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The Need of the Hour**

ANUTAM PAUL



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Social Cost-Benefit Analysis of Thermal Power Plants: A Study of Budge Budge Generating Station

J. K. Das^{} and Mahadeb Paul^{**}*

ABSTRACT: Coal-fired thermal power plant which generates the key ingredient of industrialisation and determinants of the economic strength of a country plays a dominating role in total power sector. Conversely it has negative relation with environmental system. This paper attempts to make a study of the socio-economic and environmental aspects in the neighboring region of Budge Budge Generating Station under Calcutta Electricity Supply Company of West Bengal in India. It has drawn a picture of outline of the Indian energy and allied emissions scenario of coal fed power plants. This empirical study is based on the data available through personal interview to different respondents of three levels - 309 project affected families, 52 families in the buffer zone beyond 5 km of the plant and 37 selected social representatives - by using stratified random sampling technique. It has highlighted the summary of respondents, the detriments caused to the society in the form of air, water, noise pollution, etc., and the activities as a responsible corporate citizen by undertaken different corrective means in project surrounding affected area.

Key Words : *Budge Budge Generating Station, Socio-economic and Environmental Impact, Environmental Hazards, Project Affected Families, Buffer Zone, Social Representatives, Corporate Social Responsibility.*

1. INTRODUCTION

Industrialisation, a foremost economic activity is co-related with development of a nation where as it is inversely related with environmental system. Electricity is a key element as well as prime component of such activity. The level of availability of energy is one of the

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determinants of the economic strength of a country. Because of increasing demand, prime attention has now been given on generation of power. Again considering some basic limitations of other sources of power generation as well as sky-scraping demands of electricity, fossil fuels especially coal occupy an indispensable role in the worldwide energy generation. Though it causes a considerable amount of pollution still it is well accepted by all.

Environmental effects, social and economic impact of thermal power plants (TPPs) have been enumerated here. Negative impacts owing to emissions of various toxic wastes from disposal areas of TPPs have also been outburst. Large power producing countries like the United States and China have also given importance on coal fed thermal power plants for energy generation.

Conventional burning fossil-fuel for power generation results in about 21% of all green house gases (GHGs) emission in the atmosphere, mostly in the form of carbon dioxide (CO_2). It causes global warming and climate change. During 2011, 42% of the total CO_2 emissions in the world have been generated by the power plants only. As per International Energy Agency (IEA), India has been treated as the sixth energy-related CO_2 emitter in 2011. The radiological impact of fly ash and flue-gas are significant. A serious threat to the ambient environment may be caused if it has not been properly disposed off and has the potential to create grave hazards.

Since independence (1947), while fixing its major expends, the Government of India has been granting sufficient priority to power sector. The installed generation capacity has been elevated from a mere 1,362 MW in 1947 to 2,07,876 MW on September 30, 2012 and coal fired generation has accounted for 57.1% of it. Most significant point is that 85.5% of the thermal power has been put in by coal fed power generating plants by burning more than 200 million tons of coal annually. The energy generation has been raised from 5.1 BU in 1950 to 876.5 BU in 2011-12. In spite of the rapid progress in this sector, there is incessant pressure to bridge the gap between the demand and supply of the same.

It may be pointed out that West Bengal has contributed about 10,338 MW in 2011-12 and 89.07% of it has been shared out by thermal power plants.

In a coal fired thermal power station along with electricity, wastes like ash, flue gases and hot water has been engendered. All such wastes cause severe pollution in the environment. In India it is estimated that about 70 to 80 million tons of coal ash are generated annually. It is full of various poisonous toxic pollutants. Significant radiological impact of coal ash may cause a serious threat to the project surrounding environment. It also causes the degradation of the cultivated land.

At present coal ash has beneficially been made use of in various means along with producing geo-polymer which has great utility rather than cement. CEA-Fly Ash Report-2011 confirms that ash utilization has been boosted up to 55.79% in 2010-11 from merely below 10% in 1996-97.

A variety of noxious pollutants like Carbon dioxide (CO_2), Sulphur dioxides (SO_2) and other GHGs have been discharged by the fuel fed thermal power plants. In 2011, total CO_2 emissions in the world have been estimated to 31,342 million tons and 42% of it has been emitted by the power plants only. In India about 52% of total discharged CO_2 of 1745.1 million tons has been released out of power plants. Such emissions are mostly liable for global warming and unpleasant atmosphere. Governments in many countries including India are

now encouraging corporate bodies to a greater extent to be socially consciousness. Different corrective measures like infrastructure development, welfare schemes, etc. may be undertaken for socio-economic expansion in adjacent to the project.

2 LITERATURE REVIEW

Empirical studies on social aspect of thermal power plants are very scanty. Mostly, social cost-benefit analysis of TPPs has outright been ignored, though it is fundamentally significant. Yet again a rare attention has been drawn on the empirical part of this topic. The literature relating to the studies on this issue have been pointed out here in concise form.

Dasgupta (1999) has illustrated the attempts to expose the means to surmount the problems of disposal of huge quantities of ash generated by TPPs by producing different value added products, like bricks, etc. Only most effective use of the solid waste has been observed here, ignoring its social impact. Nafez and Kamal (2000) have studied the techniques followed on corporate social disclosure (CSD) in the accounts. Ichikawa and Sada (2002) have detected that the basic points for the environmental impact assessment are concentration of air pollutants and suspended particulate matters in the atmosphere. They are in favour of expanding the developed atmospheric dispersion model instead of others to assess the environmental impact of TPPs for evaluation of topographical effects. Here, the detection and evaluation of environmental impact of TPPs have only been emphasized. Swain *et al.* (2004) had viewed that growth of Indian power sector have been blocked due to absence of clear-cut government Policy. Lack of knowledge and experience, limitation of infrastructure facilities, financial capabilities has further aggravated the problem. Considering the recent trend, energy privatization has been recommended to recover the situation. Here discussion has only been confined with structural perspective of Indian power sector. Joulain (2004) showed the inter relation between the combustion and the environment. It had stated that optimum utilization of combustion technologies and proper control had an effective economic challenge for the rapid progress of industrialization. Hein *et al.* (2005) explained the essentialities of diversified set of power plants, and suggested for technologies which reduce GHG emissions, CO₂ retention, low initial investments, climate protection, etc. Chinh and Gheewala (2007) classified the effective method to assess the environmental effects of coal based power plants.

Mukhopadhyay (2008) viewed that pollution has been inclining for the inefficient use of fossil fuel. This article has enlightened the implication of air pollution only. The study remains silent on the environmental effect of TPPs. Das and Bose (2009) have highlighted the various aspects related to the corporate social as well as environmental responsibilities and their significance in respect of development of Indian power sector. It has also drawn attention to the extent of exposures of such social and environmental exhaustion in annual report. But such related article has been walked around without considering the pragmatic aspects of social impacts of thermal power plants. Direskeneli (2010) viewed that generation and improvement of the energy is essential and mandatory for its universal acceptance and importance. Of the conventional and non-conventional sources of energy, thermal power plants have occupied a dominating part. It has also been considered as the main sources of environmental pollution. Sheng *et al.* (2010) have concluded by applying different models that environmental protection has been described as the vital tasks as well as indicator for the assessment of any thermal power enterprise. Sahay (xxxx) has found out the insignificant impact of the power plant on the ecology due to the preventive actions and continuous

monitoring by the plant authority. Expectation of the local people has been covered on pollution control, employments, free electricity, etc. The study has provided a baseline for the social cost- benefit analysis of TPPs. Jadav *et al.* (2010) have analyzed the impacts of the waste water stored in ash ponds on the underground water quality. Waste water with hazardous substances in ash pond has leached and percolated through the soil layers and reached into the groundwater which becomes vulnerable and interferes with natural conditions of water as well as affects the aquatic life. The underground water quality near the thermal power plant has only been assessed here. Dasgupta and Paul (2011) investigated the impact of coal ash on the surrounding land of the thermal power plant in respect of its change in use and its degradation. Implementation of better technology and afforestation programme in plant surrounding area has been advocated. Vikrant *et al.* (2011) studied that establishment of TPPs on the estuaries and tidal creeks exert a tremendous hassle on the habitat. As suggested that the periodic surveillances and required actions may enable to retain the betterment of the habitats.

Thus a wide-ranging empirical study involving all aspects on social and environmental effects of TPPs is severe indispensable.

3. OBJECTIVES

To resolve the environmental pollution cost as well as its dreadful causes on the project surrounding affected families, an attempt has been initiated through this study. The corrective measures which have been carried out by the project authorities for the improvement and welfare in project affected area (PAA) have been brought to light here. The study explicitly traces the:

- Appraisal of the demographic profile of the project affected persons.
- Assessment of social and environmental impact in project affected area.
- Estimation of the different remedial measures initiated by the project authorities.

4. METHODOLOGY

The study is empirical in nature which is based upon the collected data out of personal interview to different respondents of three levels by using stratified random sampling technique surrounding the area of Budge Budge Generating Station (BBGS) in West Bengal under Calcutta Electricity Supply Company (CESC) in India during 2011-13.

The power plant is treated as the centre of the study circle and some concentric circles are taken as strata depending on the pollution intensity of the area surrounding the plant. At the prime level, 309 Project Affected Families (PAFs) are selected randomly surrounding a 5 km radius of the plant and interviewed with structured schedule to collect primary data. In the next level, 52 families in the buffer zone (BZ) beyond 5 km radius surrounding the plant have been taken into account with similar questionnaire. At the last level, the opinion of 37 selected social representatives (SRs) has been taken into consideration using a special type of structured schedule. For secondary data different websites, books, journals and dailies are used.

The SPSS package is used for statistical analysis of data. Descriptive statistical methods, correlation, testing of hypothesis, analysis of variance have been taken into consideration for data analysis. For qualitative data analysis 5 point Likert's scale has been applied.

5. DATA ANALYSIS AND FINDINGS

Here the collected data from different levels have been analyzed. It contains general profile and economic condition of PAFs, infrastructure, environmental impact, investigation on social disturbance, remedial measures, and association of different variables with distance from TPPs.

5.1. About Budge Budge Generating Station

Budge Budge Generating Station (BBGS) is a major private power generating station in West Bengal under CESC. It is located at Achipur, Pujali within Pujali Municipality in South 24 Parganas district of West Bengal. It is nestled on the east bank of Hooghly River near about six kilometer from Budge Budge Railway Station of Eastern Railways and at a distance of 25 km from Kolkata. It has been provided with a number of awards for meritorious activities in power sector on environment management including pollution control and also for the excellent performance in ash utilization.

5.2. Study Areas

Out of the fifteen wards under Pujali Municipality the survey has been administered in most of its project affected wards which are located within a distance of five km from the power station. Again some wards which are located beyond a distance of five kilo metre i.e. in buffer zone from the project under the same have also been studied. Details of the studied project affected families (PAFs) and persons (PAPs), Families in buffer zone (BZFs) and persons (BZPs) and social representatives (SRs) in BBGS surrounding areas have been summarized in the Table 1.

Table 1: Summary Details of Surveyed Families and Persons in BBGS Area

Name of the Area	Upto 5 Km (PAAs)		Beyond 5 Km (BZ)		Total		SRs
	PAFs	PAPs	BZFs	BZPs	Families	Persons	
Pujali Municipality	309	1509	52	267	361	1776	37

5.3. General Profile of the Respondents

The study of 309 PAFs within a distance of five km comprises 16.2%, 22.5%, 30.4%, 18.3% and 12.6% of 1km, 2km, 3km, 4km and 5km respectively whereas for 52 BZFs it is 17.3%, 09.6%, 36.6%, 26.9% and 09.6% of 6 km, 7 km, 8 km, 9 km, and 10 km respectively. Again sample of 37 SRs are selected within a distance of 5km. Direction wise distribution of 309 PAFs is of 131(42.4%), 49 (15.9%), 26(8.4%) and 103(33.3%) from east, west, north and south respectively.

309 PAFs consist of 1509 PAPs comprising of 776 (51.4%) male and 733 (48.6%) female whereas for 52 BZFs it is 267 BZPs comprising of 140 (52.4%) male and 127 (47.6%)

female. 67.6% of sample families are nuclear and 32.4% are joint. Again 64.1% selected PAFs are Hindu and others are Muslim.

The study shows that only 40.8% of sample PAFs have an education of secondary level. 5.2% and 0.1% are graduates and post-graduates respectively whereas it is about 10.5% and 3.4% for BZPs. The most disgraceful point is illiteracy rate (18.7%) which is more than BZPs (2.2%). It also reveals that the income of 25.2% PAFs is less than Rs. 2000 and almost 89% families have an income up to Rs. 10000 per month. So, most of the PAFs are in low income group.

5.4. Economic Condition of PAFs

The study shows that about 65.0% of 309 selected PAFs reside in pacca house and 16.5% of them have kuchha house. In respect of holding of agricultural land by the PAFs, it reveals that only 10.7% of sample PAFs have possessed it. In respect of food availability about 26.2% PAFs do not have their food at least as per their need.

Table 2: Possession of Physical Assets

Physical Assets	STUDY AREA OF BBGS			
	PAFs	%	BZFs	%
Cycle	259	83.8	51	98.1
Motor cycle	42	13.6	21	40.4
Car	1	0.3	5	9.6
TV	192	62.1	47	90.4
Radio	11	3.6	27	51.9
Gas	111	35.9	34	65.4
Stove	7	2.3	21	40.4
Bio-gas	0	0	0	0
Refrigerator	30	9.7	0	0
Sewing Machine	2	0.6	1	1.9
Telephone	174	56.3	29	55.8
Computer	3	1.0	8	15.4
Fan	232	75.1	48	92.3
Nil	31	10.0	0	0

Table 2 presents that only 13.6%, 35.9%, 9.7%, 56.3% and 1.0% of them have motor cycle, connection of gas, refrigerator, telephone and computer respectively. On the contrary, majority of them (around 70%) have bicycle, electric fan and television. So, economic condition of the PAFs is not so healthier.

5.5. Different Facilities Available

In respect of transport and communication the survey reveals that most of the PAFs (more than 90%) and SRs have expressed their satisfaction on such facilities available in their area. All of the studied PAFs and most of the SRs are satisfied on the available educational facilities in their area. Similar expression has been made by BZFs also. Table 3 presents the

views of three categories of respondents on the type of available educational facilities in their respective areas. It shows that most of them are highly concerned as there is no college in their area. Only 8.7% PAFs and 5.4% SRs are responded for library facilities in their area.

Table 3: Type of Educational Facilities

Educational Facilities	Study Area of BBGS					
	PAFs	%	SRs	%	BZFs	%
Primary school	283	91.6	35	94.6	52	100.0
High school	276	89.3	35	94.6	40	76.9
College	0	0	0	0	0	0
Library	27	8.7	2	5.4	0	0

Majority of PAFs (76.4%) and SRs (56.7%) are satisfied with the available medical facilities. On the other side about 23.6% PAFs and 43.3% SRs have expressed their dissatisfaction on this issue. Most significant point (Table 4) is that the entire sample PAFs has either type of the medical facilities in their area.

Table 4: Type of Medical Facilities

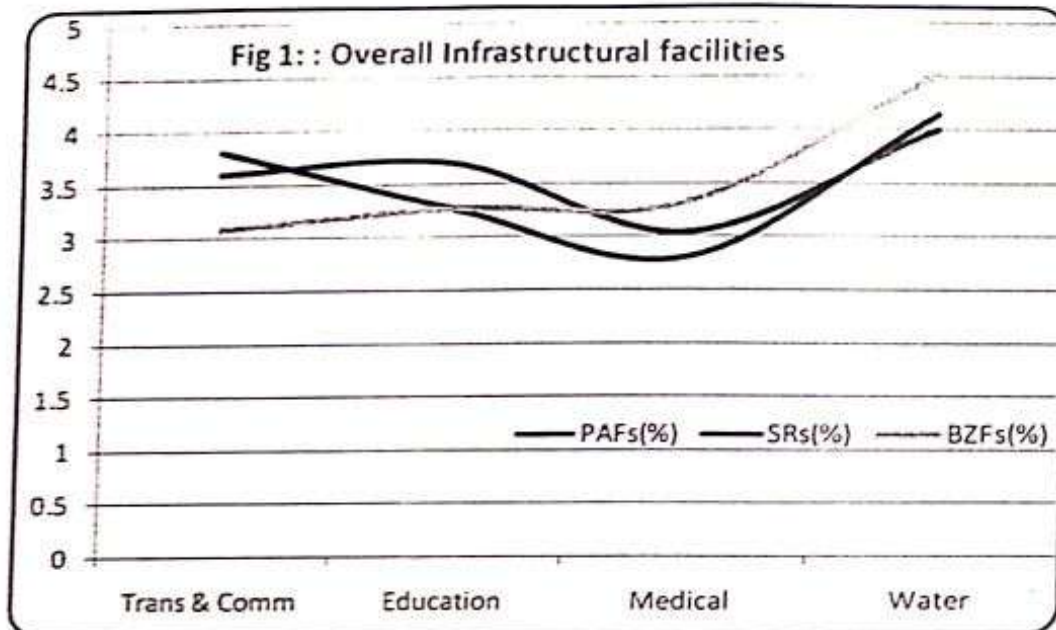
Medical Facilities	Study Area of BBGS			
	PAFs	%	BZFs	%
Health centre	284	91.9	42	80.8
Nursing home	27	8.7	19	36.5
Doctors' chamber	180	58.3	49	94.2
Not present	0	0	0	0

All of the PAFs and SRs have expressed their satisfaction on the availability of water (Table 5).

Table 5: Water Availability

Water availability	Study Area of BBGS					
	PAFs	%	SRs	%	BZFs	%
Very good	23	7.4	9	24.3	37	71.2
Good	264	85.4	24	64.9	6	11.5
Average	22	7.1	4	10.8	8	15.4
Poor	0	0	0	0	1	1.9
Very poor	0	0	0	0	0	0
TOTAL	309	100.0	37	100.0	52	100.0
Mean	4.000		4.140		4.520	
S.D.	0.382		0.585		0.828	
Skewness	0.033		-0.013		-1.464	
Kurtosis	3.949		0.005		0.815	

Overall infrastructural development has been depicted in Fig.1 which exhibits the similarity between PAFs and SRs. It also depicts that according to BZFs, infrastructural facilities is comparatively better than that of PAFs and SRs.



5.6. Environmental Impact

Environmental impact of TPPs is a vital issue which has been depicted here based upon the responses of the project surrounding families on different issues.

Table 6: Geological Change

Geological Change	Study Area of BBGS					
	PAFs	%	SRs	%	BZFs	%
Uniquely	165	53.4	23	62.2	5	9.6
Completely	42	13.6	0	0	0	0
Partially	54	17.5	4	10.8	8	15.4
Very little	39	12.6	8	21.6	2	3.8
Not at all	9	2.9	2	5.4	37	71.2
TOTAL	309	100.0	37	100.0	52	100.0
Mean	4.020		3.920		1.730	
S.D.	1.217		1.460		1.300	
Skewness	-0.854		-0.757		1.639	
Kurtosis	-0.600		-1.189		1.463	

In respect of geological change (Table 6) due to coal ash damped in their locality there is a large amount similarity between the opinions of PAFs and SRs who are very much concerned on this issue. On the contrary the most of the BZFs (75.0%) have responded reversely in this issue.

Table 7: Presence of Fly Ash

Presence of Fly Ash	Study Area of BBGS					
	PAFs	%	SRs	%	BZFs	%
Very high	146	47.2	35	94.6	1	1.9
High	51	16.5	2	5.4	15	28.8
Average	111	35.9	0	0	8	15.4
Low	0	0	0	0	17	32.7
Very low	1	0.3	0	0	11	21.2
TOTAL	309	100.0	37	100.0	52	100.0
Mean	4.100		4.950		2.580	
S.D.	0.924		0.229		1.177	
Skewness	-0.307		-4.113		0.146	
Kurtosis	-1.429		15.767		-1.278	

All but every PAFs and SRs have expressed with a vengeance about the very high level of presence of fly ash in air as well as in house in their area. The descriptive statistics also provides the mean value which is 4.10 and 4.95 point respectively and S.D. is within 0.924 and 0.229 respectively on a five point scale. The outcomes of the responses are negatively skewed. On the contrary 53.9% BZFs have expressed their opposite views.

Table 8: Noise Pollution

Noise Pollution	Study Area of BBGS					
	PAFs	%	SRs	%	BZFs	%
Very high	157	50.8	18	48.6	0	0
High	36	11.7	9	24.3	0	0
Average	0	0	8	21.6	0	0
Low	73	23.6	2	5.4	27	51.9
Very low	43	13.9	0	0	25	48.1
TOTAL	309	100.0	37	100.0	52	100.0
Mean	3.620		4.160		1.520	
S.D.	1.602		0.958		0.505	
Skewness	-.528		-0.743		-0.079	
Kurtosis	-1.476		-0.648		-2.075	

According to the Table 8 the mean value for PAFs and SRs is more than 3 which implies that noise pollution is a major problem. Whereas opposite responses have been found out for the BZFs.

Table 9: Air Pollution

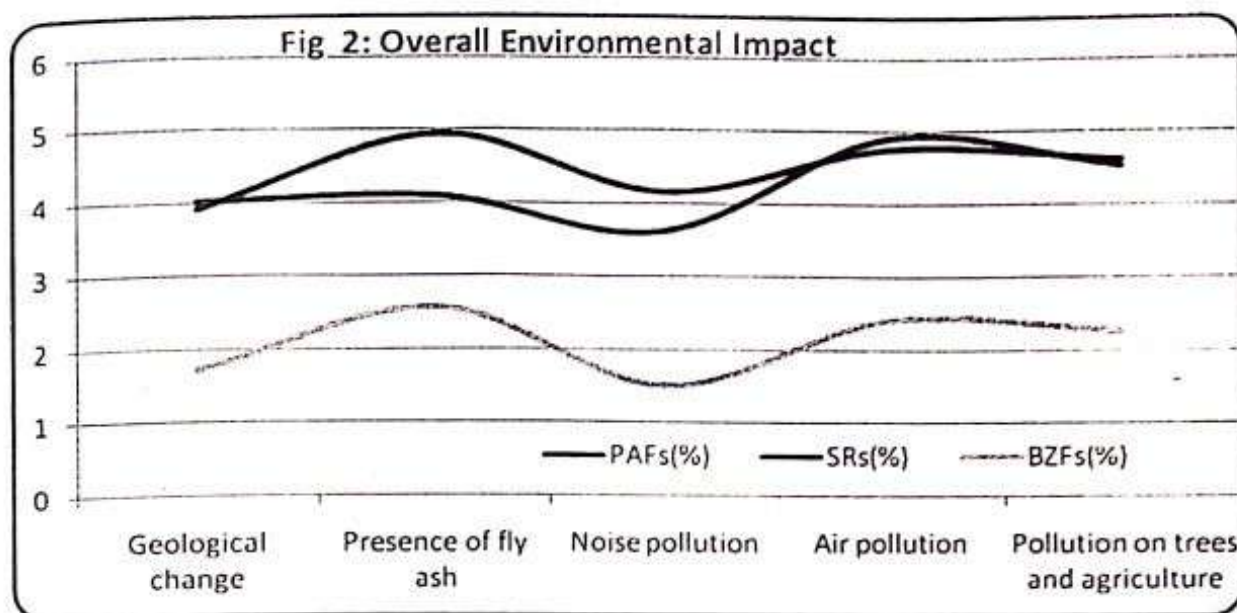
Air pollution	Study Area of BBGS					
	PAFs	%	SRs	%	BZFs	%
Very high	289	93.5	32	86.5	0	0
High	16	5.2	3	8.1	12	23.1
Average	3	1.0	0	0	9	17.3
Low	1	0.3	2	5.4	20	38.5
Very low	0	0	0	0	11	21.2
TOTAL	309	100.0	37	100.0	52	100.0
Mean	4.920		4.760		2.420	
S.D.	0.337		0.723		1.073	
Skewness	- 4.982		- 3.323		0.257	
Kurtosis	28.990		10.750		-1.171	

Almost every PAFs (98.7%) and SRs (94.6%) have expressed that high or very high level of air pollution has been caused by TPP owing to emission of gases and fly ash (Table 9). The mean value is between 4.92 and 4.76 respectively. On the other side 23.1% of the selected BZFs have expressed the similar views.

Table 10: Impact of Air Pollution on Trees and Agricultural Land

Impact of air pollution	Study Area of BBGS					
	PAFs	%	SRs	%	BZFs	%
Very high	225	72.8	32	86.5	4	7.7
High	25	8.1	0	0	6	11.5
Tolerable	58	18.8	3	8.1	7	13.5
Low	0	0	0	0	18	34.6
Very low	1	0.3	2	5.4	17	32.7
TOTAL	309	100.0	37	100.0	52	100.0
Mean	4.530		4.620		2.270	
S.D.	0.816		1.037		1.254	
Skewness	-1.400		-2.794		0.829	
Kurtosis	0.610		7.111		-0.311	

Regarding the perception on impact of air pollution on agricultural land and trees in PAAs, around 80.9% of PAFs and 86.5% of SRs in KTPS area have expressed high or very high negative impact. The mean value for the same is 4.53 and 4.62 point respectively. BZFs have expressed the opposite views (Table 10).



