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# Towards a Comprehensive Pollution Control Policy by Integrating Enterprise, National and International Level Measures

*Ananda Mohan Pal\**

**ABSTRACT:** The study deliberates comprehensive pollution control policies and observes their effectiveness in fulfilling the overall objectives. The policies are categorized under three heads: 1. Command and Control Policy; 2. Fiscal Policy; 3. Market Policy. The objectives to be fulfilled by the pollution control policies are: 1. Controlling pollution; 2. Making polluters pay; 3. Ensuring socially optimal output; 4. Realizing cost effectiveness (enforcement costs and monitoring costs). Damages are done through pollution both at global level and at local level. There are needs for international policy to control global damages and for national policy to discharge national responsibility to the global problem. Again there should be national policy to control domestic pollution. Policies need be taken at enterprise level also to respond to national and international policies and to discharge social responsibility of the enterprise. Attempt is made in the study to examine the possibility of an integrated approach to a comprehensive policy in order to ensure fulfillment of the pollution control objectives.

**Key Words :** *Command and Control Policy, Fiscal Policy, Market Policy, Polluters' Pay Principle, Comprehensive Pollution Control Policy.*

## 1. INTRODUCTION

**E**conomic and other human activities cause pollution both at local and at global level. Pollution damages air, water and soil of the earth. This study tries to discuss some

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important issues on air pollution at global level, which is also referred to as 'Climate Change' or 'Global Warming'. The green house gases are mainly responsible for the climate change. Carbon dioxide happens to be the most significant green house gas to cause global warming. Besides, other five gases are also identified as major green house gases responsible for global warming. A comprehensive pollution control policy is required because emission of gases is made at individual/enterprise level and they cause damages at global level, but control mechanism can be executed through national authorities only. Hence the national pollution control policy must be in concomitance with the global agreements on climate change. The present study tries to develop an integrated approach to pollution control policy proposed at three levels: global, national and enterprise. The study presents an overview of the pollution control policies at all the three levels.

## 2 POLLUTION CONTROL POLICIES

Three major pollution control policies are:

- Command and control policies
- Fiscal policy
- Market policy

The major objectives to be fulfilled by the pollution control policies are:

- Make polluters pay
- Reducing pollution
- Ensuring socially optimal output
- Realizing cost effectiveness (enforcement costs and monitoring costs)

### 2.1. Command and Control Policies

These policies refer to the legal enforcement for maintaining the prescribed standard of pollution abatement. This is mandatory abatement the effect of which may be observed in the increased marginal private cost of the polluter and in the decreased marginal social cost. The price of the product would not reflect full cost as long the gap between the marginal social cost and the marginal private cost exists. Although the measure has retarding effect on pollution, the polluters' pay principle is only partially adhered.

### 2.2. Fiscal Policy Measures

These include pure environmental tax, impure environmental tax, tax incentives and financial subsidies.

#### 2.2.1. Pure environmental tax

This is the direct tax on emission. The polluter can reduce tax by reducing output/consumption or by reducing the rate of pollution per unit of production/consumption or by adopting a combination of both. So long with respect to emission the marginal abatement cost is lower than the rate of tax the polluter will save tax by increasing abatement



cost. In effect emission will reduce. The direct tax on emission covering the gap between the marginal social cost and the marginal private cost would also be included in the price of the product. This measure controls pollution, make polluters pay, and allows for equilibrium output, optimum for the society.

### *2.2.2. Impure (or indirect) environmental taxes*

This is the tax imposed on output or consumption based on a presumed rate of pollution per unit of output/consumption. This is also called the indirect tax or presumptive tax. The polluter gets no inducement for abating pollution. He can reduce tax only by reducing output. This measure makes polluters pay but does not pull down the rate of pollution and does not allow optimum output.

### *2.2.3. Tax incentives*

These are the relief granted by different taxes for abatement activities, which in turn will reduce pollution. In effect this measure produces the same consequences on pollution reduction as the mandatory abatement.

A judicious combination of presumptive tax and mandatory abatement or tax incentive will almost produce the same consequence as the direct emission tax.

### *2.2.4. Financial Subsidies*

Subsidies are granted in financing green activities such as capital investment for abating pollution. This measure also produces the same consequences on pollution reduction as the tax incentives.

## **2.3. Market Policy**

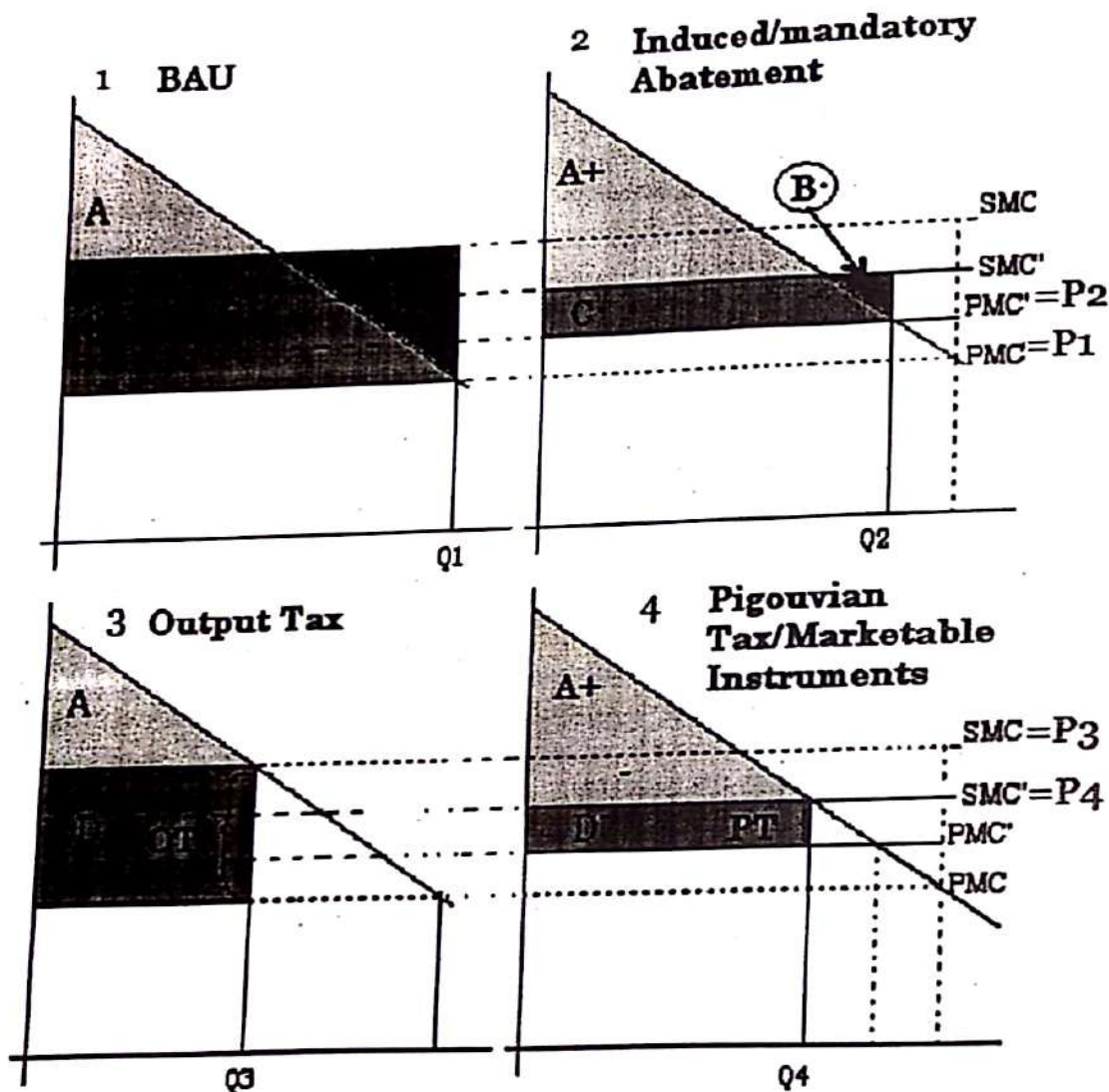
It refers to the use of emission permits and emission credits, which are tradable in the market giving revenue to the seller and entitling the buyer of the permit to pollute up to the specified limit. A polluter can reduce output or increase abatement or pay tax or penalty for emission in excess of permits. This measure has the same consequences as that of direct emission tax.

## **2.4. Analysis of the Alternative Policies**

The impact of policies on reduction of pollution, making polluters pay and output has been studied with the help of graphical presentation shown in Figure 1. Four situations are studied to explain the effect of different policies on social marginal cost, private marginal cost and consumers' surplus and output. BAU represents business as usual without any policy. Induced or mandatory abatement refers to the situation where incentive schemes under fiscal policy or regulatory measures under command and control policy results in pollution abatement by reducing output or by reducing rate of pollution. Output tax is the indirect tax imposed on output which as a policy reduces output in order to reduce tax without providing any incentive for reducing the rate of pollution. The Pigouvian tax is the pollution tax like emission tax which requires reduction of emission for saving tax.



Figure 1: Impact of Pollution Control Policy



In the Figure 1 there are four diagrams: 1. BAU: Business As Usual; 2. Induced/Mandatory Abatement; 3. Output Tax and 4. Pigouvian Tax/Marketable Instruments

X- Axis measures quantity of output (Q) and Y-axis measures costs. In BAU price is fixed at PMC; in Induced /Mandatory abatement, price is fixed at  $PMC'$ ; in Output tax the price is fixed at SMC, and in Pigouvian tax/marketable instruments price is fixed at  $SMC'$ .

In diagram 1 SMC is the social marginal cost and PMC is the private marginal cost. Let consumer be a subset of the society. 'A' shows the net consumer's surplus. 'B' shows the net social cost borne by the society in BAU. 'C' shows the cost of pollution borne by the society but enjoyed by the consumers as surplus. Thus total cost borne by society is  $B+C$ ,  $A-B$  shows the consumers surplus net of social cost and ' $Q_1$ ' denotes the quantity of output in BUA.

In diagram 2, induced or mandatory abatement reduces both rate of pollution and volume of output in response to higher abatement cost.  $SMC'$  is the reduced social marginal



cost for reduction in rate of pollution,  $PMC_{\square}$  is the increased private marginal cost for incurring cost of abatement and  $Q_2$  is the quantity of output. ( $A^+$ ) shows the increased net consumers' surplus ( $B^-$ ) shows the reduced social cost borne by the society. ( $C^-$ ) shows the reduced volume of the cost of pollution borne by the society but enjoyed by the consumers as surplus. Thus total cost borne by society is reduced to  $B^+ C^-$  and volume of consumers' surplus net of social cost is increased to  $A^+ B^-$ .

In diagram 3 'D' shows social costs recovered through tax or penalty. 'A' shows the net consumer's surplus. Output is reduced to  $Q_3$ . Net social cost borne by the society is nil. In case of indirect output tax the rate of pollution is not reduced, only output/consumption is reduced, consequently reducing total social cost of pollution to 'D' and that again being fully included in the price of the product through output tax (OT), polluter's pay is ensured.

