
ING income(Treasury advantage inst)	5.36	5.29	6.61	12.8853
Reliance income	4.02	1.06	7.63	31.8068
Templeton india MMA	6.78	3.34	7.45	25.4433
HDFC cash mgmt savings	5.43	5.44	6.53	20.8557
Sahara liquid fixed pricing	4.9	5.7	6.9	1025.6
HDFC liquid	5.19	5.21	6.43	19.0189

Fund name	1-year return	2-year return	3-year return	NAV (RS)
ICICI prudential liquid inst I	6.79	5.43	6.18	13.36
LICMF liquid	5.49	5.74	7.1	12.8917
Reliance liquid treasury	5.05	5.17	6.37	22.9896

**Tabl.9 Fund Category Based On High Return**

Fund name	1-year return	2-year return	3-year return	NAV(RS)
Birla sun life frontline equity	17.69	48.33	4.33	94.85
HDFC top 200	24.34	53.83	9.22	225.586
HDFC prudence	25.82	50.99	9.73	219.981
ICICI prudential gilt investment PF	5.36	0.2	13.82	19.1578

**Table.10 Fund Category Based On Low Return**

Fund name	1-year return	2-year return	3-year return	NAV (RS)
Sundaram BNP paribas select focus	11.75	34.99	-4.86	96.8508
Sundram bnp paribas balanced	11.75	34.99	-4.86	96.8508
LICMF children's	3.21	23.09	-22.26	11.1312
HSBC cash	4.62	3.73	5.23	15.6107

### Results and Discussion

The funds are ordered according to rate of return & variability of return. According to profitability of funds are namely called high, low, below average funds, average funds, above average, funds. The fund risks and returns are varying for average risk lead to above or below average return otherwise, above average risk are below average return. In the year of 2008 thirty one funds only listed and Sharpe ratio also been increased and the NAV value was wider changes in 2010 respectively. The value of alpha had the negative and positive respectively.

Compare to the overall hundred funds, the most of the funds having the correlation value of less than one. In the 2010 the second year return was growing compared to the first year return for enlarge changes. The third year returns are declining comparing to the lost 2 years to be precise diminutive effect of returns. The NAV value was boost comparing to the 2008 so that fund returns are changed. In 2010 the funds' NAV value, score value and one year returns are increasing and the three year returns and Sharpe ratio are decreasing.

The NAV values are wider change comparing to the 2008 year. In 2010 the fund's NAV value and one year return was increasing and third year return, Sharpe ratio are

decrease. The NAV values are wider change comparing to the 2008. In the 2010 most of the funds were positively correlated and also they were obtained with standard results. In the year of 2010 funds like Birla sun life, sundaram BNP Paribas, HSBC cash etc... Were high risked funds because of alpha values were underperformed. In the year of 2010 funds like shara income, reliance liquid etc... were low risked funds because of outperformed. The funds like UTI infrastructure, HDFC etc... were given average return because of the second year return was increased when compared to the first year return and NAV value.

In the year of 2010 funds like sundaram BNP Paribas, sundaram BNP balanced, LICMF children's and HSBC cash given lowest return grade of top hundred funds because of third year returns are negative value are increasing the risk of returns. The 2008, 31 funds are better return in 2010 because of the one year and third year return was increased and also Net Asset Value increased that funds give more return. The 31 funds 2010 Sharpe ratio are decreasing and Net Asset Value are increasing while comparing to the 2008. That investment leads to better return with average risk.

### **Conclusion**

Selection of a mutual fund scheme is not an easy task if an investor wants to get fruitful returns. In order to be a successful investor in the mutual fund, investors have to be right in most of their decisions. This success is extremely difficult without the guidance of a proper, reliable and robust scheme selection method that has been worked in many years.

The guidance has come in the way of technical which helps to analyze the scheme in a better way. Most of the broker, business channels or news articles provide investment suggestion based on the technical analysis tools.

The study compared top hundred mutual funds of 2008 and 2010 (Data from Business World). The mutual fund performance are standard returns with average risks. The 31 funds (top hundred funds 2008 and 2010) reputation was till good performance of the return and that funds risk also standard for all funds.

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## INNOVATIONS IN TALENT ACQUISITION AND RETENTION IN SOCIAL ORGANIZATIONS IN INDIA

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### ABSTRACT

During the past decades there has been a tremendous progression in the volume of social organizations in India. The progression is in fact a reflection of a change in the government policies for withdrawing slowly from social development schemes. This huge void is being covered by social organizations. A social organization can be 'for-profit' or 'not-for-profit' venture focused in income-generating activities with an intention of bringing a positive impact in the society. Though social organizations focus on the progression of the society, they encounter a plethora of issues in relation to the right engagement of human resources within their organizations. It is also a fact that social organizations consistently juggle with serious people management issues such as attracting the right talent at low salary structure, providing career opportunities for internal employees, retaining talent in the middle management cadre, effective employee engagement, etc, handling cases of high attrition, hiring and retaining cost of new employees. It is imperative for social organizations to think out-of-the-box and look at their problems from an innovative angle to find sustainable solutions.

**KEY WORDS:** Talent Acquisition, Talent Retention, Social Organizations, HR innovations.

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### 1. INTRODUCTION:

Social enrichment in the developing countries has conventionally viewed as look out of the governments in power because of the large scale operations and inabilities of its beneficiaries to pay for the services. Though the intention for social progress in developing countries is huge, the supplies available with the governments are restricted. The government and its bureaucratic policies are dysfunctional to engage in social development projects at the grass-root level. Eventually the governments in the developing countries have tactfully withdrawn from the social development activities. This has created multiple vacuums in the social area where the gap between the have and the have-nots are wider than ever.

This vacuum has been filled by Non-governmental organizations which are non-profits through their value based services for social upliftment for which the public and the private sector do not have the vision, value system, intention and dedicated resources for facilitating the change. Profits stands for a dimensions of social, political, environmental, ethnic and community activities that impact the social and cultural well being of the society and engage in community building activities.(Salamon and Sokolowski, 2004). They drive economic and market forces to work for social goals (Vigoda and Cohen, 2003) and their employees voluntarily engage in profit making activities for social progression adhering to a high ethical standard. The non-profit concerns face numerous challenges in terms of declining in charitable contributions, reduction in government funds, competition from for-profit providers of certain services, and demands for a progressive change in the grass root levels.

The 21st century is an era of dynamic technological transformations, global mergers and acquisitions, global talent acquisition and deployment etc. These sudden transitions in employment patterns and the young and flexible workforce encourage extreme competition among employers to attract and deploy the right talent capital. (Osborn, 2001). Today's organizations carry success stories based on its talent management strategies. Recruitment is vital not just for developing human assets but for key organizational survival (Taylor and Collins, 2000). The existence of social organizations and their social welfare objectives create an intention that the employees work for more of a societal cause, than for the remuneration. From any angle, social organizations, the non-profits cannot compare its compensation structures with for-profit organizations which promise a great compensation package with an envious mix of salary, reward programmes and flexible benefits. (Brandel, 2001). All these cripple innovation in the already handicapped wing of HR in non –profit social organizations.

## **2. OBJECTIVES OF THE STUDY:**

1. To bring in Innovative strategies in human resource management in social organizations to attract perfect job fit employees and retain talented employees.
2. To understand the dynamics of social organizations, with a view to comprehend the HR issues faced by the organizations.
3. To review the practices implemented by social organizations to creatively deal with the HR related issues faced by the organizations.

## **3. LITERATURE REVIEW:**

The term 'social organization' evokes myriad waves among social enthusiasts. As per (Alter & Children, 2000), social organizations are motivated in the direction of innovation due to the nature of the anticipated social progression that springs from creativity and innovative based solutions, and the sustainability of the organization and its projects rely on innovative fund generating engagements.

Social organizations are hybrid organizations that resemble philanthropic and commercial organizations in its intentions, interests, operations, objectives, strategies etc (Dees et al., 1998). Dees, proposed an organizational spectrum, where non-profit and for-profit organizations are placed at opposite ends, and the social organization, having characteristics of both, is aligned in the middle.

To analyze the nature of organizations, it is easy to categorize it to the segment they belong to, (Westall and Chalkley, 2007) specified the sectoral memberships of voluntary organizations and social organizations. These organizations can't be categorized in the public or private sector, they can be called as the 'third sector', even though it is not a homogeneous sector. The types of organizations within this sector can be classified as, Voluntary and community organizations; and, Social organizations.

According to Westall and Chalkley, it is not easy to classify voluntary organizations from social organizations. There is a rather homogenous group which we mentioned as 'Third Sector'. Although 'Third Sector' organizations may be similar with respect to their purpose and existence, they do have their differences in terms of their objectives, leadership and implementation paces.

(Bomstein, 2007) has observed that, most of the volunteer organizations are entrepreneurial and inventive in accomplishing their social welfare activities. The constructive part of the income for social organizations comes from income generating activities, whereas for volunteer and community organizations, the constructive part of their income derives from donations from individuals or organizations. The social organizations which have income generating activities, there are two types based on their profit orientation-the not-for-profit and for-profit social organizations.

#### **4. SOURCES OF DATA:**

The data is composed from the secondary sources through journals, magazines and websites.

#### **5. HUMAN RESOURCE ISSUES OF SOCIAL ORGANIZATIONS:**

Management of Human Resources is of extreme significance to social organizations due to three factors. First, the service oriented nature of social organizations emphasizes the involvement of employees than infra structure investment. Second, employees of social organizations are attracted and retained by intrinsic factors such as trust in the mission and values of the organisations and an opportunity to realize the individual values, an intention for self actualization, and participation in decision-making that change the face of the society etc. (Brandel, 2001). Third, the most critical stakeholders in the strategic positing of social organizations as their intention, intensity of execution, approach, accountability, accessibility and leadership skills are most valued.

Employees of social organizations experience job dissatisfaction if:

- (a) they assume that their organization is not fulfilling their dream of social upliftment and very purpose of the formation of the organizations;
- (b) the purpose is diluted by selfish motives and
- (c) the adopted values are in conflict with the current practices

#### **6. TALENT ACQUISITION IN SOCIAL ORGANIZATIONS:**

As social organizations have constraint of financial resources to spend on process of recruitment, they do campus hiring and online hiring. For volume hiring, those with specialized domain expertise, microfinance firms such as BASIX and FINO (Financial Information Network Organization) regularly go through campus drives for recruitments. They also source from web-based job portals to advertise about their firms and do job postings. Usually these organizations prefer dedicated development-sector job-portals such as devnetjobs.org, barefootjobs.com etc rather than general job portals such as times now, naukri.com, monster.com etc. While it is extremely complicated for social organizations to mobilize job applications, it is even more difficult for them to process the same due to the absence professional sourcing specialist. As observed above, it is all about intrinsic motivation of an individual which drives them towards joining these kinds of organizations. These problems increase when shortlisted candidates reject the call for an interview who apply without looking at the profile and the nature of the job. It also causes further issues if the job applicants have gone through interview process, get selected and later if they reject the offer. It cannot be judged during interview process as it is intrinsic drive with which people apply for the jobs.

#### **7. TALENT RETENTION IN SOCIAL ORGANIZATIONS:INNOVATIVE APPROACH**

Employee Retention in social organizations occupies exceptional focus as employee attrition is critical at any given time. Since Social organizations are primarily driven by employees, any attrition will inversely affect the employee morale, job satisfaction levels and employee engagement and organizational commitment. (Ban et al., 2003). The key role of human resource management is not only to recruit the most talented professionals, but also to create a synergy between employee's goals and organizations goals so that they internalize the culture of the organization.(Vigoda&Cohen, 2003).It is the process of creating "fit and embeddedness"(Watson & Abzug, 2005). Value and goal congruence contribute to employee engagement, performance, organization citizenship behavior, job satisfaction and longer stay. The absence of synergy levels will lead employee not to reach the pinnacle of performance,

and in turn they tend to blame the organization of being political in intentions and view it as an unfair place. This will kill the purpose and brand of the organizations. It's a self-destructive scenario. There has to be a continuous evaluation of the transparency of intentions and strategies of the project starting from planning stage to implementation and beyond. (Vigoda& Cohen, 2003).

Innovative HR Strategies such as strategic hiring based on the match of value proposition of the candidate and his interest and ability to do the task-job and his/her fitment with the organizational culture ,right employee engagement by giving opportunities to work in the areas chosen by employees, empowering them to make decision at different stages of the project, extensive training on values and project implementation strategies, mentoring and coaching from social experts at the right intervals, leadership who believes in walk the talk guarantees a long stay and a renewed interest to pursue social causes. This is a concern area for social organizations that are clueless in retention activities. The agony of attrition adds to the fact that hiring enthusiastic replacements who are fuelled with an undying passion for social initiatives is a rare breed and stay rare and can't be sourced on all seasons (Light,2000); (Salamon,2002).

A innovative employee retention strategies that can be persuaded by social organizations are:

1. Identify people with vision and values that match the organization's vision and give the job offer.
2. Publicize the organization credibility through word of mouth brand-building.
3. Opportunities for personal growth can be a good motivator for individuals along with delegation of authority and decentralization of power.
4. Creating entrepreneurship attitude among employees through decentralization of decision making, and making them accountable.
5. Creating entrepreneurial opportunities within the organization.
6. Hiring based on personality –job fit and personality and organization fit.
7. Uncompromising adherence to core values by all employees in letter and spirit.
8. Walk the talk leadership and transparency and accessibility in all levels and grades.

## **8. CONCLUSION:**

The effort put in by social organizations to bring in a social change in India is applaud able. It ranges from providing critical health care to rural India, empowering women by creating jobs, access to safe water to the poor, recycling of resources etc. Their business model inspire social innovation, foster jobs and conserve resources. Social entrepreneurs has raised the bar so high and filled the void where a flippant government and inundated charities fall short. They have linked in technology and social innovation under the same roof while carrying out the social mission with the vigor of a missionary.

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## HER IDENTITY AND EMANCIPATION

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### ABSTRACT

Woman down the ages has had a secondary status in all cultures. From the beginning, woman was not given a primary status in the running of affairs of the county, province and empire. The change will come only when men realize that to give freedom and equal respect to women is good for them and it will lead to fulfillment for both. The mind has to become free and then it is a glory and ecstasy for BOTH men and women to live in complete mutual respect and togetherness.

**KEY WORDS:** Woman, status, identity, emancipation.

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### Introduction

Woman down the ages has had a secondary status in all cultures. From the beginning, woman was not given a primary status in the running of affairs of the county, province and empire. It was the king and not the queen who was supreme in political affairs with a few minor exceptions. These exceptions too came up due to a vacuum created due to the unavailability of a king at that crucial juncture.

As society progressed and with greater enlightenment, women did gain a certain equality of status and in the modern world, the process is practically completed in many countries BUT only on paper and as laws decreed by the government.

Socially, women are still oppressed especially in the east and notably in the middle-east where religion is still deeply linked to political affairs. The fight there is still on to secure rights for women with respect to the laws that govern them.

But the crucial point is what happens socially and psychologically in the mind, heart and soul of women in the process of direct and indirect subjugation and treating her as not equal to men.

It is a common notion that women are emotional, weak and cannot govern and take care of themselves. Women are fundamentally inferior and many thinkers in the past have voiced that. This has given rise to the feminist movement and infused the literature and academics with a variety of theories about what really constitutes femininity and masculinity.

If women are inferior to men in mental ability and strength and productive capacity, what explains the brilliant achievements of scores of women in the modern world who have exploited the liberalism in the modern world.

It seems more likely that man is not able to change his attitude with respect to women and to a large extent succeeds in placing rules dictated by the social environment where the woman has to be lower than men and her primary task relegated to the home and bearing children and bringing them up.

It is a pity that Society, especially in the east and middle-east, still treats women as inferior and clings to the outmoded beliefs of the ages old past just like they cling to the religious separation and caste system.

What is the deepest root for this? Actually looking at women as inferior is a process of thinking that is similar to the process of thinking that believes in religious differences and caste differences.

In all cases of irrational thinking, reason is absent. Men do not apply their reason as a rule. They conform to whatever society decrees as the rules of living and behavior. This supersedes laws of the country also. Man is first a social and then political being.

In such a situation, a common woman (and man also) would not have the strength to rebel against the social mores of the world around them, they would be afraid of isolation and ostracism. They would simply give up even knowing the rules are senseless.

Another effect of subjugation would be that women as a rule would become weak, if she is constantly pressured and not given the freedom. The soul and mind blossom in an environment of freedom and encouragement. In a society where women are given secondary status only few exceptional women find success and that too with many psychological problems.

This is sad because this affects the full flowering of love and sexual fulfillment between men and women. Man is distanced from woman. What should have been natural union and a state of bliss becomes an unnatural adjustment in accordance with societal stereo types.

This fact has been brought out brilliantly by many great authors in a variety of themes and from various angles. TESS OF THE DUBERVILLES BY THOMAS HARDY, DARK ROOM BY R K NARAYAN, HOME AND THE WORLD BY TAGORE, come to mind.

What is really the solution to the deep suffering that women and even men go through due to women's subjugation?

It requires that a voice is raised by women and men from the grass root level. It requires educational change that promotes reason and empowers and equips men and women to transcend their culture and question their cultures and take only that which conforms to reason.

It requires us to fight for a world through educational campaign and through writings explaining and expressing the beauty of man-woman relationships when they are treated as equal.

The change will come only when men realize that to give freedom and equal respect to women is good for them and it will lead to fulfillment for both.

It is possible but a narrow law enforcement will not do. The mind has to become free and then it is a glory and ecstasy for BOTH men and women to live in complete mutual respect and togetherness.

**A RESEARCH PAPER**  
**CAPITAL STRUCTURE DETERMINANTS OF STEEL COMPANIES IN**  
**INDIA: A PANEL DATA ANALYSIS**

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**ABSTRACT**

The various financing decisions are vital for the financial welfare of the firm. A false decision about the capital structure may lead to financial distress and eventually to bankruptcy. The management of a firm sets its capital structure in a way that firm's value is maximized. However, firms do choose different financial leverage levels in their effort to attain an optimal capital structure. Although theoretical and empirical research suggests that there is an optimal capital structure, there is no specified methodology, yet, that financial managers can use in order to achieve an optimal debt level. However, financial theory does provide some help in understanding how the chosen financing mix affects the firm's value. All the theories that have subsequently emerged tried to answer the moot question as what are the factors that affect capital structure decisions. In the process of their enquiry scholars have identified several dimensions out of which firm's own characteristics is of prime concern apart from corporate governance, legal framework and institutional environment of the countries in which firm operates.

Thus the objective of study is to analyze some of the firm's own characteristics that might affect the leverage of steel companies of India. Capital structure in Indian steel industries large/medium had under gone various changes due to the growth in the infrastructure projects and global demand. This made the steel industry to grow at a wide range by reducing debt. The higher demand for steel both in global & domestic market had higher opportunity for expansion.