Overall environmental impact on some selected issues surrounding BBGS area has been exhibited in Fig. 2 which draws the similar expressions of PAFs and SRs. In all cases the average environmental impact lines move far above the BZFs.

5.7. Some Other Issues

Impact of the power project on some of the other fundamental issues like fertility of agricultural land, regeneration of fishes etc. have been put forward considering the attitudes of the project surrounding surveyed respondents.

Table 11: Impact on Yield of Different Crops

Impact on yield of different crops	Study Area of BBGS					
	PAFs	%	SRs	%	BZFs	%
Not Applicable	276	89.3	26	70.3	37	71.2
Applicable	33	10.7	11	29.7	15	28.8
Highly increasing	0	0	0	0	4	26.7
Increasing	5	15.2	0	0	9	60.0
Static day by day	4	12.1	0	0	2	13.3
Decreasing	15	45.5	6	54.5	0	0
Highly decreasing	9	27.3	5	45.5	0	0
Total (Applicable)	33	100.0	11	100.0	15	100.0
Mean	2.150		1.550		4.130	
S.D.	1.004		0.522		0.640	
Skewness	0.665		-0.213		-0.103	
Kurtosis	-0.470		-2.444		-0.127	

Table 11 shows that out of selected samples only 33 PAFs and 15 BZFs have the cultivated land. Again only 11 SRs have come under the agricultural belt. Now almost 72.8% of the above applicable PAFs and all of the SRs have expressed that yield of crops has been declining significantly whereas none of BZFs have expressed the same.

Table 12: Impact of Regeneration of Fish

Regeneration of Fish	Study Area of BBGS			
	PAFs	%	BZFs	%
Not Applicable	141	45.6	36	69.2
Applicable	168	54.4	16	30.8
Highly increasing	0	0	7	43.8
Increasing	0	0	3	18.8
Static day by day	23	13.7	6	37.5
Decreasing	73	43.5	0	0
Highly decreasing	72	42.9	0	0
Total (Applicable)	168	100.0	16	100.0
Mean	1.710		4.060	
S.D.	0.695		0.929	
Skewness	0.465		-0.136	
Kurtosis	-0.857		-1.960	

Table 12 shows that only 168 of PAFs and 16 of BZFs respectively are pertinent to this issue. Now almost 86.4% of the above applicable PAFs have viewed that regeneration of fish has been declining significantly whereas no BZFs have expressed such problem.

Likewise about 23.6% of sample PAFs have been marked in the list of families suffering from different types of chronic diseases. It also shows that around 6.4% of surveyed PAFs have been suffering from either of chronic diseases. Most of the PAFs (90.4%) where different members have been suffering from it in BBGS area have a strong belief that pollution caused by TPS is the primary source of such diseases.

The study shows that due to the various environmental hazards and pollution caused by BBGS most of the PAFs (58.5%) have agreed to shift / moved away from the PAAs whereas such percentage is insignificant for BZFs (23.1%).

Almost 92.2% PAFs and 21.6% SRs are extremely dissatisfied with the level of pollution which they feel, has been increasing gradually in their locality over last five years whereas it is comparatively low for BZFs (17.3%). It may be pointed out that about 70.3% SRs remain indifferent on this point.

Again it is very unfortunate to note from the study that some persons of few PAFs (13.6%) are psychologically affected due to pollution caused by BBGS. But no such effect has been caused in BZA.

5.8. Social Disturbance

The experience of respondents in project surrounding area on suffering from any social erosion owing to the project operation has been noted here.

Table 13: Anti-social Activities Related to TPS

Anti-social activities	Study Area of BBGS					
	PAFs	%	SRs	%	BZFs	%
Not Applicable	160	51.8	22	59.5	46	88.5
Applicable	149	48.2	15	40.5	6	11.5
Highly increasing	0	0	0	0	0	0
Increasing	149	100.0	15	100.0	0	0
Static day by day	0	0	0	0	1	16.7
Decreasing	0	0	0	0	5	83.3
Highly decreasing	0	0	0	0	0	0
Total (Applicable)	149	100.0	15	100.0	6	100.0
Mean	4.000		4.000		2.170	
S.D.	0.000		0.000		0.408	
Skewness	-		-		2.449	
Kurtosis	-		-		6.000	

From the Table 13 it is clear that 149 PAFs and 15 SRs respectively have disclosed their views related to this aspect and all of them have observed that anti-social activities surrounding TPS area have been increasing gradually whereas no BZFs have expressed the same.

5.9. Association of Different Parameters with Distance from BBGS

The Table 14 gives the Pearson correlation coefficient of some of the different observed social issues with distance from BBGS to analyze the impact of the same.

Table 14: Correlation of Different Parameters with Distance from BBGS

Parameters	Correlation (p-Value)	Remark
Significant geological change	-0.431* (0.000)	With the increasing distance from BBGS, the geological change has been thinning.
Awareness of pollution caused by TPS	-0.078 (0.170)	Awareness among PAPs has reversely been moving with increasing distance from the power station.
Presence of fly ash	-0.449* (0.000)	As distance is being increasing from the plant, presence of fly ash has been disappearing.
Noise pollution	-0.166* (0.004)	Noise pollution has been dwindling with the raising of distance from the plant
Air pollution	-0.006 (0.918)	With the increasing distance from the plant, noise pollution has been weakening.

Impact of air pollution on trees & agricultural land	-0.247* (0.000)	As distance has been changing, impact of air pollution on trees & agricultural land in the locality has been varying negatively.
Yield of different crops	0.011 (0.853)	Yield of different crops is positively correlated with distance from the plant.
Quality of available water	0.272* (0.000)	Better quality of water is available as distance from the plant has been increasing.
Greenery/plantations in locality	0.158* (0.005)	With the increase in distance, the greenery plantation in locality has been growing up.
Anti-social activities	-0.360* (0.000)	Anti-social activities have negatively been related with distance from BBGS.
General health of family members	0.014 (0.808)	General health of family members moves in positive direction with the change in distance from the plant.
Level of pollution over last 5 years	-0.342* (0.000)	View on intensity of pollution during last 5 years is negatively correlated with the distance.

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

5.10. Variation of Environmental Condition and Infrastructure with Distance and Direction from the Plant

To probe the impact of BBGS on its adjoining environment and infrastructure, analysis of variance technique is used to verify the variation with distance as well as direction. It corroborates that the overall environmental conditions adjacent to the project is highly varying (F-value= 28.5025, p-value=.000) in accordance with the distance from it. It also exposes that there is a strong variation of overall basic amenities and infrastructural facilities in immediate vicinity with respect to the distance from it (F-value= 16.4438, p-value = .000). Environmental conditions in adjoining part of the project is highly varying (F-value= 48.6223, p-value= .000) with the direction of the studied area from BBGS.

Another statistical test, chi-square has been brought into play to make sure the dependence of some social aspects with distance, direction etc. The hypothesis is whether different environmental issues are dependent on distance has been experimented applying chi-square statistic. It articulates the high level of dependence [Chi-square value = 113.401 and p-value = 0.000] of the above two attributes. Similarly the same is highly dependent with direction of the plant [Chi-square value = 89.202 and p-value =0.000]. Correspondingly infrastructural facilities are highly dependent with distance from the plant [Chi-square value = 106.216 and p-value = .000].

5.11. Remedial Measures in Project Affected Areas

Active persuasion of different remedial measures like rehabilitation, compensation and employment for the land losers, development of various schemes, etc. have the positive effect by improving social, cultural as well as economic conditions in PAAs. Here the opinions

of PAFs along with SRs have been presented and different Corporate Social Responsibility (CSR) activities undertaken by the project authority have also been pointed out.

Table 15: Rehabilitated for Acquisition of Land

Rehabilitate	Study Area of BBGS					
	PAFs	%	SRs	%	BZFs	%
Not Applicable	227	73.5	26	70.3	52	100.0
Applicable	82	26.5	11	29.7	0	0
Uniquely	0	0	0	0	0	0
Totally	0	0	0	0	0	0
Partially	7	8.5	0	0	0	0
A little	10	12.2	0	0	0	0
Not at all	65	79.3	11	100.0	0	0
Total (Applicable)	82	100.0	11	100.0	0	0
Mean	1.290		0		0	
S.D.	0.618		0		0	
Skewness	1.966		-		-	
Kurtosis	2.564		-		-	

Table 15 significantly pinpoints that almost 79.3% selected PAFs who have lost their houses, agricultural and non-agricultural land etc. and all of the related SRs who have responded on this point have not yet been provided with any rehabilitation facilities.

Table 16: Compensated for Acquisition of Land

Compensated	Study Area of BBGS					
	PAFs	%	SRs	%	BZFs	%
Not Applicable	227	73.5	26	70.3	52	100.0
Applicable	82	26.5	11	29.7	0	0
Uniquely	0	0	0	0	0	0
Totally	2	0	0	0	0	0
Partially	23	0	0	0	0	0
A little	28	34.1	0	0	0	0
Not at all	29	35.4	11	100.0	0	0
TOTAL	82	100.0	11	100.0	0	0
Mean	1.980		0		0	
S.D.	0.860		0		0	
Skewness	0.286		-		-	
Kurtosis	-1.047		-		-	

Again it is very unfortunate to note from the Table16 that almost 69.5% selected PAFs who have lost their houses, agricultural and non-agricultural land etc. have not yet been

provided with any or a little compensation for acquisition of their property whereas both are insignificant for BZFs.

Table 17: PAFs Employed in the Project

Employed	Study Area of BBGS					
	PAFs	%	SRs	%	BZFs	%
Not Applicable	227	100.0	26	100.0	52	100.0
Applicable	82	100.0	11	100.0	0	0
Yes	9	11.0	0	0	0	0
No	73	89.0	11	100.0	0	0
TOTAL (Applicable)	82	100.0	11	100.0	0	0

Most of the selected PAFs (89.0%) and all of the related SRs whose properties had been acquired by TPS, opined that they have not yet been employed in the project (Table 17).

Table 18: Infrastructural Development

Infrastructural Development	Study Area of BBGS			
	PAFs	%	SRs	%
Roads	309	100.0	37	100.0
Bridges	1	0.3	2	5.4
Culverts	0	0	0	0
School Buildings	234	75.7	31	83.8
Drainage	239	77.3	22	59.5
Drinking water	283	91.6	35	94.6
Rural electrification	309	100.0	37	100.0
Earth filling	0	0	0	0
Irrigation	0	0	0	0
Direct power supply to PAAs	1	0.3	2	5.4

Most of the PAFs and SRs have expressed their satisfaction with the development of road conditions, good schooling facilities, drainage system, drinking water and rural electrification in their area (Table 18).

Table 19: General Welfare Scheme

Welfare Scheme	Study Area of BBGS			
	PAFs	%	SRs	%
Tree plantation	86	27.8	15	40.5
Health camps	252	81.6	33	89.2
Sanitations	57	18.4	6	16.2
Family welfare camp	48	15.5	11	29.7
Adult education centre	173	56.0	25	67.6
Dispensary	43	13.9	11	29.7
Street light	308	99.7	35	94.6

Opinion of selected respondents on some of the general welfare activities undertaken by the respective authorities have been disclosed in Table 19. 27.8%, 81.6%, 99.7% PAFs and 40.5%, 89.2%, 94.6% SRs respectively have expressed their views in favour of adequate tree plantation, health camps, and street light respectively in PAAs.

Table 20: Pollution Control Measures

Pollution control measures taken	Study Area of BBGS			
	PAFs	%	SRs	%
Very quickly	0	0	0	0
Quickly	1	0.3	2	5.4
Slowly	26	8.4	2	5.4
Very slowly	0	0	0	0
Not at all	282	91.3	33	89.2
Total	309	100.0	37	100.0
Mean	1.180		1.270	
S.D.	0.579		0.804	
Skewness	3.001		2.842	
Kurtosis	7.296		6.852	

It is very disappointing to note from the Table 20 that around 91.3% PAFs and 89.2% SRs opine that the project authorities are less interested about the environment pollution caused by the TPS. Table 21 discloses the CSR activities that have been undertaken by the authority during 2011-12 in PAAs.

Table 21: CSR Activities during 2011-12

CSR Activities	Beneficiaries
1. Activities Relating to Education:	
a. Assistance to schools for infrastructure development: During 2010-11. During 2011-12.	Seven schools. Five schools.
b. Study materials.	For needy but meritorious students.
c. 'Electrical Safety and Energy Conservation' awareness programmes for the students (Till 2010 -11).	Forty-seven schools.
d. Two personality development programmes, 'Saksham' has been introduced during 2010-11.	For weak in self esteem children.
e. A residential school (Antaranga) has been initiated.	For mentally challenged girls.

f. For the development of livelihood generating skills.	For the students.
g. Full support for the promotion of high quality management education.	To three management institutes.
2. Activities Relating to Health:	
a. It has provided assistance for infrastructural development including improvement of maternity ward in Government Hospitals, clinics etc.	
b. It has provided facilities for safe drinking water, equipment for operation theatre, labour room as well as air conditioners, etc.	
c. It has arranged for anti natal and post natal care and awareness activities in the hospital.	
d. It has regularly organized health camps on medical checkup.	
e. It has initiated to renovate and upgrade a children's park.	
3. Activities Relating to Environment:	
It has undertaken various environment development programmes such as:	
a. Initiation for conservation of power.	
b. Recycling of e-waste.	
c. Encouraging for reduction of paper use.	
d. Tree plantation [about 10,000 trees have been planted during 2010-11].	

Source: CESC Annual report 2010-11 & 2011-12

6. CONCLUSION AND SUGGESTIONS

The study has enumerated some of the allied social, environmental and economic issues from different angles for assessment of social effects in thermal power station based on the attitude of PAFs as well as SRs.

The study reveals that due to acquisition of agricultural land by TPS major PAFs (10.7%) hold a little quantities of agricultural land which hampers their livelihood. Availability of food in PAFs is not so good; again 19.7% of them have to live in kuchha house. So, all these are indications of their economical backwardness. Majority of them have an education only up to secondary level (around 70.0%). Most of the PAFs and SRs are satisfied with their transport and communication facilities. They have fair educational and medical facilities. But higher education facilities are significantly poor. Overall infrastructural facilities are better. Majority of them have strongly expressed their dissatisfaction with coal ash being dumped in their locality which has direct environmental effects on the geological change in their areas. Most of them are greatly concerned as well as dissatisfied with high level of presence of fly-ash in atmosphere and abnormal level of air pollution owing to various emissions and noise pollution caused by TPS. Similar observations have been expressed on the rapid decline of greeneries and the negative impact of air pollution on agricultural land and trees in PAAs. Significant decline in yield of crops and regeneration of fish has been opined by both of them. Most of the affected families have believed that pollution caused by TPS is the prime source of such declination. The study reveals that most of the sufferers of PAPs from chronic diseases have strong belief that pollution caused by TPS is the key root of the same.

Most of the PAFs intend to shift away from PAA owing to different environmental hazards, caused by TPS. They have also expressed similar dissatisfaction on increasing trend in level of pollution during last five years in their locality. Some PAFs accused the pollution caused by TPS for their psychological distress. Both PAFs and SRs have strongly expressed that TPS is one of the very important source of social disturbances including different anti-social activities in their locality. Most of the land losers for the project in PAAs have not yet been rehabilitated compensated and/or employed in the project. However most of the PAFs and SRs are satisfied with different welfare activities undertaken by project authorities in PAAs.

Different measures which should be introduced to alleviate different social and environmental degradation caused by TPS and to maintain the ecological equilibrium have been suggested. It becomes imperative for the project authority to emerge and step forward as socially responsible citizens applying ample CSR activities which may to some extent reprimand the different annihilation caused by TPS. The plant authority in consultation with the government should make good arrangement for justifiable compensation to the dispossessed people and should implement them in priority basis. The project authorities should implement the afforestation programmes in plant as well as its surrounding local areas. The plant authorities should initiate various activities which in turn might persuade and pick up the economic condition in adjacent to PAAs. By imposing legal provisions, compulsion for allocation of certain percentage of the profit for different social activities in project surrounding locality should be put into practice by the plant authority. •

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Do Mutual Funds Time the Market? A Study of Selected Indian Mutual Fund Schemes

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ABSTRACT: The managers of mutual funds are likely to be more skilled and informed than the ordinary retail investors. They are likely to generate returns superior to a benchmark portfolio having identical risk through selection of best securities and market timing. A manager of a growth-oriented fund, who times the market successfully, increases the beta of the portfolio by buying high beta stocks and selling low beta stocks when he expects the stock market to rise and he reduces the beta of the portfolio by selling high beta stocks and buying low beta stocks when he expects stock market too decline. This paper searched the evidence of market timing by Indian mutual fund schemes during the period January 2010 to December 2013 on the basis of weekly excess returns using two two-indices regression equations. The evidence of successful market timing is found only in case of two schemes belonging to ICICI Prudential Mutual Fund out of nineteen selected Indian mutual fund schemes.

Key Words : *Mutual funds, Performance Evaluation, Micro-forecasting, Macro-forecasting, Security Selection, Market Timing.*

1. INTRODUCTION

Performance evaluation of a mutual fund requires comparison of the realized return of the managed fund with the realized return of a 'naively selected' portfolio with the same level of risk (Fama, 1972). A managed fund can achieve superior performance by (a) identifying and selecting the best securities (i.e., selecting the under-priced securities for buying and over-priced securities for selling) (called 'security selection' ability) and by (b) predicting the future movements of the stock market and timing the market by adjusting the systematic risk of the managed fund (called 'market timing' ability).

Thus, manager's 'market timing' ability is likely to increase the rate of return of the managed fund. When a manager predicts that stock market as whole is going to rise, he may

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shift towards more risky stocks and increase the responsiveness of the fund under his management to the fully-diversified market portfolio and if such timing is successful, the managed fund generates a return higher than the return of the market portfolio (Jensen, 1968). When a manager successfully predicts stock market decline, he may shift towards less risky stocks and bonds and reduce the responsiveness of the managed fund to the market portfolio and generate a return higher than the market return (Jensen, 1968). Thus, successful market timers generate returns higher than the market returns during a period when there are rises and falls in stock market, keeping the average systematic risk during the period at the prescribed level. Thus, it would be interesting to study whether the actively managed Indian mutual fund schemes time the market successfully or not.

This paper has aimed at searching the evidence of market timing by Indian mutual funds during the period January 2010 to December 2013 on the basis of weekly excess returns using two regression equations. The evidence of successful market timing is found only in case of two schemes belonging to ICICI Prudential Mutual Fund out of nineteen selected Indian mutual fund schemes.

2 OBJECTIVE

The objective of this paper is to study the 'market timing' abilities of the selected Indian mutual fund schemes during the period January 2010 to December 2013.

3. A SINGLE-INDEX MODEL FOR EXPRESSING THE RETURN OF A MUTUAL FUND

The rate of return on investment of a portfolio is likely to be influenced by many factors which can be classified into two groups. One group influences the rate of return of that portfolio only and other group influences the rates of return of all the assets and portfolios. The volatility in returns caused by the first group of factors (asset-specific factors) is called unsystematic risk and the volatility caused by the second group of factors (common factors) is called systematic risk. Total volatility in returns is measured by standard deviation whereas the systematic risk is measured by beta. All the risky assets are combined (weight being the market value of that asset to total market value of all risky assets) to form a portfolio which is called the market portfolio. The return on the market portfolio accounts for the influence of the common factors. Since the excess return on a portfolio (return on the portfolio over the return on the risk-free asset) is likely to be influenced by the unique factors as well as common factors, the excess return of a portfolio can be expressed as follows (Jensen, 1968) –

$$R_{it} - R_{ft} = a_i + b_i (R_{mt} - R_{ft}) + e_{it} \quad \dots (1)$$

Where, R_{it} = Realized return of the managed portfolio i for the period t .

R_{mt} = Realized return on the fully-diversified market portfolio for the period t .

R_{ft} = Realized return on the risk-free asset for the period t . It is the compensation for time.

a_i = Intercept term for portfolio i . The intercept represents the realized excess return from manager's ability to select securities (Jensen, 1968). Naïve random selection of securities yields zero intercept.

b_i = The regression coefficient which represents the responsiveness of the managed portfolio to the excess return on market portfolio. It represents the systematic risk of the portfolio. In this model, b_i is assumed to be constant over time.

e_{it} = The random error term and $e_{it} \sim iid(0, \sigma^2)$.

Taking expectations of both sides we get –

$$E(R_i) - R_f = a_i + b_i [E(R_m) - R_f] \quad \dots (2)$$

Where, E stands for expectation. Thus, excess return of the managed portfolio is expected to come from security selection and from bearing systematic risk b_i .

4. MARKET TIMING AND THE MODELING APPROACH

Sophisticated managers are likely to have forecasting skills better than the ordinary investors. These skills are divided into micro-forecasting and macro-forecasting skills (Henriksson and Merton, 1981).

Micro-forecasting: Predicting the future risk-return characteristics of the individual securities is called micro-forecasting which is the result of security analysis. Micro-forecasting results in the identification of the under-priced and over-priced securities. The gains from buying under-priced securities and selling or short-selling over-priced securities are described as “returns from security selection” (Jensen, 1968; Fama, 1972; Henriksson and Merton, 1981).

Macro-forecasting: Predicting the future movements of the stock market as a whole is described as macro-forecasting (Henriksson and Merton, 1981). The manager of an actively managed portfolio is likely to reduce the beta (i.e., sensitivity to market portfolio) of his portfolio by selling high-beta stocks and buying low-beta bonds when he expects that the stock market is going to decline. On the other hand, he increases the beta (and thus increases the sensitivity) of his portfolio by buying high beta stocks and selling low beta bonds when he expects the stock market to rise. The adjustment in beta in view of predicted future movements of the stock market is described as “market timing”.

When market timing is successful, bringing beta below target beta of the managed fund will be followed by negative excess return on market portfolio and increasing beta to above the target beta will be followed by positive excess return on market portfolio. Thus, the relationship between changes in beta of the managed portfolio and the subsequent performance of the market will be positive when successive market timings are successful (Jensen, 1968).

We have assumed that b_i remains constant over time in equation (1) but the magnitude of change in beta may depend on the on the predicted magnitude of the stock market movements (and thus the fund’s manager responds with several betas). Following Jensen (1968), equation (1) can be expressed as follows –

$$R_{it} - R_{ft} = a_i + b_{it} (R_{mt} - R_{ft}) + e_{it} \quad \dots (3)$$

Where, $b_{it} = b_i + v_{it}$ where $E(v_{it}) = 0$

And $v_{it} = c_i (R_{mt} - R_{ft}) + \epsilon_{it}$ where $\epsilon_{it} \sim iid(0, \sigma_\epsilon^2)$.

Thus, equation (3) can be expressed as follows –

$$R_{it} - R_{ft} = a_i + [b_i + c_i (R_{mt} - R_{ft}) + \varepsilon_{it}] (R_{mt} - R_{ft}) + e_{it} \quad (4)$$

Where, b_i = Beta of the managed fund for the period t .

b_i = Target (or average) beta which the manager wishes to maintain over time.

v_{it} = Error term which is partially under the control of the manager.

c_i = Manager's action to shift beta based on his forecast about the future stock market movements. If he does not take an action, c_i will be zero. If he takes action, c_i will be positive (i.e., $c_i > 0$). Thus, c_i represents the coefficient of the market timing proxy.

Thus, when the manager does not time the market, the excess return on managed fund and excess market return move in unison. And equation (4) takes the following form (when $c_i = 0$) -

$$\begin{aligned} R_{it} - R_{ft} &= a_i + (b_i + \varepsilon_{it}) (R_{mt} - R_{ft}) + e_{it} \\ &= a_i + b_i (R_{mt} - R_{ft}) + \varepsilon_{it} (R_{mt} - R_{ft}) + e_{it} \\ &= a_i + b_i (R_{mt} - R_{ft}) + u_{it} \end{aligned} \quad (5)$$

Where $u_{it} = \varepsilon_{it} (R_{mt} - R_{ft}) + e_{it}$ and $u_{it} \sim \text{iid} (0, \sigma_u^2)$.