In diagram 4 for Pigouvian tax or marketable instruments, it is observed that net social cost borne by the society is reduced to nil and 'D' being included in price of the product through Pigouvian tax (PT) or penalty /price for marketable instruments, polluter's pay is ensured. The reading from the graphs is presented in Table 1.

Table 1: Reading from Figure 1

Policy	Whether Price includes Pollution Costs	Whether Production suffers	Pollution Costs borne by the society	Pollution Cost borne by producer
BUA	No ( $P = PMC$ )	No	$B+C$	NIL
Induced/Mandatory Abatement	Partially ( $P = PMC_{\square}$ )	Yes Partially	$B^- + C^-$	Abatement Cost
Output Tax	Fully ( $P = SMC$ )	Yes Fully	NIL (fully recovered through Tax)	D (payment of Output Tax)
Pigouvian Tax/Marketable Instruments	Fully ( $P = SMC_{\square}$ )	Yes Partially	NIL (fully recovered through Tax)	Abatement Cost plus D (payment of Pigouvian Tax or for Marketable Instruments)

The impact of pollution control policies on social and private marginal costs, consumers' surplus and output are presented in tabular format in Table 2.

Table 2: Impact of Pollution Control policies

	BAU	Induced/Mandatory Abatement	Output Tax	Pigouvian Tax	Marketable Instrument
Social Marginal Cost	High	Reduced	Not reduced	Reduced	Reduced
Private Marginal Cost	Nil	Increased partial	Increased	Increased	Increased
Consumers' surplus	$A-B$	$A^+ - B^-$	$A$	$A^+$	$A^+$
Output reduction	Nil	Partial	Full	Partial	Partial



The observed impacts presented in the above table have been redrafted in terms of strength and weakness of the policies in Table 3.

**Table 3: Strength and Weakness of the Pollution Control Policies**

	Induced/Mandatory Abatement	Output Tax	Pigouvian Tax	Marketable Instrument
Reduction in rate of pollution	Strong	Weak	Strong	Strong
Private Marginal Cost	Semi Strong	Strong	Strong	Strong
Consumers' surplus	Weak	Weak	Strong	Strong
Output reduction	Strong	Weak	Strong	Strong

In regard enforcement and monitoring cost the policy is regarded as strong when low or no cost is borne by the government and the policy is regarded as weak when high cost is borne by the government. The enforcement cost is essentially borne by the government but the monitoring cost can be borne both by the government and the polluter. So even if the monitoring cost is high if such cost is borne by the polluter and not by the government the corresponding policy is regarded as strong.

In regard reduction of pollution a policy is regarded as strong when it reduces the rate of pollution thereby reducing the social marginal cost of pollution. In regard making polluter pay the policy is regarded as strong if it increases the private marginal cost. When sacrifice in terms of output is only partial and the corresponding consumer surplus is maximum the output level attained is regarded as socially optimal output. A policy is considered strong in respect of socially optimal output if it allows for less sacrifice in terms of output. By allowing trade of emission allowances or permits the sources of pollution can avail the choice of lower abatement cost at any other source of pollution and by this process can optimize output at minimum abatement cost. Thus the study considered seven criteria for evaluating the efficiency of a pollution control policy:

- a) rate of pollution per unit of output
- b) enforcement cost
- c) monitoring cost
- d) making polluters pay
- e) socially optimal output
- f) consumers' surplus
- g) trading of abatement cost

The available pollution control policies are tested against the above mentioned criteria in a decision table. In Table 4 the strengths (S) and weaknesses (W) of different pollution control measures are exhibited through S and W signs.

**Table 4: Strength and Weakness Analysis of Alternative Policies**

Measures	Poll. Rate	E. Cost	M. Cost	Make Polluters Pay	Output	Con. Surpl.	Abate. Cost
CAC	S	W	W	S	W	S	W
PET	S	S	S	S	S	S	W
TEP	S	S	S	S	S	S	S
IET	W	S	S	S	W	W	W
TI/FS	S	S	W	W	S	W	W
CAC+IET	S	S	S	S	W	W	W
CAC+TI/FS	S	S	W	S	S	W	W
IET+TI/FS	S	S	S	S	S	W	W

CAC: Command and Control Policy

PET: Pure Environmental Tax

TEP: Tradable Emission Permit or Credit

IET: Impure Environmental Tax

TI: Tax Incentives

FS: Financial Subsidies

It appears that the market policy effected through the use of tradable emission permit or credit fulfils all the stated criteria. At the global level application of market policy through international treaties and national commitment is the most effective way for controlling climate change. We need international treaties, national commitments and development of emission trading system and markets for implementation of market policy.

### 3. GLOBAL EMISSION REDUCTION POLICY

Keeping in due consideration the dire consequences of global warming, Kyoto Protocol has been the most important international treaty formed in 1997 and effected since 2005, where national governments of industrialized countries committed to a targeted emission reduction within a time frame. The introduction of Market Mechanism in Kyoto Protocol and launching of European Union Emission Trading Scheme (EU-ETS) in European Union have been the most significant events for development of international emission trading system and international emission markets.



### 3.1. International Treaties for Emission Reduction Target

At this point we may present a brief overview of the significant developments at global, regional and national level regarding emission reduction target (Pal, 2009). The following table (Table 5) shows a list of global emission reduction targets. The first column shows the name of the authority fixing the target. The status of the target i.e., whether it is binding on the parties or it is mere expression of desirable behavior, is stated in the second column. The countries for which the targets are set have been mentioned in the third column. The rate of emission reduction has been given in the fourth column. The target reduction has been set with respect to a base year level of emission. That base year is shown in column five. Lastly the year by which the target reduction should be achieved has been stated in column six.

Table 5: Target Reduction Calendar

Authority	Status	For Countries	Target reduction	Base level	Compliance by the year
KP	Binding	Industrialised Countries	5.2%	1990	2012
EU	Binding	EU	20%	1990	2020
ACES	Binding	US( Eqv to 4% 1990)	17%	2005	2020
EU	Desirable	Industrialised Countries	30%	1990	2020
EU	Desirable	Industrialised Countries	60%-80%	1990	2050
IPCC	Desirable	Industrialised Countries	25-40%	1990	2020
IPCC	Desirable	Developing Countries	15-30%	Baseline 2007	2020
UCS	Desirable	Global	40-50%	2000	2050
UCS	Desirable	Industrialised Countries	70-80%	2000	2050
UCS	Desirable	US	At least 80%	2000	2050
UCS	Desirable	Developing Countries	25%	2000	2050

[KP: Kyoto Protocol; EU : European Union; ACES: The American Clean Energy and Security Act; IPCC : Intergovernmental Panel on Climate Change; UCS : Union of Concerned Scientists]

By its nature and scope Kyoto protocol has been the most important international treaty for global emission reduction. The Kyoto Protocol (1997) set targets for industrialized countries to reduce their GHG emissions to be measured in ton of carbon dioxide equivalent by an average of 5.2% below 1990 levels in the period 2008-2012, known as the first commitment period. Kyoto Protocol designed three market-based "flexible mechanisms": Emissions Trading (ET), Joint Implementation (JI) and the Clean Development Mechanism (CDM). ET is called "allowance-based" mechanism because allowances are allotted to the sources of the green house gas (GHG) emissions where as JI and the CDM are called "project-based" mechanisms because actual projects are undertaken for emission reduction. CDM projects can only happen in developing countries which do not have an emissions reduction target under the Kyoto Protocol.

### 3.2: Ecological Footprint-An Alternative Basis for Emission Reduction

Global pollution should be restricted to a target volume (Cap) set on an agreed basis. The concept of Ecological Footprint provides a reasonable basis for setting Cap for individual countries. The Ecological Footprint tracks the area of biologically productive land and water



required to provide the renewable resources people use, and includes the space needed for infrastructure and vegetation to absorb waste carbon dioxide (CO<sub>2</sub>). In 2008, the most recent year for which data is available, the Footprint exceeded the Earth's bio-capacity — the area actually available to produce renewable resources and absorb CO<sub>2</sub> — by 52 percent. Overall, humanity's Ecological Footprint has doubled since 1966. This growth in ecological overshoot is largely attributable to the carbon footprint, which has increased 5-fold since 1961. The total ecological footprint comprises of cropland footprint, grazing land footprint, forest footprint, fishing ground footprint, built-up land and carbon footprint. The growth of ecological footprint and decline in bio-capacity since 1961 is presented below in Table 6.

**Table 6: Humanity's Ecological Footprint and Bio-capacity through Time  
(global hectares per capita)**

	1961	1965	1970	1975	1980	1985	1990	1995	2000	2005	2007	2008
Global Population (billion)	3.1	3.3	3.7	4.1	4.4	4.8	5.3	5.7	6.1	6.5	6.7	6.7
Total Ecological Footprint	2.4	2.5	2.8	2.8	2.8	2.6	2.7	2.6	2.5	2.7	2.7	2.7
Cropland Footprint	1.1	1.1	1	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.6
Grazing Land Footprint	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Forest Footprint	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Fishing Ground Footprint	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Carbon Footprint	0.3	0.5	0.9	1	1.1	1.1	1.2	1.2	1.2	1.4	1.4	1.5
Built-up Land	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total Bio-capacity	3.7	3.5	3.1	2.9	2.6	2.4	2.3	2.1	2.0	1.8	1.8	1.8
Ecological Footprint to Bio-capacity ratio	0.63	0.73	0.88	0.97	1.06	1.07	1.18	1.24	1.29	1.45	1.51	1.52

Source: Living Planet Report 2012

Only the countries whose carbon footprint alone exceeded its total bio-capacity (giving rise to carbon deficit, CD) are listed in the following table (Table 7). The table shows EF: Ecological Footprint, CF: Carbon Footprint, BC: Bio-Capacity, Deficit: EF-BC, CD: CF-BC: Carbon Deficit, P (M): Population in million, Total CD: P (M) X CD, % redn: Percentage



Reduction. The table also shows that the bio-capacity in respect of thirty countries is less than even its carbon footprint. It is observed that USA is at the first rank in total carbon deficit followed by Japan and China. To what extent they require to reduce their carbon footprint to mitigate the carbon deficit only is indicated in the last column. Percentage reduction is computed as  $CD \cdot 100 / CF$ .