**KEY WORDS:** Capital structure, Determinants, Firm's own characteristics, steel company

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**2. EXISTING LITERATURE**

The review of literature in context to Indian corporate about the practice of capital structure are Pandey's (1984) study of 30 Indian firms probes corporate managers' conceptual understanding of the cost of capital and optimum capital structure. Most of the respondents consider equity share capital as the most expensive and long-term debt as the least expensive source of finance. The low cost of debt due to tax advantage of interest and long procedures involved in the issue of equity capital led to strong preference for debt by the managers. Varma (1998) observes that at the beginning of the reform process, the Indian corporate sector was significantly over levered because of availability of subsidized institutional finance and operating risk was lower due to protected economy. The average debt to equity



ratio of corporate India has reduced from 1.72:1 in 1990-91 to 1.05:1 in 1996-97. Babu and Jain (1999) survey of 91 Indian private sector firms finds that they hold pecking order theory of capital structure. Raghunathan and Dass (1999) in their analysis of performance of Indian manufacturing sector for the period 1990 to 1999 find that the debt to equity ratio of Corporate India reached minimum of 1 in 1996 and then went up to 1.3 in 1999. It was as high as 1.7 in 1990, prior to liberalization of the Indian economy. Anand's (2002) analysis of capital structure finds that the retained earning is the most preferred source of finance followed by debt and then equity. The results seem to suggest that firms do not have specific capital structure in mind when deciding as to how best to finance their projects. Low growth firms prefer more use of debt in their capital structure vis-à-vis the high growth firms. The large firms prefer making bonds issue in the primary market. Very few firms use hybrid securities as a source of finance to protect bondholders from the firm/shareholders taking on risky or unfavorable projects. Fan and So (2000) study finds that there is strong evidence that financing and investment decisions are made simultaneously. The firms within the same industry tend to have more similar capital structure, though it is not a deliberate choice of the management. Firm size is found to be a determinant of capital structure. According to Sumit K. Majumdar In India older firms are found to be more productive and less profitable, whereas the larger firms are conversely found to be more profitable and less productive these performance differences are explained as arising from the market restricting industrial policies that have been followed in India over the past three decades, the issue of whether larger firms are superior in performance to smaller firms, or vice versa and whether older firms is superior in performance to younger or vice versa has generated large amounts of theoretical and empirical research in the economics management and sociology discipline. An attempt has been made to introduce variables like Size, profitability, Liquidity and Interest coverage these variables are observed to be significant in explaining long term borrowing behavior of firms.

### **3. FIRM'S OWN CHARACTERISTICS AND CAPITAL STRUCTURE**

#### **3.1. Profitability**

If managers of a firm cannot credibly convey inside information to outsiders they prefer internally generated capital to external financing (Myers and Majluf 1984). In the presence of asymmetric information, a firm would follow a pecking order preference pattern: it would prefer internal finance, but would issue debt if such low cost option were exhausted. The firm's last option would be to choose equity issue. Since profitable firms with a slow growth rate will end up with an unusually low leverage ratio compared to the industry average in which it operates. On the other hand, an unprofitable firm in the same industry will end up with relatively with leverage ratio. The profitability of the firm enables it to use retained earnings over external finance and, therefore, one should expect a negative association between the profitability of the firm and its debt ratio. Borton and Gordon (1988) have also argued that a firm with a high earnings rate would maintain a relatively lower debt level because of its ability to finance itself with internally generated funds. This is consistent with the proposition that the management of the firms desire flexibility and freedom from the excessive restrictions often associated with debt covenants. Kester (1986), Friend and Lang (1988), and Bhole (2000) have argued that the leverage ratio of the firm is a decreasing function of its profitability. Hence the hypothesis is that the profitability of the firm, which can be measured as the ratio of the operating income to total assets, will be negatively related to the debt level of firm. On the contrary, static trade off theory envisages a positive relation

between profitability and leverage because a firm with high profits would require greater tax shelter and would have more debt-taking capacity. However, the theoretical model envisaging an association between cash flow and maturity structure is complex and possibly non-monotonic (Diamond 1991a,b). Diamond argues that the firm at the lower end of the quality spectrum would depend more on the short-term borrowing and as credit worthiness increases they tend to depend more on the long-term borrowing. In the context of pecking order theory, profitable firms are likely to have sufficient internal finance that ensures that they do not need to rely on external finance. Moreover, as per agency theory framework, if the market for corporate control is inefficient, managers of profitable firms will use the higher level of retained earnings in order to avoid the disciplinary role of external finance. These two rationales point to a negative correlation between profitability and leverage. The indicator which is selected as a proxy for profitability in the study is natural log of total income by total assets  $\text{Ln}(Ti/Ta)$

### **3.2.Liquidity**

Liquidity ratios are mostly used to judge a firm's ability to meet its short-term obligations. They provide information about the ability of the firm to remain solvent in the event of the adversities. The liquidity ratio may have conflicting effects on the capital structure decision of the firm. First, the firms with higher liquidity ratios might have relatively higher debt ratios. This is due to greater ability to meet short-term obligations. From this viewpoint, one should expect a positive relationship between the firm's liquidity position and its debt ratio. However, the firms with greater liquid assets may use these assets to finance their investments. If this happens there will be a negative relationship between the firm's liquidity ratio and the debt ratio.

Moreover, as Prowse (1990) argues that liquidity of the company assets can be used to show the extent to which these assets can be manipulated by shareholders at the expense of bondholders. The proxy for liquidity is the natural log of current ratio  $\text{Ln}(Ca/Cl)$ .

### **3.3.Company size**

Trade-off theory predicts that larger firms tend to be more diversified and hence likely to be less susceptible to financial distress. Further, if maintaining control is important, then it is likely that firms achieve larger size through debt rather than equity financing. Thus control considerations also support positive correlation between size and debt. Examining the effect of size in the determination of capital structure, Marsh (1982) and Bennett and Donnelly (1993) found that larger firms are likely to use more debt. There fore, a positive association is expected between firm's size and leverage. Many authors have also suggested that direct financial distress cost is inversely related to firm size (Warner 1977; Ang, Chua, and Mcconel 1982). They have argued that the ratio of direct bankruptcy costs to the value of the firm decreases as the value of firm increases. The impact of direct costs of bankruptcy on borrowing decisions of large firms is said to be negligible. It is also argued that the larger firms are more diversified [Titman and Wessels (1988)], and they have easier access to capital markets, and borrow at more favorable interest rates (Ferri and Jones, 1979). Also, Chung (1993) has argued that the large firms have lower agency costs associated with the asset substitution and under investment problems, which mostly arise from the conflicting interests of shareholders and bondholders. Further, the smaller firms are more likely to be liquidated when they are in financial distress (Ozkan 1996). Size is closely related to risk and bankruptcy costs. All such considerations suggest a positive relationship between the firm size, which is measured as the volume of total assets of firms, and the leverage ratio. The proxy used for company size is natural log of the total assets  $\text{Ln}(Ta)$

**3.4. Interest cover:** Harris and Raviv (1990) have suggested that interest coverage ratio has negative correlation with leverage. They concluded that an increase in debt would increase default probability. Therefore, interest coverage ratio will act as a proxy of default probability, which means that a lower interest coverage ratio indicates a higher debt ratio. The role of ownership in determination of leverage has been considered empirically by Deesomsak et al. (2004). Scholars have shown that leverage is positively related with the concentration of ownership in Asia- Pacific region in contrast to the prediction of agency and signaling theories. Positive relationship between ownership and leverage is explained by the fact that firms in these countries (except Australia) are characterized by high level of family ownership, which reduces information asymmetry between owners and lenders and therefore leading to lower transaction cost and easier access to borrowing particularly, after the financial crisis.

#### **4. METHODS OF PANEL DATA AND ITS ANALYSIS**

In panel econometrics, fixed effect models rely on the hypothesis that elasticity is the same over time and across the cross section. Since panel data is pooling of time series and cross sectional observations, it gives more informative data, more variability, less collinearity among variables, better degrees of freedom and efficiency. Panel data are better suited to study the dynamics of changes, and detect and measure the effects that simply cannot be observed in pure cross section and pure time series data analysis (Gujarati and Sangeetha, 2009). Some of the study have found that capital structure is determined by some firm's own characteristics

Therefore, this paper analyses the impact of some firm's characteristics on capital structure. I have obtained fifteen years data on steel sector having total of five companies namely Tata Steel, Steel Authority of India, Hindustan Zinc, Bhushan Steel and Ahemdabad Steel .Data for each company on the four variables are available for the period 1997-2011. Thus, there are five cross-sectional units and 14 time periods. In all, therefore, I have 74 observations.

Since, the cross-sectional unit has the same number of time series observations, so this panel (data) is called a balanced panel. The simplest way to deal with such data would be to estimate a pooled regression with fixed effects models. The fixed effects model seems to be better for analyzing the above sets of data. The fixed effects models depend on the assumptions about the intercept, the slope coefficients, and the error term, unit. Here the slope captures the rate of change in Capital Structure due to the corresponding change in Natural Log of Total assets (LnTA) proxy for size of the company, Ratio of Total Income by total Assets (TI/TA) proxy for Profitability, Current Ratio (CA/CL) proxy for Liquidity and lastly ratio of Earnings before interest and tax by interest payment (EBIT/Int) proxy for Interest coverage Whereas, the intercept reflects the impact of all extraneous factors, such as corporate governance, legal frame work, etc that do not form the part of this analysis. There are several possibilities:

(1) Intercept and slope are constant across time and countries but error term captures differences over time and countries, (2) slope coefficients are constant but the intercept varies across countries,(3) slope coefficients are constant but the intercept varies across time, (4) slope coefficients are constant but the intercept varies over time and countries, and (5) intercept and slope vary across countries.

#### 4.1 Intercept and Slope Constant Across Years and Companies:

**Table- 4.1a**

Variables	Co-efficient	Standard error	T.stats	P-Value	VIF
Intercept	0.859	1.843	0.465	0.642	
Ln(TA)	0.962	0.127	7.552	.000	1.668
Ln(TI/TA)	-0.823	0.689	-1.193	0.236	1.213
Ln(CA/CL)	-0.685	0.269	-2.540	0.013	1.460
Ln(Ebit/Int)	-0.002	0.000	-2.255	0.027	1.019

N= 74       $R^2 = .695$       F= 39.39      Sig F= 3.83E-17      DW= .8734

The dependent variable is total borrowings. It is observed that all the VIF values are less than 5, indicate the model is free from multicollinearity (Tarek,2007).  $R^2$  value indicates that change in debt level is captured in four institutional characteristics apart from this there may be other external factors. The only fly in the ointment is that the DW is low suggesting that perhaps there is auto correlation in the data, which could be due to specification error.

In this I have made the assumption that all endogenous as well as exogenous variables across the five companies are same. All 74 observations are treated as if they belong to same single time series, and analysis is accordingly performed.

All the coefficients of model 1 are statistically significant except that of profitability ratio. The slope coefficients have positive sign for size of the company. Therefore a positive association is expected between firm's Size and Total borrowings of the company, Trade off theory supports a positive association between size and leverage of the company, it predicts that larger firms tend to be more diversified and hence likely to be less susceptible to financial distress Marsh (1982) and Bennett and Donnelly (1993) found that larger firm are likely to use more Debt. Similarly Liquidity and Interest coverage has negative correlation, indicating that high liquidity or high interest coverage leads to low leverage or vice versa. Theories suggests that liquidity ratio may have conflicting effects on the capital structure decisions of the firm, The firms with greater liquid assets may use these assets to finance their investments, if this happens there will be a negative relationship between firm's liquidity ratio and borrowings. Harris and Raviv (1990) have suggested that interest coverage ratio has negative correlation with leverage. The pooled regression in model 1 may distort the true picture of the relationship between Debt level and Size, Profitability, Liquidity and interest coverage ratio of all five Companies.

**4.2 Slope Co-efficient Constant But The Intercept Varies Across Individuals.**

**Table-4.2a**

Variable	Coefficients	Standard Error	T- Stat	P-value	VIF
Intercept	5.256	2.327	2.258	0.027	
Ln(TA)	0.563	0.209	2.692	0.009	6.803
Ln(TI/TA)	-1.070	0.611	-1.749	0.084	1.440
Ln(CA/CL)	-0.688	0.242	-2.833	0.006	1.784
Ln(Ebit/Int)	-0.000	0.000	-0.914	0.363	1.109
D22	0.647	0.738	0.877	0.383	1.839
D33	-3.802	0.797	-4.760	.000	2.039
D44	-0.055	0.846	-0.065	0.948	2.149
D55	-3.084	1.503	2.052	0.044	7.621

N= 74      R<sup>2</sup> = .80      F= 34.61      Sig F= 1.37E-20      DW= 1.5683

**Table 4.2b**

Name of company	Intercept
Tata Steel	- 5.256
Hindustan Zinc	- 1.453
SAIL	- 5.904
Bhushan Steel	- 5.201
Ahemdabad Steel	- 2.171

The dependent variable is total borrowings. The regression model is free from multicollinearity (VIF < 5). R<sup>2</sup> value indicates a high value and shows an improved result as compared to model 1. DW also shows an improved result and significant at 2 percent two sided level of significance in company wise fixed effect model in comparison to model I.

**Table.4.2c**

Variable	Explanation	Variable	Explanation
Ln(TA)	Natural log of Total Assets (Size of the company)	D <sub>22</sub>	Intercept of SAIL
Ln(TI/TA)	Natural log of Total Income by total assets (Profitability)	D <sub>33</sub>	Intercept of Hindustan Zinc
Ln(CA/CL)	Natural log of current assets by current liability (Liquidity)	D <sub>44</sub>	Intercept of Bhushan Steel
Ln(EBIT/Int)	Natural log of Earnings before interest and tax by interest (Interest coverage)	D <sub>55</sub>	Intercept of Ahemdabad steel

Intercept reflects the effects of extraneous variables. Here I try to use separate intercept for each of the five companies and study the changes in Debt level, because extraneous factors like Business Risk, company tax exposure, financial flexibility, management style, growth rate, market condition etc may vary across the companies.

In model 2, it can be observed from t stats that intercept of three companies namely Tata steel, Hindustan zinc, Ahemdabad steel proofs to be individually and statistically significant except that of SAIL and Bhushan steel. Therefore, it is reasonable to conclude that borrowing pattern cannot be same for all the five companies. It can vary with respect to the external factors mentioned earlier. The insignificance of intercept of SAIL may be due to the fact that SAIL is a PSU and profitable PSU borrow less (Chandra Shekhar).

#### 4.3 Slope Coefficients Are Constant But The Intercept Varies Across Time.

**Table-4.3a**

Variable	Coefficient	Std.Error	T-stats	P-Value	VIF
Constant	-.070	2.485	-.028	.978	1.912
Ln(TA)	.976	.140	6.901	.000	1.912
Ln(Ti/Ta)	-1.124	.848	-1.325	.191	1.742
Ln (Ca/Cl)	-.777	.292	-2.665	.010	1.618
Ln (Ebit/int)	-.002	.001	-2.184	.033	1.271
D <sub>1</sub> 1998	1.570	1.667	.942	.350	2.296
D <sub>2</sub> 1999	2.217	1.662	1.334	.188	2.284
D <sub>3</sub> 2000	2.193	1.671	1.312	.195	2.309
D <sub>4</sub> 2001	1.654	1.664	.994	.325	2.289
D <sub>5</sub> 2002	1.632	1.668	.978	.332	2.300
D <sub>6</sub> 2003	.308	1.706	.180	.857	2.407
D <sub>7</sub> 2004	1.115	1.678	.665	.509	2.327
D <sub>8</sub> 2005	2.902	1.775	1.635	.108	2.604
D <sub>9</sub> 2006	2.510	1.713	1.465	.149	2.426
D <sub>10</sub> 2007	2.014	1.762	1.143	.258	2.567
D <sub>11</sub> 2008	.455	1.752	.260	.796	2.539
D <sub>12</sub> 2009	-.049	1.718	-.028	.977	2.440
D <sub>13</sub> 2010	.559	1.647	.340	.736	2.243
D <sub>14</sub> 2011	2.129	1.647	1.292	.202	2.243

N= 74      R<sup>2</sup>=.744      F= 3.751      Sig F= .000      DW= .790

The dependent variable is total borrowings. The regression model is free from multicollinearity (VIF < 5). R<sup>2</sup> value of the time effect is just .744, similarly F.stats and DW is less significant as compared to model I and II.

None of the individual time dummies that is from (1997 to 2011) are statistically significant. Hence I am back to model II, therefore it may be a chance of misspecification of the model, rather than anything else, hence it is better to consider the individual and time effects together in the next section.

All the slope coefficients in the model are statistically significant except that of profitability similar to that of model 1 and 2 and has negative coefficient, as per agency theory framework if the market for corporate control is inefficient, manager of profitable firms will use the higher level of retained earnings in order to avoid the disciplinary role of external finance,

these point to a negative correlation between profitability and leverage. Slope coefficient of size, liquidity and interest coverage are statistically significant.

#### 4.4 Slope Coefficients Are Constant But The Intercept Varies Over Time And Companies.

**Table 4.4a**

Variable	Coefficient	Std.Error	T-stats	P-Value	VIF
Constant	10.649	4.474	2.380	.021	
Ln(TA)	-.009	.398	-.023	.982	38.375
Ln(Ti/Ta)	-1.396	.631	-2.213	.031	2.395
Ln (Ca/Cl)	-.555	.215	-2.579	.013	2.191
Ln (Ebit/int)	-.001	.001	-.735	.466	1.427
D <sub>1</sub> 1998	-.414	1.345	-.308	.760	3.718
D <sub>2</sub> 1999	.266	1.329	.200	.842	3.632
D <sub>3</sub> 2000	.392	1.293	.303	.763	3.437
D <sub>4</sub> 2001	-.137	1.290	-.106	.916	3.419
D <sub>5</sub> 2002	-.099	1.265	-.078	.938	3.288
D <sub>6</sub> 2003	-1.392	1.287	-1.082	.284	3.404
D <sub>7</sub> 2004	-.755	1.245	-.607	.547	3.185
D <sub>8</sub> 2005	1.196	1.256	.952	.346	3.245
D <sub>9</sub> 2006	.917	1.222	.751	.456	3.071
D <sub>10</sub> 2007	.895	1.208	.741	.462	2.998
D <sub>11</sub> 2008	-.536	1.175	-.456	.650	2.838
D <sub>12</sub> 2009	-.880	1.134	-.776	.441	2.645
D <sub>13</sub> 2010	-.132	1.084	-.122	.903	2.418
D <sub>14</sub> 2011	1.110	1.052	1.056	.296	2.275
D <sub>22</sub>	1.133	.669	1.693	.096	2.361
D <sub>33</sub>	-4.947	.807	-.491	-.6.127	3.437
D <sub>44</sub>	-.576	.951	-.605	.548	4.767
D <sub>55</sub>	-7.430	2.784	-2.669	.010	38.792

N= 75,      R<sup>2</sup> = .905      F= 9.230      Sig F= .000      DW= 1.534

**Table 4.4b**

Companies	Intercept
Tata Steel	10.649
SAIL	11.782
Hindustan Zinc	5.702
Bhushan Steel	10.073
Ahemdabad Steel	3.219

The dependent variable is total borrowings. The regression model is free from multicollinearity ( $VIF < 5$ ) except two of variable ( $VIF > 5$ ).  $R^2$  value shows the improved result as compared to model III similarly F.stats and DW also have significant result as compared to model III. Here, the slope coefficients for each explanatory variable across company and time are kept constant, where as the coefficients of extraneous variable are varied over time periods. The observed individual company and time effect, for total borrowings model (1) shifting over time as well as company, is given above.

Above is the result from the fixed effect model and according to above result the company's dummies except that of SAIL and Bhushan steel as well as coefficient of the profitability and current ratio are significant, but time dummy are not. The overall conclusion that emerges is perhaps there is pronounced individual company effect but not the time effect. In other words, the borrowing pattern of the companies are same except for their intercepts, which may be due to the difference in preference for financing, company's tax exposure, mgt style, growth rate, or any other reason which may be peculiar for each company.

In all cases I have considered Size, Profitability, Liquidity, and Interest coverage variables have a strong impact on borrowing pattern.