If adjustments in beta depend on the predicted magnitude of the stock market movements, higher the predicted increase in stock market higher will be the increase in beta and vice versa. Higher the beta higher would be the excess return of the managed fund in comparison to excess market return when stock market rises. And lower the beta higher would be the excess return of the fund in comparison to excess market return when stock market declines. So, the relationship between excess market return and excess return of the managed fund will be curved shaped and convex to the origin (Treynor and Mazuy, 1966). In that case, equation (4) can be expressed as follows -

$$\begin{aligned} R_{it} - R_{ft} &= a_i + [b_i + c_i (R_{mt} - R_{ft}) + \varepsilon_{it}] (R_{mt} - R_{ft}) + e_{it} \\ &= a_i + [b_i (R_{mt} - R_{ft}) + c_i (R_{mt} - R_{ft})^2 + \varepsilon_{it} (R_{mt} - R_{ft})] + e_{it} \\ &= a_i + b_i (R_{mt} - R_{ft}) + c_i (R_{mt} - R_{ft})^2 + u_{it} \end{aligned} \quad (6)$$

Assume that a manager, at time t , can predict whether market return will exceed risk-free return at $t+1$ but he cannot predict the magnitude of such positive excess market return. A manager who attempts to time the market will increase the beta of the scheme when market return is likely to exceed the risk-free return and reduce the beta otherwise. So, he will respond with an up-market beta when expected excess market return is greater than zero and with a down-market beta when expected excess market return is zero or negative. Thus, equation (4) can be expressed as follows (Henriksson and Merton, 1981) -

$$\begin{aligned} R_{it} - R_{ft} &= a_i + [b_i + c_i D + \varepsilon_{it}] (R_{mt} - R_{ft}) + e_{it} \\ &= a_i + b_i (R_{mt} - R_{ft}) + c_i D (R_{mt} - R_{ft}) + \varepsilon_{it} (R_{mt} - R_{ft}) + e_{it} \\ &= a_i + b_i (R_{mt} - R_{ft}) + c_i D (R_{mt} - R_{ft}) + u_{it} \end{aligned} \quad (7)$$

Where, $D = 1$ when $R_{mt} - R_{ft} > 0$ and $D = 0$ when $R_{mt} - R_{ft} \leq 0$

So, when $R_{mt} - R_{ft} \leq 0$, equation (7) becomes $[R_{it} - R_{ft} = a_i + b_i (R_{mt} - R_{ft}) + u_{it}]$ and when $R_{mt} - R_{ft} > 0$, equation (7) becomes $[R_{it} - R_{ft} = a_i + b_i (R_{mt} - R_{ft}) + c_i (R_{mt} - R_{ft}) + u_{it} = a_i + (b_i + c_i) (R_{mt} - R_{ft})]$

+ u_{it}). Thus, when the manager expects the market return to be higher than risk-free return, he increases the beta of the scheme by c_i . Thus, b_i represents down-market beta and $(b_i + c_i)$ represents up-market beta. Thus, a positive and statistically significant c_i indicates that the manager is successful in timing the market. Whereas a negative and statistically significant c_i indicates that manager's timing is wrong.

There are different types of mutual funds which follow different investment styles. Growth-oriented mutual funds invest mainly in large and medium capitalization stocks. Medium capitalization stocks are likely to be more risky than large capitalization stocks. So, a market timer can increase the beta of the managed fund by investing more in medium capitalization stocks and vice versa. This might result in changes in the responsiveness of the managed portfolio to different indices over time (Bollen & Busse, 2005). So, instead of a single index model of (6), the following two-indices model may capture the sensitiveness of the growth-oriented managed fund to different indices (Elton, et. al., 1993):-

$$R_{it} - R_{ft} = a_i + b_{i,sx} (R_{sxt} - R_{ft}) + b_{i,mcap} (R_{mcap} - R_{ft}) + c_{i,sx} (R_{sxt} - R_{ft})^2 + c_{i,mcap} (R_{mcap} - R_{ft})^2 + u_{it} \quad (8)$$

Where, R_{sxt} = Return on BSE Sensex for the period t.

R_{mcap} = Return on BSE Midcap Index for the period t.

a_i = Intercept term.

The sensitivities of the managed fund to different indices are represented by b_i s. And the sensitivities of the scheme to timing proxies are represented by c_i s.

But the excess returns on these indices are correlated. The coefficient of correlation between the excess returns on these indices are found to be very high (i.e., 0.854) and significant at 1% level of significance.

Since these the returns on these two indices are significantly correlated, the use of the returns on these two indices would result in loss of information. In order to avoid the loss of information, the return on BSE Midcap Index is made orthogonal to the return on BSE Sensex (Elton et. al, 1993). The excess returns on BSE Midcap Index are regressed on the excess returns on BSE Sensex. The excess returns on BSE Midcap Index over the excess returns on BSE Sensex are considered in the model. Thus, equation (8) becomes –

$$R_{it} - R_{ft} = a_i + b_{i,sx} (R_{sxt} - R_{ft}) + b_{i,umcap} R_{umcap} + c_{i,sx} (R_{sxt} - R_{ft})^2 + c_{i,umcap} R_{umcap}^2 + u_{it} \quad (9)$$

Where, $R_{umcap} = (R_{mcap} - R_{ft}) - b_{rmcap,sx} (R_{sxt} - R_{ft})$

$b_{rmcap,sx}$ = Regression coefficient of excess return on Midcap Index on excess return on Sensex.

Equation (7) can also be modified as follows:

$$R_{it} - R_{ft} = a_i + b_{i,sx} (R_{sxt} - R_{ft}) + b_{i,umcap} R_{umcap} + c_{i,sx} D_{sx} (R_{sxt} - R_{ft}) + c_{i,umcap} D_{umcap} R_{umcap} + u_{it} \quad (10)$$

Where, $D_{sx} = 1$ when $R_{sxt} > R_{ft}$ and $D_{sx} = 0$ when $R_{sxt} \leq R_{ft}$

$D_{umcap} = 1$ when $R_{umcap} > 0$ and $D_{umcap} = 0$ when $R_{umcap} \leq 0$.

Let us now review a few relevant works on market timing.

5. REVIEW OF LITERATURE

The successful market timing by the actively managed funds increases the attractiveness of the mutual funds as an investment vehicle to the retail investors. On the other hand, if such successes in timing the market are the results of inside information, market does not have strong-form of efficiency. If managers time the market persistently when this information is available in public domain, the market does not have semi-strong form of efficiency. But, the managers who persistently time the market successfully are likely to command higher remuneration than other managers. If the market for the managers of mutual funds is efficient, in the long-run, the risk-adjusted returns from the schemes managed by skilled managers are likely to fall in line with the benchmark portfolio. Thus, insights about market timing by mutual funds have implications for the ordinary retail investors (as to the attractiveness of investing through mutual funds) as well as to the academicians (as to the market efficiency).

Based on annual data on the performance of 57 open-ended mutual fund schemes, Treynor and Mazuy (1966) have found evidence of market timing in case of one scheme only. Using monthly data on excess returns of 116 open-ended mutual funds for the period February 1968 to June 1980, Henriksson (1984) has found the evidence of successful market timing at 5% level of significance, only in case of three funds. On the basis of monthly returns for the period January 1971 through December 1979, Chang and Lewellen (1984) have found that out of 67 mutual funds, only in case of one fund the down-market beta is lower than the up-market beta and the difference is statistically significant at 5% level of significance.

But, the managers of the actively managed portfolios are likely to monitor their portfolios more frequently than the return measurement frequency. So, they are likely to change the portfolios under their management very often based on their expectations about future movements of the market and so may make a number of trades during a return measurement interval. Although successful market timing generates return in excess of market return but such excess return would not be credited to market timing skills under the Henriksson and Merton (1981) model when the trading frequency and return measurement frequency do not match (Goetzmann et. al., 2000). Thus, annual or monthly return data might not reveal the true picture about the market timing by the managers when they trade daily or weekly. Thus, knowledge about trades driven by the motive to time the market by the managers during a period and the returns of the managed fund and the market portfolio for that period would reveal the accuracy of the market timing during that period. Since the data relating to the timing of trades of the managed funds with a motive to time the market are not available, there is a need to reduce the return measurement interval.

Using the daily excess returns of 230 mutual funds, generated during the period 2nd January 1985 to 29th December 1995, Bollen and Busse (2001) following an improved model derived from the Treynor and Mazuy (1966) model have found that 34.2% funds time the market successfully whereas 33.3% funds showed perverse market timing. And an improved model derived from Henriksson and Merton (1981) model showed that 28.1% funds were successful market timers whereas 25.9% funds showed wrong market timing.

So, returns on close time points are likely to reveal the market timing by the mutual funds. Since, RBI auctions 91-day Treasury Bills (T-Bills) on every Wednesday and publishes the yield (which is taken as the return on risk-free asset) on such T-Bills, data on risk-free

return are available on weekly basis. The study of market timing on the basis of weekly excess returns of mutual funds has not been done earlier in India.

6. METHODOLOGY

We have selected nineteen growth-oriented mutual fund schemes offered by sixteen mutual fund houses. Since these schemes do not pay dividend, the rates of return generated by the mutual fund schemes and the rates of return generated on the market indices are computed as follows:

$$R_{it} = \ln(\text{NAV}_{i,t} / \text{NAV}_{i,t-1}) \text{ and } R_{mt} = \ln(\text{Index}_t / \text{Index}_{t-1})$$

This study covers a period which starts from January 2010 and ends with December 2013. During this period there had been ups and downs in BSE Sensex and BSE Midcap Index (See Picture – 1) implying that mutual funds had enough opportunities to attempt to time the market during this period.

The secondary data on net asset values (NAVs) of the selected mutual fund schemes have been collected from the website of the association of mutual funds of India (AMFI). The secondary data on BSE Sensex and BSE MidCap Index have been collected from the website of Bombay Stock Exchange. The data on the cut-off price and annualized yield on 91-day T-Bills have been collected from the website of the Reserve Bank of India. Since, the annualized yield on 91-day T-Bills changes from time to time, the excess returns on the selected portfolios and market indices are considered. The weekly yields on T-Bills are computed as follows:

Weekly yield = $\{\ln(100 / P_t)\} (7 / 91)$ where P_t = Cut-off price for the week t and \ln represents natural logarithm.

The stationarity of the time series data on excess returns on indices and selected schemes is tested with augmented Dickey-Fuller (ADF) Test. The null hypothesis of ADF test is that the return series is non-stationary. The normality of the distribution of returns is tested with Jarque-Bera (JB) Test. The null hypothesis of JB test is that the distribution of returns is normal.

The evidence for market timing is searched with the help of the regression equations (9) and (10) on the basis of weekly excess returns data. The 'goodness of fit' of the regression equation is tested with R^2 and F statistics.

7. ANALYSIS AND INTERPRETATION

Nineteen mutual fund schemes offered by sixteen mutual fund houses have been selected for the study. Table – 1 shows that long-term capital appreciation is the objective of these funds. Table – 1 also shows the size of these schemes in terms of the average value of assets under the management of the schemes during the period July to September, 2013. It shows that the schemes are of different sizes.

Table – 2 shows the mean, standard deviation, skewness and kurtosis of the excess returns per annum of the selected Indices and selected schemes for the period of our study. It is observed that BSE Midcap Index has generated lower average excess return with higher standard deviation than those of Sensex. Although all these schemes do not imitate Sensex but in order to have an idea about their performance taking Sensex as the benchmark portfolio, we

have compared the performance of the other indices and the selected schemes based on excess return to total risk. The performance measure is computed as follows:

Performance measure = Average excess return on the selected Index or Scheme – (Excess return on Sensex / Standard Deviation of excess return on Sensex) x Standard Deviation of excess return on the selected Index or Scheme.

If this performance measure is positive, the Index or scheme has performed better than the Sensex and vice versa. Out of nineteen mutual fund schemes, twelve schemes have performed better than Sensex. Only five schemes have generated the risk-adjusted excess return of more than 3%. So, it is important to know the role of 'market timing' in the generation of such superior returns.

The distributions of excess returns of all schemes and Indices have negative skewness. Excepting excess return of Reliance Equity Opportunities Fund, all other schemes have kurtosis higher than the kurtosis (i.e., 3.0) of a normally distributed variable. Hence, the normality of the distribution of excess returns of the selected portfolios can be tested with Jarque-Bera test.

Table – 3 gives the test statistics for stationarity and normality for all the returns series. It is observed that excepting the risk-free rate of return all other returns series are stationary. It is found that at 5% level of significance, the excess returns on Midcap Index do not follow normal distribution. The distributions of excess returns of eight out of nineteen schemes are also found to have significantly deviated from the normal distribution.

Table – 4 gives the results of the regression analysis using equation – (9) on the basis of weekly excess returns. R^2 for all the regression equations are found to be very high and F-statistics are found to be statistically significant at 1% level of significance implying that the regression equations satisfy the 'goodness of fit' criterion.

Table – 4 reveals that the managers of two mutual fund schemes have been successful in timing the market whereas in case of one scheme there is evidence of wrong market timing. ICICI Prudential Dynamic Regular Plan (Growth Option) has generated an average return of 2.65% per annum (i.e., $0.8138 \times 0.000625 \times 100 \times 365/7$) from market timing. ICICI Prudential Top 100 Fund Regular Plan (Growth Option) also has generated an average return of 2.56% per annum (i.e., $0.7852 \times 0.000625 \times 100 \times 365/7$) from market timing. Whereas DWS Alpha Equity Fund Regular Plan (Growth Option) has generated an average return of – 5.65% per annum (i.e., $-4.8373 \times 0.000224 \times 100 \times 365/7$) through wrong market timing. Thus, out of nineteen selected schemes, the evidence of successful market timing is found only in case of two schemes (i.e., 10.5% of the selected schemes).

This analysis also reveals that five schemes (i.e., 26.3% of the selected schemes), on average, have been successful in generating positive returns through selection of best securities whereas one scheme has shown the evidence of losing money on selecting wrong securities. It is also observed that the excess returns of all the selected schemes are sensitive to the excess returns on Sensex as well as to the net excess returns on Midcap Index.

Table – 5 shows the results of the regression analysis using equation – (10). R^2 for all the regression equations are found to be very high and F-statistics are found to be statistically significant at 1% level of significance.

An evidence of wrong market timing is found in case of DWS Alpha Equity Fund Regular Plan (Growth Option). A statistically significant negative timing coefficient is an indicator of wrong (or perverse) market timing. The market timing coefficients of all other schemes are not found to be statistically significant. Thus, using equation (10), we have not found any evidence of successful market timing by the selected mutual fund schemes on the basis of weekly data on excess returns.

8. CONCLUSION

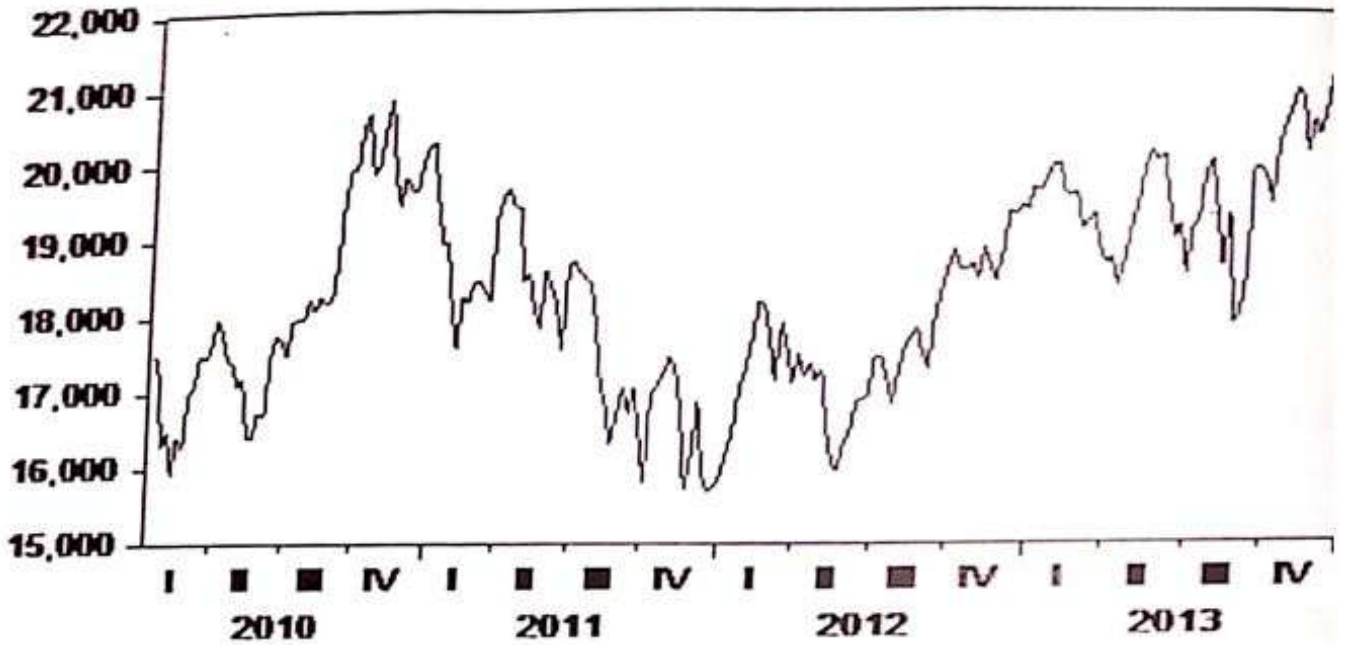
This study of nineteen growth-oriented Indian mutual fund schemes based on the weekly excess returns pertaining to the period of January 2010 to December 2013 has revealed successful market timing by only two mutual fund schemes belonging to ICICI Prudential Mutual Fund although during the selected period there had been ups and downs in Sensex as well as Midcap index. Such performance of the Indian mutual funds with respect to 'market timing' is not going to make them an attractive investment vehicle for the retail investors. •

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Picture - 1

BSE Sensex



BSE Midcap Index

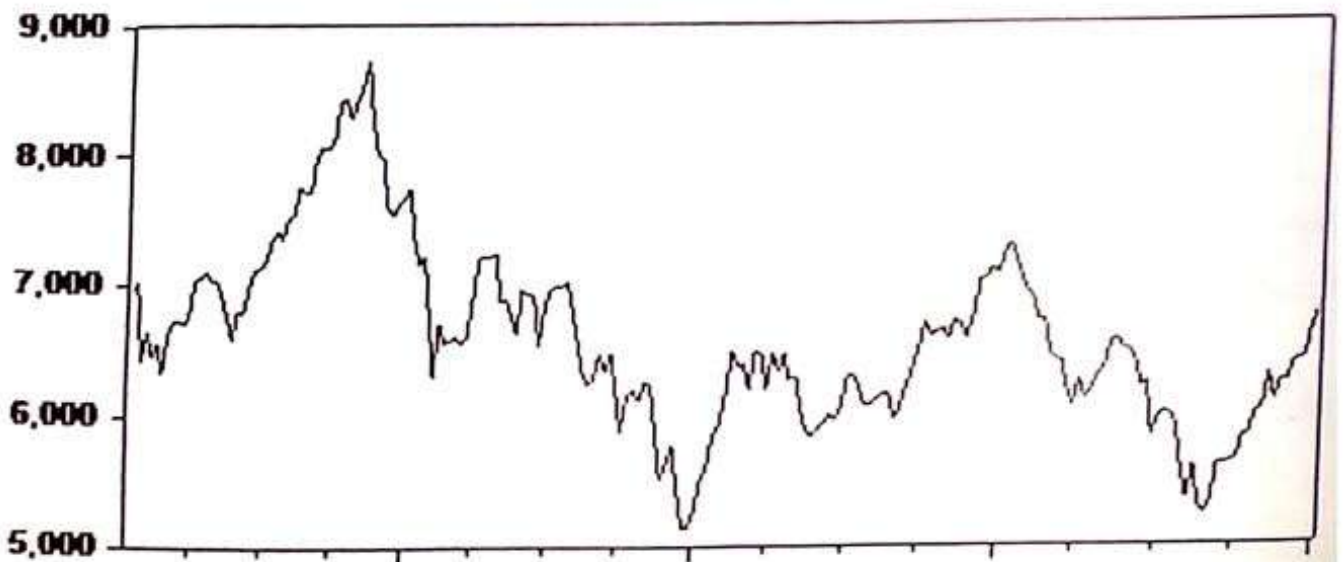


Table - 1 : Details of the Selected Mutual Fund Schemes

Sr.No.	Mutual Fund House	Mutual Fund Schemes	Objectives	AAUM* (Rs Cr)
1	Axis Mutual Fund	Axis Equity Fund - Growth	Long-term capital appreciation	452.17
2	Baroda Pioneer Mutual Fund	Baroda Pioneer Growth Fund Plan A - Growth	Long-term capital appreciation	133.25
3	Birla Sun Life Mutual Fund	Birla Sun Life Top 100 Fund - Growth Option	Long-term capital appreciation	180.93
4	Birla Sun Life Mutual Fund	Birla Sun Life Buy India Fund - Plan B - Growth Option	Long-term capital appreciation	364.68
5	DSP BlackRock Mutual Fund	DSP BlackRock Equity Fund- Regular Plan - Growth	Long-term capital appreciation	943.04
6	Deutsche Mutual Fund	DWS Alpha Equity Fund Regular Plan-Growth	Long-term capital appreciation	33.50
7	Franklin Templeton Mutual Fund	Franklin Build India Fund Growth Plan	Long-term capital appreciation	29.74
8	HDFC Mutual Fund	HDFC Equity Fund - Growth Option	Capital appreciation	6887.82
9	HDFC Mutual Fund	HDFC Growth Fund - Growth Option	Long-term capital appreciation	675.55
10	HSBC Mutual Fund	HSBC Equity Fund - Growth	Long-term capital growth	260.68
11	ICICI Prudential Mutual Fund	ICICI Prudential Dynamic - Regular Plan -Growth	Capital appreciation	2260.71
12	ICICI Prudential Mutual Fund	ICICI Prudential Top 100 Fund - Regular Plan -Growth	Capital appreciation	261.62
13	ING Mutual Fund	ING Core Equity Fund- Growth Option	Long-term capital appreciation	32.18
14	JPMorgan Mutual Fund	JPMorgan India Equity Fund - Regular Plan - Growth Option	Income and long-term capital growth.	114.94
15	Kotak Mahindra Mutual Fund	Kotak - 50 Growth	Capital appreciation	449.09
16	Reliance Mutual Fund	Reliance Equity Opportunities Fund-Growth Plan-Growth Option	Capital appreciation and consistent returns	3197.84
17	SBI Mutual Fund	SBI Magnum Equity Fund- Regular Plan - Growth	Long-term capital appreciation	605.65
18	Tata Mutual Fund	Tata Equity Opportunities Fund Plan A Growth	Long-term capital appreciation and income generation	173.72
19	UTI Mutual Fund	UTI - Equity Fund-Growth Option	Long-term capital appreciation	214.97

* For the period July - September, 2013 (in Rs Crore).

Table - 2 : Mean, S.D., Skewness and Kurtosis of Returns of the Indices and Schemes

Mutual Fund Schemes	Mean Return p.a (%)	S.D.	Skewness	Kurtosis	Annual Excess Return (%)*
Risk-free return	7.58	0.0003	-0.618	3.755	
Excess return on Sensex	-3.12	0.0250	-0.218	3.603	
Excess return on Midcap Index	-8.34	0.0280	-0.493	3.118	-4.84
Excess return on the selected schemes					
Axis Equity Fund - Growth	0.54	0.0226	-0.337	3.447	3.35
Baroda Pioneer Growth Fund Plan A - Growth	-7.06	0.0256	-0.251	3.489	-3.87
Birla Sun Life Top 100 Fund - Growth	0.18	0.0237	-0.250	3.394	3.13
Birla Sun Life Buy India Fund - Plan B - Growth	0.08	0.0236	-0.365	3.055	2.91
DSP BlackRock Equity Fund- Regular Plan - Growth	-3.01	0.0242	-0.396	3.108	-0.0012
DWS Alpha Equity Fund Regular Plan Growth	-4.32	0.0235	-0.385	3.917	-1.40
Franklin Build India Fund Growth Plan	-2.13	0.0234	-0.339	3.660	0.78
HDFC Equity Fund - Growth	-0.94	0.0257	-0.312	3.172	2.27
HDFC Growth Fund - Growth	-2.11	0.0236	-0.198	3.358	0.84
HSBC Equity Fund	-4.06	0.0235	-0.310	3.641	-1.13
ICICI Prudential Dynamic - Regular Plan - Growth	1.87	0.0197	-0.166	3.503	4.33
ICICI Prudential Top 100 Fund - Regular Plan - Growth	0.53	0.0224	-0.090	3.332	3.33
ING Core Equity Fund-Growth	-2.36	0.0247	-0.254	3.379	0.72
JPMorgan India Equity Fund - Regular Plan - Growth	-1.21	0.0228	-0.330	3.645	1.63
Kotak - 50 Growth	-2.91	0.0224	-0.328	4.218	-0.11
Reliance Equity Opportunities Fund- Growth Plan - Growth	3.93	0.0237	-0.185	2.939	6.88
SBI Magnum Equity Fund- Regular Plan - Growth	-1.01	0.0220	-0.246	3.807	1.74
Tata Equity Opportunities Fund Plan A Growth	-3.22	0.0226	-0.413	3.959	-0.41
UTI - Equity Fund - Growth	0.08	0.0227	-0.396	3.701	2.91
No. of funds generating positive performance	7				13

N = 208 ; * Performance measure for the selected schemes = Excess Return on the Scheme - (Excess Return on Sensex / Standard Deviation of Excess Return on Sensex) * Standard Deviation of Excess Return on the Scheme

Sr. No	Mutual Fund Schemes	ADF Test Statistic			JB Test	
		Coefficient	t-statistic	p-value	Statistic	p-value
	Risk free return	-0.113	-2.384	0.1474	18.20*	0.0001
	Excess return on SENSEX	1.005*	-14.391	0.0000	4.79	0.0911
	Excess return on Mid-Cap Index	-0.992*	-14.188	0.0000	8.55 #	0.0139
	Excess return on the following funds:					
1	Axis Equity Fund - Growth	-1.032*	-14.795	0.0000	5.66	0.0589
2	Baroda Pioneer Growth Fund Plan A - Growth	-0.999*	-14.317	0.0000	4.26	0.1188
3	Birla Sun Life Top 100 Fund - Growth Option	-1.035*	-14.824	0.0000	3.52	0.1722
4	Birla Sun Life Buy India Fund - Plan B - Growth Option	-0.988*	-14.163	0.0000	4.65	0.0979
5	DSP BlackRock Equity Fund - Regular Plan - Growth	-1.022*	-14.634	0.0000	5.55	0.0623
6	DWS Alpha Equity Fund Regular Plan - Growth	-0.997*	-14.270	0.0000	12.418*	0.0020
7	Franklin Build India Fund Growth Plan	-1.004*	-14.379	0.0000	7.76 #	0.0206
8	HDFC Equity Fund - Growth Option	-1.034*	-14.816	0.0000	3.638	0.1622
9	HDFC Growth Fund - Growth Option	-1.025*	-14.680	0.0000	2.47	0.2905
10	HSBC Equity Fund	-1.026*	-14.702	0.0000	6.88 #	0.0320
11	ICICI Prudential Dynamic - Regular Plan - Growth	-1.006*	-14.396	0.0000	3.15	0.2074
12	ICICI Prudential Top 100 Fund - Regular Plan - Growth	-1.020*	-14.621	0.0000	1.24	0.5388
13	ING Core Equity Fund - Growth Option	-1.035*	-14.832	0.0000	3.48	0.1751
14	JPMorgan India Equity Fund Regular Plan - Growth Option	-1.015*	-14.536	0.0000	7.36 #	0.0252
15	Kotak 50 Growth	-1.024*	-14.667	0.0000	16.60*	0.0002
16	Reliance Equity Opportunities Fund - Growth Plan - Growth Option	-1.024*	-14.672	0.0000	1.21	0.5447
17	SBI Magnum Equity Fund - Regular Plan - Growth	-1.026*	-14.692	0.0000	7.73 #	0.0210
18	Tata Equity Opportunities Fund Plan A Growth	-1.035*	-14.828	0.0000	13.88*	0.0010
19	UTI - Equity Fund - Growth Option	-1.053*	-15.099	0.0000	9.70*	0.0078
	No. of schemes having significant statistic	19			8	

N = 208; *Significant at 1% level of significance; #Significant at 5% level of significance.