Table 7: Per Capita Carbon Deficit of 30 Top Carbon Deficit Countries

	Country	(global hectares per capita)					National			
		EF	CF	BC	Deficit	CD	P (M)	Total CD (global hectares)	CD %	
1	United States of America	8.0	5.57	3.9	(4.1)	1.67	308.7	524.76	30	
2	Japan	4.7	3.13	0.6	(4.1)	2.53	127.4	323.00	81	
3	China	2.2	1.21	1.0	(1.2)	0.21	1,336.6	305.33	17	
4	Korea, Republic of	4.9	3.17	0.3	(4.5)	2.87	48.0	136.10	91	
5	Saudi Arabia	5.1	3.50	0.8	(4.3)	2.7	24.7	65.59	77	
6	Nepal	3.6	2.85	0.5	(3.0)	2.35	28.3	65.18	82	
7	Iran, Islamic Republic of	2.7	1.71	0.8	(1.9)	0.91	72.4	64.61	53	
8	United Arab Emirates	10.7	8.10	0.8	(9.8)	7.3	6.2	45.32	90	
9	Israel	4.8	3.08	0.3	(4.5)	2.78	6.9	19.12	90	
10	Iraq	1.3	0.89	0.3	(1.0)	0.59	29.5	17.45	66	
11	Singapore	5.3	3.69	0.0	(5.3)	3.69	4.5	16.47	100	
12	Malaysia	4.9	3.12	2.6	(2.3)	0.52	26.6	13.64	17	
13	Kuwait	6.3	4.53	0.4	(5.9)	4.13	2.9	11.78	91	
14	Libyan Arab Jamahiriya	3.1	1.92	0.4	(2.6)	1.52	6.2	9.12	79	
15	South Africa	2.3	1.31	1.1	(1.2)	0.21	49.2	8.11	16	
16	Qatar	10.5	8.13	2.5	(8.0)	5.63	1.1	6.39	69	
17	Uzbekistan	1.7	1.13	0.9	(0.8)	0.23	26.9	5.61	20	
18	Lebanon	2.9	1.43	0.4	(2.5)	1.03	4.2	4.26	72	
19	Jordan	2.1	0.83	0.2	(1.8)	0.63	5.9	3.49	76	
20	Korea, Democratic People's Republic of	1.3	0.72	0.6	(0.7)	0.12	23.7	3.34	17	
21	Oman	5.0	3.22	2.1	(2.8)	1.12	2.7	2.94	35	
22	Dominican Republic	1.5	0.72	0.5	(1.0)	0.22	9.8	2.11	31	
23	Syrian Arab Republic	1.5	0.80	0.7	(0.8)	0.1	20.5	1.95	13	
24	Algeria	1.6	0.63	0.6	(1.0)	0.03	33.9	1.46	5	
25	Azerbaijan	1.9	0.93	0.8	(1.1)	0.13	8.6	1.46	14	
26	Jamaica	1.9	0.87	0.4	(1.5)	0.47	2.7	1.30	54	
27	Mauritius	4.3	1.49	0.6	(3.7)	0.89	1.3	1.19	60	
28	Occupied Palestinian Territory	0.7	0.34	0.2	(0.6)	0.14	4.0	0.74	41	
29	Trinidad and Tobago	3.1	1.91	1.6	(1.5)	0.31	1.3	0.45	16	
30	Cuba	1.9	0.76	0.7	(1.1)	0.06	11.2	0.25	8	

Source: Global Footprint Network, 2010. The Ecological Footprint Atlas 2010, [www.footprintnetwork.org/atlas](http://www.footprintnetwork.org/atlas)

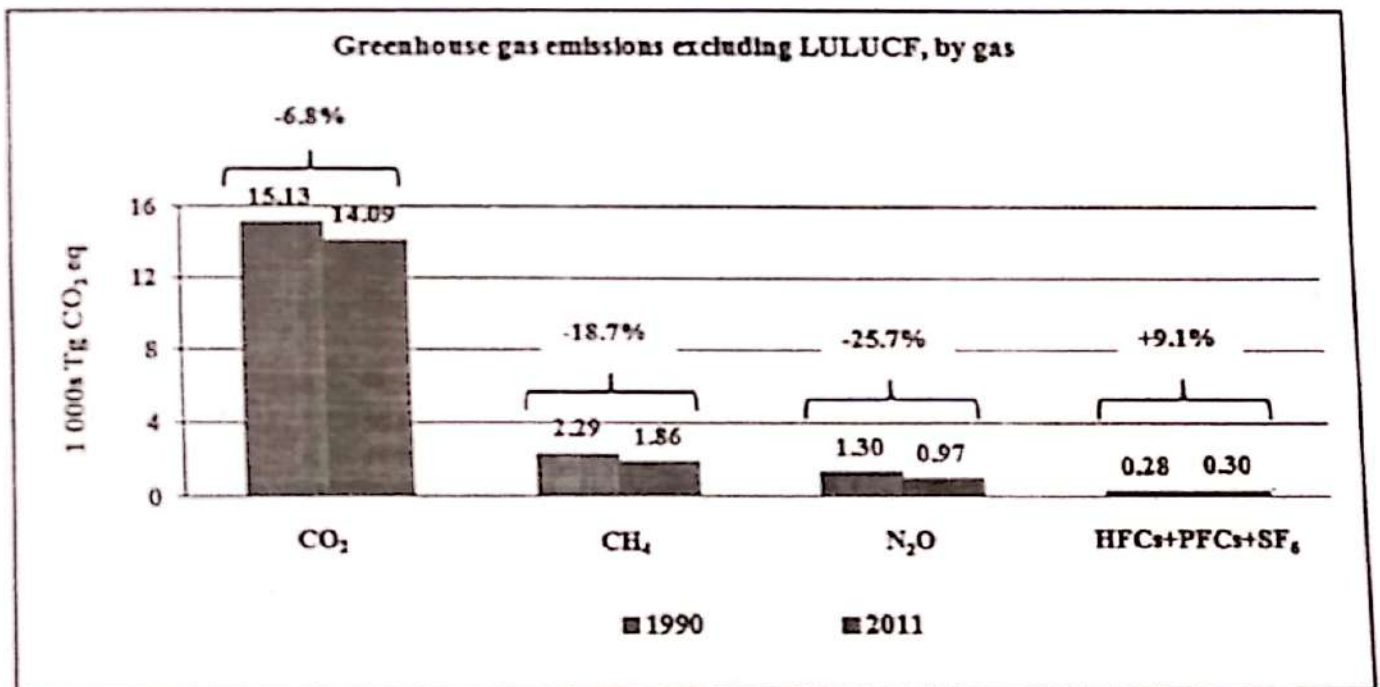


The study suggests that target emission reduction may be set for the individual countries based on the required percentage reduction in per capita carbon footprint. For the volume of emission reduction falling short of the target a country needs to import green instrument (Carbon Credit), thereby outsourcing abatement at a cheaper rate. The shortfall in import, if any, must be paid at a penal rate to the global fund. The global fund should be used for recovery of the damages to the environment caused by the shortfall.

### 3.3 Global Emission Reduction Achieved

From 1990 to 2011, total aggregate GHG emissions excluding emissions and removals from LULUCF (land use, land-use change and forestry) for all Annex I Parties decreased by 9.3 per cent, from 19,000.9 Tg CO<sub>2</sub> eq to 17,230.7 Tg CO<sub>2</sub> eq. Throughout the period 1990–2011, CO<sub>2</sub> accounted for the largest share of total emissions, contributing 79.6 per cent in 1990 and 81.8 per cent in 2011. By this time emission of Carbon dioxide has reduced by 6.8 percent, Methane by 18.7 percent, Nitrous oxide by 25.7 percent from the 1990 level and H-gases have increased by 9.1 percent over the 1990 level. The following figure (Figure 2) makes a graphical presentation of the changes in emission.

Figure 2: Greenhouse gas emissions excluding LULUCF from Annex I Parties by gas, 1990 and 2011



Abbreviation: LULUCF = land use, land-use change and forestry.

Source: National greenhouse gas inventory data for the period 1990–2011. FCCC/SBI/2013/19

## 4. POLLUTION CONTROL AT ENTERPRISE LEVEL

For the polluting enterprises abatement is compulsory for emission prohibited under command and control. Option is there to select between abatement and pollute and pay tax under fiscal policy measures. Under market policy choice is open among:



- i. Abatement
- ii. Outsourcing abatement by paying for green instruments
- iii. Penalty/tax for neither abatement nor outsourcing of abatement

Thus the pollution control policy at the enterprise level should be positively responsive to the national policies and international opportunities. Nevertheless, the enterprise level pollution control policy should be integrated to the overall corporate governance and corporate social responsibility programmes.

## 5. FRAMING A COMPREHENSIVE POLICY AT NATIONAL LEVEL

For controlling climate change national governments should come forward to make the commitment of emission reduction and to meet the emission reduction target as per the international treaties like Kyoto Protocol. Next, they should also participate in the regional schemes for emission reduction like European countries setting separate emission reduction target under EU-ETS. Emission trading under Kyoto and EU-ETS allow outsourcing abatement for emission reduction at anywhere in the world. Again, like USA national governments of other countries may develop schemes of emission reduction binding only within the territory of the country. National emission reduction units can be generated by the national governments for emission trading schemes within the country. For controlling local pollution similar pollution reduction units can be generated and used for tax relief. This will allow outsourcing of abatement within national boundary. The State should use command and control policy to control pollution decided to be avoided. They should use fiscal policy (output tax, pollution tax, incentives, and subsidies) for induced abatement at the sources of pollution. Tax revenue represents the pollution done. The government should spend the revenue for recovery of damages caused through pollution done.

## 6. CONCLUSION

The objective of this paper has been to design a comprehensive pollution control policy. Accordingly the study suggests that the pollution control policy should be operated through national governments. It is the national government that should develop comprehensive policy by integrating the policies of command and control, taxes and incentives, and emission trading market and by integrating their operation at enterprise level, national level and global level.

Kyoto Protocol and European Union Emission Trading Scheme (EU-ETS) have made significant progress to develop emission trading market operating at global level. Ecological footprint, Carbon footprint in particular, can be a reasonable basis for fixing national emission reduction target. To the extent global damages are not mitigated by green instruments, penalty should be contributed to global environmental fund. ●



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# The Impact of Interest Rate Channel of Monetary Policy on Output and Prices in Nigeria: An Unrestricted VAR Approach

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**ABSTRACT:** This paper uses the vector auto-regression analytical method to examine the interest rate channel of monetary policy to compare the period after the Structural Adjustment Period (1986Q1-1999Q1) and the period of the civilian administration (1999Q2-2012Q4) in Nigeria. The results of the second period indicate that monetary tightening leads first to an immediate fall in real output in the first 3 months reaching a maximum decline in the 9 months. The first period indicates that real output start to decline after 6 months reaching a maximum decline in 12months. In the case of response of domestic prices to monetary policy for the second period, prices did not start to decline until after 6months and it never returns to equilibrium. The findings for the first period indicate that prices started to rise after 4months and reach its peak in 12 months after the shock. This implies that we found evidence of interest channel in the two periods but monetary policy is more effective in the latter period compared to the earlier period.

**Key Words :** Monetary Policy, Output, Prices, Interest Rate.

**JEL Classification:** E52

## 1. INTRODUCTION

**T**here are few studies on monetary transmission mechanism in Nigeria relative to what is experienced in advanced economies. The study of this subject helps in exposing the

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changes in the time series properties of output, unemployment and inflation as a feed back to monetary policy decisions of government.