#### 4.5 Intercept and Slope vary across Companies

##### 4.5a

Variable	Coefficient	Std.Error	T-stats	P-Value	VIF
Constant	1.919	5.018	.382	.704	
Ln(TA)	.783	.530	1.478	.146	114.518
Ln(Ti/Ta)	-.728	1.126	-.646	.521	12.851
Ln (Ca/Cl)	-.046	.414	-.014	-.111	13.635
D22	-1.786	17.892	-.100	.921	2841.976
D33	36.302	7.410	4.899	.000	462.687s
D44	-3.999	7.410	-.100	.921	785.504
D55	-4.063	5.186	-.783	.437	238.811
D22*Ln(TA)	.278	1.833	.152	.880	3036.805
D22*Ln(Ti/Ta)	.223	1.819	.123	.903	43.588
D22*Ln(Ca/Cl)	-.369	1.468	-.251	.803	58.542
D22*Ln(Ebit/Int)	-.025	.046	-.544	.589	8.448
D33*Ln(TA)	-3.294	.700	-4.706	.000	263.234
D33*Ln(Ti/Ta)	-10.509	2.167	-4.849	.000	41.334
D33*Ln(Ca/Cl)	-1.904	.692	-4.706	.000	22.724
D33*Ln(Ebit/Int)	.001	.001	.616	.540	1.568
D44*Ln(TA)	.423	.857	.493	.624	407.597
D44*Ln(Ti/Ta)	.871	1.991	.438	.664	23.251
D44*Ln(Ca/Cl)	.057	.839	.068	.946	67.032
D44*Ln(Ebit/Int)	-.036	.009	-3.862	.000	5.998
D55*Ln(TA)	.480	.557	.861	.393	37.983
D55*Ln(Ti/Ta)	.310	1.272	.244	.808	26.482
D55*Ln(Ca/Cl)	-.268	.475	-.565	.575	29.529
D55*Ln(Ebit/Int)	.000	.001	-.321	.749	1.097

N=75       $R^2 = .944$       F= 36.958      Sig F= .000      DW= 1.994

Excluded Variable: Ln(Ebit/Int)



**Table 4.5b**

Name of company	Intercept of company	Slope Ln(TA)	Slope Ln(Ti/Ta)	Slope Ln(Ca/Cl)	Slope Ln(Ebit/int)
Tata steel	1.919	2.701	1.191	1.872	
SAIL	.132	2.197	2.141	1.549	1.893
Hindustan Zinc	38.22	1.375	8.589	.014	1.919
Bhushan Steel	-2.080	2.341	2.79	1.975	1.882
Ahemdabad Steel	-2.144	2.398	2.229	1.650	1.918

The dependent variable is total borrowings..  $R^2$  value shows the improved result as compared to previous models discussed similarly F.stats and DW also have significant result as compared to earlier model and is almost 2 suggesting that there is no auto correlation. Here, the slope coefficients for each explanatory variable across company and time are kept constant, where as the coefficients of extraneous variable are varied over time periods. The observed individual company and time effect, for total borrowings model (1) shifting over time as well as company, is given above.

Finally the model is developed to study the individual company effect on borrowing pattern, by varying both extraneous and explanatory variable across companies and over time. The slope coefficient of Size, Profitability, liquidity is significant for Hindustan Zinc, it means that the borrowings is highly influenced by all these factors in case of Hindustan Zinc. The slope coefficient of interest coverage is excluded for Tata steel whereas it is significant for Bhushan steel.

## CONCLUSION

In this paper the borrowing pattern of the five Indian companies of steel sector with respect to the Size, profitability, Liquidity and interest coverage were studied, applying panel data analysis techniques.

The general perception is that size of the company does impact the leverage of firm. In above models slope coefficient of size is positive and statistically significant, larger firms will more easily attract a debt analyst to provide information to the public about the debt issue. Banks are more willing to lend their funds to larger firms partly because they are more diversified and partly because larger firms usually request larger amounts of debt capital than smaller firms. As a consequence, larger firms are usually able to reduce transaction costs associated with long-term debt issuance and can arrange a lower interest rate. Examining the effect of size in the determination of capital structure, Marsh (1982) and Bennett and Donnelly (1993) found that larger firms are likely to use more debt. There fore, a positive association is expected between firm's size and leverage.

At the same time profitability of the firm does effect the leverage pattern of the company In the presence of asymmetric information, a firm would follow a pecking order preference pattern: it would prefer internal finance, but would issue debt if such low cost option were exhausted. The firm's last option would be to choose equity issue. Since profitable firms with a slow growth rate will end up with an unusually low leverage ratio compared to the industry average in which it operates. On the other hand, an unprofitable firm in the same industry will end up with relatively high leverage ratio. Profitability of the firm shows a contradictory result, each and every theory have its own results some predicts a positive association while other envisage a negative association with that of a leverage.

Liquidity of the firm also effects for the periods obtained from the panel data analysis. The liquidity ratio may have conflicting effects on the capital structure decision of the firm. First, the firms with higher liquidity ratios might have relatively higher debt ratios. This is due to greater ability to meet short-term obligations. From this viewpoint, one should expect a positive relationship between the firm's liquidity position and its debt ratio. However, the firms with greater liquid assets may use these assets to finance their investments. If this happens there will be a negative relationship between the firm's liquidity ratio and the debt ratio. In the above models the slope coefficient of liquidity has negative and statistically significant result.

Lastly slope coefficient of interest coverage ratio have negative and statistically significant except in case of model 1 and 3. Harris and Raviv (1990) have suggested that interest coverage ratio has negative correlation with leverage. They concluded that an increase in debt would increase default probability.

When the company-wise analysis was done, the results showed that the intercept was different for each of the five companies.

In Model II Intercept of Tata steel, SAIL and Bhushan Steel were similar. This may be due to the similarity in the stage of economic development and socio-political characteristics in these countries. An analysis across time does not reflect any variation whatsoever. In Model V intercept of Bhushan steel and Ahemdabad steel were similar.

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## **E-COMMERCE SECURITY ISSUES AND SOLUTIONS: A SURVEY**

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### **ABSTRACT**

Electronic commerce, commonly known as e-commerce or e-business consists of the buying and selling of products or services over electronic systems such as the Internet and other computer networks. The amount of trade conducted electronically has grown extraordinarily with widespread Internet usage. During the e-commerce process crucial business transactions are carried. Even individuals perform online transactions like e-banking and shopping etc. over the internet. It is here that the actual threat grips the mind of every person that is the information passed on the net is secure? While security features do not guarantee a secure system, they are necessary to build a secure system. This paper presents an overview of security and privacy concerns associated with e-commerce and the possible solutions for them.

**KEY WORDS** : B2B, snooping, sniffing, SSL.

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### **1. Introduction**

E-Commerce refers to the exchange of goods and services over the Internet. All major retail brands have an online presence, and many brands have no associated bricks and mortar presence. However, e-commerce also applies to business to business transactions, for example, between manufacturers and suppliers or distributors. E-commerce systems are also relevant for the services industry. For example, online banking and brokerage services allow customers to retrieve bank statements online, transfer funds, pay credit card bills, apply for and receive approval for a new mortgage, buy and sell securities, and get financial guidance and information. Electronic commerce that is conducted between businesses is referred to as business-to-business or B2B. B2B can be open to all interested parties (e.g. commodity exchange) or limited to specific, pre-qualified participants (private electronic market). Electronic commerce that is conducted between businesses and consumers, on the other hand, is referred to as business-to-consumer or B2C. This is the type of electronic commerce conducted by companies such as Amazon.com. Online shopping is a form of electronic commerce where the buyer is directly online to the seller's computer usually via the internet. There is no intermediary service. The sale and purchase transaction is completed electronically and interactively in real-time such as Amazon.com for new books. If an intermediary is present, then the sale and purchase transaction is called electronic commerce such as eBay.com.

## **2. The criminal incentive**

Attacks against e-Commerce Web sites are so alarming, they follow right after violent crimes in the news. Practically every month, there is an announcement of an attack on a major Web site where sensitive information is obtained. Why is e-commerce vulnerable? Is e-commerce software more insecure compared to other software? Did the number of criminals in the world increase? The developers producing e-commerce software are pulled from the same pool of developers as those who work on other software. In fact, this relatively new field is an attraction for top talent. Therefore, the quality of software being produced is relatively the same compared to other products. The criminal population did not undergo a sudden explosion, but the incentives of an e-commerce exploit are a bargain compared to other illegal opportunities.

## **3. Attacks**

This section describes potential security attack methods from an attacker or hacker.

### **3.1 Tricking the shopper**

Some of the easiest and most profitable attacks are based on tricking the shopper, also known as social engineering techniques. These attacks involve surveillance of the shopper's behavior, gathering information to use against the shopper. For example, a mother's maiden name is a common challenge question used by numerous sites. If one of these sites is tricked into giving away a password once the challenge question is provided, then not only has this site been compromised, but it is also likely that the shopper used the same logon ID and password on other sites.

### **3.2 Snooping the shopper's computer**

Millions of computers are added to the Internet every month. Most users' knowledge of security vulnerabilities of their systems is vague at best. Additionally, software and hardware vendors, in their quest to ensure that their products are easy to install, will ship products with security features disabled. In most cases, enabling security features requires a non-technical user to read manuals written for the technologist. The confused user does not attempt to enable the security features. This creates a treasure trove for attackers.

### **3.3 Sniffing the network**

In this scheme, the attacker monitors the data between the shopper's computer and the server. He collects data about the shopper or steals personal information, such as credit card numbers. There are points in the network where this attack is more practical than others.



### **3.4 Guessing passwords**

Another common attack is to guess a user's password. This style of attack is manual or automated. Manual attacks are laborious, and only successful if the attacker knows something about the shopper. For example, if the shopper uses their child's name as the password. Automated attacks have a higher likelihood of success, because the probability of guessing a user ID/password becomes more significant as the number of tries increases. Tools exist that use all the words in the dictionary to test user ID/password combinations, or that attack popular user ID/password combinations. The attacker can automate to go against multiple sites at one time.

### **3.5 Using denial of service attacks**

The denial of service attack is one of the best examples of impacting site availability. It involves getting the server to perform a large number of mundane tasks, exceeding the capacity of the server to cope with any other task.

### **3.6 Using server root exploits**

Root exploits refer to techniques that gain super user access to the server. This is the most coveted type of exploit because the possibilities are limitless. When you attack a shopper or his computer, you can only affect one individual. With a root exploit, you gain control of the merchants and all the shoppers' information on the site.

## **4. Solutions**

### **4.1 Education**

Your system is only as secure as the people who use it. If a shopper chooses a weak password, or does not keep their password confidential, then an attacker can pose as that user. This is significant if the compromised password belongs to an administrator of the system.

### **4.2 Personal firewalls**

When connecting your computer to a network, it becomes vulnerable to attack. A personal firewall helps protect your computer by limiting the types of traffic initiated by and directed to your computer. The intruder can also scan the hard drive to detect any stored passwords.

### **4.3 Secure Socket Layer (SSL)**

Secure Socket Layer (SSL) is a protocol that encrypts data between the shopper's computer and the site's server. When an SSL-protected page is requested, the browser identifies the server as a trusted entity and initiates a handshake to pass encryption key information back and forth. Now, on subsequent requests to the server, the information flowing back and forth is encrypted so that a hacker sniffing the network cannot read the contents.

#### **4.4 Server firewalls**

A firewall is like the moat surrounding a castle. It ensures that requests can only enter the system from specified ports, and in some cases, ensures that all accesses are only from certain physical machines.

#### **4.5 Intrusion detection and audits of security logs**

One of the cornerstones of an effective security strategy is to prevent attacks and to detect potential attackers. This helps understand the nature of the system's traffic, or as a starting point for litigation against the attackers.

#### **4.6 Using cookies**

One of the issues faced by Web site designers is maintaining a secure session with a client over subsequent requests. Because HTTP is stateless, unless some kind of session token is passed back and forth on every request, the server has no way to link together requests made by the same person. Cookies are a popular mechanism for this. An identifier for the user or session is stored in a cookie and read on every request. You can use cookies to store user preference information, such as language and currency.

### **4. Conclusion**

This paper outlined the key players and security attacks and defenses in an e-Commerce system. Current technology allows for secure site design. It is up to the development team to be both proactive and reactive in handling security threats, and up to the shopper to be vigilant when shopping online.

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## **A COMPARATIVE STUDY OF PERSONALITY OF BOXING AND ATHLETICS SPORTSMEN WITH REFERENCE TO THEIR SPORT'S ACHIEVEMENT**

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### **ABSTRACT**

The aim of study was to compare the personality of boxing and athletics sportsmen with reference to their achievement .The study was conducted on 100 male Sportsmen, 50 sportsmen of boxing and 50 sportsmen of athletics. There were 25 high achiever sportsmen and 25 low achiever sportsmen for boxing, similarly of athletics sportsmen, who participated at the North Indian universities and sportsmen participating in inter-university and North-eastern inter-university championships. First, Second and Third position holders were considered as high achievers in championship, the other were considered as low achievers the subjects were administered Meenakshi personality inventory for measuring the personality.

**KEY WORDS :** boxing, athletics, championship.

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The achievement level of athletes and sportsmen in various national and international competitions is improving day by day. It has been observed that in the last Olympics at Beijing (CHINA) in 2008, many old Olympic records were broken and new ones established. Human life is a complex of physical, intellectual, emotional and social developmental patterns and sports, and physical activities are integral parts of these patterns. We must have some understanding of why some people are not and why some people are more competitive than others, and why some people are not and why some people are taught and coached on the basis of their individual needs, desires, interests and attitudes. Traits such as self-confidence, self-assurance, self-enhancement, self-esteem, self-regard and self-respect all evolve out of a person's self-concept. In general, self-confidence has been found to be highly conservative and conventional. People scoring high on this trait have high feeling of responsibility in case of practical matters. They, however, lack creativity.

**Werner and Gotthail (1966)**<sup>1</sup> have identified tough-mindedness as a personality trait of athletes. But this is not the only sine-qua-non of an athletic personality. In fact what constitutes a sports person will emerge from study of different items of sports and their special requirements. The present paper is an attempt to study the personality of players of Boxing and Athletics with reference to their sport's achievement.

**Objectives:**

1. To compare the personality of high achieving sportsmen playing boxing & athletics.
2. To compare the personality of low achieving sportsmen playing boxing & athletics.

**Hypotheses:**

1. There is no significant difference between the personality of high achieving sportsmen playing boxing & athletics.
2. There exists no significant difference between the personality of low achieving sportsmen playing boxing & athletics.

**Research Methodology:**

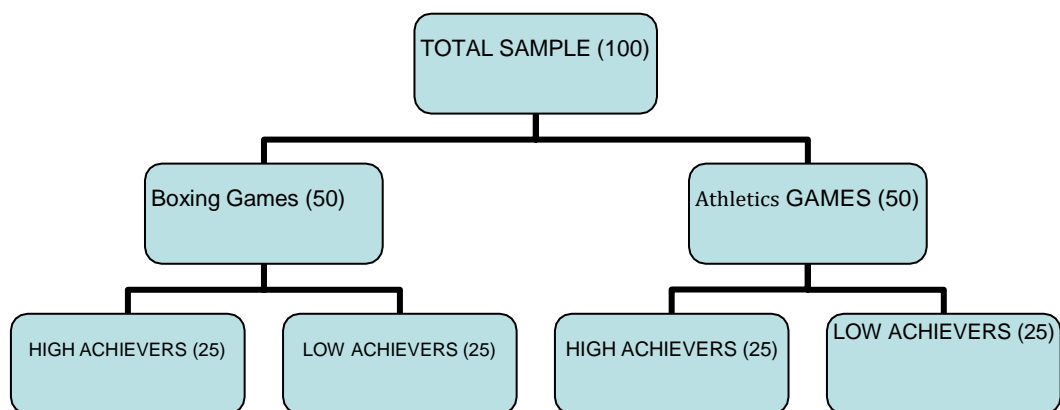
There are several methods of research. Choice of the method of research is determined by the nature of the problems. **Descriptive Survey Method 2** had been used to study the present problem.

**Population:**

The population may be all the individuals of a particular type, or a mere restricted part of that group (**Best, J.W., and Kahn, J.V., 1986**)<sup>3</sup>. The population for the purpose of this study consists of all the sportsmen of North Indian universities and sportsmen participating in inter-university and North-eastern inter-university championships.

**Sample:**

A total of 100 sportsmen (50 from boxing games and 50 from athletics games) served as sample for the present study. **Stratified random sampling**<sup>4</sup> was used to select the sample.



**TOOLS USED:**Meenakshi Personality Inventory (M.P.I.)<sup>5</sup>

**DrMeenakshiBhatnagar**

**Analysis and Interpretation:-  
 Table 1**

**SIGNIFICANCE OF DIFFERENCE BETWEEN PERSONALITY SCORES OF HIGH  
 ACHIEVING BOXING AND ATHLETICS SPORTSMEN**

Personality need	N	Mean	S.D	't'	Significance
Need achievement Boxing High	25	9.64	2.14	.57	Insignificant
Need achievement Athletics High	25	10.00	2.31		
Need exhibition Boxing High	25	6.64	2.61	3.56**	Significant
Need exhibition Athletics High	25	4.32	1.95		
Need autonomy Boxing High	25	7.64	1.91	1.73	Insignificant
Need autonomy Athletics High	25	6.64	2.16		
Need affiliation Boxing High	25	8.08	2.63	2.65*	Significant
Need affiliation Athletics High	25	9.84	2.03		
Need succourance Boxing High	25	5.88	2.54	2.01*	Significant
Need succourance Athletics High	25	7.24	2.22		
Need dominance Boxing High	25	7.64	2.14	.62	Insignificant
Need dominance Athletics High	25	7.24	2.40		
Need abasement Boxing High	25	9.72	2.24	.907	Insignificant
Need abasement Athletics High	25	9.08	2.72		
Need nurturance Boxing High	25	10.60	2.74	.107	Insignificant
Need nurturance Athletics High	25	10.68	2.56		
Need endurance Boxing High	25	8.64	3.36	1.53	Insignificant
Need endurance Athletics High	25	9.96	2.68		
Need aggression Boxing High	25	6.16	2.67	1.26	Insignificant
Need aggression Athletics High	25	5.24	2.49		

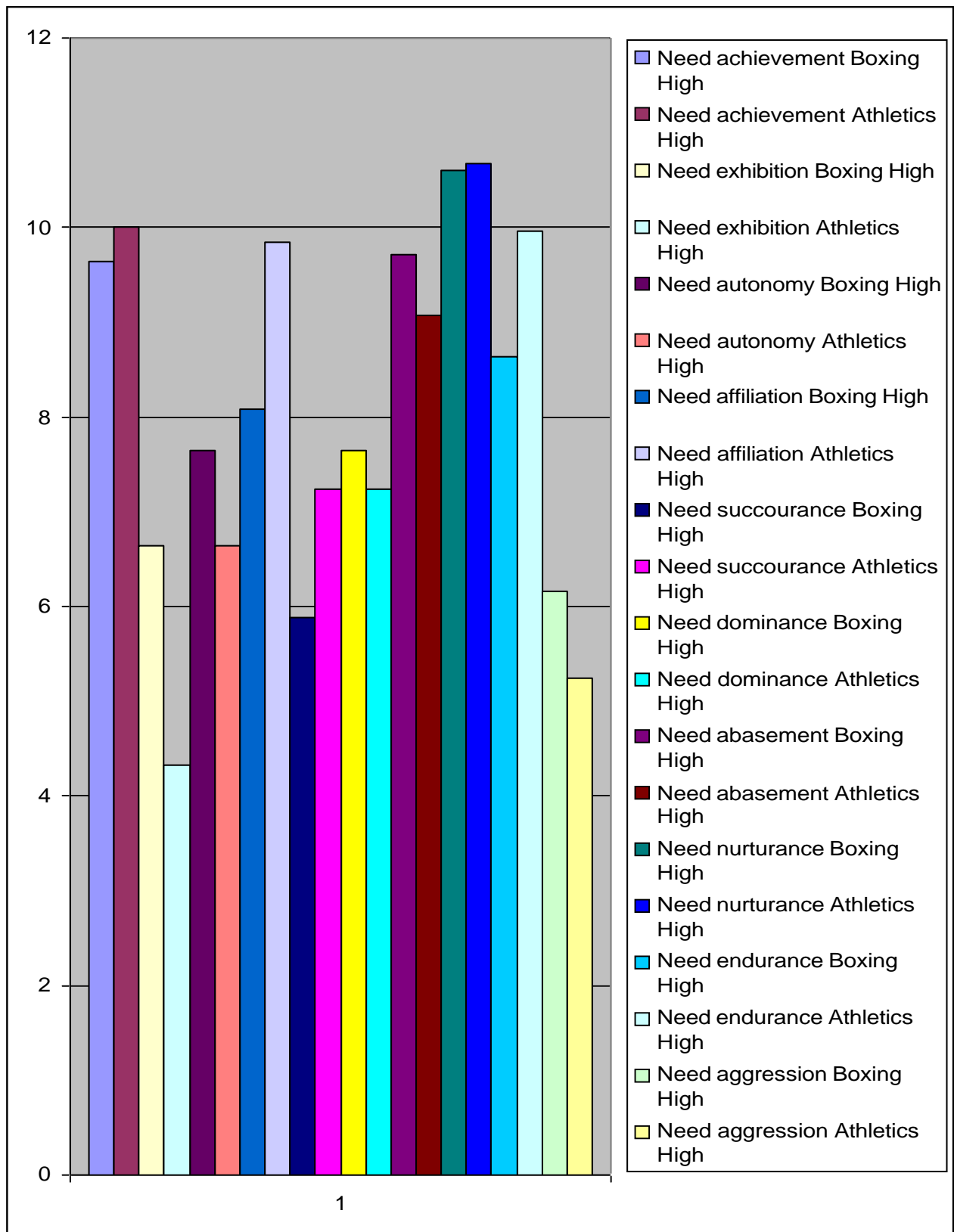
\* P<0.05 df=48

\*\* P<0.01

The table-1 indicates that the 't'-values for need achievement, need autonomy, need dominance, need abasement, need nurturance, need endurance and need aggression are found to be insignificant at both levels of significance i.e. (.01 or .05) level of significance . Thus, accepting the null hypothesis, it is said that the high achieving boxing and athletics sportsmen do not differ significantly in their personality with respect to these personality needs.