Table - 4 : Regression coefficients of the selected Schemes for Equation - (9)

$$R_{it} - R_{ft} = a_i + b_{i,ax} (R_{ax} - R_{ft}) + b_{i,umcap} R_{umcap} + c_{i,ax} (R_{ax} - R_{ft})^2 + c_{i,umcap} R_{umcap}^2 + d_{i,li}$$

	a _i	b _{i,ax}	b _{i,umcap}	c _{i,ax}	c _{i,umcap}	R ²	F-statistic
Axis Equity Fund - Growth	0.0011 * (0.0089)	0.8776 * (0.0000)	0.1628 * (0.0000)	-0.1680 (0.5909)	-0.7876 (0.3834)	0.962	1297 * (0.0000)
Baroda Pioneer Growth Fund Plan A - Growth	-0.00069 # (0.0448)	1.0049 * (0.0000)	0.1998 * (0.0000)	0.2579 (0.3213)	-0.0960 (0.8982)	0.980	2447 * (0.0000)
Birla Sun Life Top 100 Fund -Growth Option	0.00083 # (0.0486)	0.9162 * (0.0000)	0.2460 * (0.0000)	0.1699 (0.5962)	-0.4440 (0.6318)	0.964	1352 * (0.0000)
Birla Sun Life Buy India Fund - Plan B - Growth Option	0.00190 # (0.0179)	0.7997 * (0.0000)	0.5859 * (0.0000)	0.1962 (0.7470)	-2.7322 (0.1211)	0.869	336 * (0.0000)
DSP BlackRock Equity Fund - Regular Plan - Growth	0.00079 (0.1340)	0.8850 * (0.0000)	0.5069 * (0.0000)	-0.0753 (0.8514)	-1.1875 (0.3070)	0.945	881 * (0.0000)
DWS Alpha Equity Fund Regular Plan-Growth	0.00121 # (0.0109)	0.9020 * (0.0000)	0.1292 * (0.0000)	-0.4446 (0.2172)	-4.8373 * (0.0000)	0.954	1045 * (0.0000)
Franklin Build India Fund Growth Plan	0.00093 (0.1662)	0.8512 * (0.0000)	0.4007 * (0.0000)	-0.3021 (0.5574)	-1.0291 (0.4892)	0.905	482 * (0.0000)
HDFC Equity Fund - Growth Option	0.00062 (0.3117)	0.9559 * (0.0000)	0.4582 * (0.0000)	0.2965 (0.5290)	0.2533 (0.8523)	0.934	718 * (0.0000)
HDFC Growth Fund - Growth Option	-0.00032 (0.5758)	0.8938 * (0.0000)	0.3340 * (0.0000)	0.6253 (0.1526)	1.8047 (0.1531)	0.933	704 * (0.0000)
HSBC Equity Fund	0.00024 (0.6061)	0.9126 * (0.0000)	0.1090 * (0.0000)	-0.3967 (0.2613)	-0.5046 (0.6205)	0.956	1097 * (0.0000)
ICICI Prudential Dynamic - Regular Plan -Growth	0.00011 (0.8598)	0.7290 * (0.0000)	0.2506 * (0.0000)	0.8138 \$ (0.0961)	1.9344 (0.1705)	0.879	370 * (0.0000)
ICICI Prudential Top 100 Fund - Regular Plan - Growth	-0.00001 (0.9884)	0.8628 * (0.0000)	0.1197 * (0.0001)	0.7852 \$ (0.0790)	1.1606 (0.3676)	0.922	603 * (0.0000)
ING Core Equity Fund - Growth Option	-0.00 (0.8400)	0.9405 * (0.0000)	0.3779 * (0.0000)	0.4582 (0.2185)	0.5194 (0.6288)	0.955	1086 * (0.0000)

JPMorgan India Equity Fund – Regular Plan – Growth Option	0.00080 # (0.0318)	0.8883* (0.0000)	0.1968* (0.0000)	-0.1170 (0.6780)	-0.9804 (0.2293)	0.970	1642* (0.0000)
Kotak – 50 Growth	0.00042 (0.4379)	0.8595* (0.0000)	0.1147* (0.0001)	-0.4212 (0.3096)	-0.3662 (0.7596)	0.933	707* (0.0000)
Reliance Equity Opportunities Fund – Growth Plan – Growth Option	0.00166 (0.1926)	0.7188* (0.0010)	0.4813* (0.0000)	0.6965 (0.4752)	-1.8610 (0.5090)	0.667	101* (0.0000)
SBI Magnum Equity Fund – Regular Plan – Growth	0.00058 (0.2799)	0.8451* (0.0000)	0.1317* (0.0000)	0.2487 (0.5427)	-1.2650 (0.2844)	0.932	697* (0.0000)
Tata Equity Opportunities Fund Plan A Growth	0.00045 (0.3943)	0.8432* (0.0000)	0.3598* (0.0000)	-0.1147 (0.7782)	-0.5513 (0.6395)	0.936	741* (0.0000)
UTI - Equity Fund – Growth Option	0.00182 (0.1227)	0.7337* (0.0000)	0.1962* (0.0016)	-0.5741 (0.5233)	-3.5855 (0.1685)	0.691	113* (0.0000)
No. of significant coefficients	6	19	19	2	1		19
No. of positive coefficients	5	19	19	2	1		
Mean		-0.000599	-0.001033	0.000625	0.000224		

p-values are given in the parentheses; *Significant at 1% level of significance; #Significant at 5% level of significance; \$ Significant at 10% level of significance.

Table - 5 : Regression coefficients of the selected Schemes for Equation - (10)

$$R_{it} - R_{ft} = a_i + b_{i,ux} (R_{mt} - R_{ft}) + b_{i,umcap} R_{umcap,t} + c_{i,ux} D_{ux} (R_{mt} - R_{ft}) + c_{i,umcap} D_{umcap} R_{umcap,t} + U_{it}$$

	C	$b_{i,ux}$	$b_{i,umcap}$	$c_{i,ux}$	$c_{i,umcap}$	R ²	F-statistic
Axis Equity Fund - Growth	0.00177 # (0.0275)	0.8907 * (0.0000)	0.1996 * (0.0000)	-0.0008 (0.4336)	-0.0011 (0.2560)	0.962	1302 * (0.0000)
Baroda Pioneer Growth Fund Plan A - Growth	-0.00089 (0.1832)	1.0022 * (0.0000)	0.1813 * (0.0000)	-0.00006 (0.9412)	0.0006 (0.4608)	0.980	2441 * (0.0000)
Birla Sun Life Top 100 Fund -Growth Option	0.00051 (0.5359)	0.8986 * (0.0000)	0.2574 * (0.0000)	0.0011 (0.2734)	-0.0005 (0.6406)	0.964	1359 * (0.0000)
Birla Sun Life Buy India Fund - Plan B - Growth Option	0.00033 (0.8328)	0.7894 * (0.0000)	0.5572 * (0.0000)	0.0006 (0.7317)	0.0015 (0.4426)	0.868	333 * (0.0000)
DSP BlackRock Equity Fund- Regular Plan - Growth	-0.00091 (0.3738)	0.8586 * (0.0000)	0.4868 * (0.0000)	0.0018 (0.1520)	0.0009 (0.4706)	0.946	887 * (0.0000)
DWS Alpha Equity Fund Regular Plan-Growth	0.00182 \$ (0.0590)	0.9304 * (0.0000)	0.2213 * (0.0000)	-0.0015 (0.1910)	-0.0023 \$ (0.0574)	0.950	955 * (0.0000)
Franklin Build India Fund Growth Plan	0.00034 (0.7949)	0.8745 * (0.0000)	0.3636 * (0.0000)	-0.0014 (0.3872)	0.0018 (0.2693)	0.905	485 * (0.0000)
HDFC Equity Fund - Growth Option	0.00039 (0.7468)	0.9419 * (0.0000)	0.4490 * (0.0000)	0.0008 (0.5955)	0.0001 (0.9309)	0.934	717 * (0.0000)
HDFC Growth Fund - Growth Option	-0.00078 (0.4888)	0.8877 * (0.0000)	0.3373 * (0.0000)	0.00009 (0.9480)	-0.0007 (0.5991)	0.931	689 * (0.0000)
HSBC Equity Fund	-0.00001 (0.9879)	0.9167 * (0.0000)	0.1202 * (0.0017)	-0.00009 (0.9364)	-0.0002 (0.8885)	0.955	1088 * (0.0000)
ICICI Prudential Dynamic - Regular Plan - Growth	0.00024 (0.8487)	0.7104 * (0.0000)	0.2112 * (0.0001)	0.0008 (0.5970)	0.0007 (0.6391)	0.877	361 * (0.0000)
ICICI Prudential Top 100 Fund - Regular Plan - Growth	-0.00058 (0.6146)	0.8317 * (0.0000)	0.0797 \$ (0.0979)	0.0016 (0.2352)	0.0009 (0.5420)	0.922	596 * (0.0000)
ING Core Equity Fund - Growth Option	-0.00065 (0.4948)	0.9315 * (0.0000)	0.3887 * (0.0000)	0.0004 (0.7392)	-0.0007 (0.5435)	0.955	1079 * (0.0000)

JPMorgan India Equity Fund - Regular Plan - Growth Option	-0.00017 (0.8168)	0.8886* (0.0000)	0.1685* (0.0000)	0.00004 (0.9617)	0.0013 (0.1459)	0.970	1646* (0.0000)
Kotak - 50 Growth	0.00083 (0.4329)	0.8718* (0.0000)	0.1448* (0.0013)	-0.0006 (0.6367)	-0.0009 (0.5160)	0.933	705* (0.0000)
Reliance Equity Opportunities Fund-Growth Plan-Growth Option	0.00199 (0.4222)	0.6604* (0.0000)	0.5927* (0.0000)	0.0036 (0.2332)	-0.0044 (0.1586)	0.671	104* (0.0000)
SBI Magnum Equity Fund- Regular Plan - Growth	0.0011 (0.2887)	0.8743* (0.0000)	0.1179* (0.0074)	-0.0020 (0.1164)	0.0008 (0.5496)	0.933	703* (0.0000)
Tata Equity Opportunities Fund Plan A Growth	0.00026 (0.8060)	0.8493* (0.0000)	0.3547* (0.0002)	-0.0003 (0.7916)	0.0004 (0.7784)	0.936	741* (0.0000)
UTI - Equity Fund-Growth Option	-0.00012 (0.9599)	0.7478* (0.0000)	0.1628 \$ (0.0936)	-0.0006 (0.8314)	0.0022 (0.4393)	0.688	112* (0.0000)
No. of significant coefficients	2	19	19	0	1		19

p-values are given in the parentheses; *Significant at 1% level of significance; #Significant at 5% level of significance; \$Significant at 10% level of significance.



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Subprime: A Model of Financial Inclusion in Housing Sector

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ABSTRACT: Financial Inclusion is defined as the expansion of financial services for encompassing the financially disadvantaged and the low-income segments of the society. For this the financial services provided by the financial institutions is to be made available such that it matches the affordability of the financially disadvantaged. Financial inclusion is an important issue in housing sector as providing shelter to the populace is an important agenda of the state. The basic tenet of 'housing' is 'shelter' which requires substantial financial outlay, far exceeding the potential homeowner's financial capability. Thus housing finance – financial service provided by financial institution – is a matter of concern for providing shelter for the homeless. In this regard two significant models of financial inclusion in the housing sector are noted. 'Special circuits' is a model of housing finance which was a worldwide phenomenon during the 1970s and 1980s. Due to certain reasons a decline in these is observed worldwide (Diamond and Lea 1992). The other is the market led model which became popular since 1990s. This, popularly referred as the 'subprime', led to a mortgage market crisis during 2007. Consequentially this crisis was termed the subprime crisis. Subprime, as such, is a market led model of financial inclusion which has been operative in the US financial market for a number of years. Aitken (2006) views 'subprime' as an important part of 'fringe finance' which he describes as 'a set of credit practices provided to those populations that exist on the margins of the mainstream financial world'. Chima (2010) elaborately discusses subprime as a measure for 'democratisation of finance' and infers that the rise of subprime has acted in furthering financial inclusion and homeownership. This paper attempts a critical analysis of subprime as a model of financial inclusion in housing. For the said purpose the paper is divided into five sections. The first section, introduction, discusses the basic issue of financial inclusion, in general, and the housing sector, in particular. In the second section an argument is put forward that the rise of subprime is an outcome of certain specific policy initiatives of the United Nations and the World Bank. In the third section subprime as an important aspect of the Anglo-Saxon model housing finance market is considered. The failure of subprime as model of financial inclusion is considered in the fourth section. In the last section certain conclusions are drawn and certain policies are prescribed for financial inclusion in the housing sector.

Key Words : *Financial Institutions, Subprime Lending, Mortgage, Financial Crisis, Housing Finance.*

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1. INTRODUCTION

In a welfare state, the government is vested with the responsibility of protection and promotion of economic and social well being of the citizens. Levine (1995) noted that financial development – an important determinant of economic growth – is related to the economic well being of the populace which is embedded in the concept of 'financial inclusion'. Financial Inclusion is defined as the expansion of financial services for encompassing the financially disadvantaged and the low-income segments of the society. For this the financial services provided by the financial institutions is to be made available such that it matches the affordability of the financially disadvantaged. Food, clothing and shelter are the three basic issues of social and economic well being. Shelter, unlike the other two, requires sizeable financial outlay, far exceeding the potential homeowner's financial capability. Sharma (1988) commented that the cost of an average-sized-house is generally thirty to fifty times the monthly income of an individual. Thus an individual depends primarily on financial assistance, referred as housing finance, provided by the financial institutions for acquiring shelter. The investment flows in housing finance are categorized as formal sector finance and informal sector finance. The contribution of the former comprises of budgetary allocations of the state and the central government and institutional finance from financial intermediaries. Thus, housing finance in this sector comprises of (a) bulk credit (finance from government supported apex level institutions) and (b) retail credit (finance by housing finance institutions). The informal sector, on the other hand, covers loans from friends, relatives, and employers. In developing economies informal finance is predominant, providing almost 90% of the total credit available for the sector (Bol  at 1985). The dominance of informal housing finance is primarily attributed to the lack of awareness and inefficiency in formal financial arrangement. Arrieta (2005) noted that formal housing finance need to account for borrower's financial affordability, otherwise the low income population would be marginalized from the market.

Financial inclusion is an important issue in housing sector as providing shelter to the populace is an important agenda of the state. The state is obligated to over-viewing the affordability of housing finance as it is directly related to the state's agenda of shelter for the homeless. Financial inclusion, in the housing sector, is targeted at achieving increasing the share of formal finance in the housing sector which reduces the over dependence on informal sources. The degree of financial inclusion is directly related to the rate of homeownership which is considered as a measure for the fulfilment of the national agenda of providing shelter to the homeless.

2. GLOBAL INITIATIVES

There have been various initiatives taken by the United Nations (UN) which shaped the housing policies and strategies of numerous countries, especially the developing countries. Habitat I (1976), the first global conference exclusively for the housing sector, is considered the most important UN initiative in this regard. This global conference on human settlements, held at Vancouver in 1976, is considered as a landmark in the process of evolution of housing policies. Turner reminisces¹ "...it was a moving experience. So many people working in

¹ Source: Interview of John F.C. Turner (taken by Roberto Chavez in 2000), published by World Bank on 11th September, 2000. The interview is available at <http://www.worldbank.org/urban/forum2002/docs/turner-tacit.pdf>

isolation; not feeling that they had any support from anybody whatsoever; suddenly found other people in the same situation". The conference adopted the Vancouver Declaration and the Vancouver Action Plan. The Vancouver Declaration on Human Settlements affirmed that:

"Adequate shelter and services are a basic human right which places an obligation on Governments to ensure their attainment by all people ... Governments should endeavour to remove all impediments hindering attainments of these goals ..."

The Vancouver Action Plan included sixty four recommendations for national actions which were required for effective implementation of policies and strategies in the field of human settlements. United Nations Centre for Human Settlements (UNCHS) –referred as Habitat –was formed in 1978 with the objective of promoting the Vancouver Action Plan and monitoring the housing policies of the member countries. UNCHS was instrumental in influencing the decision of the United Nations General Assembly to declare 1987 as the International Year of shelter for the Homeless (IYSH) to draw international attention to the problems of homeless and 'inadequate housing' in the developing countries. One of the objectives was to find solutions to the deteriorating shelter conditions of the slums and the informal settlements. IYSH targeted to improve the shelter conditions of the homeless, particularly in the developing countries. UN also resolved to consolidate and share knowledge and relevant experience gained since Habitat I so that the poor could be housed. The IYSH stimulated a wide range of international and national initiatives aimed at improving the shelter conditions of the poor.

UN adopted the 'Global Strategy for Shelter to the Year 2000 (GSS)' in 1988 and the right to housing was recognized. GSS noted that;

"...the right to adequate shelter is recognized universally and constitutes the basis for national obligations to meet shelter needs".

The GSS also adopted an 'enabling' approach with the objective of rationalizing and optimizing the activities and resources for housing development. The governments of various countries were asked to withdraw their role as 'providers' of housing and play a more effective role in facilitating the construction and improvement of housing for the poor. Consequently, the role of the governments was shifted, as they were required to act as 'enablers' in the housing sector. They were required to do this by creating an appropriate legal, institutional and regulatory environment, and ensuring the availability of housing finance.

The GSS also observed that:

"Governmental intervention may be required, in many instances to remove or offset market imperfections, and, in some specific cases, a policy may be justified to meet the social welfare requirements of the very poor and destitute."

The adoption of the GSS was a landmark in the evolution of housing policy and strategies, particularly in developing countries. GSS brought about a paradigm shift in the strategy for housing, and recommended governments to serve as 'enablers' for the housing sector.

This strategy was avowed when the World Bank published 'Housing: Enabling Markets to Work (with technical supplements)' in 1993. The governments of various countries were recommended to abide by seven instruments. The three instruments that addressed demand-side constraints were:

- Developing property rights: ensuring that law regarding owning and exchanging property were in place and properly enforced.
- Developing mortgage finance: creating healthy and competitive mortgage lending institutions, and fostering innovative arrangements for providing greater access to housing finance by the poor.
- Rationalizing subsidies: ensuring that subsidy programmes were well-targeted, measurable, and transparent. This would avoid distortion in the housing markets.

The three supply-side instruments were:

- Providing infrastructure for residential land development: coordinating the agencies responsible for provision of residential infrastructure and to focus on servicing existing and undeveloped urban land.
- Regulating land and housing development: balancing the costs and the benefits of regulations that influence urban land and housing markets, and removing regulations which hinder housing supplies.
- Organizing the building industry: creating greater competition in the building industry, removing constraints to the development and use of local building materials, and reducing trade barriers.

These instruments were to be supported and guided by developing the seventh instrument, namely the institutional framework for managing the housing sector which emphasized strengthening apex level institutions which could oversee and manage the performance of the sector as a whole; bringing together all the major public agencies, private sector, and representatives of nongovernmental organisations (NGOs) and community-based organisations; and ensuring that policies and programmes benefit the poor and elicit their participation.

It is matter of misconception that that the policy prescription was directed towards a reduction in the role of the governments for the housing sector. Rather, the role of the governments became supportive in nature for unfettered development of the housing markets. I argue that this 'enabling' strategy propagated by GSS acted as the death knoll of 'special circuits', the much prevalent model of financial inclusion in housing sector during 1980s and early 1990s and initiated the growth and popularity of the market led model of financial inclusion which was later termed as the 'subprime'.

3. THE SUBPRIME

The subprime residential mortgage that evolved in UK is considered as a model of financial inclusion in the housing sector (Munro *et al.* 2005:56). The authors opine that the subprime provides accessibility to mortgage loan for borrowers who are excluded from obtaining mortgage finance from traditional sources on normal terms and condition because of low credit scores. Subprime residential mortgage loan, as such, has been popularized in US. The US mortgage market is classified into prime and subprime category. There is also a third category of near-prime mortgages which covers Alt-A mortgages. Prime mortgages are the traditional mortgages made to borrowers with good credit scores. These borrowers are financial able to make down payments and fully document their income. Jumbo loans are a specific type of prime mortgage that exceed the upper limit for trading and guaranteeing by the government-sponsored enterprises. Near-prime mortgages, which are smaller than jumbos, are made to borrowers who qualify for credit a notch above the subprime borrowers who are unable to fully document their income or make down payments. These mortgages are also called Alt-A mortgages. . There have been various definitions of subprime provided by various authors but the basic issue is that the subprime mortgage loan is a mortgage loan to the financially disadvantaged who are outside the ambit of traditional mortgage finance and, therefore, unable to acquire his shelter. The subprime borrower is outside the ambit of traditional mortgage finance as he is financially incapacitated to make initial down payment or has insufficient credit score. Thus a subprime borrower is a lender-defined term. Financial institutions in US defines a borrower as a subprime borrower who has a low credit score (FICO² score less than 620) or has other types of credit impairment. In Table 1, a definition of various categories of mortgage loans in US is considered. It is observed that the subprime mortgage is non-conforming³ mortgage due to improper credit scoring of the borrower and also due to improper documentation.

The subprime residential mortgage market that barely existed in 1994 grew rapidly since then. In Table 2 the proportionate share of prime and subprime mortgage loan along with total mortgage origination is shown from 1994 to 2008(Q3). It is evident in Table 2 that subprime mortgage loans played a significant part in the US housing market since 1994 when the share of subprime in total mortgage origination was 4.5%. Subprime as a percentage of total mortgage origination grew marginally from 10.20% in 1995 to 13.20% in 2000. The period of 2001-2006 is crucial in this regard as subprime as a percentage of total mortgage origination grew steeply from 7.80% in 2001 to 20.10% in 2006. The share of subprime shrank to 7.9% in 2007 and less than 1 percent in 2008.

The unfettered growth of subprime implied that the subprime mortgage originators undertook significant credit risk as it is obvious that subprime mortgages are more risky than the prime mortgages. In Fig 1, an analysis of historical data from national delinquency survey (2006 [Q4],

² The FICO (Fair, Isaac, and Company) score is the most widely used credit score (a measure of credit worthiness) model used in the US.

³ Non-conforming mortgage loan refers to the loan not being confirmed by the regulatory authorities like Fannie Mae.

2009 [Q1], Mortgage Bankers Association) is made, which clarifies the issue that the credit risk in subprime loan is significantly higher than credit risk imbedded in the prime loans.