How has the problem of growth and price stability which monetary policy is meant to address fared since 1986 (after the Nigerian Structural Adjustment Program -SAP) when government introduced a fundamental shift in policy and ways of managing the nation's resources? And what has been the changes in the real output and domestic prices after the assumption of office by the civilian government (1999-2012)? Consequently, how monetary policy has determined the path of growth in real output and prices in Nigeria should be a major concern for government.

The answers to the issues raised depend on the ability of the monetary policy committee of the nation to trace the best channel which best propagates monetary policy innovations, the lag period for policy actions to take effect and which disturbance is the real cause of the variability in output and inflation.

The pattern of changes in the real output and domestic prices in Nigeria for the period 1986Q1-1999Q1 and 1999Q2-2012Q4 respectively are as shown in figures 1-4 in the appendix. Our illustration shows that the pattern of behavior of real output in these two periods does not depict sustained growth because in the first period immediately after SAP the changes in the pattern of real growth has been that of moderate fluctuations especially from 1989-1998.

In the second period real output dropped slightly in 1999 but started to experience reasonable increase from 2004 with wider fluctuations from one year to another in the period 2004-2012.

Domestic prices in Nigeria have been generally on the increase in the two periods under consideration. The sharp increase in 1993Q3 dropped in 1995Q1 but started to rise again reaching a peak similar to that of 1994 by 1998. The trend in domestic prices from 1999 has been increasing but this is gradual compared to the former period (see figures 3 and 4).

There are number of transmission channels through which monetary policy affects macroeconomic variables: for example interest rate channel, money channel, exchange rate channel, bank lending channel, equity channel and real estate channel (Mishkin 1995).

The need to determine the most effective channel from the past times series data is to use such empirical evidence to forecast the future. If the shocks to the economy are kept unchecked, the economy will only become successively volatile and the problems of growth and price instability will persist. Otherwise it is sensible to assume a reasonable stability to last.

Bhuiyan (2008) found that policy shocks transmit to real output in Canada through interest rate channel and output start to decline in a maximum period of six months. In the UK report of the Monetary Policy Committee (1999) suggest that real output start to fall after the initial policy change and reaches the maximum in about one year and three months. And a study by Caprole and Soliman (2005) which assesses the asymmetric effects on monetary policy in some European nations found that monetary policy shocks affects real output with different intensities in these countries- response of output to monetary policy ranges between 1-8 quarters. In some emerging economies response of output to policy from evidence ranges between 2-9 quarters (see Elena (2012), Cambazoglu and Gunes (2011), Asir, Noor, Yasir and Hastam (2005)).



Chuku (2009) on Nigeria found that monetary innovation has modest effects on output and prices. Others who conducted similar studies on Nigeria are Saibu and Nwosa (2011), Ammasona, Wosa and Olaiya (2011), and Ogun and Akilo (2010) although based their study on bank lending channel. They all found that monetary policy affects output and inflation but did not specify the rate of response of output and prices to monetary policy shocks.

In this paper, we seek to contribute to the debate by investigating the response of output and prices to monetary policy shocks through interest rate channel and also compare the effects of monetary policy on output and prices in the periods- 1986Q1-1999Q1 (Military rule) with 1999Q2- 2012Q4 (civilian administration). Unlike previous studies, we determine and specify the periods it takes output and prices to respond to monetary policy shocks in the respective periods.

The rest of the paper is organized as follows. In section 2, we discuss the conceptual issues; section 3 is based on the methodology of the study while sections 4 and 5 contain the results and conclusion.

## 2 CONCEPTUAL FRAMEWORK

The conceptual framework of the conduct of monetary policy can be traced to the classical economists like Marshall 1923, Say 1821 and Fisher 1911. They in one way explained the link between money supply and prices as a direct link. Keynes (1935) came up with the idea that relationship is not direct but that adjustments in the interest rate by the monetary authority affect the macroeconomic variables like real output, employment and domestic prices. And because of price rigidities and rational expectations, changes in nominal interest rates may cause movements in both short-term and long-term real interest rates. Given that real interest rate reflects cost of capital and corporate investment. Further, interest rate also influences investment spending like spending on household goods and investment goods. In a modern economy, actions of the Central bank in regulating supply of money and credit influence's economic agents portfolio decisions, aggregate demand and consequently inflation.

This transmission mechanism of monetary policy works through not just one but many channels that affect different variables and markets at various speed and intensities. This makes the transmission mechanism of monetary policy a complex study as described by Bernanke and Getler (1995) "inside the black box".

A framework for the analysis of money and interest rate channels of monetary transmission mechanism from Mishkin (1996) is represented in figure 1. This illustrates the steps and interest rate channel in a monetary transmission channel in a developing nation like Nigeria.

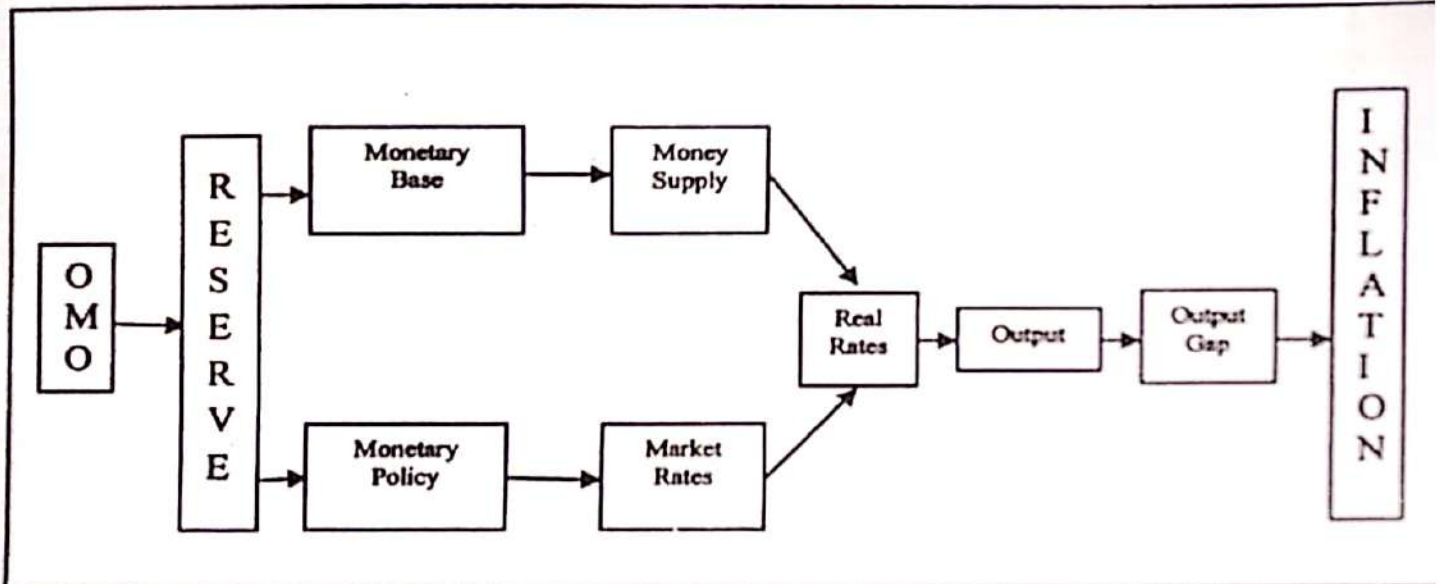
The first stage of the interest rate channel concerns interest rate interactions. In other words this is the impact of the policy interest rate on the market interest rate. The second stage corresponds to the effect of the nominal market interest rate on the real rates and then to real sector (prices and output) as represented in figure 1.

Changes in the short-term nominal interest rate induced by a central bank result in a corresponding change in the real interest rate on both short- and long-term bonds owing to nominal price rigidities. Hence, expansionary monetary policy, which lowers the short-term



the monetary authorities in the current period cause changes in the money market rates. Changes in these rates in turn affect investment decisions (goods and labour markets) and ultimately the aggregate output and general price level.

Figure 1: Interest rate Channel



Source: Extracted from Mishkin 1996.

### 3. METHODOLOGY

#### 3.1 Model of the Study

In the standard form, a VAR contains a set of K endogenous variables  $y_t = (y_{1t}, \dots, y_{kt}, \dots, y_{Kt})$  for  $k = 1, \dots, K$ . The VAR (p) process is then defined as:

$$y_t = A_1 y_{t-1} + \dots + A_p y_{t-p} + u_t \quad \dots \quad (1)$$

with  $y_{t-p}$  being vector of endogenous variables,  $A_i$  are  $(K \times K)$  coefficient matrices for  $i = 1, \dots, p$  and  $u_t$  is a K-dimensional process with  $E(u_t) = 0$  and time invariant positive definite covariance matrix  $E(u_t u_t^T) = \Sigma_u$  (white noise).

In this paper, we share the view of Robinson and Robinson (1997) and express the specific form of the structural VAR that is specified for estimation of the inter-relationship between the variables in the form:

$$\Delta GDP_t = \beta_{11} \Delta GDP_{t-1} + \dots + \beta_{1q} \Delta GDP_{t-q} + \gamma_{11} \Delta CPI_{t-1} + \dots + \gamma_{1q} \Delta CPI_{t-q} + \phi_{11} \Delta NMS_{t-1} + \dots + \phi_{1q} \Delta NMS_{t-q} + \delta_{11} \Delta MPR_{t-1} + \dots + \delta_{1q} \Delta MPR_{t-q} + \alpha_1 + \epsilon_{1t} \quad \dots \quad (2)$$

$$\Delta CPI_t = \beta_{21} \Delta GDP_{t-1} + \dots + \beta_{2q} \Delta GDP_{t-q} + \gamma_{21} \Delta CPI_{t-1} + \dots + \gamma_{2q} \Delta CPI_{t-q} + \phi_{21} \Delta NMS_{t-1} + \dots + \phi_{2q} \Delta NMS_{t-q} + \delta_{21} \Delta MPR_{t-1} + \dots + \delta_{2q} \Delta MPR_{t-q} + \alpha_2 + \epsilon_{2t} \quad \dots \quad (3)$$

$$\Delta NMS_t = \beta_{31}\Delta GDP_{t-1} + \dots + \beta_{3q}\Delta GDP_{t-q} + \gamma_{31}\Delta CPI_{t-1} + \dots + \gamma_{3q}\Delta CPI_{t-q} + \phi_{31}\Delta NMS_{t-1} + \dots + \phi_{3q}\Delta NMS_{t-q} + \phi_{31}\Delta MPR_{t-1} + \dots + \phi_{3q}\Delta MPR_{t-q} + \alpha_3 + \varepsilon_{3t} \quad (4)$$

$$\Delta MPR_t = \beta_{41}\Delta GDP_{t-1} + \dots + \beta_{4q}\Delta GDP_{t-q} + \gamma_{41}\Delta CPI_{t-1} + \dots + \gamma_{4q}\Delta CPI_{t-q} + \phi_{41}\Delta NMS_{t-1} + \dots + \phi_{4q}\Delta NMS_{t-q} + \delta_{41}\Delta MPR_{t-1} + \dots + \delta_{4q}\Delta MPR_{t-q} + \alpha_4 + \varepsilon_{4t} \quad (5)$$

Where GDP is the natural logarithm of real domestic product in Nigeria in year t at 1984 constant prices, CPI is the natural logarithm of the composite consumer price index in Nigeria, NMS is the natural logarithm of the of the narrow money supply and MPR is the monetary policy rate. Other notations are; t is time as a proxy for technological change,  $\beta$ ,  $\delta$ ,  $\gamma$ ,  $\phi$  and  $\alpha$  are parameters of the model to be estimated and finally  $\varepsilon_i$  (i=1, ..., 4) are vectors of innovations.