It is also evident from the above table that 't' value for need exhibition dimension of personality for boxing and athletics sportsmen has come out to be 3.56, which is significant at 0.01 level of significance .Therefore, null hypothesis is rejected. Hence, it is concluded that there is a significant difference between the high achieving boxing and athletics sportsmen on need exhibition dimension of personality. Also it may be interpreted from the mean values (6.64, 4.32) that need exhibition of boxing high achieving sportsmen is higher than the need exhibition of athletics high achieving sportsmen.

Above table also shows that 't' value for need affiliation and need succourance dimensions of personality for high achieving boxing and athletics sportsmen have come out to be 2.65 and 2.01, respectively which are significant at 0.05 level of significance. Thus, rejected the null hypothesis, it may be concluded that there is a significant difference between the boxing high achieving and athletics high achieving sportsmen on need affiliation and need succourance dimensions of personality. Also, it may be interpreted from the mean values (need affiliation 8.08, 9.84, need succourance 5.88, 7.24) that need affiliation and need succourance of boxing high achieving sportsmen is lower than the need affiliation and need succourance in the personality of athletics high achieving sportsmen.



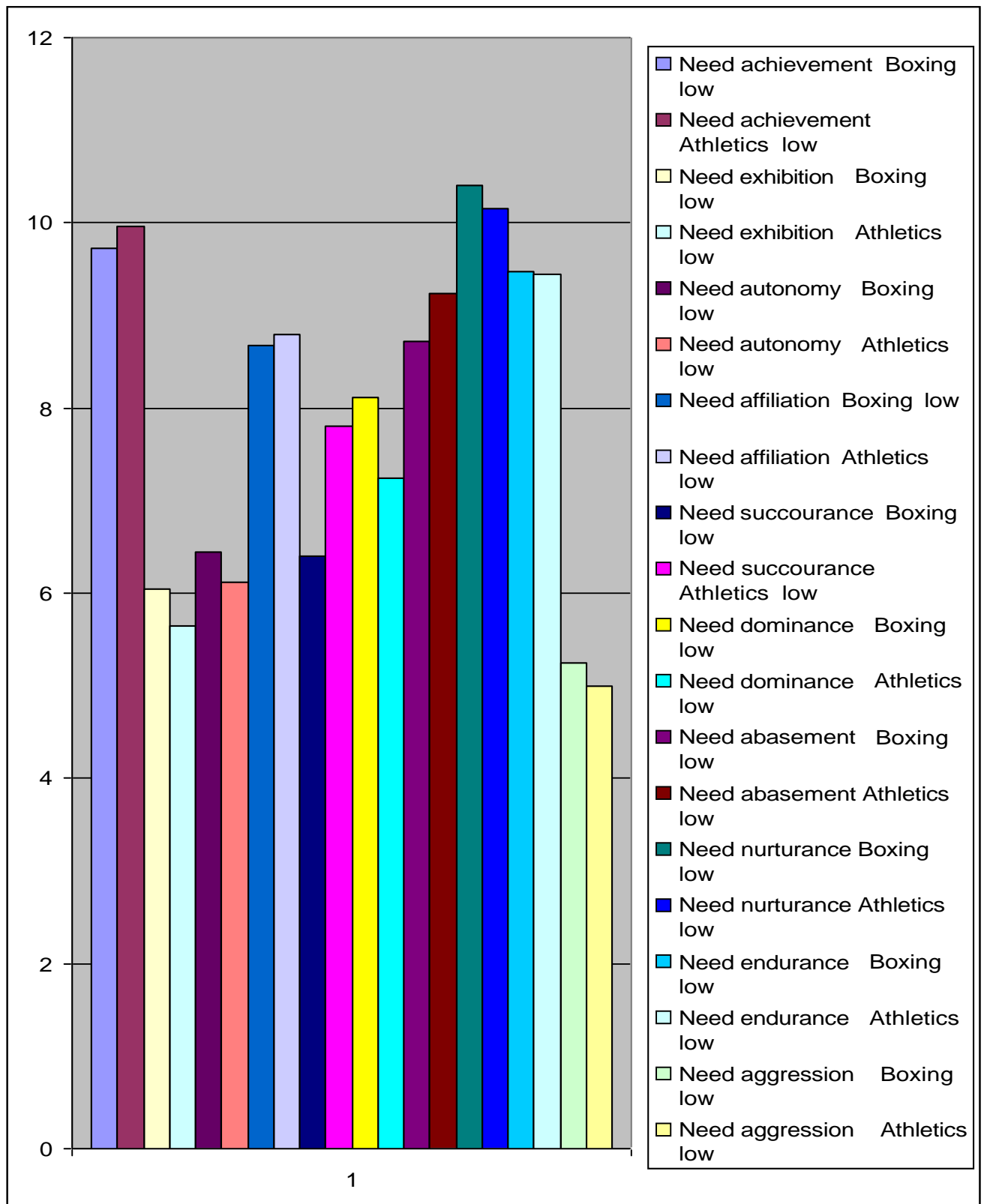


**Table 2**

**SIGNIFICANCE OF DIFFERENCE BETWEEN PERSONALITY SCORES OF LOW ACHIEVING BOXING AND ATHLETICS SPORTSMEN**

Personality need	N	Mean	S.D	't'	Significance
Need achievement Boxing low	25	9.72	2.30	0.39	Insignificant
Need achievement Athletics low	25	9.96	1.99		
Need exhibition Boxing low	25	6.04	2.19	0.62	Insignificant
Need exhibition Athletics low	25	5.64	2.36		
Need autonomy Boxing low	25	6.44	2.08	0.49	Insignificant
Need autonomy Athletics low	25	6.12	2.50		
Need affiliation Boxing low	25	8.68	2.08	0.196	Insignificant
Need affiliation Athletics low	25	8.80	2.25		
Need succourance Boxing low	25	6.40	2.90	1.73	Insignificant
Need succourance Athletics low	25	7.80	2.81		
Need dominance Boxing low	25	8.12	2.39	1.38	Insignificant
Need dominance Athletics low	25	7.24	2.11		
Need abasement Boxing low	25	8.72	2.13	0.79	Insignificant
Need abasement Athletics low	25	9.24	2.52		
Need nurturance Boxing low	25	10.40	2.04	0.39	Insignificant
Need nurturance Athletics low	25	10.16	2.32		
Need endurance Boxing low	25	9.48	2.77	0.05	Insignificant
Need endurance Athletics low	25	9.44	2.47		
Need aggression Boxing low	25	5.24	2.09	0.39	Insignificant
Need aggression Athletics low	25	5.00	2.29		

Table 2 illustrates that the 't'-values for need achievement, need exhibition, need autonomy, need affiliation, need succourance, need dominance, need abasement, need nurturance, need endurance and need aggression are found to be insignificant at both levels of significance i.e. (.01 or .05) levels of significance . Thus, accepting the null hypothesis, it is interpreted that the low achieving boxing and athletics sportsmen do not differ significantly in their personality with respect to these personality needs. Hence, they have similar personality with respect to all these personality needs.



## **Results and Discussion:**

**Objective: 1.** To compare the personality of high achieving sportsmen playing boxing & athletics.

High achieving boxing and athletics sportsmen do not differ significantly in their personality with respect to these personality needs:- for need achievement, need autonomy, need dominance, need abasement, need nurturance, need endurance and need aggression.

Need exhibition of boxing high achieving sportsmen is higher than the need exhibition of athletics high achieving sportsmen.

Need affiliation and need succourance of boxing high achieving sportsmen is lower than the need affiliation and need succourance in the personality of athletics high achieving sportsmen.

**Objective: 2.** To compare the personality of low achieving sportsmen playing boxing & athletics.

The low achieving boxing and athletics sportsmen do not differ significantly in their personality with respect to these personality needs. Hence, they have similar personality with respect to all these personality needs:-need achievement, need exhibition, need autonomy, need affiliation, need succourance, need dominance, need abasement, need nurturance, need endurance and need aggression.

This finding is also corroborated by the study conducted by **Sharma, S.S (1977)6.**

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## ASSESSING THE IMPACT OF ONLINE RETAILING ON MALL SHOPPERS AND INTERNET USERS

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### ABSTRACT

Online retailing, often referred to as online shopping or e-tailing, is growing every day in India. Although most studies in the past have pointed out that the process has been rather slow and unsuccessful in gathering much steam with the Indian users, the trend is changing now and a good number of savvy online users are making big purchases on the digital space. The purpose of this study is to analyze the impact of online shopping on both mall shoppers and internet users and how they are receptive to this change. It will also focus on some of the factors responsible for influencing the consumers to purchase through online mode and internet shopping attitudes. It also tries to study the situational and product category effects on intention to use internet versus mall shopping. This study can be considered as descriptive in nature and a questionnaire is designed and distributed among the selected sample to collect information and their opinions regarding online shopping. The results indicate that internet shopping has a relatively near term competitive impact on traditional shopping for the cognitive product market, while the effect of internet on sensory experiential market may not be as pronounced. Attitude towards internet shopping, past experience with online shopping and demographic characteristics influenced information search intention and shopping through internet.

**KEY WORDS:** Online Retailing, Internet Vs Mall Shopping

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### Introduction

Today's consumers are blessed with enormous choices, not only among different products and brands, but also among diverse retail formats such as shopping malls, hyper markets, speciality stores, department stores and online electronic shopping systems. Of the various alternatives, internet shopping is the most rapidly developing shopping mode and is quickly gaining significant market share. Online retailing means the sale of goods and services via internet or other e-channels for personal or household use by consumers. Considering the internet's present growth rate and society's paradigm shift from an industrial to an information age, it is worth to understand the competitive effects of internet commerce on the marketplace arise. Internet retailing has evolved because of the facts like capability of internet to spread around the world on a fast pace, vital role of internet to make e-tailing a big hit, modernisation of traditional retail formats and e-tailing has many advantages over the traditional retail formats. As there is surge in PC penetration, growing internet awareness and computer literacy and change of internet more as enabler-facilitator than messaging-entertainment, internet shopping has got much momentum growth. The process of online shopping includes selection of product of interest, using of shopping cart software, signing up for a permanent online account and e-mail ordering and receipt conformation. The modes of

payment can be through debit card, credit card and the delivery options include download, shipping and in-store pick-up.

### **Objectives of the Study**

Because very little empirical research has been conducted to assess the potential competitive impact of internet shopping on shopping through traditional retail venues and malls, the major objective this study is to determine whether the product category being evaluated or purchased and the situation context of shopping, used to identify three major consumer groups-internet shoppers, mall shoppers and cross shoppers between internet and shopping mall retail formats. Further, the factors that influence consumer's decision to use internet or malls are assessed, including online shopping attitudes.

1. To have a theoretical overview of online retailing.
2. To investigate shopping mode choice and profile internet shoppers, mall shoppers and product-specific cross shoppers.
3. To examine the situational and product effects on intention to use internet versus mall shopping.
4. To identify factors influence consumer's intention to use internet for product search and online shopping attitudes.

### **Scope of the Study**

*Target group*-This study focuses on both typical mall shoppers and computer users, although those groups may not be mutually exclusive. Mall shoppers represent a major market segment that traditional store retailers strive to maintain and increase, while internet users represent an attractive segment for online retailers to pursue. By focussing on both groups, it is possible to determine the extent to which mall shoppers and internet users are likely to cross shop or to shop exclusively from one or the other venue.

*Product category and Purchase situation*-Product category is divided into two ie sensory experiential products (through touch, sight or smell) and products based on cognitive type of information (facts and figures, testimony of experts). Purchase situation is task oriented or convenience oriented.

*Shopper segments* –Each shopper group is profiled as online shopper, mall shopper or cross shopper based on attitude towards internet shopping, or use of internet for product information search and several consumer experience or background variables.

### **Description to Methodology**

#### ***Sampling and Data Collection***

Both primary and secondary data were used for the study. Primary data was collected from 120 respondents-60 mall shoppers selected from Trivandrum district and 60 internet users (preferably the researcher's „facebook“ friends having ownership of a laptop or PC). They are the shoppers who have interest in online shopping as well as mall shopping and judgement sampling was used. Secondary data was generated from library research sources, text books, trade journals, articles from news papers and from websites.

### *Measurement*

Shopping mode choices were studied by choosing the product categories as textiles, books, CDs, gifts, jewellery and other accessories. Based on product or situation specific scenarios, use of internet for product information search was studied. Attitude towards internet shopping was measured through general attributes like products offered and perceived risks and benefits.

### **Theoretical Framework**

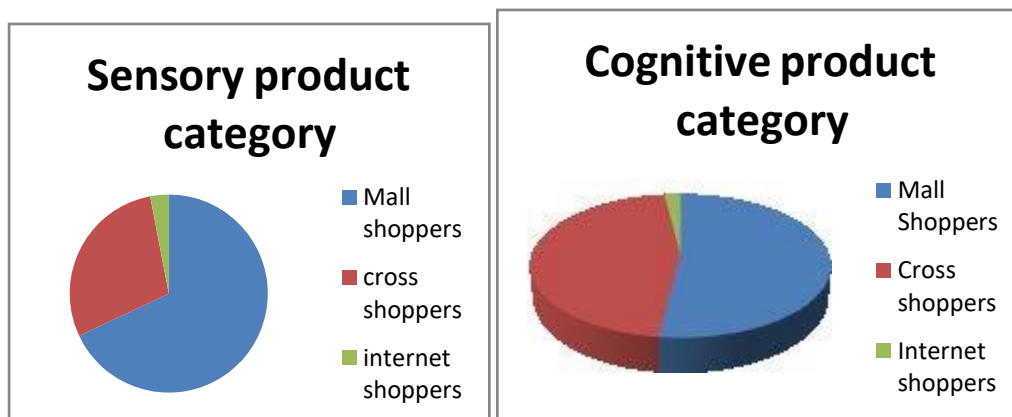
#### *Online Retailing-An Overview*

Online Retailing offers many advantages, including-For the consumers: **\*Incredible convenience:** In comparison to a brick and mortar store with fixed hours, online shoppers can choose any time of the day or night to get on the Web and shop. This is especially useful for moms with small children, people that are home-bound, or simply in times of inclement weather. **\*Price comparisons:** When we visit a store, we most likely have to settle for whatever price the vendor has placed on a particular item. Not so with online shopping – we have the ability to compare prices from hundreds of different vendors. **\*Infinite choice:** Shelf space in a brick and mortar store is limited, which means that variety of goods is limited. Not so with an online store, and also switching over is possible, if the needy item is not there. **\*Easy access to consumer reviews:** It's easy to access consumer reviews for pretty much of any product of online, which makes for more informed purchases. **\*No pressure sales:** Normally, customers been awkwardly propositioned by eager salespeople. Customers don't have to put up with that online. For the retailers: **\*Global reach** is possible, location is irrelevant. **\* Possible to save wages and premises cost.** **\* Possible to reach a larger audience** and acceptance of orders **24 hours** a day. **\* Customer relationship management and micro marketing** is easy. Even though, there are a lot of advantages, Consumers have to face certain challenges like security worries, lack of interaction, can't see or feel the merchandise, premium for delivery and difficulty for return and delivery. Retailers face obstacles due to lack of technology, less powerful than face to face, uptake slow for goods selected by taste or smell, after sale care difficulties, difficult to maintain a customer service operator or maintenance staff etc.

Even though Tata group and Vishal retail have already launched online shopping portals, there are a lot of challenges ahead. But, it is true that awareness about electronic shopping is increasing nowadays. A recent survey shows the result as fifty four percent of the youth are using internet shopping for ordering books, online ticketing, trendy clothes and accessories, audio-video CDs, software and innovative home appliances and kitchen utensils. E-marketing through blogging and social networking sites is common now, because through these modes, products and companies can have personal interaction and can instil a feeling of loyalty from potential customers. Social media helps to expand the reach of products and a tremendous impact on the number of impressions that are generated for marketing and communication. In the case of future potential e-retailers, evangelizing, selling and keeping the customer happy is more challenging. It needs heavy promotion to get customers, building trust and security is imperative. Indian retail industry has always thrived on personalization, which no CRM software can claim to do. Indian customers are still very need oriented than impulse or deal oriented than Americans. So in India, a combination of both traditional retailing and modern e-tailing will serve the best.

### Analysis and Results

Among the respondents, 53% are male and only 47% are females. Majority (60%) are in the age group of 25-34. In general, the respondents were highly educated and the study revealed that more than 50 % are graduates. Among the mall shoppers, majority were employed in private firm and in professional occupations and among the mall shoppers, 60% have total monthly income above 10000 and among internet users, majority are youngsters, and among them, 50% of the respondents have monthly income above 20000. Among the mall shoppers, 60% visit the shop monthly twice and majority are from urban area. Their preference for buying includes quality product, one-stop shopping, more brands, family shopping and fresh stock. Among the internet users only 30% had purchased products through internet. Based on the sensory experiential product category, 68% are mall shoppers, 29% are cross shoppers and only 3% are purely internet shoppers. In the case of cognitive product category, 52% are mall shoppers, 46% are cross shoppers and 2% are purely internet shoppers.



Results indicated that the 3 segments of shoppers were significantly different in attitudes towards internet shopping for both the cognitive product market and the sensory experiential product category. Internet shoppers exhibited significantly stronger attitudes towards the secure transaction, speedy process, and money savings benefits of internet shopping. Internet and cross shoppers were similar in their attitude towards the social shopping and easy choice benefits of internet shopping. In the case of sensory experiential product market, three groups displayed significantly different attitude towards the speedy process and choice. Three groups were different in their intention to search for information in the case of both cognitive and sensory experiential product. For both the products, internet shoppers seek prior information through internet and mall shoppers will seek through retail formats. Product-situation cross shoppers exhibited a tendency to search for information from both internet and retail stores. Because of social influence also, people tend to buy from malls, but such an influence is meagre in the case of internet shoppers. For sensory experiential products, direct internet purchases was substantially greater (apparels and accessories) than mall shopping. Greater percentage of males tended to be internet shoppers or product-specific crossing shopping for both product categories.

**Table 1-Age wise characteristics (in percentage)**

Age	Mall Shoppers	Internet Shoppers
18-24	20	50
25-34	60	50
35-44	10	--
45-54	10	--
>54	--	--
Total	100	100

Source: primary data

**Table 2- Online shopping expectations**

<b>Confidence (Strongly agree)</b>	<b>Convenience (Strongly agree)</b>	<b>Choice (Strongly agree)</b>
Feel more secure if Don't want to enter Credit or debit card information -62%	Prefer sites that offer multiple payment methods-66%	Choose sites with both credit and debit card payments-61%
Trust sites that offer more payment options-65%	More convenient when alternative payment methods-68%	Want a paypal method where don't want to enter Credit Card number-62%

Source: primary data

In short, for cognitive products, the respondents will use either internet or stores, but for sensory products, they prefer malls and 52% indicated that they would shop through only malls or retail formats, independent of product being purchased. Internet may be preferred shop mode for products requiring a greater degree of intellectual sense like books, CDs and software. For merchandise that need senses or experiences, the respondents prefer retail store shopping.