Table 1: Market Description of Mortgage Categories

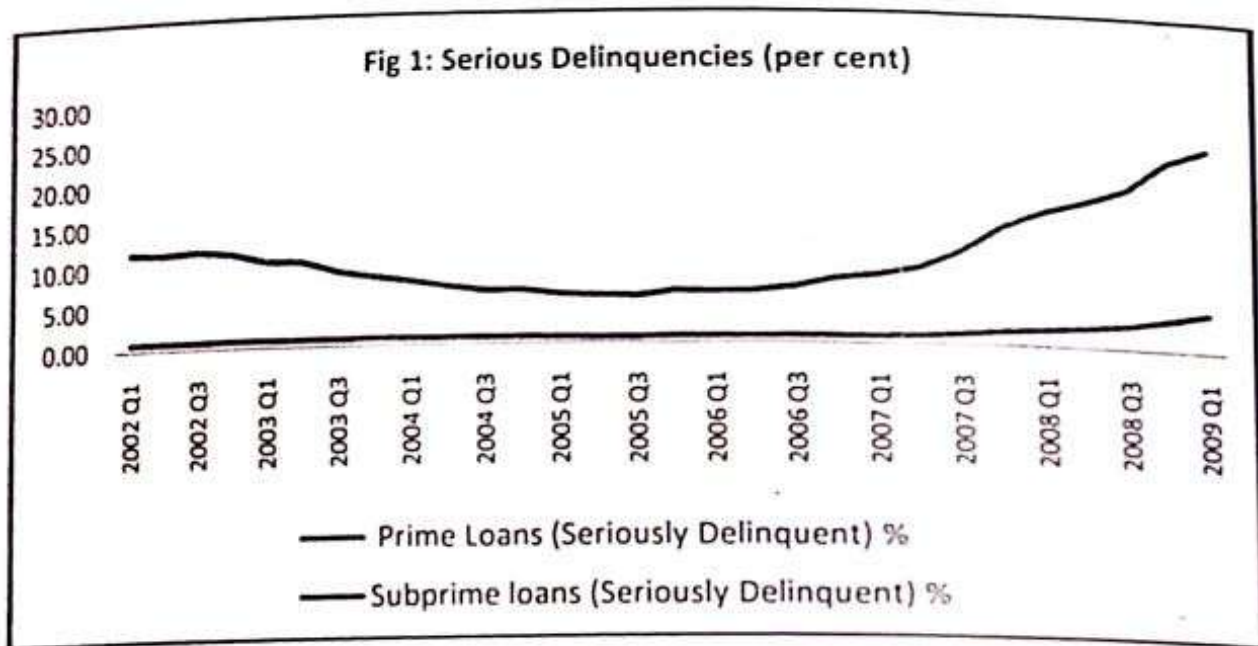
Attribute	Prime	Jumbo	Alt-A	Sub-Prime
Average LTV	Low 70s	Low 70s	Low 70s	Low 80s
FICO rating of the Borrower	700+	700+	640-730	500-660
Borrower Credit History	No credit derogatoriness	No credit derogatoriness	No credit derogatoriness	Credit derogatoriness
Conforming to Agency Criteria?	Conforming	Conforming by all standards but size	Non-conforming due to insufficient documentation or LTV	Non-conforming due to FICO rating, credit history, or documentation
Loan-to-Value (LTV)	65-80%	65-80%	70-100%	60-100%

Source: Gorton (2010)

Table 2: Home Mortgage Origination (1994-Q3,2008)

Year	Prime (%)	Subprime (%)	Total Mortgage Origination (US \$ Billions)
1994	95.50	4.50	773.00
1995	89.80	10.20	639.00
1996	87.70	12.30	785.00
1997	85.50	14.50	859.00
1998	89.70	10.30	1450.00
1999	87.80	12.20	1310.00
2000	86.80	13.20	1048.00
2001	92.20	7.80	2215.00
2002	92.60	7.40	2885.00
2003	91.60	8.40	3945.00
2004	81.80	18.20	2920.00
2005	78.70	21.30	3120.00
2006	79.90	20.10	2980.00
2007	92.10	7.90	2430.00
Q1 2008	97.90	2.10	490.00
Q2 2008	99.10	0.90	445.00
Q3 2008	99.30	0.70	300.00

Source: Inside Mortgage Finance, Milken Institute, adopted from 'The Rise and Fall of US Mortgage and Credit Market', Barth, J. R.



The mortgage lenders addressed this enhanced credit risk by referring to the 'originate-to-distribute' model of housing finance as more and more loans were packaged into mortgage-backed securities (MBS). In Table 3 the percentage of mortgage backed securities (subprime) is shown. It is observed that in 1994 only 31.60% of the subprime mortgages were securitised. This percentage increased manifold from 40.50% in 2000 to 80.50% in 2006. Thereafter subprime mortgage backed securities shrank significantly.

Table 3: Securitisation of Subprime Mortgage Loan

Year	Subprime (%)	Subprime MBS Share of Total Subprime Originations (%)
1994	4.50	31.60
1995	10.20	28.40
1996	12.30	36.40
1997	14.50	50.00
1998	10.30	55.10
1999	12.20	37.90
2000	13.20	40.50
2001	7.80	55.20
2002	7.40	57.10
2003	8.40	61.00
2004	18.20	75.70
2005	21.30	76.30
2006	20.10	80.50
2007	7.90	114.00
Q1 2008	2.10	20.90
Q2 2008	0.90	4.30

Source: Inside Mortgage Finance. Milken Institute, adopted from 'The Rise and Fall of US Mortgage and Credit Market', Barth, J. R.

Credit risk for mortgage originators also increased as there was severe decline in lending standards. Various new mortgage loan products like the 'low documentation loan', 'interest only loans' and 'teaser loans' were aggressively marketed which aggravated the credit risk profile for the originators and were eventually transmitted to the investors through various types of MBS. In Table 4 the deterioration of lending standards is projected.

Table 4: Deterioration of Lending Standards, 2002-2006

Type of Loan	Year of Origination		
	1999	2003	2006
Subprime Loans	512476	1426503	2376949
Alt A Loans	84233	413494	872208
Low Documentation Loans	120682	678810	1635176
Interest Only Loans	1169	95870	725317
Second Loans	86482	192337	708343
ARM Teaser Loans	172579	361811	1639509

Source: Loan Performance, Pennington-Cross *et al.*

4. FAILURE OF SUBPRIME

The financial crisis (2008) is merely a manifestation of the failure of subprime as a model of financial inclusion. In this model, as has been stated earlier, financial assistance for housing is provided to those who are otherwise not eligible for such financial assistance within the purview of the traditional financial system. The subprime loans are riskier and therefore are priced at a higher rate than the prime loans. Thus a borrower whose credit worthiness is considered weak is brought within the purview of the financial system. This is tenable only when there is significant house price appreciation which creates surplus housing wealth⁴ for the borrower. According to the definition the subprime borrower often exhibits improper credit history. Thus there is high default rate associated with subprime borrowers. This is very evident through a study of foreclosure of subprime loans. The Center for Responsible Lending [CRL] (2007) estimated the subprime foreclosure during 1998 -2006 as 2.4 million. It is also evident that the most subprime loans are not used for buying homes, but for refinancing existing mortgages. In 2006, almost 56 per cent of the subprime loans originated were for refinancing of earlier loans and thus did not contribute to new homeownership.

⁴ Surplus housing wealth arises when the value of the house is more than the amount of borrowed funds. Thus there is an inherent capital accumulation process when house prices appreciate.

Table 5: Estimated New Homeownership from Subprime Lending

Year	Total Subprime Loans Originated	Estimated Subprime Loans to First-Time Homebuyers (Homeownership Gain)	
		Number	% of all Subprime Loans
1998	962273	73253	7.61%
1999	1132280	89309	7.89%
2000	911369	87651	9.62%
2001	918557	80856	8.80%
2002	1046072	85883	8.21%
2003	1505854	120807	8.02%
2004	2219547	219180	9.87%
2005	3259908	324361	9.95%
2006	3219749	354172	11.00%
Total (98-06)	15175609	1435472	9.46%

Source: CRL issue paper no.14 (2007)

In Table 5 the estimated new homeownership as direct fallout of subprime lending is shown. During 1998-2006 merely 9.46% of the subprime loans were targeted towards first-time homebuyers signifying that the major part of the subprime loans are either refinance loans or for purchase of second house. In Table 6, a comparison is drawn between subprime loans to first-time homebuyers and respective year's foreclosures of subprime loans.

Table 6: Net Impact of Subprime Lending on Homeownership

Year	Total Subprime Loans Originated	Homeownership Gain: Subprime Loans to First-time Homebuyers (A)	Homeownership Loss: Projected subprime foreclosures [no. of foreclosures] (B)	Net Homeownership Gain/Loss (A-B)
1998	962273	73253	94750	(21497)
1999	1132280	89309	144567	(55258)
2000	911369	87651	133126	(45475)
2001	918557	80856	105464	(24608)
2002	1046072	85883	102252	(16369)
2003	1505854	120807	181464	(60657)
2004	2219547	219180	348345	(129165)
2005	3259908	324361	632302	(307941)
2006	3219749	354172	624631	(270459)
Total (98-06)	15175609	1435472	2366901	(931429)

Source: CRL issue paper no.14 (2007)

Table 6 shows that in each of the years during 1998-2006 there has been net loss of homeownership which totals almost one million families. It is also noted the net loss in homeownership is projected in each of the years under consideration.

5. CONCLUSION

Collins *et al.* (2004) commented 'overall, the emergence of risk based subprime lending should produce positive social welfare effects'. In subprime mortgage lending financial assistance is provided, at less favourable terms, to borrowers who are financially ineligible in the prime mortgage market. Thus subprime actually helps in expanding access to credit and expands the reach of financial services which is the basic issue of financial inclusion. On similar lines Ben Bernanke commented 'The expansion of subprime mortgage lending has made homeownership possible for households that in the past might not have qualified for a mortgage and has thereby contributed to the rise in the homeownership rate since the mid-1990s⁵. Thus it is observed that the market led model of financial inclusion –the subprime residential mortgage – which was prevalent in the US mortgage market since early 90s contributed significantly to homeownership rates. Unfortunately aggressively marketing of newer financial products, deterioration of credit standards and speculation mania⁶ which crept inside the mortgage market as investors started financing their houses with the 'teaser' loans only to sell off their houses within the reset period at reap the advantage of rising house prices created a turmoil in the financial market which was named as the 'subprime' crisis. Furthermore it is important to note that financial regulation is more important in case of proper functioning of the market-led model of financial inclusion in the housing sector. The housing sector is a very sensitive sector since the issue of shelter is the basic aspect of housing and thus housing subsidies should be well targeted and the special circuits need to be revived as a model of financial inclusion in housing sector. •

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⁵ <http://www.federalreserve.gov/newsevents/speech/bernanke20070517a.htm>

⁶ Speculation mania is defined as a phase in financial market when heavy borrowing is used to buy financial assets on the assumption that the prices of such asset would increase relentlessly and allow the speculator to dispose the financial asset at higher price, thereby booking capital profit. This has been referred as the 'Ponzi finance' or hyper-speculation.

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Brand Development and Revival Strategy: Evidence from India

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ABSTRACT: Purpose: Liberalization of the Indian economy for the last two decades makes it highly dynamic and complex. In this extremely turbulent environment, firm sustenance and development is critically dependent on a conceptual brand development strategy or framework by which environmental uncertainty can be minimized. Considering the cases of two firms, namely Metro Dairy Limited and Sulekha works Private Limited and an attempt has been made to understand their brand development strategy and brand revival strategy respectively.

Research Design: Regression analysis has been performed taking sales variables on time to indicate the brand development measure of Metro Dairy Limited, and the brand revival strategy of Sulekha Works Private Limited. Standard error of the estimates in regression analysis is used to indicate the market volatility of the organization. Lower value of standard error indicates more stability in respect of the variables concerned, less fluctuation during the defined time period and a certain level of consistency.

Key Findings: Low standard error of estimates in both the cases indicates the success of brand development and brand revival strategies of the two respective firms, in the highly turbulent Indian market.

Research Implications: The present research highlights the need of the adoption of the innovative strategies for the sustenance of the firms originating from the Indian soil.

Key Words : *Strategy, Brand Development, Brand Revival, Market Volatility, Standard Error, India.*

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1. INTRODUCTION

The Indian economy has taken on a new lease of life after liberalization. After a structural adjustment, economic growth has been supported by market reforms, huge inflows of FDI, rising foreign exchange reserves, both an IT and real estate boom, and a flourishing capital market. Indian markets also observe changes in the market such as increase in affluent middle income group, cultural change, increased consciousness about quality of the product and service, export potential, development of markets – both wholesale and retail, improvement of physical and social infrastructures and rapid growth of industrialization as well as entrepreneurship development. India is one of the largest emerging markets with a huge potential for sustained economic growth. It is among the six largest industrial economies and the five largest agricultural economies (Som 2008).

With the growth potential Indian firms also witnessed a turbulent era in the form of hyper competition, characterized by sudden numerous unexpected changes, intense competition, greater buoyancy and growth potential and greater requirements for technological sophistication (Khandwalla 2002; Som 2008). To be competitive and ensure sustainable development, Indian organizations have to emphasize on brand development and product innovation.

In this paper an attempt has been made to understand brand development and revival strategy by taking into consideration two Indian firms. The purpose of the study is to critically evaluate the brand development strategy of Metro Dairy and the brand revival strategy of Sulekha Works Limited by case research method.

2. LITERATURE SURVEY

A brand is more than just a name, logo or advertising slogan; it is a person's dominant perception when the stimulus of any such symbol is presented. A brand is a reputation that develops enduringly from customers' actual consumption experiences. Marketer initiated communications can play important roles in brand development, including creating awareness of the offering, stimulating trial, and providing language and imagery to frame the desired brand. Marketing communications cannot compensate for a poor product or service. [Berry and Lampo 2004].

Brands are not static; they evolve with time (Figure 1). They go through several stages. Level one is the label or identity of the producer. The second level is functional superiority, which is perceived by customers as differentiation. The third level is the stage of emotional touch, while fourth level provides the power of self-expression. At the top of the pyramid (level five) is the cult brand (Ghodeswar 2008).

Literature shows that there has been a huge change in how branding has been perceived by marketers over the entire period of its evolution. Traditionally, branding was "casually treated as part of the product" (Urde 1999, p. 119). Its goal was to build brand image. The modern view is that branding is "a major issue in product strategy" (Kotler 2000, p. 404). It focuses on developing brands in a more active and deliberate manner, starting with the brand identity as a strategic platform. Therefore, the brand becomes an "unconditional response to customer needs and wants". Brand structures are complex and the "focus is on multiple brands, multiple products, and multiple markets". Once, the basic objective of a brand manager used to be "coordination with the manufacturing and sales departments in

order to solve any problem concerning sales and market share", and the "responsibility of the brand was solely the concern of the marketing department" (Davis 2002). Most companies thought that focusing on the latest and greatest advertising campaign meant focusing on the brand (Davis and Dunn 2002).

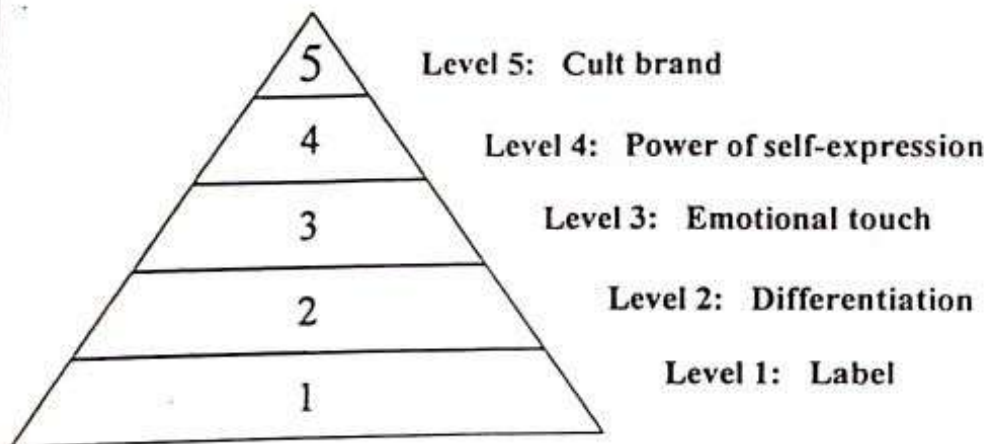


Figure 1: Levels of Brand Evolution

Kapferer (1997) has identified the functions of the brand for the consumer (Table 1), i.e. what the brand is supposed to do for the customer as well as the product / company.

Table 1: The Functions of the Brand for the Consumer

Function	Consumer benefit
Identification	To be clearly seen, to make sense of the offer, to quickly identify the sought-after products.
Practicality	To allow savings of time and energy through identical repurchasing and loyalty.
Guarantee	To be sure of finding the same quality no matter where or when you buy the product or service.
Optimization	To be sure of buying the best product in its category, the best performer for a particular purpose.
Characterization	To have confirmation of your self-image or the image that you present to others.
Continuity	Satisfaction brought about through familiarity and intimacy with the brand that you have been consuming for years.
Hedonistic	Satisfaction linked to the attractiveness of the brand, to its logo, to its communication.
Ethical	Satisfaction linked to the responsible behavior of the brand in its relationship towards society.

Adapted from Kapferer (1997)

The concept of branding is refocusing towards brand equity:

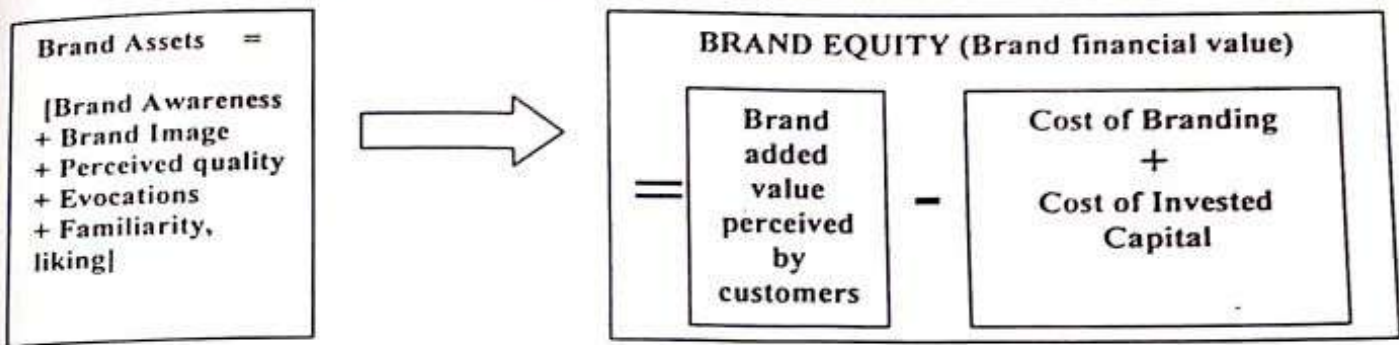


Figure 2: Refocusing of Branding- From Brand Assets to Brand Equity

Urde (2003) explains the brand building process to be two-part: internal and external. The internal process is used primarily to describe the relationship between the organization and the brand, with the internal objective being for the organization to live its brands. Conversely, the external process is concerned with relations between the brand and the customer, with the external objective of creating value and forming relationships with the customer.

Aaker and Joachimsthaler (2000) proposed a brand leadership model, "which emphasizes strategy as well as tactics". The strategic and visionary perspective leads to the brand manager being higher in the organization, having a longer time job horizon, and being a strategist as well as communications team leader; whose objective is to build brand equities and develop brand equity measures; and, brand structures are complex, as the focus is on multiple brands, multiple products, and multiple markets. In short, brand identity and creating brand value become the drivers of strategy.

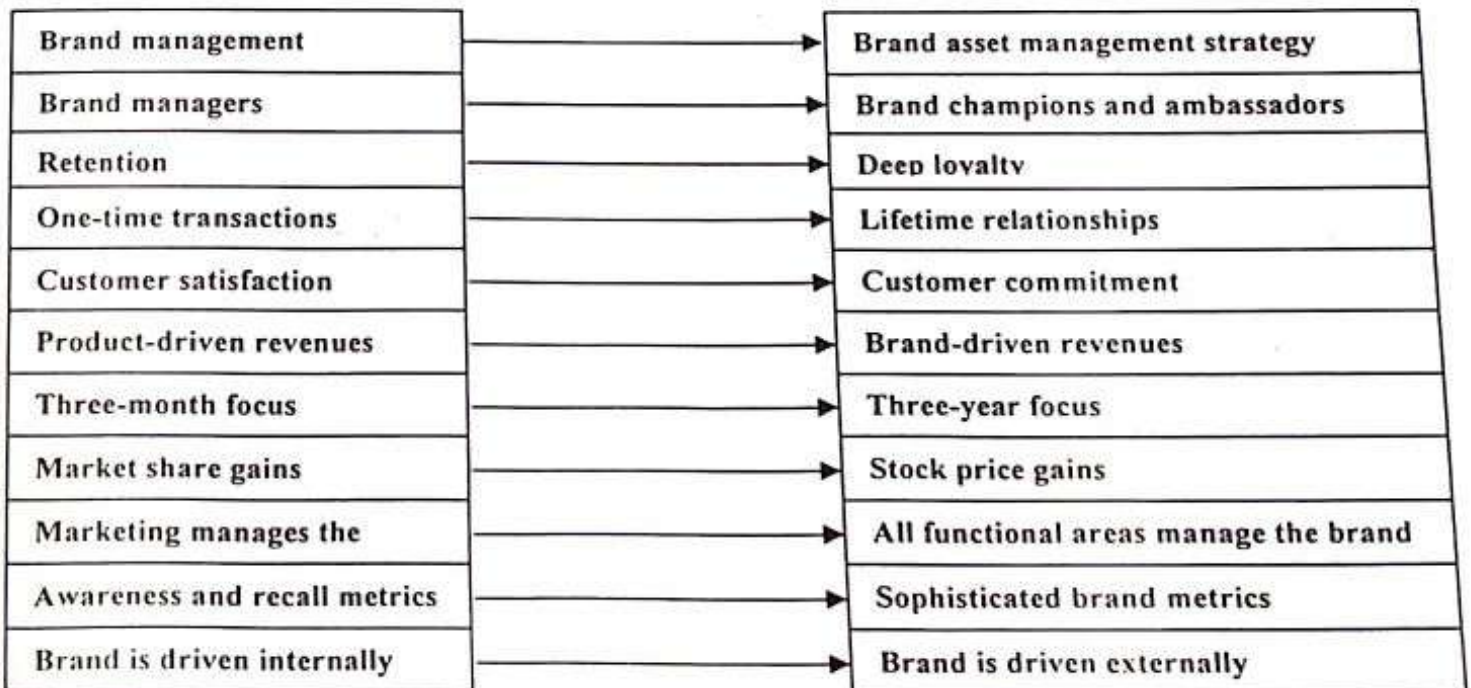


Figure 3 : The Shift from Traditional Brand Management to Brand Asset Management [Adapted from Davis (2002)].

Brand Asset Management (Davis 2002) concept proposes that brands, along with people, are a company's most valuable asset. The top three strategic goals for brand strategy nowadays are increasing customer loyalty, differentiating from the competition, and establishing market leadership (Davis and Dunn 2002). It is also noted that "brand management has to report all the way to the top of the organization and has to involve every functional area" (Davis 2002, p. 9).

2.1. Building Brand Identity

Branding literature noted another significant change in the mid-nineties. Businesses began shifting their focus from product brands to corporate branding (de Chernatony 1999; Hatch and Schultz 2003). Aaker (2004a) defines a corporate brand as a brand that represents an organization and reflects its heritage, values, culture, people, and strategy. Corporate branding congruent with the strategic brand vision (Schultz and Hatch 2003), focuses on developing brands at an organizational level (Knox and Bickerton 2003) - which requires managing interactions with multiple stakeholders (Balmer and Gray 2003; Knox and Bickerton 2003; Hatch and Schultz 2003; Aaker 2004b).

In an aggressively competitive marketplace, a brand has to rely on its brand personality and reputation to be able to differentiate itself from competing offerings in the consumer's mind, in order to gain customer loyalty and achieve growth. A necessary step in this is building customer trust, which can only be possible through a strong brand identity, which is well understood and experienced by customers, thereby distinguishing it from competition. Firms have to create a clear and consistent brand identity by communicating brand attributes to customers in a lucid and simple manner.

2.2. Relevance of the Study

The literature survey indicates that organizations of all sizes worldwide, are realizing that developing a strong brand image is an absolute necessity for sustenance. It has become more pertinent in the context of the liberalized Indian economy, where, restructuring has given rise to many changes, both in the micro as well as the macroeconomic environment. Success stories of Indian origin firms have been taken here to highlight the issue that innovative branding strategies are essential for both small and medium firms for development and sustenance in this highly competitive environment, and hence firms in different industrial segments and geographical pockets are developing such unique and innovative branding strategies. Here the authors have used case research method to explore the operational strategy by an intensive study of the two firms for their growth and revival respectively.

The case research of Metro Dairy analyzes their brand development strategy, through which a conceptual framework development for building brands has been attempted. Simple statistical measures using selected dimensions have been used to justify the qualitative framework.

The case of Sulekha is the story of a well established brand fading into oblivion due to lack of understanding of and adaptability to changes in technology and consumer mindset. A conceptual framework is based on the case research method of Sulekha, exploring how they have successfully revived their brand. Justification of this framework can only be made using selected measures as applicable in the case.

3. OBJECTIVES OF THE STUDY

In this extremely dynamic environment, firm sustenance and development is critically dependent on gradual development of its product – marketing – branding strategy.

In this present environmental context which is highly dynamic and complex, it is desirable to develop a conceptual brand development strategy or framework by which environmental uncertainty can be minimized.

In this paper we have considered two firms, namely Metro Dairy Limited and Sulekha works Private Limited and an attempt has been made to understand the brand development strategy and brand revival strategy taking these two firms as the cases.