### 3.2 Data and Estimation Procedure

In this study we estimate an unrestricted VAR with four variables on the aggregate economy for the two periods of study being compared. The data include the real aggregate output, monetary policy rate, consumer price index and narrow money supply (M1) for the period 1986Q1-1999Q1 and 1999Q2-2012Q4. Our VAR model is used to determine the dynamic relationship between the endogenous variables without any restriction. The model captures the feedback effect allowing current and past values of the variable in the system.

The augmented Dickey-Fuller (ADF) test statistics were used to determine stationarity of study variables. This entails the estimation of the following regression according to (Dickey and Fuller, 1979).

$$\Delta Y_t = \beta_t + \delta Y_{t-1} + \sum_{i=1}^m \alpha_i \Delta Y_{t-i} + \varepsilon_t \quad (6)$$

Where  $\varepsilon_t$  is a pure white noise error term and  $\Delta Y_{t-1} = (Y_{t-1} - Y_{t-2})$ ,  $\Delta Y_{t-2} = (Y_{t-2} - Y_{t-3})$  etc. The null hypothesis is that  $\delta = 0$  (has a unit root) and alternative is that  $\delta < 0$  (stationary). The optimum lag length for each of the variables has been chosen using the automatic lag selection option which is based on the Schwarz information criterion (SIC). The test is said not to be stationary if the ADF test reveals that the Null Hypothesis  $\delta = 0$  could not be rejected against an alternative that  $\delta < 0$ , and stationary if otherwise.

The VAR model is indentified based on recursive Choleski decomposition. In respect of each system, we follow the order: real GDP, consumer price index, M1 and MPR respectively for each of the period's being compared. To generate the impulse response Hamilton (1994) infers that if a VAR of our study with a vector MA ( $\infty$ ) is expressed in the form:

$$y_t = \mu + \varepsilon_t + \psi_1 \varepsilon_{t-1} + \psi_2 \varepsilon_{t-2} + \dots \quad (7)$$

The matrix  $\psi$  has the interpretation

$$\frac{\partial y_{t+s}}{\partial \varepsilon_t} = \psi_s; \quad (8)$$



Which implies that the row  $i$  and column  $j$  element of  $\psi$  identifies the consequences of a unit increase in the  $j^{\text{th}}$  variable's innovation at date  $t$  ( $\varepsilon_{jt}$ ) for the value of the  $i^{\text{th}}$  variable at the time  $t+s$  ( $y_i, t+s$ ), holding all other innovations at all dates constant.

This approach allows the identification of monetary policy shocks by taking the residuals from the reduced form interest rate equations and regressing them on the residuals from the real output, consumer price equations and narrow money supply for the respective periods. The choice of optimal lag order was determined based on Schwarz information criteria (SIC). This is to avoid the following problems: if the lag length is too small, the model will be misspecified and if it is too large, the degrees of freedom will be lost.

## 4. VAR RESULTS

### 4.1. Indicator of Monetary Policy

Our attempt to estimate the VAR requires that we choose an indicator of monetary policy. And this section analyzes the information content of the monetary policy rate and money supply aggregate (M1) as a predictor of real gross domestic product and domestic prices allowing the variables to interact without restrictions.

In order to estimate the VAR and determine the measures of economic activity (real GDP and domestic prices) we estimate the unit root tests on individual variables and then proceed to estimate the impulse response of the study variables. The sample period is divided into two: 1986Q1-1999Q1 and 1999Q2-2012Q4. The periods allow us to compare the impact of monetary policy in the post SAP period and the period of the current civilian administration.

### 4.2. Unit Root Test

Augmented Dickey Fuller (ADF) tests were conducted to verify the stationarity (presence of unit roots) in the individual series of the model in which all variables are in logarithm except Minimum lending rate. The results of the unit root tests for the two periods are summarized in Table 2 and 3 indicate that all the variables are stationary at the first difference except real GDP for the period 1986Q1-1999Q1 which was stationary at the second difference.

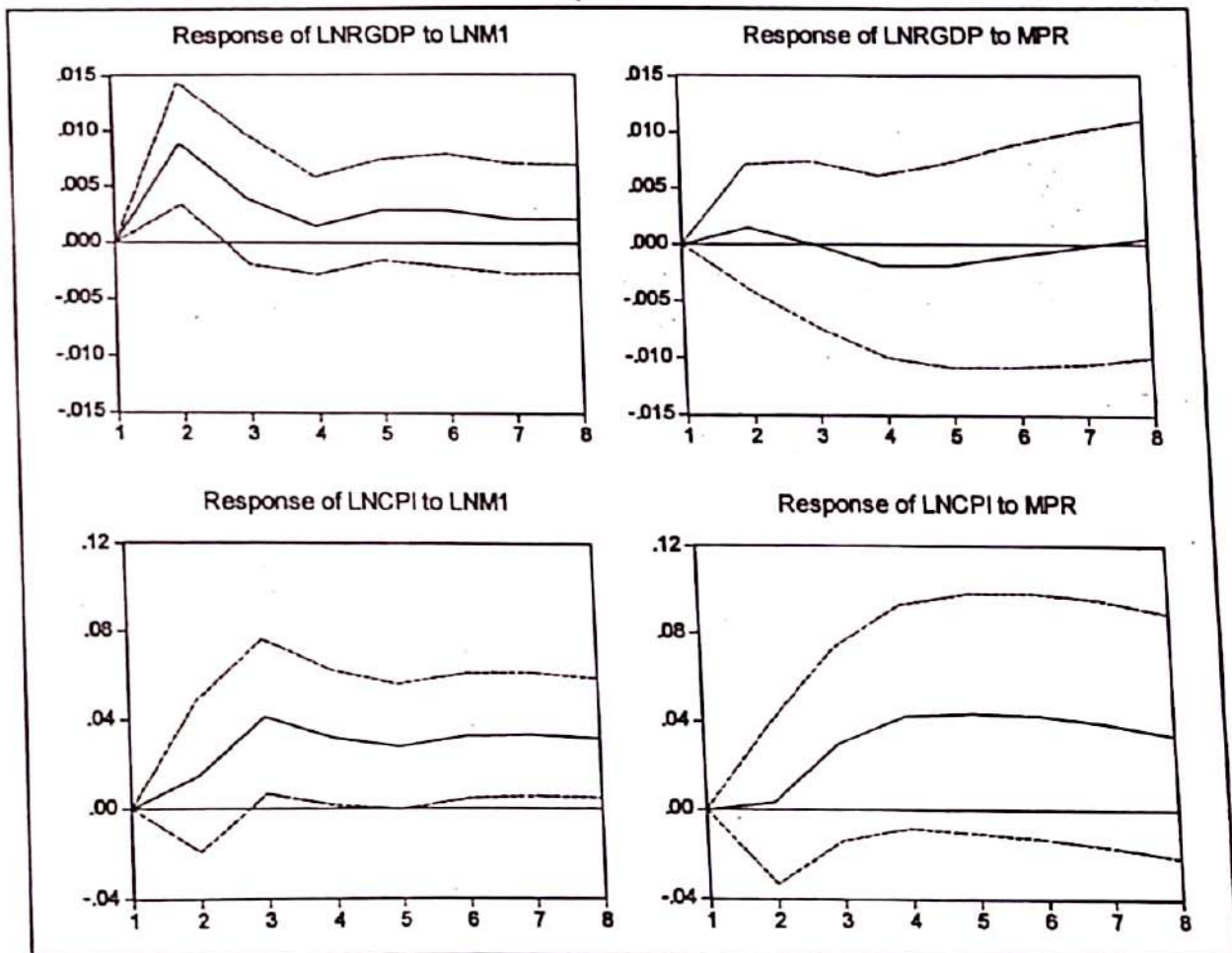
Tables 2: Results of Unit Root Tests

ADF Statistics : 1986Q1-1999Q1			
Variables	Test	Lag	Remarks
lnrgdp	-12.03	2	1(2)
lnncpi	-7.57	0	1(1)
lnM1	7.42	0	1(1)
MPR	-6.48	0	1(1)
Critical Values @ 1%: lnrgdp -3.57 ; lnncpi -4.15 ; lnM1 -3.57 ; MPR -3.57			

Tables 3: Results of Unit Root Tests

ADF Statistics : 1999Q2-2012Q4			
Variables	Test	lag	Remarks
lnrgdp	-6.41	4	1(1)
lndpi	-7.99	2	1(1)
lnM1	-10	0	1(1)
MPR	-6.47	0	1(1)
Critical Values @ 1%			
lnrgdp -3.57 ; lndpi -3.57 ; lnM1 -3.56 ; MPR -3.56			

Figure 1: Impulse Responses of RGDP and CPI to Choleski One Standard Deviation shock to MPR 1986Q1-1999Q1



### 4.3. Impulse Response

To explain how the monetary policy actions affects the macro economy through the interest rate channel, Figures 1-2 shows the impact of an unexpected 1% increase in the policy rate on real output and domestic prices in the periods of study. In accordance with the VAR