### **Conclusion**

The results of the present study may provide important implications for developing strategies for shopping mall managers to compete directly to online retailing, the research results suggests that traditional retailers have to expedite the service as well as trend setting. Shopping experience should be more time-efficient than the present day regional mall. High speed processing and self service with internet type environment will be preferred. Innovative product information should be available in stores; otherwise customers will try to get it from the internet. So making product information available to consumers may be an important tool that directly affects sales. In the malls, there should be toll-free telephone numbers or simultaneous internet via store shopping. In the case of web retailers, proper care should be taken to give maximum security, multiple payment and delivery methods, preference for methods like Paypal in order to maximise the result. Lastly, this research has its limitations, so future research is warranted to extend and expand the scope of the present study.



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## **A STUDY ON PERFORMANCE OF NPAS AND LOAN OUTSTANDINGS OF SHG LINKAGE PROGRAMME IN INDIA**

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### **ABSTRACT**

Microfinance is defined as “the means by which poor people convert small sums of money into large sums”. (Rutherford 1999). It is the provision of financial services to poor people in poor countries who lack to access commercial banking system They are many types of micro finance institutions; local organization that provide a small number of donor-based loans and multimillion dollar loans

This paper tries to highlight the performance of outstanding loans, the amount of loans disbursed and the non performance assets with regard to banking and financial institutions. This paper will give a bird’s eye view about the microfinance industry with reference to non performance assets and the region wise performance of the NPAs. This will enlighten the people and enormous effort taken for the self help group linkage programme in India.

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### **INTRODUCTION**

Microfinance is the financial service done to the rural people. In recent times, microfinance is evolving at a great extent around the globe. This has evolved to a large extent after the evolution created by Noble Prize Winner Mohammad Yunus. This has taken up the attention in India by developing the microfinance sector for developing the poor people. This has paved way to introduce Microfinance Bill in 2007.

### **Definition**

Microfinance is the offer of financial & non-financial services to people excluded from the traditional banking system. The services are adapted to the needs of the target populations

### **Models of Microfinance:**

#### **1. Grameen Bank Model:**

The Grameen System dominates in Bangladesh. This system was pioneered by Mohammad Yunus in 1976 and has grown rapidly. The members organize into groups of five members which are in turn organized into centres of around five to seven groups. The members make regular Savings.

#### **2. Self Help Group Model:**

The members form a group of around twenty members. The group formulation process may be facilitated by an NGO or by the MFI or bank itself.

### **3. Joint Liability Groups:**

It is an informal group comprising preferably of 4 to 10 individuals coming together for the purpose of availing bank loan either singly or through the group mechanism against mutual guarantee. The member should offer a joint undertaking to the bank that enables them to avail loans.

This paper tries to analyze the specific model named Joint Liability Model of microfinance in India. The paper also tries find out the outlook of JLG Model of microfinance.

### **EVOLUTION OF MICROFINANCE**

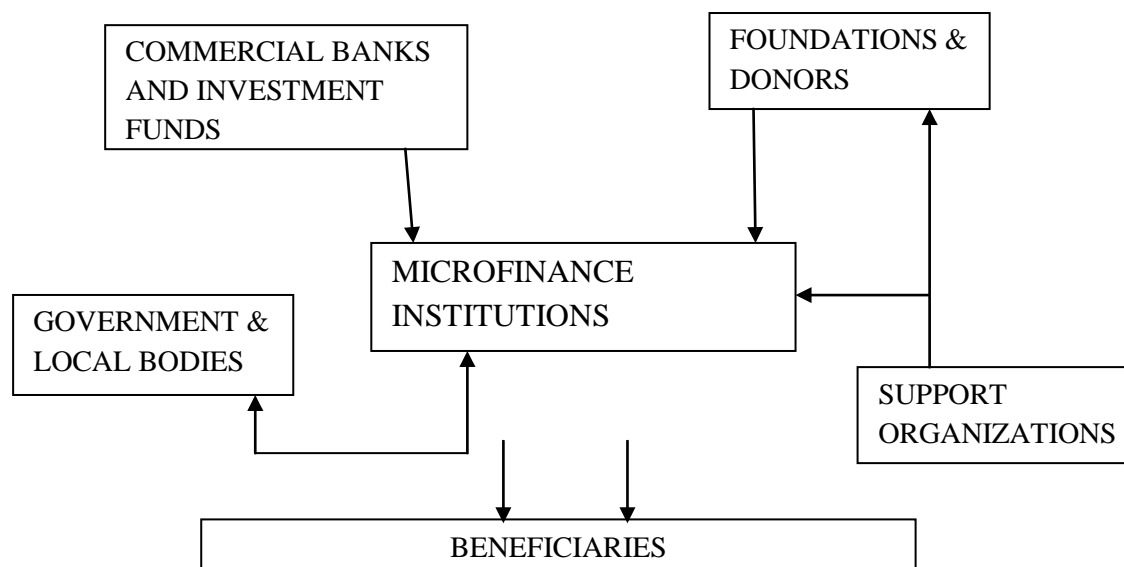
The concept of microfinance dates back to centuries.

- 1462: An Italian monk created the first official pawn shop to counter usury practices
- 1515: Pope Leon X authorized pawn shops to charge interest to cover the operating costs.
- In 18<sup>th</sup> Century, Irish Loan Fund system was initiated which provided small loans to poor farmers who have no collateral.
- In 19<sup>th</sup> Century, the emergence of larger and formal savings in Germany encouraged the upbringing of microfinance.
- In 1865, the cooperative movement expanded rapidly in Germany and in other countries.
- In 1895, Indonesian People's Credit Banks became the largest microfinance system in Indonesia.
- In 20<sup>th</sup> Century, The rural finance system was introduced in Latin America
- In 1950-1970, Efforts were made to expand credit.
- In 1970s the concept of microcredit came into existence as Dr Mohammad Yonus was declared as the noble prize winner.
- In 1990s the term micro credit was replaced by micro finance.

### **History of Microfinance in India**

- The emergence of microfinance institutions in india emerged after 1970s.
- In 1973, The Self Employed Womens Association (SEWA) of Gujarat formed a bank named Mahila SEWA Cooperative Bank to access financial services.
- The Grameen bank formed by Mohammad Yonus in 1970s which won the Noble Prize which is now been taken as a role model in some of the institutions in India.
- In 1997, The global micro credit summit was undertaken.
- The microfinance institutions in India were registered as NGOs in 1996-1997
- From 2002, these institutions moved from NGO to profit motive.
- The banking companies which emerged in 2010 were the main cause for upgrading of microfinance institutions.
- The Government introduced the Microfinance Sector Development and Regulation Bill on 20<sup>th</sup> March 2007 in the Lok Sabha

## MECHANISM OF MICROFINANCE



**Chart 1: Chart showing mechanism of microfinance Institutions**

### CURRENT STATUS OF MICROFINANCE INDUSTRY

- 10,000 MFIs manage a global portfolio of US\$30 Billions
- In a range from 150 US\$ to 7,000 US\$, the average loan size is US\$ 450
- 150 Mio micro-credit active clients
- 300 Mio micro-saving active clients
- 50 Mio micro-insurance active clients

### ANDHRA PRADESH CRISIS

- Series of suicides in AP → Criticism toward MFIs from all over the world
- Allegations: Inappropriately high profits, coercive money collection practices, and over lending to the destitute

### AP Government passing the AP Microfinance Ordinance 2010

- Impact of the Ordinance - drastic drop in loan repayments. As of January 2011, the MFIs collections had fallen from 99% to less than 20% of loan amount.
- CMF interviewed 4 MFI Heads from AP MFIs in July 2011
  - Medium sized MFI-109 branches reduced its number of branches to 84. This particular NBFC was also looking at individual lending options in order to sustain its business.
  - Medium sized MFI-Brought down its microfinance operation by 56%. This particular NBFC started focusing on diversifying its portfolio to other states right after the AP ordinance came out.
  - Small sized MFI- Was planning to open new branches in 2010-plan was discarded. Portfolio decreased by 30% after the crisis.
  - Small Sized MFI- Completely shut down its microfinance operation right after the crisis in October 2010 and switched to cooperative banking.

## **REGULATION OF MICROFINANCE BILL**

- Microfinance Institutions (Development and Regulation) Bill 2012 has been introduced by the Government
- MFIs would now by regulation be required to register with the Reserve Bank of India (RBI).
- The RBI has already released specific guidelines regarding the eligibility of MFIs for priority sector lending. Some RBI recommendations include:
  - a maximum client annual household income of Rs. 1,20,000 for urban areas and Rs. 60,000 for rural areas.
  - the total indebtedness of the borrower does not exceed Rs 50,000 and that the loan does not exceed Rs 35,000 for the 1<sup>st</sup> cycle and Rs 50,000 for next cycles.
  - MFIs will further be required to ensure that they cut down on consumer loans as at least 75% of loans be given for income generating purposes only.
  - To protect clients from over-borrowing, the RBI recommends that not more than two MFIs lend to each client.
  - MFIs should not disburse loans at a margin of more than 12% while an overall cap of 26% has to be maintained.

## **SELF HELP GROUP BANK LINKAGE PROGRAMME IN INDIA**

The self help group linkage programme has transformed into a large extent. It has been recognized as a decentralized and cost effective and fastest growing microfinance initiative in the world with over 103 million poor households to various sustainable microfinance from the banking industry. The linkage with banks has provided the members of the groups for pooling the thrift of savings and access to credit from banking system.

The Government of India and State Government has also recognized the potential of the SHG Movement in development of poor. There was only 500 SHGs to banks in 1992 and by 2012 this has reached upto 8 million . At present the linkage programme has brought livelihood support to the poor. Many international financing agencies has turned to India to see the tremendous growth of the SHG Bank linkage programme.

## **OBJECTIVES OF THE STUDY**

- To study the savings with banks by SHG.
- To study the No of loans disbursed to SHG.
- To know the loan outstanding of SHG.
- To analyze the loan issued to SHG by Banks
- To analyze the agency wise NPA of bank loans to SHG
- To know current status of loan outstanding.

## **RESEARCH METHODOLOGY**

### **Method of Data Collection**

- **Secondary Data:**

The data is collected based on NABARD Reports.

### **Tools Used**

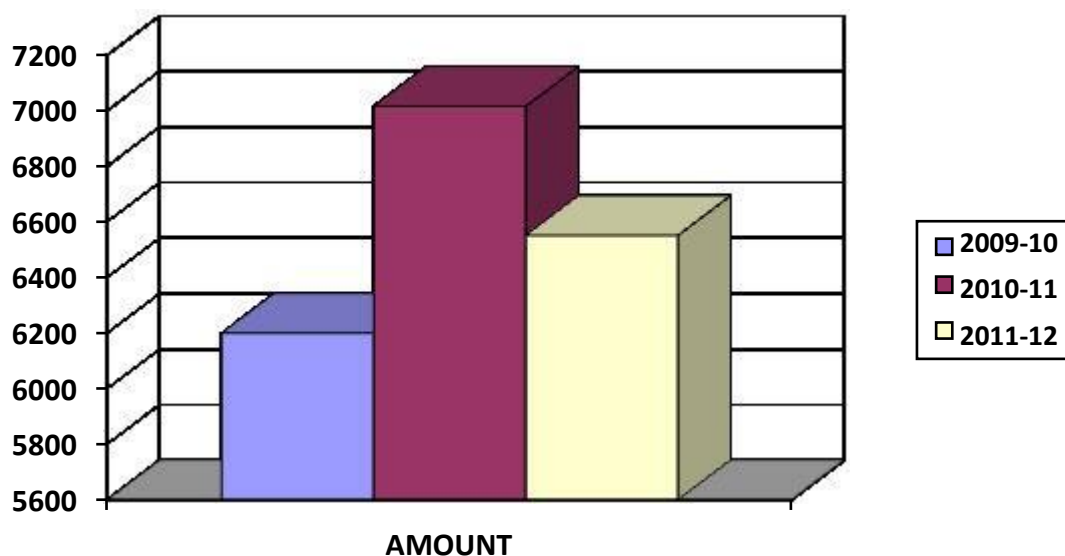
- Loan outstanding
- Performance of NPAs
- Loans Disbursed.

**DATA ANALYSIS  
 SAVINGS OF SHGS IN BANKS**

YEAR	AMOUNT
2009-10	6198.71
2010-11	7016.30
2011-12	6551.41

Source: NABARD Report

**Table1: Table showing the savings of SHG in Banks**



Source: NABARD Report

**Chart 2: Chart showing the savings of SHG in Banks**

**Interpretation:**

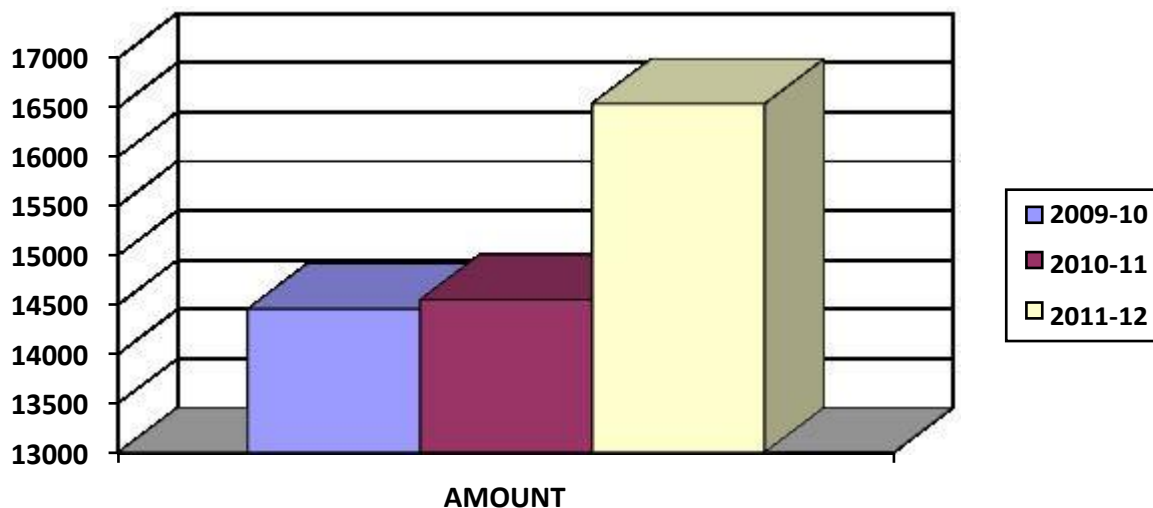
The savings for the current year 2011-12 has decreased.

**ANALYSIS LOAN DISBURSED TO SHGS**

YEAR	AMOUNT
2009-10	14453.3
2010-11	14547.73
2011-12	16534.77

Source: NABARD Report

**Table 2: Table showing the loan disbursed to SHGS**



Source: NABARD Report

**Chart 3: Chart showing the loans disbursed to SHG**

**Interpretation:**

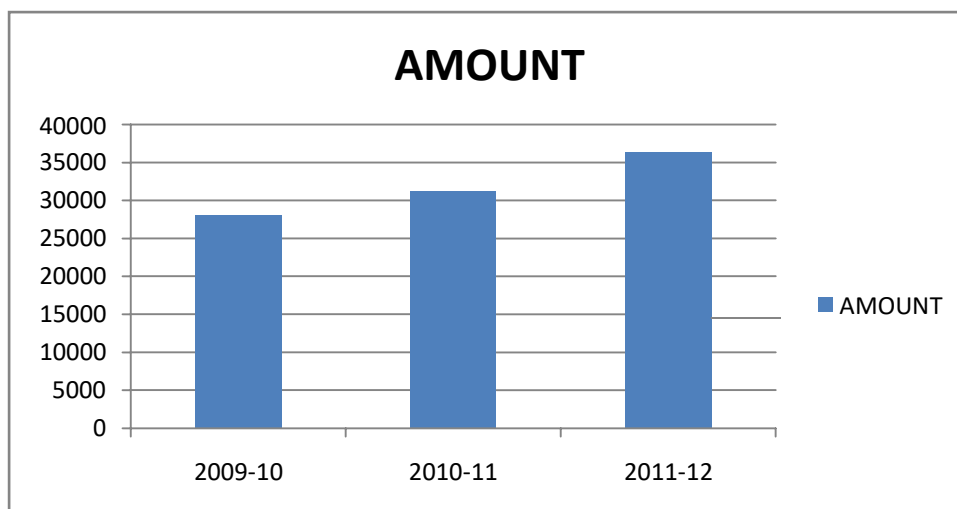
The total outstanding for the current year is high comparing to 2010-11.

**ANALYSIS OF LOAN OUTSTANDING**

YEAR	AMOUNT
2009-10	28038.28
2010-11	31221.17
2011-12	36340.00

Source: NABARD Report

**Table 4: Table showing the loan outstanding**



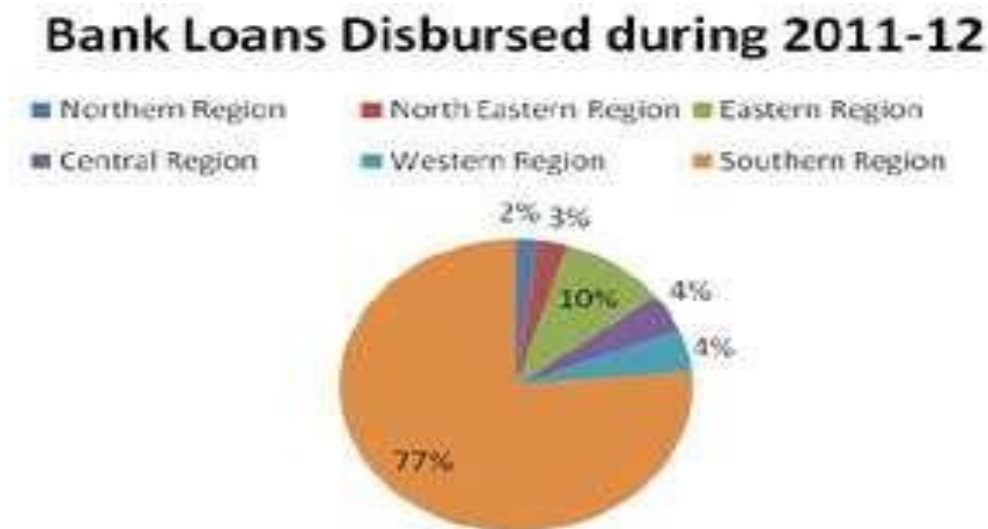
Source: NABARD Report

Chart 4: Chart showing the loan outstanding

Interpretation:

The loan outstanding is high in 2011-12 compared to 2010-11.

**BANK LOANS DISBURSED DURING 2011-12**



Source: NABARD Report

Chart 5: Chart showing banks loans disbursed during 2011-12

Interpretation:

The loan disbursed is high in Southern region followed by Eastern Region.