The objectives of the paper are as follows:

[A] Brand Development strategy taking Metro Dairy as a case:

1. From its inception Metro Dairy emphasized on its quality product and emphasized its brand development strategy. A qualitative framework of its brand development strategy is completely analyzed.
2. Sales turnover for the last 11 years for Metro Dairy and Percentage growth of Sales are taken as quantitative measure of its brand development.
3. Find quantitative evidence to prove the validity of the qualitative framework

[B] Brand Revival Strategy taking Sulekha Works as a case:

1. Sulekha works has chalked out a plan for its brand revival. New product development and revitalizing its brand name so as to leverage its brand equity and expand market share.
2. After 18 years of sickness and closure, Sulekha Works reopened in 2006. A complete analysis of their product market development strategy has been performed.
3. Sales turnover and Percentage growth of Sales has been analyzed to assess their brand revival measure.
4. Find quantitative evidence to prove the validity of the qualitative framework.

4. METHODOLOGY

4.1. Research Design

To justify the measure of success of the brand development strategy of Metro Dairy, an attempt has been made to assess how far the organization has been able to manage the volatility in the demand side. For this purpose, sales turnover data of the last 11 years (1999-2000 to 2009-2010) are used as a basis to measure the uncertainty present in the market. Estimation of the standard error in regression analysis, while regressing sales variables on time, is used to indicate the market volatility.

To emphasize the elements of its brand revival strategy of Sulekha Works, sales revenue data for the firm since 2006, i.e. after its reopening its doors which had remained closed for the past 18 years, has been taken for a similar analysis.

Standard error of estimates is taken as objective measure of uncertainty of business environment. Lower value of standard error indicates more stability in respect of the variables concerned, less fluctuation during the defined time period and a certain level of consistency. On the other hand, higher value of standard error indicates less stability in respect of the concerned variables and high level of fluctuations within the defined time period which indicates a greater degree of inconsistency.

4.2. Data source and collection

The data was collected through interactions with the top/senior executives who had an adequate knowledge of company history, business strategy, changes in the business environment, and the changes in the organization. The entire primary data was collected using interview method in an unstructured way. The sales performance data from their audited balance sheet were collected to be used as a dataset.

5. MODEL DEVELOPMENT

5.1. Brand Development - Metro Dairy Limited

5.1.1. Qualitative Framework of Brand Development

Company Brief

Metro Dairy Limited is a joint sector company with an annual turnover of Rs. 180 crores. The equity shares are held by West Bengal Co-operative Milk Producers' Federation Limited (47%), Keventer Agro Limited (43%), and ICICI Bank Limited (10%). The only dairy in the joint sector under the Operation Flood Programme, the Company's project was totally funded by the World Bank. The dairy, which was planned and set up under the supervision of the National Dairy Development Board and commissioned in 1996, was built at a cost of around Rs. 49 crores.

The objective of the World Bank in funding and setting up this dairy was "to ensure a market for the co-operative milk farmers of West Bengal and to assure them of remunerative procurement prices, as also to ensure consumers of Kolkata and surrounding areas with wholesome and hygienic products at reasonable prices." The Company is professionally managed, the overall control being with the Board of Directors representing the various equity shareholders of the Company. The Chairman of the Company is the Minister-in-Charge of Animal Resources Development Department of the State.

The Dairy Plant: State-of-the-art infrastructure and processes

Metro Dairy's plant is one of the most modern dairy plants in Asia, even today, in terms of sophistication of machinery, automation, PLC system and effluent control. This configuration of excellence ensures consistent repetitive product quality and high levels of sanitation and hygiene – which, in turn, manifest in the product in terms of consistent product composition and better shelf life. The parameters that ensure high quality in production and continuous future improvements in quality are as under:

- *Imported Machinery*
- *Completely automated system*

Automation System comprises of a computer network with Central Management System and individual Graphics terminals for each major section of the plant. The Control

System comprises of 4 major sub-systems: (1) Front-end Controllers – PLC System, (2) Modbus Plus LAN Data Highway, (3) Man-Machine Interface Units, (4) Central Computer for MIS.

Ensuring quality input: sourcing of milk

Primarily, the Company is procuring as much liquid milk as possible from the cooperative sector in West Bengal. It has already started receiving milk from Bhagirathi Milk Union in Murshidabad District and Kishan-II Milk Union in North 24 Parganas District. Also, it is about to procure milk from Damodar Milk Union in Hooghly District. To mitigate the shortage of supply of milk from West Bengal, the Company is also sourcing liquid milk from the Andhra Pradesh Milk Federation.

Skilled human resource

Metro dairy recruits and develops skill sets in their different process technology areas to sustain its quality production system, e.g., dairy technologists with experience in the co-operative dairies, engineers with specialization in electronics and refrigeration, technicians mostly with specialization in instrumentation, and especially quality control personnel with Doctorates in dairy chemistry, dairy bacteriology, etc.

Waste management

The dairy has a bio-degradable sludge-bed type Effluent Treatment Plant (E.T.P.) where dairy effluents are treated under continuous lab analysis before being finally emitted into an adjacent canal.

Quality assurance

Metro dairy relies on quality assurance for developing its brand image. Its focus on continuous improvement of its processes is a result of its corporate strategy of maintaining the loyalty of its customers through consistency, commitment and responsiveness to food safety and consumer health, affordability and availability. Quality in this dairy is not just adherence to certain pre-fixed specifications but it is a continuous development process. In order to achieve this, quality monitoring is embedded into the entire processing activity. The dairy plant is equipped with a sophisticated laboratory which has the latest imported equipment, such as the Micro-processor based Milk Analyser or the bacteriological chamber for microbiological analysis, to name a few.

Brand development

Brand development strategy that has been adopted by Metro Dairy, Kolkata, has yielded consistent performance in the niche market of the Kolkata region. This case can serve as a role model for brand development in a micro-market. The findings indicate that the market performance data support the viability of this brand development model. The Dairy Plant with state-of-the-art infrastructure and processes has emphasized strongly on technological sophistication and quality as a tool for branding. They have also embarked on a programme of intense market research to find the levels of customer preferences for dairy products and their price sensitivity. This has been used to find an ideal fitment of the quality-price combination for the growing urban population of middle-income group and quality-aspiring consumer.

From the inception Metro Dairy has built up a quality product image in the dairy sector in Kolkata market. They communicate the message giving emphasis on the quality, the

freshness. They always use the tag line in the advertisement for their milk as "*Ghana raja dudher raja*" (Bengali) (Thick & Fresh – The King of Milk). They consciously promote their ice-cream as Dairy Ice-cream as they use fresh milk as ingredients. That creates the huge demand of the ice-cream product compared to their competitors and its pricing strategy also helps to increase market share. Their great success is reflected in the present market research data compiled by AC-Nielson in the time period April-Dec'2006.

Brand	% Market Share (based on volume)
Metro Dairy	45
Quality Walls'	20
Rollick	15
Big-Ones	7
Amul	5

To meet up the demand of the market, they are also expanding their production capacity. They have increased 50% of their production capacity within the time period from 2002-2003 to 2008-2009 (Data: Production capacity in the year 2002-2003 was 7000 litre per day & Production capacity in the year 2008-2009 was 11000 litre per day).

To summarize, Metro Dairy brand image hinges on high product quality, which is made possible through high quality of input raw materials and state of the art production processes based on technological sophistication. This is supplanted by a highly skilled workforce who operates the process and delivers the high quality product. This is topped by regular communication to the consumer emphasizing product quality.

5.1.2 Quantitative Analysis

Sales turnover is a good measure for the estimation of organization performance and brand development as it not only considers the financial health of the organization but also the firm's contribution to the development of society, since it includes the cost of labour, contribution to the GDP, stakeholders participating in the value chain.

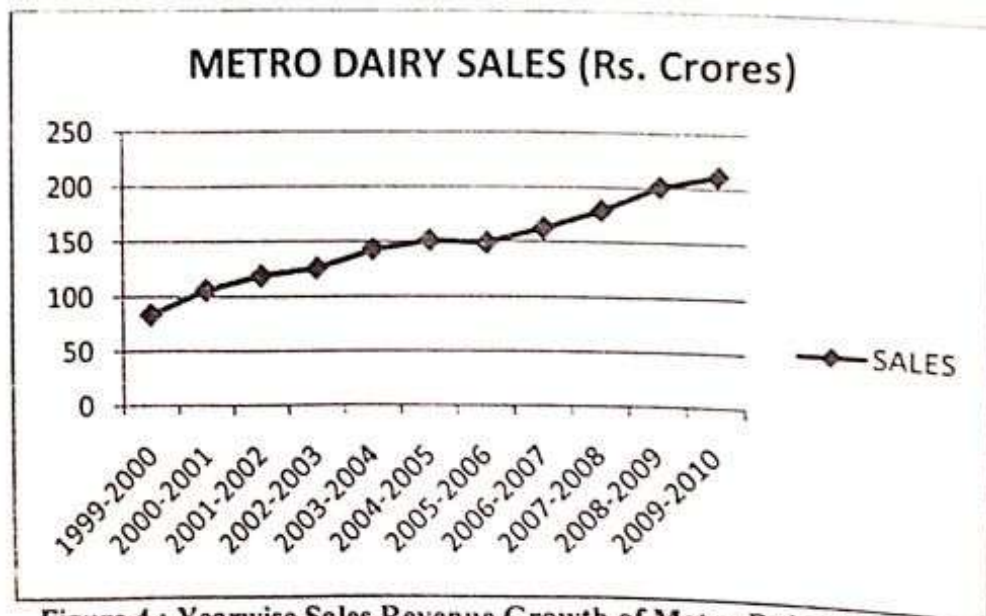


Figure 4 : Yearwise Sales Revenue Growth of Metro Dairy Limited.

Hence, compounded annual growth rate (CAGR) of sales is taken as Brand Development Measure (BDM):

$$r = \left[\frac{S_n}{S_o} \right]^{1/N} - 1$$

where,

r is CAGR

S_o is the base year

S_n is the final year

N is the number of years between S_o and S_n

In the case of Metro Dairy, the CAGR value calculated is 9.8%. The year-wise sales data (Fig.4) and CAGR, clearly indicate the consistency of performance of Metro Dairy, leading to brand sustainability.

Based on yearly data on the variables, namely sales turnover, time series analysis has been performed using regression method with time being the only independent variable. The time series data was available from 1999-2000 to 2009-2010.

In this analysis the values of R square have turned out to be reasonably high. As we have suggested earlier, standard error of the estimate is taken as a measure of uncertainty in respect of the variables. [Refer Table 3]

Variable	Unstandardized Coefficient		R Square	Adjusted R Square	Std. Error of the Estimate
	Constant	Time			
Sales Turnover	78.088	11.673	0.973	0.970	6.824
Dependent variable: Sales Turnover (Rs. Crores)					
Independent variable: Time (1999-2000 to 2009-2010)					

In the above case as far as market volatility is concerned, as derived from sales data, standard error of the estimate is very low. This indicates performance of the Metro Dairy is quite consistent for the last decade.

Clearly, they can absorb the volatility of demand side with their effective business strategy. Thus, sales revenue data confirms that their marketing strategy has successfully contributed towards brand development. This has also been reflected in their 4P Strategy:

- **Product Strategy:** Metro Ice Cream is a product that has been developed and positioned as a dairy ice-cream.
- **Pricing Strategy:** Price competitiveness - Metro Dairy has made it a common man's ice-cream so as to be included as part of the Bengali daily cuisine.
- **This product-price competition strategy** has helped it to successfully overcome the competition from giants like HUL's Quality Walls brand of ice-cream. Its niche market strategy has successfully made it the market leader in Kolkata and surroundings.
- **Promotional Strategy:** They have created the taste of ice-cream and positioned it as a common ingredient of the Bengali meal. Now they are taking steps to offer a variety of flavours and packaging and size options.

- **Distribution Strategy:** They have been able to create a strong distribution network in Kolkata and surroundings area, making it an unquestioned leader in the niche market.

5.2. Brand Revival – Sulekha Works Ltd.

5.2.1. Qualitative Framework of Brand Revival

After a long gap of 18 years Sulekha Works reopened its doors in 2005. The organization, which had been started in 1934, was once famous as a leading manufacturer of fountain pen ink and phenyl in the local market of West Bengal. But it now faced a completely different market. Fountain pens have been rejected by consumers in favour of Ball-point pens and Gel pens. The changes were visible for a long time, but the management had previously refused to acknowledge it. Competitors like Reynolds, Linc, Cello, etc. had entered the market and offered better technology and variety in the design of writing instruments, rendering Sulekha completely obsolete. Offices and schools in the new millennium were now habituated with a variety of stationary equipments. Phenyl was also no longer used as was prevalent before. It, therefore, was faced with a case of product obsolescence.

History

“Sulekha Ink” has a nostalgic connection with the Bengali psychology. As the makers of fountain pen ink used by students as well as in offices, they were the dominant market leader in the local market of West Bengal from 1930s to the 1980s. But in 1988-89, Sulekha Works factory was shut down. Reasons for sickness include:

- Changes in technology
- Changes in consumer tastes and preferences
- Excess manpower
- Lack of Financial resources

Present Scenario

The management of Sulekha has formulated a new strategy, though it is very late, to revitalize its old brand name and capitalize on the brand equity thus availed.

Organizational Revival Strategy

Before reopening in 2005, they had taken a lot of steps to pay the workers dues. They had to sell company land assets in Ghaziabad and Sodpur. This is another evidence of their well established corporate social responsibility. They have also taken initiatives to recruit former workers, if they were still fit to work, or their family members. This has increased the loyalty, motivation and faith among its workforce. A dedicated workforce is now the growth-engine in its turn-around story.

Product development strategy:

Keeping in mind the consumers' changed tastes and preferences, Sulekha came up with a basket of new products and their varieties, such as use-and-throw pens, pencils and erasers for school students, ink for refilling computer printer cartridges, stamp pads (ordinary as well as self-inking variants), different varieties of adhesives, office pins and many more. For the household they have developed “Camphora” and “Pynora” brands of Herbal cleaning agents. In addition to this, they also manufacture naphthalene, bleaching powder, Liquid Hand Wash, and “Easy Klin” brand of dishwashing soap.

They have adapted to new technology for product innovation, new product development, product diversification etc.

Sales strategy

Previously they used to operate in a monopolistic market. They had no threat perception from competitors. But when they awoke to the reality of changing consumers tastes along with technology, coupled with increased competition, it was already too late and they were in deep trouble. They had no recourse but to close down.

Now with that bitter experience they have realized that it is essential to have a marketing / branding strategy. Previously they concentrated only on production. Now they are creating a separate marketing vertical as an on-going process of decentralization. For example, a separate Home Products division has been created to emphasize this area. They have conceptualized the idea of a Strategic Business Unit (SBU). Based on market research, they are finding new micro-markets in North-Bengal as well as North-East India, with a huge potential.

To summarize, Sulekha has focused on diversification to avoid product obsolescence leading to Product variety based on consumers' tastes and preferences. A dedicated and loyal workforce is driving this change. A separate marketing vertical implies a shift from production-focus to customer-focus. Decentralization and formation of SBUs to emphasize product categories implies that more importance is being given to individual brands.

5.2.2. Quantitative Analysis

Sulekha, having restarted operations from 2005, can show their sales performance from 2006-2007. The spectacular turnaround story of Sulekha is prominently reflected in their sales data (Fig. 5). Within a period of three financial years, they have created own niche market with their variety of diversified product mix, monitoring of quality and development of strong distribution network. In the next two years, from 2009-2010 to 2010-2011, a steep growth in sales indicates that they have earned consumer trust and the high CAGR value of 158.8% corroborates the same.

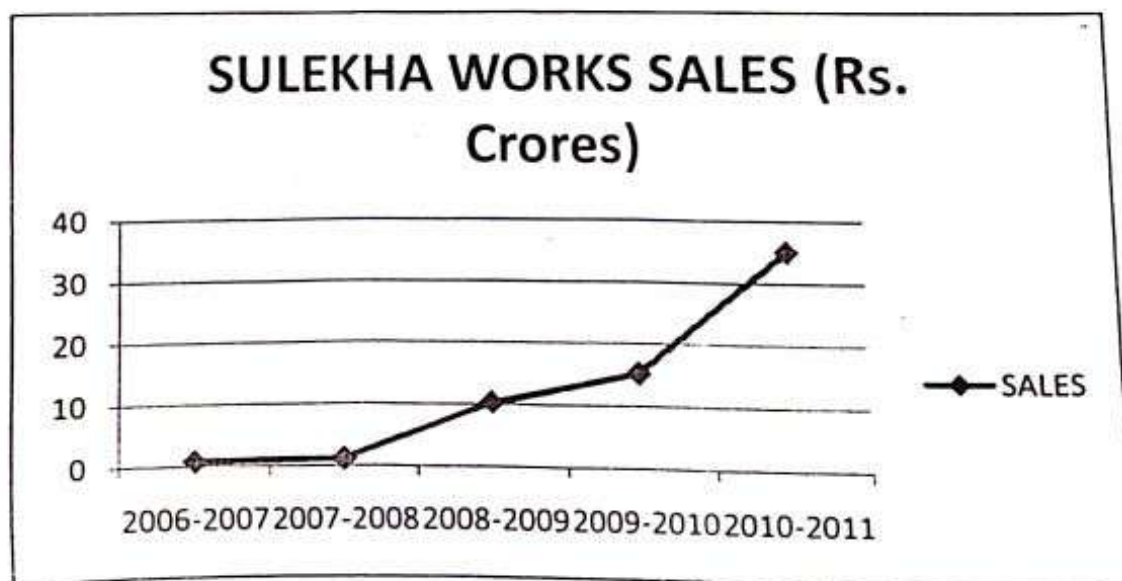


Fig. 5. Yearwise Sales Revenue Growth of Sulekha Works Limited.

Based on yearly data on the variables, namely sales turnover, time series analysis has been performed using regression method with time being the only independent variable. The time series data was available from 2006-2007 to 2010-2011. In this analysis, the values of R square have turned out to be quite high. As we have suggested earlier, standard error of the estimate is taken as a measure of uncertainty in respect of the variables. [Refer Table 4].

Variable	Unstandardized Coefficient		R Square	Adjusted R Square	Std. Error of the Estimate
	Constant	Time			
Sales Turnover	-12.263	8.245	0.867	0.823	5.896
Dependent variable: Sales Turnover (Rs. Crores)					
Independent variable: Time (2006-2007 to 2010-2011)					

In the above case as far as market volatility is concerned, as derived from sales data, standard error of the estimate is low. This indicates that Sulekha is gradually trying to overcome the market volatility. This implies that their market revival strategy seems to be working in a positive direction.

6. MANAGERIAL IMPLICATIONS OF RESEARCH

With the growth potential Indian firms also witnessed a turbulent era in the form of hyper-competition, characterized by sudden numerous unexpected changes, greater buoyancy and greater requirements for technological sophistication (Som, 2008, Khandwalla, 2002). To be competitive and ensure sustainable development, Indian organizations have to emphasize on brand development and successful brand sustenance strategy.

Large firms with deep pockets have a lot of resources for facing stiff competitions. But small and medium scale firms need to develop customized branding strategies for survival in the tough market. The two cases highlight brand development and brand sustenance strategies that may be taken as role models by Indian firms that want to exist in the Indian market. Due to the huge geographic area and cultural diversity, there exist a lot many small firms existing in their own pockets. They struggle to capture a niche market and survive in it. But large scale firms and multinationals are increasingly encroaching in their domain using their huge financial base, technological sophistication, structured organization and adequate resources. The present research highlights the need of the adoption of the innovative strategies for the sustenance of the firms originating from the Indian soil.

Despite contributing 8 per cent to the country's GDP and being a key player in social and economic development by providing employment to 60 million people through 26 million enterprises, the role of MSMEs is not visible due to weak marketing and branding. Branding is crucial to promote the micro, small and medium enterprise (MSME) sector in India. Brand building and reformulation of marketing strategies to enable MSMEs to position their products and services in the competitive market is the need of the hour.

7. LIMITATION OF RESEARCH

This research has been conducted using a case-based approach of branding strategy of Indian firms. It must be kept in mind that the same strategies may not work for all

organizations and the strategies may differ depending upon the diverse nature of operating environments and size of the firm.

8. FUTURE SCOPE OF THE STUDY

Both of these organizations may serve as role models for the small and medium enterprises. In the context of liberalized Indian economy, each and every sector has faced hyper-competition from the local, national as well as foreign direct investment. With the advent of new technologies more brands are wiped out due to obsolescence than are created. To be competitive, product innovation, diversification, with the backbone of integrated policy framework of the organization can only minimize the threats of the turbulent, dynamic and complex market. Indian organizations mainly small and medium sector are mainly ignorant about the branding strategies. Branding, especially corporate branding becomes a new concept which has to be nurtured by the SMEs to create primarily product differentiation and preference for a product in the mind of the consumer. Exhaustive exploratory study will be made in future considering a set of SME organizations and a relationship has to be developed in between its performance and parameters of the branding strategies such as measurement of the volatility in the market, measurement of the volatility present in the supply of inputs and also measurement of uncertainty within the organization. •

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Remembering “Buladi”: Fiction of Pleasure in Social Marketing

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ABSTRACT: In 2003-2004 West Bengal State AIDS Prevention and Control Society launched a vigorous communication campaign against HIV/ AIDS by creating an icon “Buladi”, designed by Ogilvy in the form of a rag-doll with a projected identity of a neighborhood elder sister whom everybody looks up to. This campaign is based on some “social learning theory” which believes that people’s behavior can be changed through some role model. Bula di tries to engage all strata of society through a woman gaze. The campaign justifies its scale by elaborate consumer research that suggests increased HIV threat due to people’s myths and misconceptions. This paper reviews this campaign through some secondary data and compares it with some other contemporary social marketing campaign in HIV/ AIDS, where similar fictional characters are used. A simple logo recognition study is done in the migration-prone blocks of Howrah. This article tries to extract some learning for the future from Buladi campaign.

Key Words : *Social Marketing, HIV AIDS, Condom, Communication.*

1. INTRODUCTION

One of the most dramatic developments in the field of marketing in the twenty first century is the broadening horizon of “social marketing” as an approach to changing important social behaviour for the collective benefit of the society as a whole. Social Marketing has been defined as the use of marketing principles and techniques to influence a target audience to voluntarily accept, reject, modify or abandon a behavior for the benefit of individuals, groups or society as a whole (Kotler 2002). In recent times, social marketing has helped people to conserve environment by avoiding poly-packs, to prevent traffic accidents by wearing seat-belts and helmets, to arrest spread of sexually transmitted diseases by using condoms. Social marketing in

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health sector seeks to bring about changes in health seeking behavior by improving access to and demand for products and services. India was one of the first countries globally to adopt the social marketing of contraceptives to extend the coverage and outreach of the family planning programme. The onslaught of HIV / AIDS from late eighties has added a new dimension to this social marketing campaign.

2. CONTRACEPTIVES: EVOLUTION OF SOCIAL MARKETING IN INDIA

The National Population Policy 2000 (Govt. of India 2000) recognises the immense potential of social marketing in expanding the outreach and coverage of health care products and services, and emphasises the need to formulate and implement social marketing schemes for provisioning products and services, through partnerships between the voluntary sector, non-government organisations, the private corporate sector, Government, *Panchayati Raj* Institutions and the community. It recognises that all of this will accelerate achievement of the national socio-demographic goals. In India, the social marketing was originally started (1968) to promote acceptability and utilisation of the condom and subsequently, the oral contraceptive pill was the second contraceptive to be included (1987) in the programme. For over thirty years the social marketing of contraceptive has promoted diverse brands of condoms and oral contraceptive pills, increasing availability of and access to contraceptives. Number of new products, e.g. oral rehydration salts, iron-folic acid tablets, has been recently introduced in the basket of health care products.

By the end of the sixties, commercial marketing of condoms was two decades old. However, these were stocked in a few hundred drugstores / retail outlets known for selling high priced specialty goods to the upper income groups in large cities. Market prices of condoms were very high, and private manufacturers were unable to generate expansion in consumer sales. In the early 1960's, India had introduced a brand of condom, known as 'Nirodh' for free supply through government hospitals and primary health centres. By 1968, private sector companies with extensive distribution networks for consumer products were invited to promote 'Nirodh' in the market. Union Carbide, a manufacturer and distributor of flashlight batteries, Hindustan Lever and Tata Oil Mills, competing manufacturers for cooking oil and bath soap, India Tobacco Company, the premier distributor of cigarettes, and Brooke Bond Tea, the major distributor of tea, were given responsibility for operations within assigned geographic territories. Collectively they covered the entire country.

Since the introduction of the social marketing programme in 1968, awareness regarding condoms and oral contraceptive pills has substantially increased as reflected in the growth in the Contraceptive Prevalence Rate (CPR) in every demographic health surveys. The onslaught of HIV / AIDS from late eighties has given new direction and impetus to the social marketing of condom.

3. "BULA DI" CAMPAIGN

3.1. Genesis



With these thought processes behind, WBSAPCS commissioned Ogilvy to launch their new anti HIV campaign: "Operation Bula Di". The campaign needed a role model or a brand ambassador who can execute this social learning to the best effect, with whom the target audience can identify with. Thus was born "BULA DI": a social worker whom one can always





look up to for advice. But she was no different from our next-door neighbor. She was of indeterminable age, of unflappable temperament, and one with those she seeks to help. She was a myth-breaker. She was sister to some, aunt to some, mother to some – but a friend to all – reliable, educated, and claims to be apolitical too. Clad in traditional Bengali *saree* with a *santiniketani* bag she was represented by a “*nakrar putul*” (rag doll), the leading handicraft of Bengal as the friendly mnemonic to women and girls.