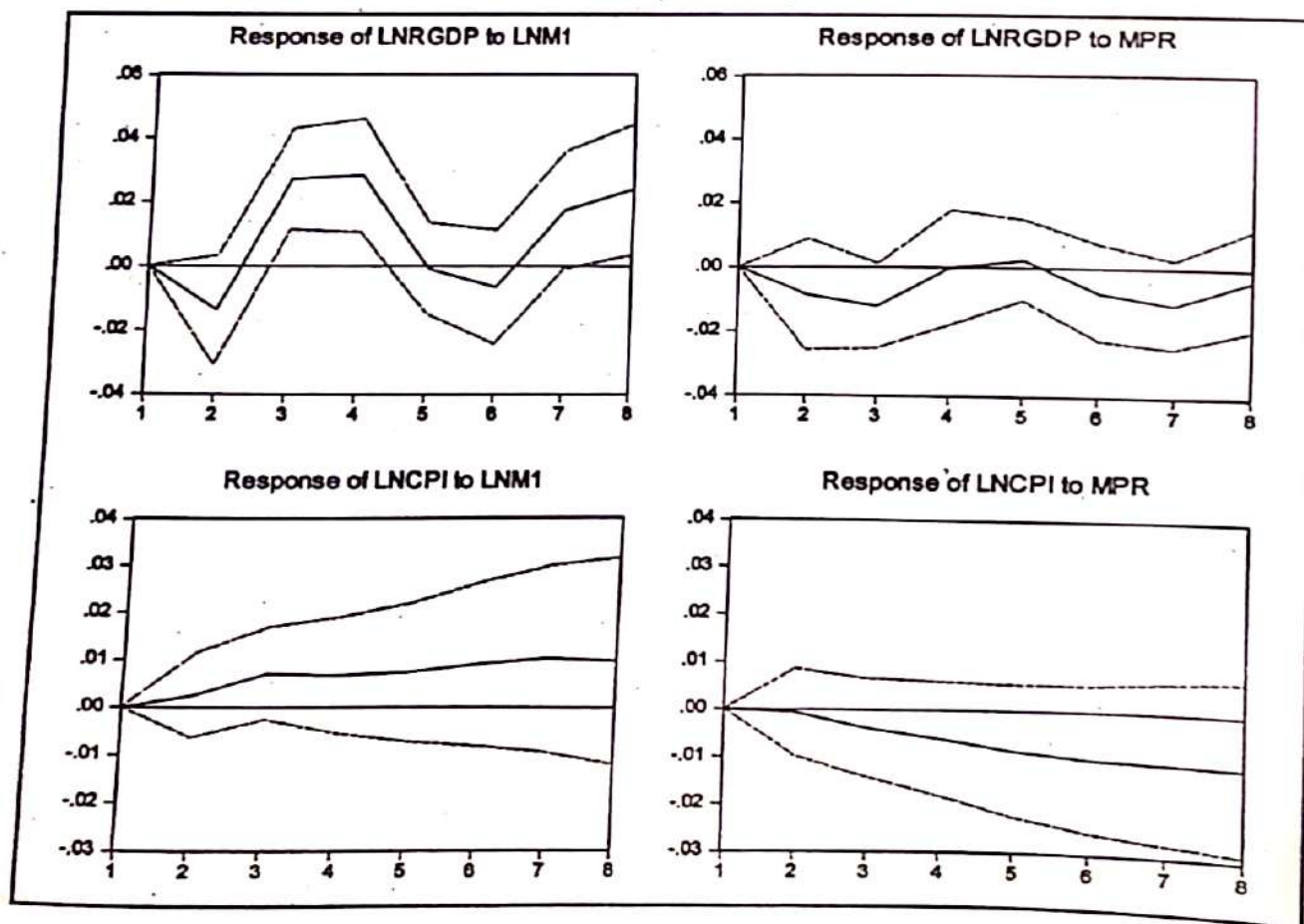
analysis for the first period 1986Q1-1999Q1 (figure 1) the real output in response to contraction in monetary policy rose initially within the first quarter (3months) after the shock. But after 6months it started to decline becoming negative after 9months and later reaching equilibrium in about 22months.

In the second period (1999Q2-2012Q4) the response of real output to monetary policy indicates an immediate decline in real output in the first quarter immediately after the shock (3months) and it did not start to rise until about 9 months reaching equilibrium after 12months (see figure 2).

The results of response of domestic prices to monetary policy in the first period differ relative to the second. The first period indicates that prices started to rise after 4 months, rose sharply after 6 months reaching about 0.04 per cent as a result of the monetary policy shock (see figure 1).

Evidence of response of domestic prices to monetary policy in figure 2 (second period) indicates that domestic price response to monetary policy occurs after 6 months when prices start to decline and it never returns to equilibrium even after 24 months.

**Figure 2: Impulse Responses of RGDP and CPI to Choleski one Standard Deviation shock to MPR 1999Q2-2012Q4**





## 5. CONCLUSION AND RECOMMENDATION

In this paper we conducted an investigation on the impact of monetary policy on real output and domestic prices in Nigeria comparing two periods: 1986Q1-1999Q1 and 1999Q2-2012Q4. Our empirical findings tend to suggest that interest rate channel exists in Nigeria in the two periods of study. However, interest rate channel appears to be more effective in the latter period compared to the former.

Our results also suggest that the use of monetary policy to control real output and domestic prices is evolving in a developing country like Nigeria. This implies an improvement in the interest rate channel as a measure of monetary policy because it enhances the management and integration of the Nigerian financial system. In view of these findings, the need to further harmonize the capital markets and the banking system is highly recommended so as to further strengthen a market controlled system of economic management in Nigeria. •

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# Corporate Governance in India: A Reality or A Myth

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**ABSTRACT:** Corporate Governance (CG) is not merely the indicator of economic prospects of a developing country like India but also plays a vital part in the prosperity. Through this study we shed light on the aspects for better Corporate Governance for Indian corporate. For an effective framework, governing the code of conduct of business entities, a mechanism of growing strategy needs to be adopted, where public interest, self-regulation and a system of control co-exist. In this regard Ministry of Corporate Affairs and Securities Exchange Board of India take an essential part in implementation of Corporate Governance.

**Key Words :** *Corporate Governance, SEBI, Listing Agreement, Independent Directors, Audit, Scams, Regulation, Institutional Investors.*

## 1. INTRODUCTION

Corporate Governance (CG) may not dictate the economic prospects of a developing country like India but, it certainly can play an integral role in shaping them. Good corporate governance is a key to the integrity of corporations, financial institutions and markets, and essential to the health of any economy and its stability.

Corporate governance systems depend on the key principles of:

- balanced objectives,
- equal concern for all stakeholders

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- transparency,
- accountability, and
- material disclosures.

Whether corporate India, which follows a rules-based governance structure, is complying with regulation merely in letter is a question that is often raised. This is particularly significant as the nature of corporate India's approach to compliance and regulation exerts a sizeable influence on the quality of compliance. Introducing a CG framework in India is a complex task, coping with the problems associated with very large number of companies, and the ownership and management structures and operating culture. A majority of these organisations are family owned; some are family owned but professionally run. Many are public limited but still a few are listed. Many of the large publicly traded companies are in effect controlled by a few minority promoters. Bringing in a legal framework capable of encompassing these different subsets and effectively enforcing a regulatory frame is indeed fraught with complexities and difficulties. The timely and stringent enforcement of regulations is key to any effort aimed at narrowing the gaps between desired goals and achieved results. Against this backdrop, there is a humble effort to capture certain areas where Indian companies are still lagging and to suggest few measures for their better performance.

## 2 BACKDROP

CG norms in India have evolved over the past couple of decades. In December 1995, the Confederation of Indian Industry (CII) set up a task force to design a voluntary code of CG. Between 1998 and 2000, 25 leading companies voluntarily followed the code. Considering the emergence of code of best Corporate Governance practices all over the world like Cadbury<sup>1</sup>, Greenbury and Hampel Committee reports, in 1998<sup>2</sup>, SEBI constituted a Committee on Corporate Governance under the Chairmanship of Shri Kumar Mangalam Birla. Its recommendations were implemented through Clause 49 of the stock exchange Listing Agreements, setting out mandatory and recommendatory provisions for the governance of listed companies. In 2000, the government-appointed Sanjiva Reddy Committee issued its report on Corporate Excellence through Governance, setting out far reaching recommendations. The Ministry of Corporate Affairs soon after amended the Companies Act 1956 to incorporate specific corporate governance provisions regarding independent directors and audit committees. Since 2001, accounting standards were strengthened and expanded by the Institute of Chartered Accountants of India, and were notified under the Companies Act on the recommendation of the National Advisory Committee on Accounting Standards (NACAS), to mandate appropriate compliance by companies. The Ministry of Corporate Affairs issued a set of voluntary guidelines for corporate governance in December 2009.

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<sup>1</sup> Cadbury Report. (1992). *Report of the committee on the financial aspects of corporate governance*. London. Gee Publishing. The Cadbury Report (1992) focused attention on the board of directors' accounting and auditing functions, and emphasised the importance of institutional investors as the most influential group of shareholders. It also mandated that listed UK companies establish audit committees composed of non executive directors.

<sup>2</sup> Hampel Report. (1998). *The combined code: Principles of good governance and code of best practice*.



Governance regulations and codes around the world have been either principles-based or rules-based. The regulatory system in the US is based on strictly enforced rules. The Sarbanes-Oxley Act (2002) set new rules and standards relating to financial reporting, internal accounting, personal loans from companies to Directors, whistle blowing etc. for all the U.S. public company boards, management, and public accounting firms, with stringent penalties for violations. It also established a Public Company Accounting Oversight Board (PCAOB) for the regulation and monitoring of US audit and accounting firms.

In contrast, the UK adopts a principles-based governance model on a 'comply-or-explain' approach, where it is not necessary for companies to comply with all aspects of the code so long as they satisfactorily explain the justifications for their non-compliance. In response to the financial crisis, regulators around the world have responded by introducing a fresh wave of regulations. The quality of corporate governance does vary markedly between, and within, countries, yet almost all have moved forward.

Subsequently, after Enron, WorldCom, and other corporate governance calamity, SEBI felt that there was a need to improve further the level of corporate governance standards in India and constituted a second corporate governance committee chaired by Mr. Narayana Murthy, of Infosys Technologies Limited. Based on the recommendations of the aforesaid Committee, SEBI issued a circular on August 26, 2003 revising Clause 49 of the Listing Agreement. Following the public comments received thereon and the revised recommendations of the Committee, certain provisions of the regulatory framework for corporate governance were modified and relevant amendments were made to Clause 49 of the Listing Agreement. The revised clause 49 outmoded all the earlier circulars on the subject and became effective for listed companies from January 01, 2006. It is applicable to the entities seeking listing for the first time and for existing listed entities having a paid up share capital of Rs. 3 crores and above or net worth of Rs. 25 crores or more at any time in the history of the company. However, the disclosures of the compliance with mandatory requirements and adoption of the non-mandatory requirements shall be made in the section on corporate governance of the Annual Report. The process continues and as the incidents occur, need for modifying the ongoing rules and regulations goes on.

### **3. OBJECTIVE OF THE STUDY**

The objective of this study is to find out whether corporate governance variables had an effect in the reaction of Indian companies or it is yet to come.

### **4. METHODOLOGY**

This paper is about the failure of companies when they are confronted with critical governance matters. Performance of twelve companies is studied with a brief look and in order to find that governance failures fall into identifiable patterns. This paper offers insights into the responsibilities of Independent Director's with respect to corporate governance thus, seeks to throw light on the key responsibilities that the organizations face and suggests improvements that may help to enhance the personal and professional integrity of those independent directors.



This paper is mainly based on secondary data and data are collected from various reputed websites. Various related articles & journal have been used to collect the data. A number of paper presented in the various national and international conference also have been used.