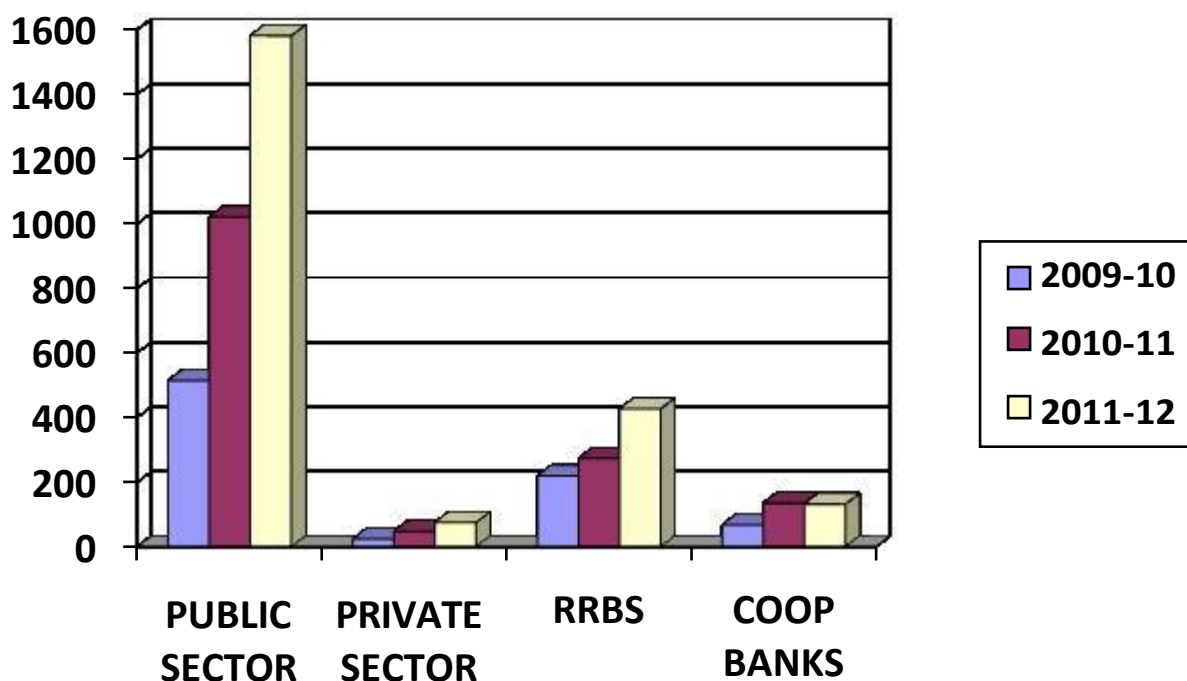
**ANALYSIS OF AGENCY WISE OF NPAs OF BANK LOAN TO SHG**

YEAR	PUBLIC SECTOR	PRIVATE SECTOR	RRBS	COOP BANKS
2009-10	513.53	23.93	218.53	67.04
2010-11	1019.90	47.09	272.82	134.30
2011-12	1581.05	74.37	426.34	130.97

Source: NABARD Report



**Table5: Table showing analysis of agency wise NPA of bank loan**



Source: NABARD Report

**Chart 6: Chart showing analysis of NPAs of Banks**

**Interpretation:**

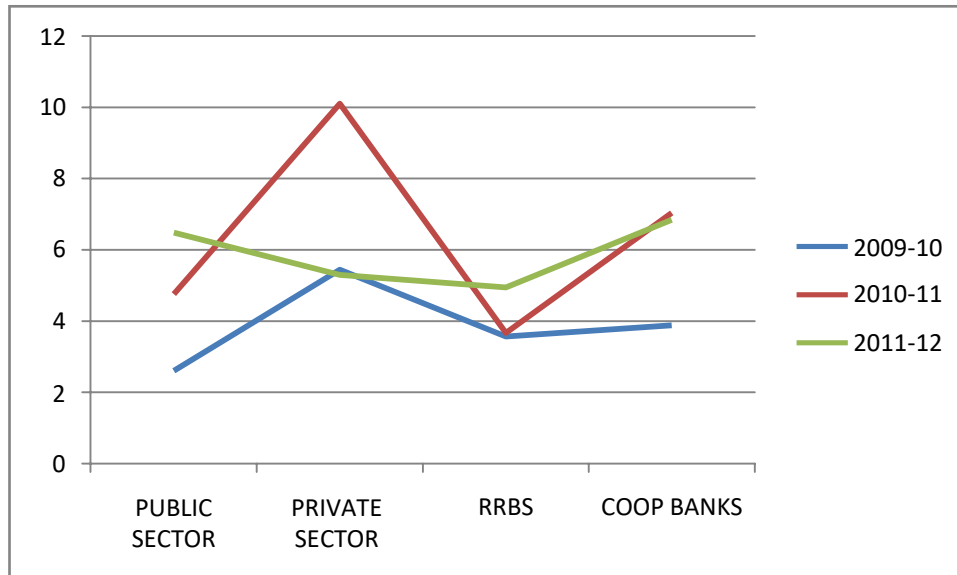
The NPA of public sector is more rather than in other agencies

**PERCENTAGE OF NPAs TO LOAN OUTSTANDING**

YEAR	PUBLIC SECTOR	PRIVATE SECTOR	RRBS	COOP BANKS
2009-10	2.6	5.44	3.56	3.88
2010-11	4.76	10.10	3.67	7.04
2011-12	6.48	5.30	4.95	6.84

Source: NABARD Report

**Table 6: Table showing percentage of NPAs to Loan outstanding**



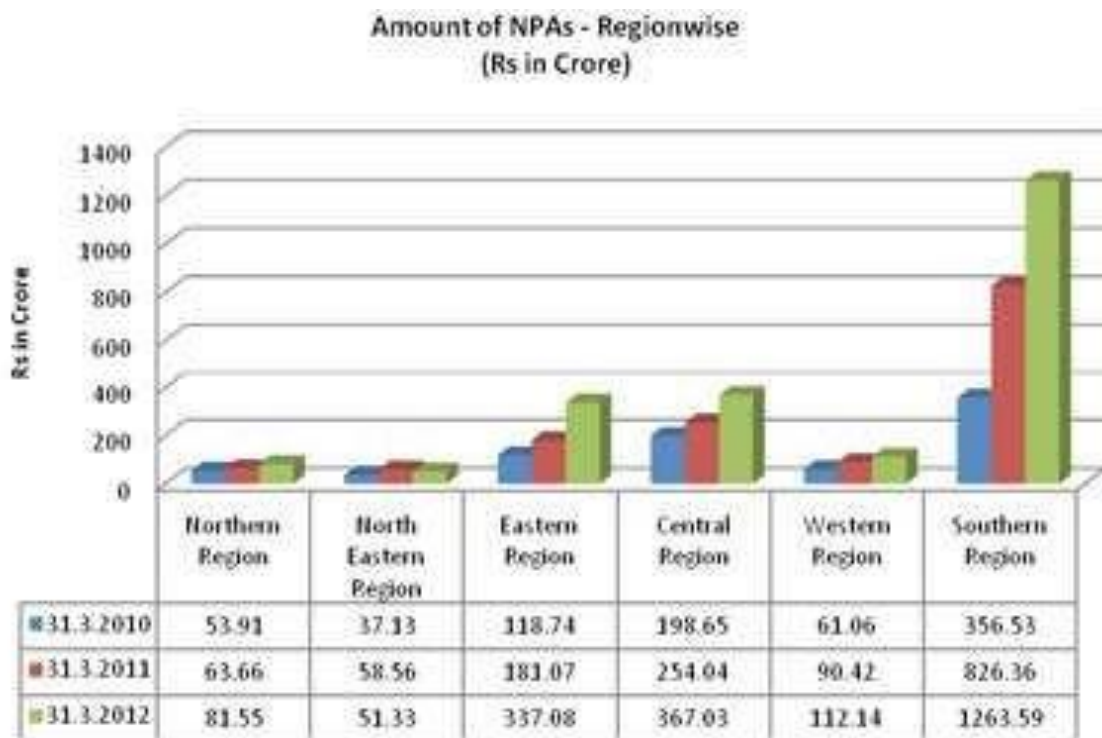
**Source: NABARD Report**

**Chart 7: Chart showing percentage of NPA to loan outstanding**

**Interpretation:**

The percentage of NPA to loan outstanding has ups and downs.

## REGIONWISE NPA POSITION AGAINST LOAN TO SHGS



Source: NABARD Report

Chart 8: Chart showing the region wise NPA position against loan to SHGs.

### Interpretation:

The NPA is very high for the current year in the southern region.

### FINDINGS

- The savings of Self help Group in 2012 is 6551.41
- The loans disbursed has raised subsequently from 2010-11 to 2011-12
- The loan outstanding has increased from 31221.17 in 2010-11 to 36340.00 in 2011-12.
- The loan disbursed in southern region is 77%
- The NPA is high in public sector commercial banks.
- The percentage of NPA is high in 2012.
- The southern region has the highest amount of NPA in 2012.

### SUGGESTIONS

- ✓ The savings of self help group should be further increased.
- ✓ The outstanding amount of loan should be reduced.
- ✓ The loan disbursed in other regions must be concentrated and increased further.
- ✓ The NPA of commercial banks should be reduced.
- ✓ The NPA performance is at an alarming rate in the year 2012 which should be carefully investigated.
- ✓ The NPA of southern region should be reduced.

## **CONCLUSION**

The concept of self help group linkage programme has paved a way to establish a link between the banks and financial institutions has grown at a large extent. It has been observed that this has been a major support for the self help groups and the survival of micro finance industry to uplift the poor.

The analysis of loan disbursed, outstanding amount of loans and the non performance assets will be greatly helpful for the upbringing of the industry as a whole. This would benefit many microfinance institutions and the banks in India to reduce their NPAs of banks. The region wise analysis will also help the industry to identify the problems of NPA and loan outstanding to make the microfinance industry as a an effective one for the poor to develop the economy.

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## ADVERTISING CREDIBILITY: A REVIEW OF LITERATURE

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### ABSTRACT

In a world of fierce competition and emergence internet as a powerful media, gaining the attention of the customer and persuading them to buy products and services is becoming difficult and important. Although, advertising has been proved to be effective in providing information, yet its credibility had been questioned consistently. Thus, it is important for the marketers to understand the concept of advertising credibility and the factors that enhance it. The paper reviews, synthesizes and integrates the substantial literature on advertising credibility, source credibility and media credibility and addresses the issues relating to their conceptualization and measurement. The paper finds the two gaps in the literature. First, the relationship between credibility and skepticism towards advertising has never been established. Second, the dimensions of advertising credibility along with the multidimensional scale needs to be developed.

**KEY WORDS :** Advertising, Credibility, Media, Source.

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Everyday people encounter information from friends, colleagues, books, newspapers, television, websites, etc. But all information is not equally useful/ valuable. Some information is more trustworthy and better than others. Therefore, people have to decide which information is more credible.

The concept of credibility has received considerable attention since the late 1990s when the internet began providing a new information interaction environment that allowed users to seek for information and communicate with others in ways never been possible. As a consequence the researchers and practitioners in diverse fields including information science, marketing, management information systems, communication studies and psychology have examined credibility from a variety of different perspectives (Riehand Danielson, 2007).

Credibility as an area of research became popular amongst researchers for its role in persuasion process. In information science, credibility has been understood as one of the criteria of relevance judgment used when making the decision to accept or reject retrieved information (Riehand Danielson, 2007). Communication researchers have, on the other hand, been examining credibility as the research agenda distinguishing message credibility, source credibility and media credibility (Metzger et al, 2003).

Credibility has been defined as believability, trust, reliability, accuracy, fairness, objectivity, and dozens of other concepts and combination thereof (Self, 1996). It refers to a person's perception of the truth of a piece of information (Eisend, 2006). It also has been defined in terms of characteristics of persuasive sources, characteristics of the message structure and content, and perceptions of media (Metzger et al., 2003). Some studies focus on the characteristics that make sources or information worthy of being believed, while others examine the characteristics that make sources or information likely to be believed (Flanagin and Metzger, 2007).

Hilligoss and Rieh (2007) gave a unifying framework of credibility assessment which included three levels of credibility judgments: construct, heuristics and interaction. The construct level pertains to how a person constructs, conceptualizes or defines credibility. It is the most abstract level and as such involves broad notions of credibility that influence the person's judgments. The heuristics level involves general rules of thumb used to make judgments of credibility. This level is fairly general, being broad enough to apply to a variety of situations rather specific to any particular situation. The interaction level refers to credibility judgments based on specific source or cues.

Table 1  
 Three levels of credibility assessment

Level	Definition	Types	Influence
Construct	Conceptualizations of credibility	<ul style="list-style-type: none"> <li>• Truthfulness</li> <li>• Believability</li> <li>• Trustworthiness</li> <li>• Objectivity</li> <li>• Reliability</li> </ul>	Provides a particular point of view for judgment credibility
Heuristics	General rules of thumb that are broadly applicable to a variety of situations	<ul style="list-style-type: none"> <li>• Media related</li> <li>• Source-related</li> <li>• Endorsement-based</li> <li>• Aesthetics- based</li> </ul>	Provides useful ways of finding information conveniently and making credibility judgment quickly
Interaction	Specific attributes associated with particular information objects and sources for credibility judgments	<ul style="list-style-type: none"> <li>• Content cues</li> <li>• Peripheral source cues</li> <li>• Peripheral information object cues</li> </ul>	Provides useful ways of finding information source or object characteristics on which to base a judgment

(Hilligoss and Rieh (2007))

## CREDIBILITY AND RELATED TERMS

**Credibility and Authority:**Wilson's (1983) theory of cognitive authority is closely related to the concept of credibility. Both feature trustworthiness and competence as their main components. Wilson argues that what people know of the world, beyond the narrow range of their own lives, is only what others have told them. People do not, however, count all hearsay as equally reliable. Only those who are deemed to "know what they are talking about" are recognized as cognitive authorities. Wilson claims that people do not attribute cognitive authority exclusively to individuals. Credibility differs from cognitive authority and information quality, while being closely related to these two concepts. Cognitive authorities are those people who actually exert influence on other people's thoughts by being recognized as proper (Wilson, 1983). According to Wilson, an authority's influence is thought proper because "he is thought credible, worthy of belief". Cognitive authorities are clearly among those who are considered to be credible sources. A person may be recognized as credible in an area even if not exerting influence on other people's thoughts. In Wilson's words, "those we think credible constitute the potential pool of cognitive authorities on which we might draw" (Wilson, 1983). Wilson claims that people do not attribute cognitive authority

exclusively to individuals. Cognitive authority can be found in books, instruments, organizations, and institutions.

**Credibility and Trust:** It can be difficult to discuss credibility without referring to trust or trusting behaviours and vice versa. Historically, trust has been a core construct in many conceptualizations of credibility (Hovland et al., 1953).

Tseng and Fogg (1999) point out that, although credibility and trust have sometimes been used interchangeably, they should not be considered synonymous. Trust is different from credibility because “trust indicates a positive belief about the perceived reliability of, dependability of, and confidence in a person, object, or process”. Tseng and Fogg further distinguish between the general concept of trust and “trust in information” (p. 41). Trust frequently refers to a set of beliefs, dispositions, and behaviors associated with the acceptance of risk and vulnerability. Credibility refers to a perceived quality of a source, which may or may not result in associated trusting behaviours.

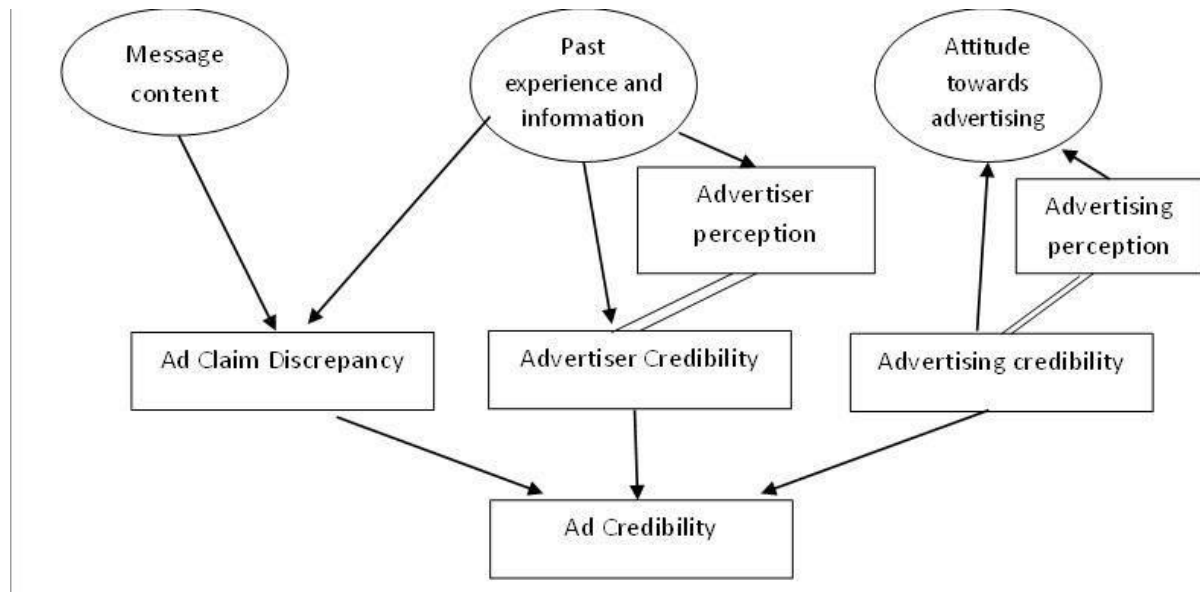
**Credibility and Reputation:** Reputation is a closely related but differentiable term to credibility, especially in the context of a firm. Herbig and Milewicz (1995), explained reputation as the estimation of the consistency overtime of an attribute of an entity. The authors summarized the distinction between reputation and credibility of a firm. They stated that credibility is the believability of the current intensions, whereas, reputation is a historical notion based on the sum of the past behaviours. They posited that if a firm enjoys good reputation for its quality products and services, it can achieve high advertisement credibility.

#### **ADVERTISING CREDIBILITY**

In Literature, rare attempts have been made to define and measure advertising credibility and generally have been considered to be closely related to the believability of the ad- claims. MacKenzie and Lutz (1989), defined advertising credibility as “consumer’s perceptions of the truthfulness and believability of advertising in general.” Their conceptualization and measurement of advertising credibility suggest that the construct refers to consumer’s generalized beliefs in the integrity of advertising claims (MacKenzie and Lutz, 1989). Herbig and Milewicz (1995) suggested that credibility is related to the extent to which, what is said matches with what is done. In other words, if the product claims confirms with the performance, the credibility increases. Credibility exists when one can confidently use past actions to predict future behaviour (Herbig and Milewicz, 1995). This conceptualization is similar to one of the determinants of Ad credibility given by MacKenzie and Lutz (1989), i.e. ad-claim discrepancy (discussed below).

Distinguishing between advertising credibility and ad credibility, MacKenzie, Lutz and Belch (1986), posited credibility of Ad refers to how truthful or believable the audiences perceive the assertions made about the brand to be. The authors discussed the determinants of Ad Credibility: 1) the perceived claim discrepancy of the ad; 2) the credibility of the advertiser and; 3) the credibility of advertising in general.

Figure  
 Determinants of Ad Credibility



(Adapted from MacKenzie and Lutz, 1989)

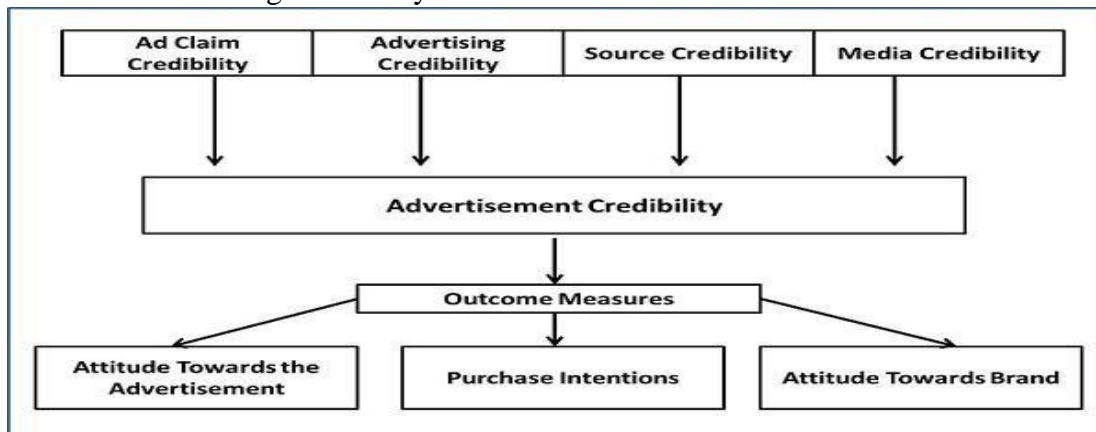
Perceived Ad claim discrepancy is the degree to which the message recipient perceives a discrepancy between what is being claimed about the brand in the ad and the actual characteristics or benefits of the brand (MacKenzie and Lutz 1989). If the actual benefits fall short of the claimed benefits it results in damaging the credibility of the ad. This dimension is very close to the definition of credibility given by Herbig and Milewics (1996). The exaggerations in the ad may lead to consumer think that the ad is not credible. Message content is the evaluated by the customers keeping in mind the past experiences and/ or information with respect to the advertised brand.