3.2. Media Mix: 360° Campaign

In order to surround and engage the audience at highest possible level, Bula Di appeared in Mass media, Local Media, Folk Media, Inter-personal and Advocacy communication channels. Ads in print media like mastheads of publications, car panels, and other innovative areas created intrigue in the minds of people. 20 sec TV and radio spots dealt with specific issues on HIV and Aids. Kiosks and Wall paintings carried the communication messages with innovative use of Taxi seat covers used to reinforce the message. Cinema slides promoted the help line number. Public relations were used to plant stories to help generate awareness on HIV and AIDS. Mobile Vans moved from place to place conducting puppet shows and games. Street Plays were conducted in certain pre-determined areas. Prescription pads of certain select doctors and chemist shops highlighted ‘Buladi’ brand. Idols appeared at petrol pumps and *dhabas*. Cellular phone network transmitted ‘Buladi’s’ messages.

3.3. Key Messages

Sr. No.	Figure	Message	Remarks
1.		HIV can spread through contaminated blood	Bula Di breaks the myth that HIV is a disease of lower class, not of 'bhadralok'. It also raises awareness about another common route of infection.
2.		HIV spreads through infected needles	It raises awareness about another high-risk group, injectable drug users.

 <p>But Bula-di, I have just one partner. How can I be infected?</p> <p>Why not? Are you sure your partner is not an HIV carrier?</p> <p>Unprotected sex can cause AIDS. Call Bula-di on 1097 (toll free)</p>	<p>Be sure about partner</p>	<p>It highlights that monogamy can prevent HIV. In contrast to CSW, here emphasis is on male promiscuity and the unsuspecting housewife.</p>
 <p>Bula-di, why am I suffering from lower abdominal pain and smelly discharge?</p> <p>This could be a symptom of Sexually Transmitted Diseases. Go to a hospital for treatment without delay!</p> <p>Get treated at a Sexually Transmitted Diseases clinic at any hospital to be certain. Call Bula-di on 1097 (toll free)</p>	<p>Foul smelling discharge can be a symptom of STD</p>	<p>It raises awareness about early treatment of STDs.</p>
 <p>But Bula-di, won't using a condom mean suspecting my partner?</p> <p>Not at all. Rather it is a sign of a healthy relationship</p> <p>Unprotected sex can cause AIDS. Call Bula-di on 1097 (toll free)</p>	<p>Condom means healthy relationship</p>	<p>It tries to clarify male inhibition to use condom by attaching commitment to condom.</p>
 <p>কুম্ভি, নাইরাম যৌব গ্রোপ নিশ্চয়ই ভয়ানক হলে পারেনা?</p> <p>যৌব গ্রোপ HIV-র মত-একধরনের মস্তাবনা ৯০ দিন ব্যতিক্রম কালে।</p> <p>নিরাম ব্যবহার করুন, HIV, AIDS, STD-র সংক্রমণের ঝুঁকি থেকে বাঁচুন। ১০১-১০২ সড়ক, ঢাকা-১০০০ (১০১-১০২)।</p>	<p>STD does increase risk of AIDS</p>	<p>It raises awareness about STD among careless male youth.</p>

In all the above cases, the advice seeker is a woman, who is bold and frank enough to solicit Bula Di's advice, though the issues involve their husbands or sons. Interestingly, male audience includes 'bhadrals' as well as 'mastans'.

These were snap shots of one-frame dialogues. The print or hoardings series are repeated as TV spots too with voice added to the doll animated characters.

4. IMPACT EVALUATION

The Phase I Bula Di Campaign brought forth a more than encouraging response in terms of generating public curiosity and awareness on the subject. A formal Impact Assessment study (WBSAPCS 2006) conducted by M/S Synovate Inc. revealed a hard biting reality that as high as 79% of all respondents had not seen any HIV/AIDS related campaign prior to this. The recall figures for the campaign was highest for Kolkata while North Bengal seemed to be not very enthused about the campaign with 26%, 63%, 59%, 60 % unaided recall in Jalpaiguri, Krishnanagar, Burdwan and Kolkata respectively.

The campaign has emerged out to be a greater success in the age group 15-26 years with unaided recall as high as 61% as compared to 52% in the age group 27-50 years. The campaign has ensured the realization of the objectives set at the onset of the campaign about reaching out to women as the primary target audience. Women (unaided recall 57%) seem to have taken notice of the campaign more than men (unaided recall 54%).

The campaign conceived as a 360 degree campaign did get visibility in all its channels, however outdoor & TV seemed to be catching the highest audience attention with 44% message recall being traced back to Outdoor hoardings while 45% to TV and 11% stated Radio to be the source of recall. Further 71 % of those who recalled the campaign stated that the outdoor was appealing enough to prompt them for the suggested call for action. The success of the campaign in Kolkata could be traced back to higher investment in hoarding display for Kolkata.

The Phase I of the campaign generated a statewide familiarity with the 1097 Toll free number for STD/HIV/AIDS related queries while addressing several prevalent myths on the issues related to HIV/AIDS. Phase II tries to generate awareness about STD – HIV/AIDS linkages, STD symptoms particularly among women, Symptoms of HIV/AIDS infection in people.

The call for action is more towards getting people to get HIV tested at VCTC centres when one feels to be at risk of HIV/AIDS and get treated at STD clinics when symptoms suggest so. The message on Condom usage holds common for both the phases. A monthly analysis of the phone calls received shows a sharp rise (up by 193%) after the campaign was launched on 1st December 2004. Electronic media (Radio and TV broadcasted around 60 minutes of airtime, across 6 channels) as well as the print media (with news material of more than 8,000 sq. cm. with 11 articles in 10 publications) rendered full support to the campaign. Men: Women ratio among callers came down from 5:1 to 2:1 due to steep rise in the women callers.

4.1. Did they Recognize 'Buladi' in Howrah?

As a part of evaluation of pulse polio campaign (Ray 2006) in Howrah, 15-44 yrs aged married women respondents were asked to recognize different logos from different commercial as well as social marketing campaign from flashcards displayed through interpersonal interviews. In this study, Bula Di shows better brand recall than Amul, a brand

promoted by another doll like cartoon icon, but it lags far behind in its reach from Pulse Polio campaign:

Table 1: Bula Di Logo Recall by married women (15-44 years)

Frequency	Bula Di	Polio	Amul	Mother Dairy
Yes	42	103	23	15
No	114	53	133	141

The study also shows that a Hindu mother is 6.54 times more likely to recognize "Buladi".

Table 2: Odds Ratio of Bula Di Recall by Mothers

Variable	Reference Category	Category	Odds Ration
Religion	Muslim	Hindu	6.538
Standard of Living Index (SLI)	High	Low	.168
		Medium	.820
Polio Acceptance	Acceptor	Refusing	.121
Health Awareness	High	Low	.326

This raises a question about the buladi's penetrance across religious divide: do we require a "bula-bibi", to get socially identified with them?

Table 2 reveals that low socio-economic groups are far less likely to heed to the campaign than the higher groups, probably being restricted in their exposure to both print & electronic media.

The people who are not regularly reached by existing health-service and consequently remain unaware about their health needs are found to be at greatest risk of not responding to "Buladi". These contrasting findings from Synovate evaluation point to a possible gap in the campaign among low SLI Muslim women in rural Bengal, who may be more conservative and under-exposed to media but at the same time more vulnerable to the onslaught of the disease because of their migrating husbands' polygamous relationships.

4.2. Where Bula Di is Different?

Bula Di is not a pioneer. Before Bula Di, we have noticed two similar anti HIV campaign (PSI 2003) using fictional character: "Balbir Pasha" in Mumbai (2002) and "Puli Raja" in Chennai (2003), both designed by Lowe and executed by Population Services International. But Bula Di is different:

4.2.1. Portrayal of the character

Both Balbir and Puli are male, whereas Bula Di is a woman protagonist. Both Balbir and Puli are presented as "alter ego" of the man in the street, who is unaware of AIDS, visits a brothel in a metro city, chooses partners by their looks- who is just one of us, average, vulnerable commoner. But Bula Di is a "didi", almost infallible, who knows everything, who is beyond any suffering or vulnerability, who teaches with firm conviction.

4.2.2. Graphics

Both Balbir and Puli are represented by real life photographs, sometimes in shilloute. Bula Di is presented through a rag-doll, charming but rounded with smoothed edges, striking through childhood memories but a little far from day to day reality.

4.2.3. Side Characters

For Balbir, it is his partner Manjula, who is a commercial sex worker. So like Balbir, Manjula also comes in enough blood and flesh. For Bula Di, it is a doll's house or doll's para: too many faces without any name. They are no individuals, they are community.

4.2.4. Theme

Balbir and Puli themes were focused with single agenda of condom promotion. Bula Di is much more versatile, tries to cover almost the entire universe of AIDS, touching the problems of intravenous drug use, contaminated bloods etc.

4.2.5. AD Content

Balbir and Puli's ads are presented in a "slice of life" fashion like television soap. They personalize the risk. Bula Di's are one snap shots in phase I campaign. They are informative, educational, sometimes instructive and sometimes morbidly fearful. They do not unfold any story. In fact, very little we know about Bula Di.

4.2.6. Intrigue Element

Any ad takes some time to get it familiarized. One way to strike people's imagination is to use teasers. Both Balbir and Puli were super-hits to arouse that curiosity to become the talk of the town, at the barber's shop, at pan dukan, at dhaba - everywhere. Every Balbir ad used to end with same interrogative tagline: "Balbir Pasha ko AIDS hoga keya?" ("Will Balbir Pasha suffer from AIDS?")

Bula Di does not touch that cord. It asks to ring Bula Di for detailed information: It is much more formal. It just personifies a telephone no 1097, it does not personalize the sufferings. Once Alfred Hitchcock commented that to lure the audience, we need to use either 'surprise' or 'suspense'. Balbir and Puli had suspense, Bula Di has none.

4.2.7. Target Audience

Balbir and Puli ads targeted male youth but spilled over to other segments because of its soap-serial suspense. Bula Di, though mainly targets women, it also encompasses the entire strata of the society from bhadraloks to mastans.

4.2.8. Portrayal of Women

Both Balbir and Puli ads in spite of their huge 'box-office' success were forced to be withdrawn because of its negative, regressive portrayal of women, who had been shown to be the carrier and transmitter of the disease. Bula Di is a path-breaker in this respect. It has been successful to get rid of this male gaze by portraying the innocent mother/ wife characters who have to bear the brunt of the disease from the male. This womanpower is perhaps Bula Di's greatest strength. Recently, some quarters have raised concern about its overzealous anti-male gaze.

4.3. Then, Where does Bula Di Fail?

Being a doll of dominance, icon of instruction Bula Di is alienated from its audience. The huge leap in 1097 calls or the successful recall percentage proves its noticeability but cannot prove its penetration in the mindsets of the people, particularly those in conservative rural Muslim belts, who need it most. Bula Di is too ideal an image to be identified with. She is neither 'Balbir' nor 'Choube' (Ref: Reliance mobile ad), who represent man in the street whom we meet at tea shop, at bus stand, may be in the mirror too.

On TV spot, voice can lend some life to the dolls making it more palpable to the audience. But, in case of outdoor/ print ads, one has to be visually literate to appreciate the speech or thought balloons. The middle aged rural housewife who is not fed on comic strips from her childhood may find it difficult to follow Bula Di's conversation.

Thirdly, Bula Di actually does not converse, she answers in one-liners. That makes her economic but more bland at the same time.

Bula Di phase I in fact directs and urges its audience to call 1097. This strategy of generating demand needs to be backed up by adequate support service, which remains in doubt as evidenced empirically. This researcher has come across in Howrah a specific incident of a patient of AIDS who was deserted by his family, got detached from the job and abandoned by the community, was lying in a heap of filth on the road. A local club having seen the Bula Di ad rang 1097 for help. Nobody responded. The person was ultimately rehabilitated by another NGO. This kind of incident acts as a pointer to the limitation of Bula Di, when she is demanded to come down from the cartoon-reality to the dust and drizzle of our day-to-day existence.

On fifth count, Bula Di is too ambitious to touch all segments. But her presence is not felt to truck drivers or the upstart urban youth. So she needs expansion. Misplacement of hoardings and frequent use of English as the language further reduces her appeal. Bula Di is used to disseminate information rather than to build on a single theme in a focused way.

4.4. Up Scaling of the Bula Di Campaign

In the above backdrop, the Bula Di campaign got scaled up in outdoor campaign. The campaign was carried forward through outreach activities for chemists/druggists, transport, hotel industry, religious leaders, and alcohol shops along with inscription in marriage registers and matrimonial columns.



message branding. The effort would be to get each one play their role in the battle against HIV/AIDS. In this second phase, messages become crispier, focused on promoting condoms.

These outdoor ads are followed by a new series of TV spots, which are longer in duration, which present a 'slice of life' in a TV soap commercial fashion with more fleshy looking animation conversing in real life languages. These TV ads unforgettably add a punch line that ruptures in adult humour. All the spots are focused on a single theme: "No Condom, No Sex". Thus they stir the audience to a deeper attention level.

In every spot, an amorous couple is exchanging romantics to prepare for sex. But the woman character insists on using condom. The male partner argues but then bows down. The spots end in showing an accepting male going for abstinence: "Chalo ludoi kheli" (Let's play ludo) or "Ami kintu akta kirtan sunbo" (But I will listen to one Kirtan song).

Use of 'Kirtan', the traditional bengali devotional song or 'Ludo', the traditional bengali game played at every bengali home, usually by women, on one hand helps to touch the bengali audience at personal emotional level (Bean 2011) and on the other reinforces the social 'cues', created by the rag-doll.

And Bula Di appears for a moment in the foreground from the side of the wings, just as a 'Vivek', the known face of infallible protagonist in the bengali 'Jatra', almost trespassing the couple's bedroom as if to bring the private emotion into public space.

5. CONCLUSION

The bedrock of the campaign was the principle that people can learn by observing the consequences of behaviors of others. Social psychologists argue that observing can lead to behavior change, especially when a behavior is reinforced by the consequences of the role model's actions. In 1973, Gorge Graver proposes cultivation theory of mass media, which says that repeated, intense exposure to deviant definition of "reality" in the mass media leads to perception of that "reality" as normal. The result is a social legitimization of the "reality" which can influence the behavior. In 1975, Ajzen and Fishbein describe theory of reasoned action (Ajzen and Fishbein 1975), which specifies that adoption of a behavior is a function of intent, which is determined by a person's attitude, "beliefs and expected values" toward performing the behavior and by perceived social norms (importance and perception that others expect of the behavior). In 1976, Ball Rokeach and Defleur (Kincaid *et al.* 1997) developed a dependency theory of mass media, which delineates a 3-way interaction among

audiences, media and larger social system. It specifies that an audience segment dependency on a medium for information increase when: (1) that medium supplies information that is central to the needs of that group and (2) when social change, conflict and social instability increase uncertainty and ambiguity. Increased dependency contributes to increased impact of mass media on knowledge, attitude and behavior. In 1977, Bandura puts forward social cognitive (learning) theory (Bandura 1977) which explains that audience members identified with attractive characters in the mass media, who demonstrate behavior, engage emotions and facilitate mental rehearsal and modeling of new behavior. The behavior of models in the mass media also offers vicarious reinforcement to motivate audience members' adoption of the behaviour.

But, these ads being focused on promotion of condoms are faced with two pronged challenges: they have to follow the codes of ad council and they also do not have the scope of showing any brand. The TV spots show a little frustrated male in the end. Where does this sublime frustration lead us? Does it, by default, promote abstinence instead of condom?

The promotion of the condom itself appears to occupy a paradoxical space within advertising at large. If, as Gillian Dyer (Dyer 1982) says "Advertising's central function is to create desires that did not previously exist", how then is it possible to promote something which urges us to curb our pre-existing 'basic instincts'? Initially, the condom manufactures tried to overcome this problem by targeting women as their customers, rehabilitating condoms as harmless option in place of oral pills. Women's empowerment as envisaged in Bula Di campaign may go well with this concept by subjugating male desire to female rationality. But does it not make it inhibitory? So the alternate option that evolves is making the condom itself an object of desire (a la 'Kamsutra'). Condom promotion therefore attempts to trade off the curtailment of pleasure through interruption of carnal motions and the diminution of male tactile sensuality through sheathing with the pleasure of freedom from the anxiety of AIDS/STDs/ unwanted pregnancies and the new form of erotic ecstasy through fetishisation of the 'male sheath'-ribbed, flavored, lubricated. In its 1977 ad for 'Unison', Durex declared: "It's worn by men. It drives women wild. And we are not talking about aftershave....You will hardly know you're wearing it. But she will". Condom ads thus promote modification of one of the most fundamental human behavior, love and sex, not by repressing the desire but by making it more adventurous and versatile through highlighting the pleasures of fetish and foreplay.

Based on this learning, can a reincarnation of Bula Di balance the pleasure and the preaching, as Mrs. Dawson did with an ambivalent smile while rolling condoms in and out a metal tube, in 1990 series of ads by the Health Education Authority in Great Britain: that's the challenge the 21st Century social marketer will have to respond to. •

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Problems and Opportunities of MSMEs: A Study based on the District of North 24 Parganas, West Bengal

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ABSTRACT: This paper deals with the problems and opportunities of the Micro, Small and Medium Enterprises (MSMEs) in the district of North 24 Parganas, West Bengal. In various studies it has been observed that there is an important role of MSMEs in the economic development of our country. West Bengal has the advantage of a rich store house of natural and mineral resources within its own boundary and its nearby states. In this study, it has been observed that MSMEs in this district are facing many problems like lack of capital, lack of access to global market, high cost of credit etc. However, there is ample scope of this sector to flourish and provide employment opportunities. Primary data was collected from field survey through the use of structured questionnaire. Data was also collected from the Directorate of MSME, Government of West Bengal. In this study, some recommendations have been made which is expected to improve the present scenario of MSMEs in the district of North 24 Parganas, West Bengal.

Key Words : *MSMEs, Economic Development, MSMED Act, 2006, Employment Opportunities.*

1. INTRODUCTION

In the Indian economy Micro, Small and Medium Enterprises (MSMEs) represent an important sector in terms of their involvement to country's industrial production, exports, creation of entrepreneurship base and employment. In the Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 the terms 'Micro', 'Small' and 'Medium' enterprises have been widely defined. The Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 provides the first-ever legal structure for recognition of the

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concept of "enterprise". Under the Act, enterprises have been categorized broadly into two groups viz. manufacturing enterprises and enterprises which provide services.

Type of Enterprises	Micro	Small	Medium
Manufacturing Enterprises: Investment in Plant and Machinery	Upto Rs. 25 lakhs	Rs. 25 lakhs to Rs. 5 crores	Rs. 5 crores to Rs. 10 crores
Service Enterprises: Investment in Equipment	Upto Rs. 10 lakhs	Rs. 10 lakhs to Rs. 2 crores	Rs. 2 crores to Rs. 5 crores

In India, the MSMEs play an essential role in the overall industrial economy of the country. Ministry of Micro, Small and Medium Enterprises, Government of India, estimated that in terms of value, the sector accounts for 45% of the manufacturing output and 40% of the total export of the country and employs over 6 crores people. Further, in recent years the MSME sector has constantly recorded higher growth rate compared to the overall industrial sector. The most important benefit of the sector is its employment potential at low capital cost. This sector employs an estimated 6 crores persons spread over 2.6 crores enterprises as per available statistics. And the labour strength in the MSME sector is anticipated to be almost 4 times higher than the large enterprises.

2 REVIEW OF LITERATURE

Das *et al.* (2007) identified the ways in which SMEs in India can have an access to external markets through exports, which include simplification of procedures, incentives for higher production; and formation of clusters and networks in order to reinforce their external competitiveness.

Ghatak (2009) studied the economic growth and employment generation through the role of micro, small and medium enterprises in the Indian context.

Bhavani (2010) highlights the issue of quality employment generation by the SSIs and negates the short term attitude of increasing the volume of employment generation compromising with quality. The author argues that technological up gradation would enable the small firms to create quality employment improving remuneration, duration and skill.

Subrahmanya (2011) has probed the impact of globalization on the exports potentials of the small enterprises. The study shows that share of SSI export in total export has increased in protection period but remain more or less stagnated during the liberalization period.

Lahiri (2012) studied critically and analyze the definitional aspect of MSMEs and explore the opportunities enjoyed, the constraints faced by them in the era of globalization. Annual Average Growth rate (AAGR) has been used as the major statistical tool to compare the performances of MSMEs during pre and post-liberalization period with the help of four economic parameters namely No. of units, production, employment and export.

In the study of Saluja (2012) it was found that India can generate additional economic growth by fostering entrepreneurial activities within its borders, particularly within its burgeoning middle class.

3. OBJECTIVES OF THE STUDY

The study has been conducted on the basis of following objectives:

1. To understand the present scenario of MSMEs in West Bengal.
2. To analyze the growth and future prospects of MSMEs in the district of North 24n Parganas, West Bengal.
3. To offer some recommendation for the improvement of MSMEs.

4. RESEARCH METHODOLOGY

This study is purely an empirical research and both primary data and secondary data were collected for the study. Primary data were collected from the field survey and through the use of structured questionnaires. 32 registered Micro, Small and Medium Enterprises (registered during 2011-12) in the district of North 24 Parganas, West Bengal, were selected for sample survey. Secondary data were collected from Final Report of 4th All India Census of MSMEs, published annual report of MSMEs, journals, magazines, internet database, research papers, related books and thesis etc.

5. MSMEs IN WEST BENGAL

The Directorate of Micro & Small Scale Enterprises under the Department of Micro & Small Scale Enterprises & Textiles, Govt. of West Bengal, has been playing a vital role in growth of MSMEs and generation of employment. As per the annual report 2012-13 of Govt. of India, Department of MSMEs West Bengal generated 3.60 lakhs employment from 0.43 lakhs Registered units, whereas there are approximately 34.21 lakhs unregistered units are there and from this unregistered units number of employment generated was 82.18 lakhs.

West Bengal is rich in handicrafts which are traditionally the heritage items of the state. According to the data provided by the Directorate of Micro, Small and Medium Enterprises, Government of West Bengal, there are as many as 5, 50,000 craftsmen engaged for producing wide range of handicrafts item while staying in their home. The State Govt. has been implementing different schemes for development of handicraft industries in the state.

In the field of export promotion the State has set up a West Bengal State Exports Promotion Board, an agency under the control of Department of Cottage & Small Scale Industries, Govt. of West Bengal. The said Board is taking steps to develop a good data base system which will help entrepreneurs to collect export intelligence. The following is the table of registered MSMEs in West Bengal.

From the above table it is clear that, Kolkata is in first position of total Registered MSMEs in West Bengal. As per data received from the Directorate of MSMEs, Govt. of West Bengal, from 01.04.2011 to 31.03.2012 North 24 Parganas district is in the first position, in terms of new registered units.

Table 1: Number of Registered MSMEs in West Bengal

Sl. No.	District	Registered Units (upto 31.03.2012) #	Registered Units (1.4.2011 - 31.03.2012) ##
1	Bankura	1687	419
2	Birbhum	2021	310
3	Burdwan	3910	57
4	Cooch Behar	1269	370
5	Daksin Dinajpur	703	63
6	Darjeeling	1502	77
7	Hoogly	3287	514
8	Howrah	9489	1429
9	Jalpaiguri	3273	1126
10	Kolkata	12601	1527
11	Malda	2226	169
12	Murshidabad	2926	147
13	Nadia	1866	714
14	Paschim Medinipur	2666	1078
15	Purba Medinipur	3073	7
16	Purulia	1221	352
17	North 24 Parganas	9060	1755
18	South 24 Parganas	5068	1050
19	Uttar Dinajpur	1005	130

Source: # MSME Development Institute Kolkata; ## Directorate of MSME, Government of West Bengal

6. ANALYSIS

Using the structured questionnaire and visiting 32 micro and small business units operating in North 24 Parganas, the following data have been collected and analysed.

Most (almost 84%) of the units have borrowed funds from different sources for their business but few units are not in a position to borrow funds due to lack of proper documents. The collected data shows that only 3 units out of 32 units i.e. less than 10% use computer for their business operations and rest are not using it. All the units uses only electricity as a source of power for production purpose not any other sources. Most of the respondents (almost 92%) have passed matriculation or equivalent examination. Most of the respondents (up to 88%) are falling under general caste and rests are belonging to schedule castes. Maximum entrepreneurs (approximately 93%) are belonging to the age group of 41 to 53 years.

In most of the cases employees are male. Readymade garments and handicrafts item are mostly prepared by women employees and they are not satisfied with their wages as it is very low in comparison to other sectors. For this reason workers are not motivated.