## 5. PRIOR LITERATURE REVIEW

The present study investigating whether the corporate governance really existing in the Indian scenario or not, examine the issue from different and various perspectives. A Large number of literatures are available based on the performance and reasons of failure of corporate governance in India. A brief review of such literatures is made here:

The concept of stakeholder management was proposed by Freeman (1984) to address the ethical and moral considerations of business in addition to the more competitive ones.

Shleifer and Vishney (1986) develop a theoretical model which explains large external shareholders may facilitate takeovers by selling their shares to bidding firms when incumbent manager are underperforming and unwilling to implement reforms.

Botosan (1997) shows that an improvement in corporate governance practices reduce information asymmetry between shareholders and managers.

Lang and Lundholm (1999) suggest that a higher level of transparency and higher quality of disclosure are associated with lower information risk.

Regulation and competition as the predictor variables of interest is motivated partly by emerging research and partly by practice. Social factors such as regulation as well as economic factors such as a competitive environment distinctly and interactively influence corporate governance Aguilera & Jackson, (2003). Each of these forces shares links with the other Aoki, (1990), and the influence of each one may even be contingent on the other Aguilera & Jackson, (2003).

Academicians have made several attempts to measure the quality of corporate governance. Among these the governance index of Gompers *et al.* (2003), the entrenchment index of Bebchuk and Cohen (2005) deserve special mention.

Empirical studies utilizing various corporate governance indices have shown that corporate governance is positively associated with firm value or stock returns (Bebchuk *et al.*, 2005; Gompers *et al.* 2003).

Doidge *et al.* (2007) showed that in countries with weak development, it is costly to improve firm-level corporate governance because the institutional infrastructure is lacking and good governance has political costs.

## 6. EVIDENCES FROM INDIAN COMPANIES

This section of the study is about the failure of companies when they are confronted with critical governance matters. Studies of some corporate frauds in different countries over the years show that governance failures fall into identifiable patterns. According to the study of few selected companies mentioned here it has been observed that based on proxy voting disclosures, directors of the reputed companies attend less than 75 per cent of board meetings.



Table 1: Directors' Attendance in the Board Meetings held in the Financial Year 2013

Company Name	Total No. of Directors	No. of Directors attended less than 75% Board Meetings	Percentage of Directors attended less than 75% Board Meetings
Yes Bank Ltd.	7	5	71%
Cummins India Ltd.	10	6	60%
Shriram Transport Finance Co. Ltd.	10	6	60%
United Phosphorous Ltd.	12	7	58%
Mahindra & Mahindra Ltd.	13	6	46%
Hindalco Industries Ltd.	11	5	45%
Exide Industries Ltd.	12	5	42%

Source: Moneylife Digital Team

It was observed further that companies taken into consideration were non-compliant with Clause 49 of the 'Listing Agreement'. Independent Directors of those companies have served on the board for more than nine years and which is mere non-compliance of the provisions of Companies Act 1956, suggested in this regard. It is seen that a majority of the companies have complied with Clause 49 in letter rather than in spirit.

Table 2: Independent Directors who have served the Board for more than Nine Years

Names of the Independent Directors	Names of the Companies in which Independent Director's were involved	Tenure as Independent Director's in Years
Mr. Keshab Mahindra	HDFC	36
Mr. J.K.Setna	Colgate Palmolive India	35
Mr. Nusli N Wadia	Tata Steel	34
Mr. C.M.Maniar	Hindalco Industries	31
Mr. R.A.Shah	Colgate Palmolive India	30
Mr. H.R.Manchanda	Cipla	30
Mr. M.L.Bhakta	Ambuja Cements	28
Mr. T.K.Balaji	Titan Industries	27
Mr. M.L.Apte	Grasim Industries	26
Mr. Yogendra P.Trivedi	Reliance Industries	21

Source: Moneylife Digital Team



Regulators and institutional investors are assigning an increasingly important role to the board of directors in general and independent directors in particular, in ensuring good governance of companies. Yet conventional wisdom seem to suggest that independent directors are not yet effective monitors of inside management and in India they are by and large more a myth than reality.

Companies in India have the practice of retaining on their boards non-executive directors who do not qualify as independent under the prescribed criteria. While this practice may have been a necessary transitional measure, it is perhaps time to phase this practice out over the next few years. One way of achieving this objective would be to lay down a progressively diminishing maximum proportion of the board members who are non-executive-non-independent. Much of the criticism lies on the behavioural incapacity of independent directors to disagree with the promoters or management. It is probably for this reason that international best practice calls for such selections and appointments to be made by a Nominations Committee which is wholly composed of independent directors. Indian regulation needs to move towards this practice sooner rather than later.

**Table 3: Companies which had less than Fifty Percent Independent Directors on the Board**

Company Name	Percentage of Independent Directors
Bharat Heavy Electricals Ltd.	22%
Bharat Petroleum Corporation Ltd.	22%
Gail (India) Ltd.	27%
Hindustan Petroleum Corporation Ltd.	33%
Rural Electrification Corporation Ltd.	33%
Steel Authority of India Ltd.	38%
Oil and Natural Gas Corporation Ltd.	43%
DLF Ltd.	44%
Canara Bank Ltd,	45%
Bank of Baroda Ltd.	46%
Bank of India Ltd.	46%
Power Finance Corporation Ltd.	46%
NTPC Ltd.	47%

Source: Moneylife Digital Team

Corporate governance in India practically revolves around Clause 49 of the Listing Agreement of SEBI, and some provisions in the Companies Act, 1956 relating to- audit, constitution of boards of directors, disqualification of directors, restriction on the number of directorships etc. Clause 49 contains eight sections dealing with the composition and obligations of boards of directors, the scope of Audit Committees, the remuneration of directors, board procedure, management, shareholders, reports on corporate governance and compliance. The Clause requires that at least one-third of the board should consist of independent directors if the board is headed by a non-executive chairman. If promoters or



their relatives are appointed as the non-executive chairman, then independent directors should constitute at least half the board strength, where independence is defined as the lack of any material, pecuniary relationship, or transactions with the company, other than the director's remuneration, which in the judgment of the Board may affect a director's judgment. It also stipulates that companies should have qualified and independent audit committees with a majority of independent directors, and that the Annual Report should disclose details of the remuneration of directors, and should contain all management discussions and analyses. Additionally, Annual Reports should contain a separate section on corporate governance detailing compliance with the mandatory and non-mandatory requirements proposed by SEBI.

The role and the responsibilities of independent directors, which have been under debate for several years, have now come into sharp focus following the failure of many high profile corporations around the world and several scams in India. Hence, it seems from the above examples that Indian companies have a long way to go before adhering to corporate governance best practices, as their performance is below-par on certain discussed parameters. Under these circumstances, the most challenging task before corporations and the regulators would be to find ways and means, especially of mending and not ending the system of independent directors in India.

## 7. INDIAN SCAMS AT A GLANCE

Number of corporate scams has shaken the nerves of the Indian investors. At the top of the list was the major fraud at Satyam Computers, the fourth largest Indian software services company (after TCS, Infosys, and Wipro). The Satyam Computer Services scandal<sup>3</sup> was a corporate scandal that occurred in India in 2009 where chairman Ramalingam Raju confessed that the company's accounts had been falsified and manipulated by US \$1.47-Billion. The unravelling of the Satyam scam, has put a big question mark on not only the role of corporate entities but also the urgent need for re-examining the issue of corporate governance and the role of the company auditors. Major casualty in this incident was the institution of independent audit, and the reputational credibility of even internationally well known audit firms. Clearly, with increasing competitiveness and the need for rapid growth becoming crucial, better corporate governance has become imperative.

Among the other corporate and capital market scams were the Ketan Parekh scam in 2002 (along the lines of a similar fraud perpetrated by Harshad Mehta a decade earlier) where the Bank of India, Madhavpura Cooperative Bank and others lost billions of rupees.

The insider trading scam involving the Monthly Income Plan investments in Unit Trust of India is another case where scores of large business houses were able to foreclose their investments while millions of small unit holders were left to bear the losses.

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<sup>3</sup> For Satyam shareholders in India, their attempts to obtain monetary recovery from the National Consumer Disputes Redressal Commission (NCDRC) were rebuffed by the NCDRC on the grounds that it does not have the infrastructure to address this matter, and other government bodies (e.g. criminal authorities) are addressing it. The Supreme Court of India refused to overturn this outcome. The Satyam fraud led to class actions in the United States as well; the outcome of these cases is pending as of date.



An inspection by the Corporate Affairs Ministry has found that National Spot Exchange Ltd (NSEL) Board failed to perform their duties towards shareholders in violation of Regulations. The report of inspection, carried out by the Registrar of Companies (RoC), Mumbai, was submitted to the Ministry and suggested that appropriate action be taken.

Spot commodity exchange NSEL, part of Jignesh Shah-led Financial Technologies Group, is struggling with Rs 5,600 crore payment crises after it suspended trade on July 31, 2013 on government direction. Inspection of books of NSEL, directed by the Corporate Affairs Ministry, found lapses on the part of the board of directors in carrying out their duties towards protecting interests of shareholders and failure at multiple levels, including lack of transparency, integrity, compliance and ethics.<sup>4</sup>

In the Saradha Group financial fraud<sup>5</sup>, where none of the entities of the Kolkata-based Group was operating as a registered chit fund, failed miserably and huge number of investors' fate has become unpredictable. The failure of some Multi-level Marketing (MLM) or a ponzi scheme is explained as failure of a Chit Fund company, which is totally unfair. Saradha Group has got about 160 registered activities including realty and resort but not even one activity was registered as Chit Fund in the State.

While a vast majority of Indian listed companies comply with Clause 49 of SEBI's listing agreement, whether the quality of corporate governance is acceptable or not is a matter of debate. Irrespective of sound regulation, rigorous implementation, and widespread ethical pressures, the business world has had its share of scams and disasters with astounding regularity.

What is discovered and publicised is often a fraction of what goes undetected. In India, corporate scams are less reported, probably due to our relatively poor monitoring and preemptive mechanisms compared to other nations.

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<sup>4</sup> The report of inspection, carried out by the Registrar of Companies (RoC), Mumbai, was recently submitted to the Ministry and suggested that appropriate action be taken for violations by National Spot Exchange Ltd (NSEL). Many of the NSEL directors, including Jignesh Shah and Joseph Massey, were holding common directorship in group companies of Financial Technologies and they cannot claim to be not aware about happenings at the exchange, sources said. The inspection of books was ordered under Section 209 A of the Companies Act.

<sup>5</sup> Saradha Group has got about 160 registered activities including realty and resort but not even one activity was registered as Chit Fund in the State. The regulator of chit funds is the Registrar of Chits appointed by respective state governments under Section 61 of Chit Funds Act. As per the law, a Chit Fund company is not allowed to accept deposit from the public and can only accept subscription amount from the members. However, Saradha Group accepted deposits from investors and worked as Multi-Level Marketing. Meanwhile, the government has said several of its investigating wings like SEBI, RBI, IT department and Enforcement Directorate have begun investigations on Ponzi schemes and have initiated action against Saradha Group under various laws including the Prevention of Money Laundering Act (PMLA).