Advertiser Credibility is the perceived truthfulness and honesty of the sponsor of the ad. “If the sponsor is credible, this ad is for the sponsor’s brand; therefore, the ad is credible. Advertising credibility represents consumer’s perception of the truthfulness and believability of advertising in general, not simply the particular Ad in question. It is one of the several perceptual dimensions along which consumers may assess advertising as institution.

Bae, Wright and Taylor (2001), gave the revised model of advertising credibility. They included the media credibility as a dimension of advertisement credibility. Their results also suggested that media credibility has positive impact on attitude towards the ad, attitude towards the brand and purchase intention. They concluded that advertisers can enhance the effectiveness of their advertisements by selecting a credible medium (Bae, Wright and Taylor, 2001)



Figure 2  
Model of Advertising Credibility



(Bae, Wright and Taylor, 2001)

With recognition of the influence of credibility on effective advertising, many researchers have attempted to conceptualize and measure the construct in a variety of contexts: source credibility, ad content credibility or message credibility and media credibility.

More recently, Obermiller and Spangenberg (1998) approached the construct of advertising credibility from an opposite direction, which they called “advertising skepticism.” They define skepticism toward advertising in general as “the tendency toward disbelief of advertising claims” and developed a 9-item Likert format scale to measure consumer skepticism toward advertising. Even though the authors did not explicitly mention the relationship between advertising skepticism and advertising credibility, the conceptual similarity to advertising credibility (i.e., belief or disbelief of advertising claims) and the similar items to the measures of advertising credibility (e.g., advertising is generally truthful, advertising is truth well told) suggest that advertising skepticism is not an unique construct from advertising credibility but the same construct which views advertising credibility from another way.

### Measurement:

Amongst the earlier attempts to study the advertising credibility a technique was presented by Oehler to know how the public responds to advertising claims. Owing to the complexities of the measurement of advertising credibility, Oehler said “No foolproof means may ever be devised for measuring exactly the degree of credibility an advertising claim has attained or is likely to achieve”. The measuring technique he described did not produce the absolute information rather it tells the advertiser how his claim compares with others and whether the user of his brand thinks that the claim is valid in the sense of being particular valid for his product. His measurement included the responses of 600 housewives regarding three aspects of claims believability, validation and identification (Oehler, 1944). Rare have been attempts to measure advertising credibility with diagnostic, multi-item scales or to treat this construct as separate and distinct. In most cases, advertising credibility has been measured with a non-diagnostic single item (e.g., Calfee and Ringold, 1994) or with subscales of a measurement for attitude-toward -advertising-in-general (Muehling, 1987; Sandage and Leckenby, 1980; Shavitt, Lowrey and Haefner, 1998). The frequent items measuring advertising credibility include: most advertising is believable, ads usually present a true picture, and ads are reliable sources of information.

MacKenzie and Lutz (1989) measured this construct with three items: convincing-unconvincing, believable unbelievable, and biased-unbiased. The three scales were averaged

to produce the advertising credibility index. Although this scale was the first attempt ever to measure advertising credibility objectively, but its validity is questionable as the author have used the same scale for measuring all the attitude and credibility constructs on a 7-point semantic differential scale (MacKenzie and Lutz, 1989).

Greer (2003) measured credibility of ads using five items from Beltramini's (1988) advertising believability scale: Unbelievable/ believable, not convincing/ convincing, not credible / credible, dishonest/honest, and untrustworthy/ trustworthy on a 5-point semantic differential scale.

### **SOURCE CREDIBILITY**

Credibility of the source of product information has been an important concern among advertisers and advertising researchers. Source credibility has been defined as the judgements made by perceiver concerning the believability of a communicator. In other words, it is the degree of confidence the receiver of the message has in the source of the message. Ohanian (1990) defined source credibility in terms of communicator's positive characteristics that affect the receiver's acceptance of the message. McDougall and Fry (1975) discussed the nature of the construct and posited that source credibility may be situation specific in that the relevant elements of credibility are dependent on the type of source, the situation and the audiences goals. Most of the studies found two dimensions of source credibility, expertise and trustworthiness (Hovland, Janis and Kelly, 1953). Expertise is defined as the extent to which a communicator is perceived to be a source of valid assertions. It the communicator's qualification or ability to know the truth about a topic (Hovland, Janis and Kelly, 1953). In other words, it is the ability to provide accurate information coming from the knowledge, experience, training or skills a source possesses (Erdogan, 1999). Trustworthiness refers to the consumer's confidence or belief in the communicator for carrying messages in an unbiased and honest manner (Hovland et al., 1953; Ohanian, 1990). It is the degree of confidence in the communicator's motivation to communicate the assertions he considers most valid.

Source credibility in advertising research has been studied in two contexts: endorser/celebrity credibility and advertiser/corporate credibility. Research on endorser credibility heavily depends on two general models: the source credibility model and the source attractiveness model. The source credibility model originally developed by Hovland and his colleagues (1953) includes trustworthiness and expertise to be the dimensions underlying the endorser credibility construct. The source attractiveness model has its origin in the social-psychological research and is a component of source valance model of McGuire (1985). The attractiveness model contents that the effectiveness of a message depends on source familiarity, likability, and attractiveness to the respondents. Combining these two models Ohanian (1990), developed a scale to measure source credibility with underlying three dimensions i.e. expertise, trustworthiness and attractiveness.

Other research has examined advertiser credibility, where the advertiser who manufactured the advertised product is seen as a source of the communication (Lafferty and Goldsmith, 1999; MacKenzie and Lutz, 1989; Newell and Goldsmith, 2001). Advertiser have the communicative responsibilities including commissioning the ad, paying for it, approving it and being held legally liable for what is in the text (Stern, 1994). Newell and Goldsmith (2001) defined corporate credibility as the extent to which consumers feel that the firm has the knowledge or ability to fulfil its claims and whether the firm can be trusted to tell truth or not. Keller (1998) explained corporate credibility as the extent to which consumers believe that a firm can design and deliver products and services that satisfy customer needs and wants. Similar to endorser credibility, advertiser credibility is considered composed of expertise and trustworthiness (Keller, 1998; Goldsmith, Lafferty and Newell, 2000; Newell

and Goldsmith, 2001). Expertise is understood as the extent to which consumers feel that the firm has the knowledge or ability to fulfill its claims and trustworthiness as whether the firm can be trusted to tell the truth or not (Newell and Goldsmith, 2001).

Source credibility had been measured as a multidimensional construct. However, the dimensions given by different authors are different. Berlo, Lemert and Mertz (1969) gave three dimensions: safety, qualifications and dynamism which are measured on various bipolar adjectives. Endorser credibility is often measured by the semantic differential items, for instance: experienced/unexperienced, knowledgeable/unknowledgeable, and qualified/unqualified for expertise; honest/dishonest, dependable/undependable, and trustworthy/untrustworthy for trustworthiness; and attractive/unattractive, beautiful/ugly, and plain/elegant for attractiveness (Ohanian, 1990; Lafferty and Goldsmith, 2000). Newell and Goldsmith (2001), developed a two dimensional scale for measuring corporate credibility. The expertise of the firm was measured by statements such as: XYZ corporation has a great amount of experience, XYZ corporation is skilled in what they do, XYZ has great expertise, XYZ does not have great experience. The trustworthiness dimension was measured by four items: I can trust XYZ corporation, XYZ makes truthful claims, XYZ is honest, I do not believe what XYZ tells me (Newell and Goldsmith, 2001).

### **MESSAGE CREDIBILITY**

The literature are placed a lot of emphasis on conceptualization and measurement of source credibility, but message credibility, despite of various attempts lacks a clear definition and operationalization. There are a few scholars who have dealt with ad content credibility, ad claim discrepancy and various theories related to information acceptance and processing. Ad content credibility has been considered a key attribute of effective advertising because consumers will not act in the desired manner unless they accept or believe ad claims. MacKenzie and Lutz (1989) define ad content credibility as “the extent to which the consumer perceives claims made about the brand in the ad to be truthful and believable.” It involves acceptance of the statements and in part is related to the similarity between the communicator and the audience’s position (McDougall and Fry, 1975). Advertiser credibility and advertising claim discrepancy combine to affect the ad credibility (Lutz, 1985; Lutz, Mackenzie and Belch 1983; Mackenzie and Lutz, 1989). Goldberg and Hartwick, presented a study to extend Lutz’s work. They systematically manipulated the advertiser credibility and advertising claim extremity to test the interactive effects of these factors on ad credibility and product evaluation. The results showed that the relationship between claim extremity and ad credibility being more strongly negative for those given the negative reputation description than for those given the positive description of the firm (Goldberg and Hartwick, 1990).

Attribution theory, which posits that individuals attribute events in his environment to underlying causes, has been relevant and mostly referred to while development of persuasive messages in advertising. A persuasive message can be regarded as an event (effect) by the audiences, the causes of which are attributed to advertiser’s motive to sell or the actual characteristics of the products or services. When the advertisers consistently say establishes superiority in their advertising claims, the audiences attribute these claims to advertiser’s desire to sell the product. Whereas, when the advertiser’s claims superiority over a few characteristics, the confidence rating by the audiences improves which inturn increases the credibility (Roering and Paul, 1976).

The literature on message credibility indicates three categories of factors influencing message credibility: message structure (how the various components of the message have been arranged), message content (information quality, language intensity) and message delivery (the way in which the message is presented by the source). Ambiguous information and information that is unable to be validated, will be perceived as less credible (Cronkhite and

Liska, 1976). In terms of message characteristics researchers have examined the influence of message comprehensibility, number of arguments, incentives, fear appeals, repetition and presentation style on recipient's attitude change. Many of these factors not only influence persuasion but also affect the credibility assessments (Slater and Rouner, 1997).

Rare attempts have been made to measure the message credibility by the researchers. However, the impact of message credibility on source credibility or advertising effectiveness have been checked by manipulation various components of an advertisement. Smith (1978) gave the message measurement inventory (MMI) to evaluate receiver's perceptions of message including message credibility. But, this included items such as confident, passive, uncooperative, which is more relevant in measuring source credibility rather than message credibility.

### **MEDIA CREDIBILITY**

Media credibility was included in the Ad credibility model by Bae, Wright and Taylor (2001). Advertising medium credibility has been defined in terms of consumer's perception of the average believability of a channel's overall advertising content (Kioussis, 2001). The credibility of a medium will be influenced by the credibility of the surrounding programming or editorial environment (Chook, 1985) and in turn will affect the advertising effectiveness. Each medium has its own effectiveness and personality, so it is logical to suggest that different media will have different levels of intrinsic credibility Prendergast, Liu and Poon (2009). Some researchers argue that internet is the least credible advertising medium as anyone can put anything online and it is generally difficult to verify the message (Marshall and WoonBong, 2003)

Findings from previous studies reveal contradictory results regarding the credibility of different media. A few studies suggest that traditional media such as newspapers, television, radio are more credible medium than new forms of media i.e. internet and mobile. In their article, Prendergast, Liu and Poon (2009), applied the pairwise technique for testing the credibility scores of different media and found that radio, broadcast television and cable television are perceived to be most credible advertising medium by the interviewees and the internet and direct mail were perceived as least credible media. In another article authors examined the differences in consumer's perception of advertising credibility for five media – newspapers, television, radio, magazines and the internet and the moderating role of persuasion knowledge in those perceptions. The results indicated that the advertising credibility was the highest for traditional media and lowest for the internet (Rodgers, 2005). Becker, Martino, and Towers (1976) found that newspapers were perceived as the most credible advertising medium and that advertising credibility varied as a function of two audience demographics: age and media use. Younger consumers perceived few differences across ad media; older consumers perceived large differences. Media use was also positively associated with credibility perceptions, and consumers perceived credibility differences across advertising media depending on their primary source of local information.

Soh, Reid and King (2007), examined trust in different advertising media and the relationship of that trust to media credibility and found consumer trust in advertising media and media credibility are associated constructs, though trust in advertising is separate and different from credibility. Across five advertising media, media credibility was consistently associated with media specific trust, indicating that the credibility of the medium and trust in medium are directly related.

The dimensionality of media credibility has not been explored in past and its impact has been measured on various ad effectiveness factors by comparing the advertising credibility in different media. Kioussis (2001), measured media credibility by five indicators in the context of news information: factual, extent to which it is motivated by money, invades with people's

privacy, concern for community and can be trusted. But this measure is not appropriate in the advertising context. Moore and Rodger (2005) measured advertising credibility by a three item scale: advertising generally tell the truth, you can generally believe what you read in ad, I usually find advertisement to be quite credible. Prendergast, Liu and Poon (2009), measured the construct by three statements: I think advertisement in XXX are credible, I think advertisement in XXX are exaggerated, I think advertisement in XXX are unbelievable.

### Summary and Suggestions

The review of literature throws light on the model of ad credibility and identifies three contexts in which advertising credibility has been studied, i.e. message credibility, source credibility and media credibility. The literature also distinguishes between advertising credibility and ad credibility. Various researchers have studied the dimensions underlying ad credibility, but no such model has been developed for advertising credibility. The only domain described in literature is related to advertising perceptions which affects the consumer's perception of advertising credibility. Although the literature on source credibility is very vast, the conceptualization of message credibility and media credibility needs to be explored. Also the causal relationship between advertising credibility, media credibility, ad content credibility and source credibility needs to be studied.

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## KAMLA DAS AS A CONTROVERSIAL BUT AN HONEST INDO ANGLIAN POETESS

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### **ABSTRACT**

As far as post – independent Indian English poets are concerned Kamla Das is one of the pioneering Indo-Anglian poets who has contributed immensely to the growth and development of modern Indian English poetry. Her life has been long drawn battle against cultural and religious orthodoxy. But without carrying for the restriction created by the society she mirrors her life in all her nakedness. With a frankness and openness unusual in the Indian context, Kamala Das expresses her need for love. The uniqueness in her poetry is the frustration of a woman devoid of sexual satisfaction. There was a considerable age difference between Kamla Das and her husband. This marriage was not a happy one. The age difference caused her frustration just after a few years of marriage. Their relations became hollow. Having the thirst for a sea at the age what she got were hardly a few drops of stinking water. All sweet moments were turned to bitter curses. What was missing in her life is well expressed by her poems.

**KEY WORDS :** Pioneering, Orthodoxy, Stinking.

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### **INTRODUCTION**

Kamla Das (1934-2009) has written under the pseudonyms Madhavikutty and Kamla Suraiyya.) Indian poet, novelist, short story writer, dramatist, essayist, is one of the best-known contemporary Indian women writers. Writings in two languages English and Malayalam, Das has authored many autobiographical works and novels, several well-received collections of poetry in English, numerous volumes of short stories, and essays on a broad spectrum of subjects. Since the publication of her first collection of poetry, *Summer in Calcutta*(1965), Das has been considered an important voice of her generation, exemplified by a break from the past by writing in a distinctly Indian person a rather than adopting the techniques of the English modernists. Das provocative poems are known for their honest explorations of the self and female sexuality, urban life women's roles in traditional Indian society, issues of post colonial identity, and the political and personal struggles of marginalized people.

Das work in English has been widely anthologized in India, Australia, and the West, and she has received many awards and honours, including the P.E.N. Philippines Asian Poetry Prize (1963), Kerala (Sahitya) Academy Award for her writing in Malayalam (1969), Chiman Lal Award for fearless journalism (1971), the ASAN World Prize (1985), and the Sahitya Akademi Award for her poetry in English (1985). In 1984, she was nominated for the Nobel prize in literature.

As Das is a significant Indo-Anglian poetess who is known for honesty and frankness, her poetry is obsessed with herself, about her intensely felt desire for love, for her



emotional involvement and her failure to achieve such a relationship. Poetry was in her blood as both her parents were poets of Kerala. She constantly speaks of her Dhavidian blood and of her Nair heritage. Kamla Das was married at an early age of 15, but she failed to find that fulfillment in her married life for which a woman craves. The result has been frustration and disillusionment, which we see in her poetry. Her poignant story of life and the psychological traumas she suffered is narrated in her autobiography 'My story'.

Kamla Das is one of the members of the poetic trinity of Indo Anglian poets, the other two being Nissim Ezekiel and Ramanujan. Her poetry is characterized by extreme sincerity and integrity. She writes for the therapeutic purposes as her own self is the center of her three anthologies of poetry. Her poetry shows that in male dominated world She tried to assert her individuality, to maintain her feminine identity, and from this revolt arose all her troubles. Kamla Das works are unconventional and rather shocking in the Indian context. Happy or unhappy, Kamla Das continue to live with her husband and kept writing both prose and poetry in English and Malayalam. Her poetic output in English is rather thin. It consists of three slender volumes; *Summer in Calcutta* 1965, *The Descendants* 1967 *The old play house* and other poems.

"Self is the nucleus from which all her poetry originates." But like Jane Austen she recognized the limitations of her range and achieved excellence by working on her "Three inches of ivory". She presents the portrait of her feminine self as a tortured young woman. Most of the poetry is concerned with the poet's intense passions. The dominant outcry in her poetry volume *Summer in Calcutta* contains to be herself, her exploration and her various experiences. It reveals the dilemmas and poignant situations faced by the poet under the stress of her longing for love, sex and loneliness. She pines for what is not there. She faces the pains of loneliness even in her childhood. Neither her parents nor the society in which she grew helped her to free herself from this alienation. As she complains about her parents.

"They took us for granted and considered us mere puppets, moving our limbs according to the tugs they gave us ....."

Marriage does not provide her any solace or comfort from loneliness. The immature sexual approach of her husband developed contempt against the bond of married life and male domination. So she tries to find comfort in love outside marriage but she failed in the attempt to find a relationship which could give her love and security. Most of her poems deal with the theme of unfulfilled love and yearning for love. 'The dance of the Eunuchs' is a good instance of a poem in this context. The dance of eunuchs is a dance of the sterile and therefore the unfulfilled and unquenchable love for women in the poet is seen. Her quest for fulfillment leads her only to sterility and vacant ecstasy. The dance of eunuchs is a symbol of her inner self, which is humiliated by all husband, lover, society. 'A hot noon in Malabar' is a good example where herself moves between memory and desire. In her volume 'The Descendant' she tries to seek a smooth way of her life. Journey on an ideal path. She addresses the sea in 'The suicide' to know the intuitive knowledge of life and death. Here her poetic self rises above mundane problems. Her poetic self neither wants to leave her body nor soul. The old play house and other poems are addressed to 'you' i.e. to the husband. He wants to encompass her action, movement and activity of which her young self is desirous. The poetic self does not like this just as her young self does not like him or his ways. Her poetry shows that she has to make her identity. She has to create a place for herself in a public world in her home and even in her bedroom. 'The old Play house' is a variation on the same theme. All her quest for love ends in disaster of lust.

Her greatness as a love poet arises from the fact that her love poetry is rooted in her personal experience. It is an outpouring of her own loneliness, disillusionment and sense

of frustration. When she speaks of love outside marriage she is not actually propagating adultery and infidelity but merely searching for true love and security which she identifies with Radha-Krishna myth or with Mira bai's. Her love poetry is unconventional and shocking to the orthodox. Kamla Das acted as a rebel against the male oriented universe in her poems. Like all rebels she was against the social norms frustration and disillusionment. Her poetry mirrors her life in all her nakedness. Kamla Das like itself violated the systematic and traditional norms and values and affairs to a form of life which is characterized by the unconventional and extremely modern point of view. So she was unconventional in life and equally unconventional in her diction 'The looking glass,' 'The stone age' are some instances of her unconventional diction. Countless are the poems in which her uninhibited treatment of the human anatomy and Physical aspects of sexual love are exposed.