Table 2: Demand for Product and Degree of Competitions in the Markets

Details	Very High	High	Moderate	Low	Very Low
Demand for Product in Local Market	7	17	6	2	
Demand for Product in National Market	3	4	5	5	11
Demand for Product in International Market	3	1			15
Degree of Competitions in Local Market	10	17	5		
Degree of Competitions in National Market	22	5	1		
Degree of Competitions in International Market	17	1	1		

Source: Primary Survey

Table 3: Assistance Received by the Entrepreneurs and Degree of Sufficiency

Details	More than Sufficient	Sufficient	Somewhat Sufficient	Little bit Insufficient	Totally Insufficient
Financial Assistance From Bank: 16 From Others: 11		12	10	3	2
Marketing Assistance From Govt. (Central & State): 6 From Others: 10		6	4	3	3
Technical Assistance From Govt. (Central & State): 1 From MSME-DI: 15 From Others: 9	1	19	2	1	2
Production Assistance From Govt. (Central & State): 4 From Others: 14		6	7	2	3
HRD Assistance From Govt. (Central & State): 1 From Others: 11		4	4	2	2

Source: Primary Survey

Maximum entrepreneurs know well about Employees State Insurance Act and they provide this facility to their workers. No Provident fund scheme is provided to the workers.

Most of the entrepreneurs provide a small amount of bonus at the time of festive season to their employees but not according to the Payment of Bonus Act.

From Table 2 it is clear that, most of the units (i.e. 53.1%) have high demand for their products in local market. Out of the 32 respondents 28 i.e. 87.5% (Table 2) said that they participated in national market. Some respondents (approximately 39%) said that demand for their products are very low in national market. 19 respondents had participated in the international market with their products. Most of the respondents expressed that the demand of their product in the international market is very low.

53% of the respondents have mentioned that the degree of competition in local market is high. Out of the 32 respondents 22 of them said that the degree of competition in national market is very high.

Out of the total sample size, 27 (i.e. 84.4%) respondents have taken financial assistance from various sources. A total of 16 respondents (Table 3) have borrowed money from Scheduled Commercial Banks. Some respondents have borrowed money from other sources like local 'mahajans', relatives, friends etc. There is a huge number of marketing schemes available for the entrepreneurs of MSMEs. Only 6 respondents have taken the advantages of marketing facilities from the Government institutions. Most of the respondents have taken the Technical Assistance from MSME-DI (Table 3). As per the opinion of 19 respondents, the degree of technical assistance is sufficient. 18 respondents (Table 3) have got production related support from different organizations. Only 4 respondents have taken the help of different state and central Government organizations for production related support. Only 1 unit has taken the assistance from the Central Government for Human Resource Development purpose (Table 3).

Table 4: The Problems, Faced in Operating Business and the Nature of Such Problems

Sl No	Details	Very High	High	Low	Very Low
1	Difficulties in obtaining loan from financial Institution	15	16		1
2	Rate of interest payable on loan	8	21	1	1
3	Shortage of raw material	2	12	14	4
4	Price of raw material	9	21	2	
5	Shortage of skilled labour	6	11	11	4
6	Labour unrest	2	13	14	3
7	Irregular power / electricity supply		12	17	3
8	Cost of power	15	15	2	
9	Shortage of demand for the product manufactured		2	24	6
10	High competition	9	21	1	1
11	Use of old / obsolete technology	1	2	9	20

Source: Primary Survey

As per the opinion of the respondents, difficulty in obtaining loan is very high (Table 4). They face huge problems for taking loan from the banks. They are not properly aware of the documents required for obtaining loan. Most of the respondents (Table 4) said that the rate of interest on loan is high.

All the respondents expressed their opinion about shortage of raw materials. In some cases, the shortage is very significant. More than 90% respondents think that the prices of raw material are high. More than 50% respondents informed that there is a shortage of skilled labour. Sometimes the entrepreneurs face labour unrest. Problem of electricity supply is not very significant but its cost is high. There is sufficient demand of the finished products in most of the cases (Table 4). In maximum cases production are made according to the customer's order. Analyzing the Table 4, it can be said that in most of the cases the entrepreneurs are facing high competition in the market.

Table 5: Awareness among the Respondent regarding Few Marketing, Finance and Human Resource Development Schemes provided by Government of India, Department of MSMEs

Name of the Schemes	Remarks		Name of the Schemes	Remarks		Name of the Schemes	Remarks	
Marketing	Yes/ No		Finance	Yes/ No		Human Resource Development	Yes/ No	
(i) 15 % Price Preference		32	(i) Credit Guarantee Fund Trust for MSE	14	18	(i) Entrepreneurship and Skill Development Programme	2	30
(ii) Purchase Preference Policy	1	31	(ii) Enhancement of Collateral Credit facility	9	23	(ii) Management Development Programme	4	28
(iii) Tender from free of Charges	1	31	(iii) Laghu Udyami Credit Card	12	20	(iii) Computer Training Programme	5	27
(iv) Exemption from Payment of Earnest Money		32	(iv) Credit Link Capital Subsidy Scheme	4	28	(iv) Mini Tool Room and Training Centre Scheme	20	12
(v) Vendor Development Programme	4	28	(v) Rajiv Gandhi Udyami Mitra Yojana (RGUMY)	9	23	(v) National Award Scheme	7	25

Source: Primary Survey

There are three important schemes provided by the Department of MSMEs, Government of India, which are Marketing Schemes, Finance Schemes and Human Resource Development Schemes. Also there are other schemes which are not considered in the study.

From the sample survey it has been observed that, in the district of North 24 Parganas respondents are not properly aware of the above mentioned schemes. Table 5 clearly shows that few respondents have heard the name of some schemes but they have not availed those schemes. Some respondents are very much interested to avail those schemes, e.g. Mini Tool Room and Training Centre Scheme.

7. CONCLUSION

It may be inferred from a secondary data that in North 24 Parganas district, MSMEs has achieved steady growth over the last couple of decades. Under the rapidly changing economic scenario the MSMEs have both opportunities and challenges. The support given by the central and the state Governments through different schemes are not adequate enough to solve their problems. However for improvement of this sector and to utilise its full potential, it is essential that the Government should take necessary steps for further development.

The MSMEs in North 24 Parganas are going through a tough situation due to high competition in local, national and international level, lack of infrastructure, lack of capital, lack of product standardization, lack of access to modern technology etc. The effect of Globalization has increased competitiveness in India as well as in West Bengal. MSMEs are not properly ready to compete in the foreign market. The Govt. has taken up several policy initiatives for improvement of the MSMEs but it needs proper co-ordination among the different levels. The various Government schemes must be implemented in a proper way so that the benefits of the schemes can be availed by the MSMEs. Most of the MSMEs entrepreneurs are not properly aware of the facilities or schemes which are provided by the Government to them. If MSMEs continue to play its crucial role in our economy, it will surely eradicate the twin problem of unemployment and poverty from our society.

8. RECOMMENDATIONS

From the above analysis few recommendations are made which can improve the present situation of MSMEs sector:

- ❖ District wise Workshops or Seminars might be organised for awareness programme on financial knowledge, educational knowledge, technical knowledge etc.
- ❖ Proper guidelines might be provided by the Dept. of MSME for availing financial assistance in their websites or in their office.
- ❖ Information technology or Internet-enabled environment helps in fast and accurate decision-making and by these, MSMEs may increase mobility.
- ❖ More support is needed for the MSMEs from the Government in the form of different lending schemes, promotional schemes, technological help etc. ●

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Social Outreach of Higher Educational Institutions (HEIs) – The Need of the Hour

Anutam Paul

ABSTRACT: Outreach is not a new concept for Higher Educational Institutions. Through outreach activities an educational institution can reach to the society to which it belongs. With huge number of youths it is the HEIs who can address the problems of the poor, illiterate and other underprivileged section of the society for the betterment of the society and at the same time for the benefit of both students and institutions. In almost all the colleges, National Service Scheme (NSS) exists and seems to work in that line. Government is also providing funds for such services. However, the effectiveness of such work is under question. In this study an attempt has been made to see the perception and liking of students as well as local people, where the institution is located. Are they considering outreach as integral part of HEIs' activities? Are the students aware of such activities and interested to participate in such activities? What are the different types of activities they expect from HEIs? How the HEIs should work in this perspective. For the purpose a study has been conducted taking two colleges in south Kolkata. Opinions of students and local people have been noted. Based on the observations it is being tried to suggest some measures to make the outreach activities effective.

Key Words : Outreach, Academic, Community, HEI, Government, Programme.

1. BACKGROUND

Outreach (OR) is the fundamental element that allows Higher Educational Institutions (HEIs) to interact with their environment. It is the act of extending community services to a wider section of the population or is concerned with extending community services. According to Miller (2007), "Outreach" is the means by which an educational institution reaches beyond the borders of its campus to directly serve nontraditional populations (e.g., youths, adult students) and communities (e.g., the local civic community, professional groups). The concept includes in fact a great diversity of activities.

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Higher education refers to a level of education that is provided by universities, community colleges and other collegiate level institutions that award academic degrees. It includes teaching, research and social services activities of universities; and within the realm of teaching, it includes both the undergraduate level and the graduate (or postgraduate) level.

The roles of such institutions are two-fold, namely

- Providing formal education and
- Upholding education's role of service to society.

Quality of education is a multi-dimensional concept, which should embrace all functions, and activities, i.e., teaching, academic programme, research and scholarship, staffing, students, infrastructure, and academic & social environment. Higher education should be considered a public service and the institutions should take it upon themselves to render the same.

Until recently, higher educational institutions directed their activities according to the information that came from within them, which led them to a considerable isolation for the sake of protecting their autonomy.

However, nowadays the HEIs need to maintain relationships with all the sectors in society. Thus, without alienating themselves within their own social sphere, Higher Educational Institutions have to take part in the social life with a critical mind and in a positive way. The substantive functions of Higher Educational Institutions should be planned bearing in mind the goal of contributing to the integral development of society.

It is highly important to understand that Higher Educational Institutions are under the obligation to be at the service of the needs of the environment, and not only remain confined at the service of the areas closer to their economical activities. Therefore, it is fundamental for each Higher Educational Institution to be clear about what it conceives as its social responsibility, so that it keeps itself linked to society on a larger platform.

It is being observed from various news on dailies, journals and discussions in media that the society is not recognizing, as much as it needs to be, the contribution of higher educational institutions. It may be that the Higher Educational Institutions have failed to live up to the expectations of the society or the society fails to recognize their contributions. Probably, the society expects something more or something different from that what the Higher Educational Institutions offer. It is not enough just to provide huge number of graduates to the society without creation of values. If Higher Educational Institutions fail to ensure a society for better living; then one need to relook into the basic objective of granting formal degrees and grades. Higher Educational Institutions need to reach beyond its traditional domain of operation.

The Delors Commission identified 'Four Pillars of Education' and of the opinion that education must, as it were, simultaneously provide maps of a complex world in constant turmoil and the compass that will enable people to find their way in it.

The four pillars are: 'Learning to know' that is acquiring the instruments of understanding; 'learning to do', so as to be able to act creatively on one's environment; 'learning to live together', so as to participate and co-operative with other people in all human activities; and 'learning to be', an essential progression which proceeds from the previous three. Of the four last two talks about channelising the students towards enlightened citizen.

Learning to live together, learning to live with others, by developing an understanding of other people and an appreciation of interdependence, carrying out joint projects and learning to manage conflicts, in a spirit of respect for the values of pluralism, mutual understanding and peace. Learning to be, so as better to develop one's personality and be able to act with ever greater autonomy, judgment and personal responsibility, in that connection, education must not disregard any aspect of a person's potential: memory, reasoning, aesthetic sense, physical capacities and communication skills.

Formal education systems tend to emphasize the acquisition of knowledge to the detriment of other types of learning; but it is vital now to conceive education in a more encompassing fashion. Such a vision should inform and guide future educational reforms and policy, in relation both to contents and to methods.

2. REVIEW OF LITERATURE

Miller (2007): Just as outreach emerged as a way to connect universities to society during the flowering of the industrial revolution, outreach is moving into the mainstream of higher education as a response to the societal needs of the information revolution and other, related driving forces.

Gould (2001): Besides being an educational and scientific-technological phenomenon, outreach is a social and human phenomenon as well, since it is a transforming and integrating activity that is part of the 21st century's process of change.

UniSCOPE Learning Community (2000): "Outreach" is inherent in all of the missions of the University, specifically, teaching, research, and service.

Castañeda (1996): Outreach is necessary for higher education to operate within the contemporary society with a vision which takes into account the achievement with the greater international relevance, quality and cooperation.

Reyes (1995): Public higher education institutions need to restate their substantive functions as well as their adjective function.

Bettye (1996): The higher education system in which most current faculty and administrators were educated, and today serve in, is changing dramatically: a change which is moving towards accountability and meeting the needs of the new market. In this new economy, needs are sharply focused on higher quality, lower costs and rapid response to satisfy the consumer: an economy requiring educated and trained individuals who demonstrate higher-order thinking skills and are prepared to enter the workforce; an economy characterized by international competitiveness and a global community forcing collaboration and cooperation among all parties, including institutions of higher education; and an economy more demanding and less forgiving of institutions of higher education that do not recognize the needs of their own markets, particularly the major employers of graduates.

According to Kamat (1998), Socialization is the process through which man learns to live in social groups, to participate in their productive activities and cultural life. Through this process of socialization is culture transmitted from one generation to another. Education or

deliberate organized instruction is a part – only a part, but an important part – of this process of socialization.

In the views of Panikkar (2011), there is no education without values, but in all societies values are a mixed bag. They are so because of differing ideological needs. Yet, there are certain universal values which all societies cherish and disseminate. Education is an effective agency of this process in modern times when a network of communication is in place.

Thus the need of social outreach cannot be ignored. Depending on socio economic condition of the society outreach activity takes its forms and shapes; the activities are not common, it varies with varying needs of the society. Every educational institution must try to address the problems of the society to which it belongs and also should involve them in the community service. Such outreach activities benefit both the community as well as the Higher Educational Institutions; and most importantly help the youth to become enlightened citizen.

3. BENEFITS OF OUTREACH ACTIVITY FOR THE ACADEMIC DEPARTMENT

Outreach activities present many advantages to academic departments, advantages that vary based on the type of activity.

Offering credit programmes off campus, whether through evening/ weekend programmes or online brings new students to the department. However, that may be just the beginning. As because, many of these new students are already working in industry, some in management or leadership roles, when institutions serve these adult learners, the faculty members and departments may find new ways to develop or broaden relationships with employers. This can lead to new opportunities to place recent graduates, recruit graduate students, or identify industry-sponsored research and consultancy.

It is perhaps inevitable that outreach education programmes bring the academic unit and individual faculty members into closer contact with the students' employer. This is an obvious benefit of contact programme. Since the employer funds the students' education there may be a development of formal relationship between the employer and the academic unit regarding curriculum, delivery, and support. There can also be significant impact in programmes that are open to the general public. For example, while some contract programmes require a work-based project as part of the curriculum, students in open enrollment programmes often want to use work examples in their course projects and papers. Often, working adult students are already in professional positions that allow them to invite faculty into the workplace as consultants. And, certainly, these students are positioned to promote the programme, and the academic unit generally, to their work colleagues. As alums, they provide an ongoing point of contact with their employers.

The key to successful outreach activities by the academic department is to have a plan for relationship development and management. An academic department can build on the contacts made by individual faculty members by assigning an individual person to manage

relationships with individual companies or organizations. Separating the relationship management process from the teaching/research transfer process allows the organization a "neutral" contact when there are problems and ensures that there is one person who sees the larger, strategic picture when dealing with the organization.

Even non-formal public engagement has advantages for the academic unit, by creating greater community visibility for the unit and its disciplines and by attracting new funding for outreach activity that supports faculty and graduate students.

The key is to work across the unit and with central support units to optimize each outreach opportunity.

3.1. The National Service Scheme (NSS): A Brief Note

In India the idea of involving students in the task of national service dates back to the time of Mahatma Gandhi, the father of the nation. According to Mahatma Gandhi the first duty of a student should be, not to treat their period of study as one of the opportunities for indulgence in the intellectual luxury, but for preparing themselves for final dedication in the service of those on whose back they were resting.

Dr. Sarvepalli Radhakrishnan also recommended introduction of national service in the academic institution on voluntary basis with a view to developing healthy contacts between the students and teachers on the one hand establishing a constructive linkage between the campus and the community on the other.

On September 24, 1969, the then Education Minister Dr. V.K.R.V. Rao launches the NSS programme in 37 universities, covering all states with a view to promoting social consciousness and a sense of discipline and dignity of labour among college students.

Some of the aims and objectives of NSS are –

- To work among people.
- To engage in creative and constructive social work.
- To enhance the knowledge of community.
- To gain skills in the exercise of democratic leadership.
- To gain skills in programme development to enable for self employment.
- To bridge the gulf between the educated and uneducated masses.
- To promote the will to serve the weaker section of the community.

Keeping in view the need and importance of social outreach a small study was conducted with the following objectives -

- To find out the role perception with regard to such institutions.
- To identify the nature of social expectation in the community life.

- To have an idea about the Institutions' performance in view of this broader perspective of social outreach.

4. STUDY METHODOLOGY

Study is both explorative and empirical in nature. For the empirical study, only two colleges, both having their NSS unit, in the Garia locality of South Kolkata were taken as the sample. The colleges taken into consideration are Dinabandhu Andrews College and K.K. Das College. For each college a sample of sixty representatives consisting of both students and local people equally were taken and with the help of structured questionnaire they were interviewed. Simple statistics, basic and inferential, were used to analyse the data so collected.

5. MAJOR OBSERVATIONS

From the study following conclusions can be drawn:

- The role of HEIs is not restricted only to academic developments, it goes beyond. Holistic development is the call of the day. Both local people as well as students prefer holistic development to academic development.
- The nature of activity preference in the locality as preferred by the local people and students are – Awareness on Education for all, Education to underprivileged, Women empowerment, Organization of health camps, Awareness on health issues, Adult education, and Local area maintenance and development
- Very low level of awareness is observed about the National Service Scheme (NSS) among the students. Some of the students even do not know if NSS unit exists in their institution.
- Activities so far performed are not at par with the level of expectation of the local people. Both students as well as local people are not satisfied either with the activities performed or with performance level. Health camps are mostly for blood donation and not covering any specific problem of the local area, cultural programmes performed by the institutions are mainly in the form of college fest and do not involve local participation. Thus activities are in true sense not directed towards outreach programmes.
- There is also lack of sufficient awareness programme relating the society to which it belongs. Another fact is that usually these are done annually and not continuously.
- Among the various reasons of not performing the outreach activities well, academic stress has not been identified by the students as a reason for non performance. Local people are of opinion that more involvement in political activities rather than social is one of the reasons for not doing outreach activities.
- Opinion has been in favour of making outreach programme mandatory.
- Another good point came out is that both the sections considered in the survey are in favour of participation of corporate houses in such programmes.

- A very strong recommendation came for proper public reporting of the activities from all sections.
- As parent people are willing to pay money for such outreach activities on a regular basis in the form of increased fees.
- Whether remunerative or not hardly matters to the students for participation in outreach activities. They are willing to participate in outreach activities of their institution irrespective of remuneration.
- Average number of students in these colleges is 2,750; this implies that if a student had to work for outreach activities just for one week, just one institution can provide at least 50 students a day to work.
- Outreach programmes are not continuous; it is done by the institutions on annual basis.
- Reporting system of outreach activities to the larger stakeholders is very poor; most of the institutions report their outreach achievements through annual prospectus which is issued (sold) at the time of admission to the prospective students and not even to the existing students.

6. FEW SUGGESTIONS:

Based on the survey and observations the following can be suggested –

- Outreach activities through NSS should be made mandatory in colleges and a joint effort is required from all sections of the society.
- Corporate houses should also be associated as part of their corporate social responsibility.
- All students should take part in NSS activities as part of their curricula.
- Students' performance on this aspect should be evaluated by minimum credit hours for awarding the degree certificate.
- At this level of education, activities should be directed towards local people's need (local issues) and that should be assessed first by the institutions.
- Students are to be made aware about the positive side of performing outreach activities to the society as well as for them; for this orientation programme on regular basis is to be conducted by the institutions.
- There must have a definite NSS Liaison Cell to coordinate different parties such as University, Corporate Houses etc. to such activities.
- Periodic bulletin is to be published by the institutions to report outreach activities performed and also the annual financial report on outreach activities. These reports should also be submitted to various authorities and parties engaged in such work.

- To develop a structured programme plan: there must have a central outreach unit as stated above. As outreach activities are generally developed in addition to the standard academic budget, which is structured around the department's on-campus teaching activity, they must be organized in collaboration with the central outreach professional unit so as to recover the cost involved. As a result, for each project a separate and specific plan is required. Each plan should include the following elements:
 - Nature of the Programme: whether it should be a onetime conference, an online degree programme, a credit certificate offered in the evening, a youth camp, or an on-site industry training programme.
 - Social Purpose. Type of societal problem it would address. Will it satisfy the local people where the college is situate?
 - Academic Purpose. Assessing the strategic goal of the programme from the academic unit's perspective. The manner in which it may benefit faculty, the academic unit, and the institution at large.
 - Population to be Served. The direction of the programme, that is to say whom it would serve specifically. The size of the population to be served. How can the institution reach them to provide the service? Whether the audience is renewable or one time.
 - Budget design. The cost involved and recovery of the same. How can the programme be financed?
 - Program Design. The structure of the programme. Who (inside the academic unit, institution-wide, externally) will be involved in its development and delivery? Involvement of the Faculty – whether within the unit or from other unit. Identifying the responsibility for providing instruction, etc.
 - Sustainability. How will the programme be sustained over time? What are the implications for academic unit workload and priorities?

7. CONCLUSION

Social or community outreach by higher educational Institutions is the call of the hour for its recognition and survival. Every HEI should accept it as part of its curricula to involve students and faculty members in the noble service to the society to which it belongs. It is the way to reach to the community for whom the HEIs are. Outreach should be regarded as Social Responsibility of every HEI for its strategic placement in the society. •

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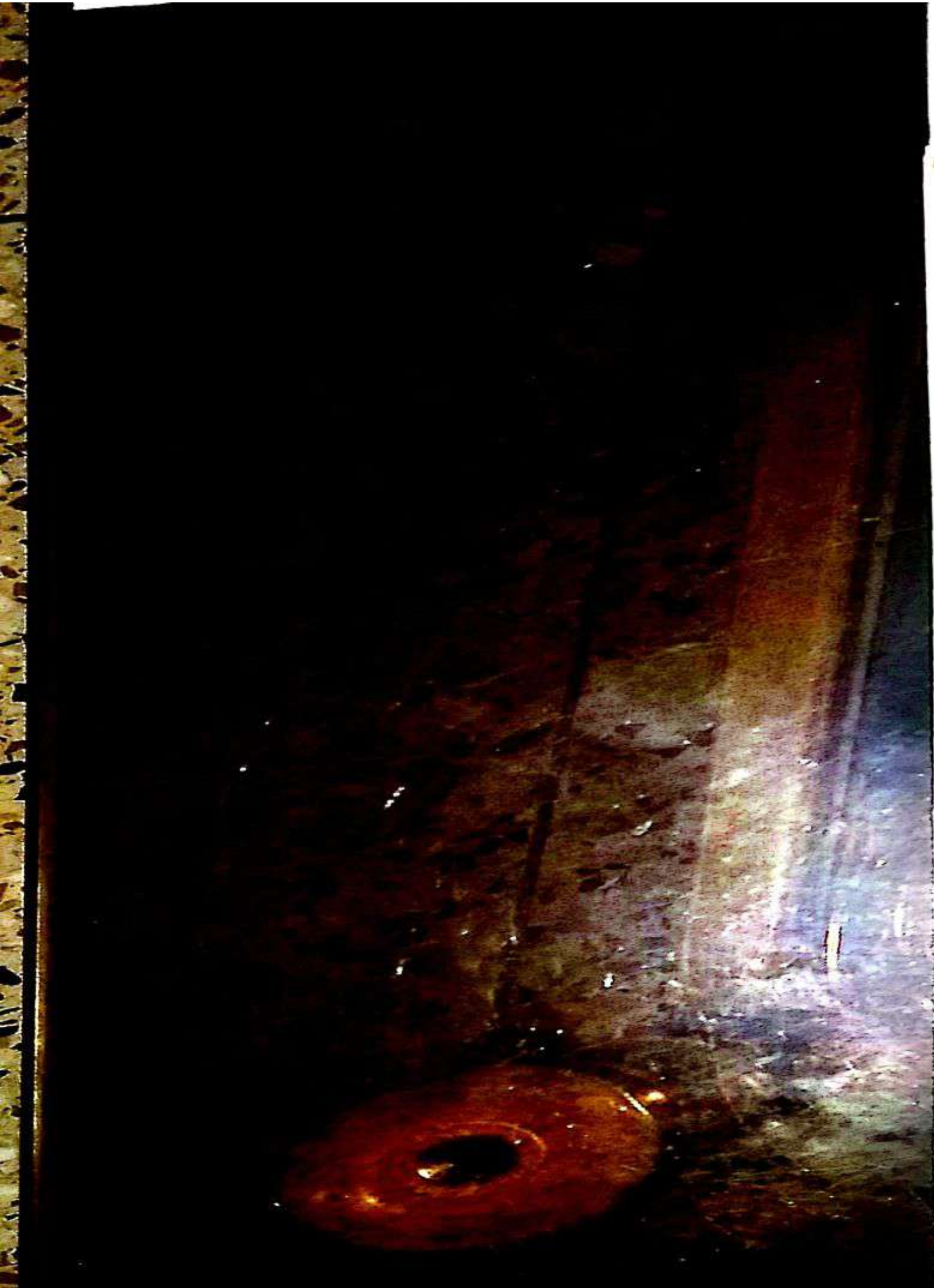
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