Kamla das is also a confessional poet, who struggles to relate the private experiences with the outer world. Confessional poets deal in their poetry with personal emotional experience which are generally considered as taboo. There is rootless self analysis and a tone of utter sincerity. What a confessional poet gives us is the psychological equivalent for his or her mental stage and 'It is such psychological equivalent' that we always get in the poetry of Kamla Das E.V. Ram Krishnan rightly stresses that in her poetry Kamla "has always dealt with private humiliations and sufferings which are the stock themes of confessional poetry." Kamla Das is concerned with herself as victim. Sexual humiliation becomes a central experience in her autobiography 'My Story'. Confessional poetry is fully autobiographical in which poets even courts death and disintegration so that a higher level of preception may be possible. The long for death and disintegration as well as for psychic wholeness and insight. This tension between two opposites is reflected in the constantly shifting moods of confessional poetry. As a confessional poet she narrates her personal experience but slowly from the personal and the particular she rises to the general and the universal.

## **CONCLUSION**

Kamla Das is intensely conscious of herself as Woman. Srinivas Iyenger writes "Kamla Das is fiercely feminine sensibility that dares without inhibitions to articulate the hurt it has received in an intense, largely, man made world". In her typical poems the male desire is quickly apprehended and described but emphasis is largely on sexual love and female organs while feminine sensibility in the real sense implies stress on emotional bond and an attitude which the women poets alone can achieve. Kamla Das feminine sensibility is not to be found in her frank confessions of her sexual life. It is expressly manifested in her attitude to love, in the ecstasy experiences in receiving love and the agony which she feels. As stated earlier Das is a poet famous for her honesty. Her book 'My Story' created some controversy for its frank discussion of her search for love inside and outside marriage. She writes critically of the traditional conservative society in which she lives. It has shocked the mainstream Kerala with its candid accounts of her encounters with men. As an artist, her paintings included nudes. In 1999 She converted to Islam, an action she said she has been contemplating for many years. She said "Two plain reasons lured me to Islam one is the Purdah. Second is the security that Islam provides to women. In fact, both these reasons are complementary. Purdah is the most wonderful dress for women in the world. And I have always loved to wear the Purdah. It gives women a sense of security. Only Islam gives protection to women. I have been lonely all through my life. At nights, I used to sleep by embracing a pillow. But I am no longer a longer. Islam is my company. Islam is the only religion in the world that gives love and protection to women. Therefore, I have converted".

As a feminist writer. She says "I don't think any genius can survive caught in the machine of formal education." Kamla Das never tries to escape from the harsh realities. Courage and honesty are the strengths of Kamla Das character and poetry. Kamla Das has shown an increasing concern with disease, sickness, decay and death. In "The Sunshine Cat" poetess grow old and becomes "A cold half-woman of no use to man." And in "The Invitation" the poetess is preoccupied with the thought of suicide. In her poetess she revolts against social norm with courage against male dominated world but she never tries to escape from harsh reality. She has no regrets for her honesty but her final analysis shows that she has lived beautifully in this beautiful world.

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**“TO ANALYZE THAT ADVERTISEMENTS BOOST UP THE  
STANDARD OF LIVING OF THE SOCIETY TOWARDS THE BRANDS  
OF CONSUMER’S GOODS -A STUDY CARRIED OUT AT BHIWANI  
DISTRICT”**

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**ABSTRACT**

After the introduction of New-Economic Policy in 1991 by the then Finance minister Dr. Man Mohan Singh, the total scenario of Indian economy has undergone a significant change. The new economic policy has given greater priority to liberalization and globalization. With the advent of these two concepts a number of MNCs have entered the Indian market in various economic activities and as a result a battle has started for greater market in various economic activities and battle started for greater market coverage as Indian market is constituted of both rural and urban sections. To carve their market share, these MNCs have to understand and change the mindset of consumers and their perception which will bring about a total change in their buying behaviour. These changes can be possible only with the help of effective advertising as it is a significant tool which can bring about the required kind of change in perception, attitude and buying behaviour of consumers. The more effective is the advertisement, the greater impact there will be on the buying behaviour of consumers. Advertising is a mirror of society, reflecting people tastes habits and desires. Although advertising is a big tool that big business houses use to great advantage, it can be a powerful force for the small business owner as well. Nothing except the Mint can make money without advertising. Mass production and mass distribution totally depend on all forms of advertising and publicity. We can tell numerous people about a product or service in the quickest time interval at the lowest possible cost. Advertising by facilitating mass production and mass distribution has provided immense employment opportunities to people. It is responsible for creating and delivering rising standard of living to innumerable people. It has made possible tremendous industrialization and economic development in many countries. It is the backbone of modern national and international marketing. Modern advertising informs guides, educates as well as protects buyers, so that they can buy intelligently and raise their standard of living. It is the tool supplemented by salesmanship and sales promotion. Advertising is to business what steam, electric or nuclear energy (motive power) is to industry.

**KEY WORDS :** Advertising, Brand, Consumer, Consumer goods.

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## INTRODUCTION

It is a matter of everybody's observation that hundreds of products are newly added to be sold in the market. The arrival or existence of these goods must be known to the consumers so that they can take interest and if found suitable to their needs and wants they can go for ultimate purchase. This purpose is served through advertisement. Advertising is a social mirror of society, reflecting people's tastes, habits and desires. Advertising is virtually everywhere in daily life, and its forms and roles are both contested and admired. Some see advertising as both the mirror and the maker of culture: its words and images reflect the present and the past even as they contribute new sounds and symbols that shape the future. It is believed that no business can survive without advertisement. Therefore, advertisements are must. Advertising decision is a very critical decision because it may affect the whole marketing strategy. Advertising has now a days become a part and parcel of the commercial life. In ancient times, advertising was not known because marketing was almost entirely unknown. Whatever was produced was consumed easily. There was no surplus. With the development of civilization and social needs, extra production was achieved, which was sold to other persons. This marked the beginning of marketing, which was carried to potential consumers by well-composed information known now as advertisements.

Advertising is not developed in vacuum; it is one key element in the process of marketing. Businesses, individuals, governments and non-profit organisations all develop products to satisfy customers, the people or organisations that purchase a product and advertising helps persuade customers to select one product rather than another. Advertising plays an important role rather than limited role in marketing. It can be used to promote a product's many advantages, but it does not determine which features will satisfy people's needs. Advertising is a business of ideas. Whether or not you consider yourself creative, you must respect the creative process and understand how to work with and inspire creative people. Although some observers at the turn of the century believed advertising to be "a mirror of life", others complained of being bombarded with ads every day. Over the centuries, the evolution of advertising has been closely tied to social, economic and technological changes that have affected the media and the message. Due to the widening gap between producers and consumers as people moved away from their villages and crafts people had less personal contact with their customers. To bridge this gap and to stimulate the demand they needed to sell the larger quantities they were producing. Due to advertising business turned too quickly and easily reached to many potential customers.

Advertising makes purchasing easier for consumers. It provides necessary information to the consumers about the place of availability of goods, prices, utility, points of superiority, standard of quality, relative merits, etc. Selection and purchasing of goods by the consumers become much easier by advertising. It educates the consumers by providing knowledge about the new products or the new uses of existing products. It helps in the replacement of old habits and traditions by new and better methods and goods. It improves their standard of living. Manufacturers generally advertise their products by brand names to economize in the cost of advertisements and to create goodwill for their products. It tends to create confidence amongst the buyers about the quality of the goods advertised. The business is also forced to maintain quality to retain its customers. It helps a manufacturer to establish direct link with the consumers. He makes a direct appeal to the consumers and influences their buying habits. He can eliminate middlemen and undertake direct sales to the customers, who would be able to get better quality of goods at cheaper costs. It leads to increase in production and turnover. Large scale production and sales help in reducing the cost of production and distribution of goods. It brings about reduction in the selling prices of the goods in every part

of the country. Advertising promotes consumer satisfaction. It helps them to select the more useful, cheaper and better quality products. The prices of the same type of product may vary from producer to producer. Advertising helps people to choose the best and the cheapest goods. Life style and value systems are modified by advertisements. In India, the materialistic attitudes have won over spiritual thinking through advertisement.

### REVIEW OF LITERATURE

The ensuing text seeks to review the existing literature for the purpose to define the problem precisely and crystallise its objectives. This not only helps in setting the direction for the research but also broadens the mental horizon and the vision of its implications.

**Young**, advertising practitioners have recognized the importance of setting objectives and measuring the effectiveness of messages using all three criteria, C and A and B, rather than just one or two of them.

It is essential that the impact of the message be such that it gains and maintains the attention and interest of the target market. This can be achieved in different ways such as using the product in a normal setting, depicting a lifestyle that fits the product, creating a fantasy around the product, making use of mood or images that illustrate beauty, love or serenity, displaying a personality symbol that represents the product, employing a technical expertise showing the product, or by means of scientific or testimonial evidence **Kotler** nevertheless, authors such as **Fugate** rely on the ability of humour as to attract attention, increase comprehension and credibility as well as enhance liking.

**Doole and Lowe** identifies international marketing culture as “the sum total of learned beliefs, values and customs that serve to direct consumer behaviour in a particular country market”.

People’s culture will have an effect on their attitudes and actions **Johnston and Beaton** and as stated by **McAuley** as well as by **Javalgi and White** only by understanding the importance of the cultural factors, international marketing will be successful forth.

**Eagley, Wood, and Chaiken** have identified two types of bias which could influence recipients' causal attributions. First, recipients may believe that the communicator might have knowledge bias. That is, the communicator's knowledge of message-relevant information is not veracious. Second, the communicator might have a reporting bias. That is, the communicator is unwilling to communicate an accurate representation of reality. Research has provided support for this framework

**Lamb** argues that effectiveness depends on achieving the main purpose of advertising; that is, to garner sales or influence purchase decisions

**Morgan and Pritchard** state that all the reasons to evaluate advertising effectiveness are comprised in the following stages: awareness of the product by the target market; comprehension of the features and benefits of the product by potential customers; acceptance that the product can meet their needs; purchase, motivates the customer to act or to buy and; the reinforcement, to confirm customers’ choices.

### OBJECTIVES OF THE STUDY

The present study attempts to:

- (i) study that advertising changes and influence the personality of a human being;
- (ii) analyze that advertising improves social, moral and business ethical values among the society;
- (iii) examine that advertisements have greater impact on our minds;
- (iv) analyze that advertisements boost up the standard of living of the society.

### **HYPOTHESES OF THE STUDY**

- H<sub>1</sub>: There is a significant difference among the respondents towards the impact of advertising on consumers' lifestyle;  
H<sub>2</sub>: There is a significant difference among the respondents towards the social, moral and business ethical values among the society;  
H<sub>3</sub>: Advertisements have greater impact on consumer's minds;  
H<sub>4</sub>: There is a significant difference among the respondents towards the Impact advertisement and improvement in standard of living.

### **RESEARCH METHODOLOGY**

#### **Universe of the study and survey population**

In the present study, the existing and potential customers of consumer goods or FMCGs in the district Bhiwani of Haryana are considered as a unit of analysis. Further, it is restricted to four FMCGs like Toothpaste, Shampoo, Detergent Powder and Soaps, which are treated as consumer goods as a whole.

#### **Research design**

Initially, study used exploratory design to get the objectives clearly defined and to formulate the hypotheses. Afterwards, the research used descriptive design by forming a structured questionnaire and surveying 300 respondents from the locale of Bhiwani in Haryana.

#### **Sampling plan**

The sampling was done on the random basis. For selecting the sample convenience sampling was used. Key informants included the users of FMCGs. Questionnaires were filled by personal interviews from each respondent.

#### **Data collection**

An extensive literature review facilitated theory development and item generation. The literature search includes several journals, articles, books, newspapers and business magazines. So the principal data collection methods used were combination of the analysis of the literature, statistical data from secondary sources, questionnaire survey and the content analysis. The term „content analysis“ means information analysis of the key events of an industry recorded in reports, research papers, compendium, and handbook of statistics, business magazines, newspapers and Internet.

To answer the research questions (objectives of the study) and to verify/test the tentative answers (hypotheses of the study), the required information is identified. Then, questionnaire was developed, which was the main instrument used to collect the required information. The qualitative data was collected using scaling techniques on a 5-point Likert scale. The values on the scale signify a continuum from „1 to 5“ as anyone of the below mentioned rows:

- 1.....Strongly Agree,
2. Agree,
- 3.....Indifferent,
- 4.....Disagree,
- 5.....Strongly Disagree.

A total of 300 respondents (sample using convenience sampling) were contacted personally during survey in the Bhiwani district of Haryana state; out of which 227 respondents responded positively and provided the required information and gathered 227 filled up questionnaires from them. Secondary data was collected from different previous research studies, including several journals, compendium, and handbook of statistics, articles, books, newspapers and business magazines. Furthermore, Internet is also used for gathering worldwide information. During the course of editing of the questionnaires, the number 227 in terms of questionnaires was further reduced by 29, when it was discovered that the information recorded in the questionnaires was incomplete and highly inconsistent on one or the other count. Therefore, 198 questionnaires were finally considered for further processing of the data and final analysis.

**Analyses pattern: Dependent and Independent variables**

There are five independent variables like gender, age, income, occupation and education. The dependent variables used to operationalise advertising effectiveness are: (a) Attitude towards the ad; (b) Attitude towards the brand.

After collection of data through various sources, different techniques have been used for the analysis of data. A set of simple techniques of statistical analysis such as average, weighted mean, percentage, cumulative percentage, ranking and standard deviation, has been used. Wherever appropriate and to test the hypotheses, Chi-square, Correlation and ANOVA have been used. Furthermore, graphical presentation is also done for its easy grasping. Most of them are obtained with the help of the computerized packages SPSS (16.0 version); and Microsoft Office Excel 2007. Interpretation of data is based on rigorous exercise aiming at the achievement of the objectives of the study and findings of the existing studies.

**ANALYSIS OF DATA:**

**Table 1.1**  
**Impact of Advertising on Consumers' Lifestyle**

Goods	Toothpastes		Shampoos		Detergent Powders		Soaps	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Behaviour	1.56(2)	.984	1.73(3)	.958	1.77(4)	.933	1.52(1)	.779
Attitude	2.21(2)	.876	2.19(1)	.722	2.42(4)	.907	2.27(3)	.876
Perception	2.65(2)	1.060	2.68(3)	.933	2.72(4)	.997	2.55(1)	.882
Habits	3.10(3.5)	.954	3.05(1)	.989	3.10(3.5)	1.069	3.09(2)	1.086
Desires	3.66(4)	1.284	3.65(3)	1.260	3.45(1)	1.391	3.48(2)	1.373
<b>Average of Ranks→</b>	<b>2.7</b>		<b>2.2</b>		<b>3.3</b>		<b>1.8</b>	

**Note:** Rank in parenthesis.

**Source: Survey.**

Being advertising a source of awareness may influence the lifestyle of the consumer. In this regard, the Table 1.1 is prepared to know the degree of impact on advertising on lifestyles of the respondents or the consumers of FMCGs like toothpaste, shampoo, detergent powder and soaps. The table depicts that advertisements of FMCGs change the behaviour of the consumers of soaps followed by toothpaste, shampoos and detergent powders having the mean values: 1.52, 1.56, 1.73 and 1.77, respectively. Further, it is observed that attitude is the



second component of personality of a person which is influenced by advertisements followed by attitude, perception and habits. Whereas, desires are least concerned that may be changed with the impact of advertisement. It means desires remain unchanged or there is no impact of advertisement on desires of the consumers. On the basis of average of ranks, it may be concluded that the degree of impact of advertisement on consumers is maximum in case of soap users followed by toothpaste, shampoo and detergent powders. On the basis of majority of responses, the hypothesis may be accepted that there is a significant difference among the respondents towards the impact of advertising on consumers' lifestyle ..... **H<sub>1</sub>**

**Table 1.2**  
**Moral, Social, Ethical Values and Advertising**

Nature of Response	No. of Respondents	Percent
Strongly Disagree	23	11.6
Disagree	135	68.2
Indifferent	23	11.6
Agree	14	7.1
Strongly Agree	3	1.5
Total	198	100.0
Mean	2.37	
Standard Deviation	0.843	
$\chi^2 = 284.172, df=4$ at 0.01		
Asymp. Sig.	.000	

**Source: Survey.**

Table 1.2 depicts the responses given by respondents regarding the role of advertisements to improve or boost up the moral, social and ethical values among the society and found that ninety-one percent respondents disagreed with this statement. Whereas, only nine percent are of the opinion that advertisements plays a vital role to boost-up such values. On the application of Chi-square test, it is found that there is a significant difference among the opinions of respondents that advertisements enhance the moral, social and ethical values among the society with the acceptance of hypothesis at 1 percent significance level..... **H<sub>2</sub>**

**Table 1.3**  
**Impact of Advertising on Thinking Style of Consumers**

Nature of Response	No. of Respondents	Percent
Strongly Agree	35	17.7
Agree	101	51.0
Indifferent	41	20.7
Disagree	21	10.6
Total	198	100.0
Mean	2.37	
Standard Deviation	0.843	
$\chi^2 = 284.172, df=4$ at 0.01		
Asymp. Sig.	.000	

**Source: Survey.**

Table 1.3 figures that four-fifth respondents agreeing that the advertisement of various consumer goods changes the thinking styles of consumers; whereas, one-tenth people are of different opinion. The value is also accepting the statement at 1 percent significance level that all the customers are of the same opinion regarding the change in thinking style due to advertisements

**Table 1.4**  
**Advertisement and Improvement in Standard of Living**

Nature of Response	No. of Respondents	Percent
Strongly Disagree	12	6.1
Disagree	133	67.2
Indifferent	24	12.1
Agree	26	13.1
Strongly Agree	3	1.5
Total	198	100.0
Mean	2.37	
Standard Deviation	0.843	
$\chi^2 = 284.172, df=4$ at 0.01		
Asymp. Sig.	.000	

**Source: Survey.**

After applying the Chi-square test, it is found that there is a significant difference among the opinions of respondents that advertisements lift the standard of living of the society with the acceptance of hypothesis at 1 percent significance level..... **H<sub>4</sub>**.

**CONCLUSIONS**

1. It is found that advertisements of FMCGs change the behaviour of the consumers of soaps followed by toothpaste, shampoos and detergent powders having the mean values: 1.52, 1.56, 1.73 and 1.77, respectively. Further, it is observed that attitude is the second component of personality of a person which is influenced by advertisements followed by attitude, perception and habits. Whereas, desires are least concerned that may be changed with the impact of advertisement. It means desires remain unchanged or there is no impact of advertisement on desires of the consumers.
2. It is found that ninety-one percent respondents disagreed with this statement. Whereas, only nine percent are of the opinion that advertisements plays a vital role to boost-up such values.
3. Four-fifth respondents agreeing that the advertisement of various consumer goods changes the thinking styles of consumers; whereas, one-tenth people are of different opinion. The value is also accepting the statement at 1 percent significance level that all the customers are of the same opinion regarding the change in thinking style due to advertisements.
4. Nearly seventy percent respondents are not agree with the statement that advertisement boost the standard of living that they are not agree with this statement. Whereas, 12.1 percent are of indifferent opinion, if both the values are clubbed together than it may be concluded that four-fifth respondent are not in favour of this view that the advertisements are having a positive role among the social development.

At the end, it may be provoked that advertisements may not improve or boost up the moral, social and ethical values among the society as well as standard of living of the society. But advertising has the power to persuade, the power to influence the mind and shape destiny. It has the power to change markets and improve profit margins. Advertising has short-term power (conveying new information, building awareness, enhancing credibility, etc.) and long-term power (conveying brand image, attaching emotional values to the brand, building positive reputation, etc.). The great power of advertising is seldom achieved in practice, but we can't give up. The potential and the promise are too great. The companies that master the creative guidance and the testing systems to consistently develop and deploy great advertising will own the future and the fortunes that go with it. Great advertising is a cloak of invincibility. Therefore, advertising must be more effective. To create effective advertising, the following steps may be considered:

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