## 8. KEY RECOMMENDATIONS

Regulators who issue detailed corporate governance guidelines to companies should periodically assess whether the regulations lead to holistic improvements in corporate governance practices and whether companies actually benefit in terms of improved performance, compliance with regulations and effective management of risks.

It is desirable for the Securities Exchange Board of India (SEBI)<sup>6</sup> and the stock exchanges to engage in an active dialogue with institutional investors, ensuring that their concerns and viewpoints are reflected in the way the amendments are made to future corporate governance codes. This would instill confidence in institutional investors on the role of Indian market regulators, resulting in a culture where governance requirements would be taken more seriously. A strong culture of shareholder activism would also result in industry adopting best practices voluntarily.

One way to broad-base corporate governance norms or promote corporate democracy would be to increase public shareholding in listed companies. In this connection it should be worth noting that only entities which are directly or indirectly not linked to the promoters should become part of the public. Such entities are FII's, Banks, Insurance Companies, Pension and Provident Funds, Mutual Funds, individuals etc.

The Audit Committee should institute the practice of reviewing the company's letter of representation to assess whether the representations obtained are reasonable and valid in the context of the audit procedures performed and whether there are any areas where the auditors have unduly or excessively relied on management representations.

The other areas that require improvement include fraud detection, regular forensic audit, freedom of choice in auditor selection, rotation, etc. to name a few. What is of immense importance that a constructive dialogue between investors, stakeholders, policymakers and auditors, on the efforts that should be initiated to bridge the expectation gap relating to the performance of the company. However, this dialogue must recognise that the auditing profession is committed to continuously improving its abilities and methods to detect fraud. This may take effect through the commitment on the part of the company management in its truest sense.

In a country like India where ownership structures are predominantly inclined towards concentrated holdings by promoters or groups the foremost criterion for determining the independence of an individual should be their association with not only the subject company but also the group entities and power centres as a whole. The present regulatory provisions do not seem to fully take this important fact into account. An individual may or may not be a non-executive director in another entity controlled and/or owned by the same parent or some other entity or individual that is influenced by the subject company. They usually gets ignored when considering linkages with the promoter for the purpose of determining the individual's independence in the subject company.

The most aggressive way of rooting out fraud involves mandating all public companies to undergo a forensic audit at least once every two to three years. Unlike the indirect means used

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<sup>6</sup> The possibility of concurrent SEBI enforcement, criminal enforcement, and private enforcement could be achieved via legislative amendments to the SCRA (1956) and SEBI Act (1992).



to detect frauds in a conventional audit, a forensic audit resembles a police investigation. Forensic auditors scrutinise all records of the company including emails, and question employees under oath. It might be necessary for an audit network or a specialised forensic auditor to perform a forensic audit with the aid of independent lawyers who have not represented the audit client during the period under review.

## 9. CONCLUSION

Corporate governance has assumed greater significance following the global financial crisis of 2007. For an effective framework governing the code of conduct of business entities, a mechanism of growing strategy needs to be adopted, where public interest, self-regulation, mandated self-regulation, and a system of controls co-exist. The ownership and control structure of corporations largely determine the nature of the corporate governance problems that these corporations face.

In India, corporate governance standards in promoter-driven, family-managed businesses remain a concern for institutional investors. The Ministry of Corporate Affairs has played a significant role in taking concrete steps to improve the corporate governance standards in India Inc. through a two pronged approach—strengthening the corporate governance provisions within the Companies Act 2013 through greater transparency in disclosures and enhanced powers to shareholders; and introducing the voluntary guidelines on corporate governance based on best practices that listed entities are encouraged to adopt. •

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# The Role of Women in Arsenic Mitigation

*Abhijit Das\**

**ABSTRACT:** About 100 million people in West Bengal (India) and nearby Bangladesh are now exposed to very high levels of naturally occurring arsenic in the groundwater, which is their only safe water source for drinking. Drinking arsenic contaminated water over a long period of time has a severe damaging effect on human health and it might prove to be fatal. If good quality water is not provided to the people, a lot of deaths will take place within a few decades to come. The present article describes one success story where women having the sole responsibility of supplying and managing the water supply project in the arsenic affected areas. The study has been carried out in the village Haringhata of Haringhata block under Haringhata- I Gram Panchayat in Nadia district. Based on qualitative data analysis techniques, the study shows that the women-led water supply project helps in health benefits, employment generation, rural women empowerment as well as social capital formation. This is a finest example of women-centric water management towards sustainable water supply in arsenic affected areas of West Bengal.

**Key Words :** *Arsenic, Nadia district, Mitigation measures, Swajaldhara*

## 1. INTRODUCTION

Public health scientists and engineers have a great concern regarding arsenic contamination in the drinking water of millions of people in the different parts of the world (Sarkar et. al. 2010). The Gangetic delta has been worst – affected by this severe crisis of arsenic contamination and it covers a large area of India and Bangladesh. This is arguably one of the worst calamities of the present world (Chatterjee et al. 1995; Chakraborti et. al. 2004; Ahmed et. al. 2007). The brunt of this arsenic crisis is being gradually felt in 38 countries such

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as Afganistan, Argentina, Australia, China, Taiwan, Thailand, Mexico, USA, Ghana, Hungary, United Kingdom, Chile, New Zealand, and Russia and so on (Jakariya 2003; Moinuddin 2004; Rahaman et.al. 2006; Mukherjee et. al. 2006). There are some congenial factors that makes the use of groundwater in these regions most favourable. Not only is the groundwater in these regions easily accessible and microbially safe but there is also a serious lack of infrastructure for treatment and distribution of surface water. Owing to absence of proper sanitation practice surface water is often contaminated enough. The mixing of arsenic in groundwater is caused by its dissolution resulting from excessive groundwater withdrawal in order to cater to the needs of growing population and increasing agricultural demands. This happens due to the geochemical weathering of minerals within the aquifer. Despite differences in reported statistics, due to the difference in coverage of their study areas, from different sources there is unanimity over the fact that eight districts of the state have arsenic levels in ground water above the national permissible limit of 50µg/L. These are Nadia, Murshidabad, Malda, South 24-Parganas, North 24-Parganas, Howrah, Hoogly and Burdwan.

Drinking arsenic contaminated water over a long period of time has a severe damaging effect on human health and it might prove to be fatal. Long-term exposure of arsenic can lead to reduced IQ in children, dermatologic, neurologic, vascular, and carcinogenic effects that can result in amputations or death (Das et. al. 2011). Recent cohort study reported that about 14% of all deaths in West Bengal and Bangladesh are now attributed to arsenic exposure from drinking water (SOES and DCH, 2010). Arsenicosis has an economic impact that feeds back through health and human wellbeing of both the individual and their family (Hanchett 2004; Roy 2008; Das 2011). The people affected by arsenic poisoning suffer from health hazards and face some social and economic barriers (Das 2011). All these aggravate the overall rural poverty. One can easily assume from these above details that the easiest solution of this problem lies in using the treated surface water that is not plagued by arsenic contamination in it. However if one takes into account the realistic considerations, development and maintenance of surface water based drinking water system is not only expensive and time consuming but also requires high investment. Therefore it is really difficult for a developing country to switch from the use of groundwater to that of surface water within a short period of time in order to meet its regular demand for water. Arsenic removal system needs to be installed on an emergency basis to avoid human casualty and mitigate the suffering of the affected ones before there can be a complete changeover to the use of surface water.

Several arsenic removal technologies have been developed over the last two decades. Despite public knowledge of arsenic-bearing drinking water in rural West Bengal and Bangladesh as of 2006 being widely known for the past 20 years, less than 1% of the exposed population has access to arsenic-remediated drinking water (Gadgil *et. al.* 2012). For the past three decades in arsenic affected regions of India the mitigation activities have followed the path of developing arsenic-removal process-technologies. In socio-economic terms the interventions followed the expenditure model which does not care for sustainability of an effort (Das 2011). Field observation revealed that most of the technological options are in defunct condition. The reason varies from socio-economic to political (Das 2009, 2011). The main reason is the follow-up of the top-down approach or supply-driven approach and the lack of community participation.

What is required is the urgent need to develop water system solutions which essentially adopts a holistic approach and gives the onus and power back to the natural owners



—women-s to take control of the system independent of any external aid. The recognition of age old practice of women in household water management within mainstream economic activities would not only enhance economic empowerment of women but would also transform women's role into true change makers not only in the domain of domestic water management but the entire water resource management. Women, by virtue of being the custodian of water usage, storage and recharge, will earn the right to control water system even in traditional bastions of male dominance, e.g. agriculture. In a nation reeling under atrocities committed against women, at times as heinous as female feticide, this gender-sensitive and rights based water management system will provide the optimum impetus to achieve the Millennium Development Goals (MDG).

International Drinking Water Supply and Sanitation Decade (IDWSSD) 1980-1990 (also known as the Water Decade) proclaimed on 10 November 1980 that provides a framework for a massive effort to bring safe water to half of the world's population has acknowledged the role of women in the management of water. The close relationship between women and water has also been stressed by the Resolution 25 of the UN General Assembly adopted by the 1980 World Conference of the UN Decade for Women which recommended promotion of the goals of the Water Decade at all levels. The Resolution advocated wider engagement as well as promotion of the present status of women in the whole process of clean water supply including its planning, implementation and technology. Planners and policy makers, according to this Resolution, involve women while setting these goals. This has been reaffirmed when the UNDP and World Bank's Water and Sanitation Programme adopted the Dublin Rio Principles in 1992. The principles uphold a holistic management of water that is considered as an essential and socio-economically valuable resource. They emphasized on the participatory management of the water resources and women to play a pivotal role in all water projects at the lowest appropriate level as they are the main providers and users of water.

## 2. OBJECTIVES OF THE STUDY

The specific objective of the present study is to show how women participation can lead to provide arsenic free and safe water supply to the habitations in an arsenic affected area on a sustainable basis. Study also describes the extent and effect of women participation in this project.

## 3. METHODOLOGY

The study has been carried out in the village Haringhata of Haringhata block under Haringhata- I Gram Panchayat in Nadia district. Swajaldhara water supply scheme was considered for the study. The reason is water supply scheme under swajaldhar given the importance of community participation in water supply and management. Past research studies (Das 2009; 2011) in Murshidabad district (one of the severely arsenic affected districts) shows that swajaldhara water supply scheme dominated by male candidates were non-functioning. The reasons range from shortcomings of managing committees, unwillingness of the villagers to pay for arsenic free water, to village politics. Consequently, those arsenic mitigation measures were not 'community-based, but were managed, operated and maintained by 3-4 families in the village. What was unfortunate that no female member was there in the village water committee! From these observations, one hypothesis has been made that the lack of female member participation may be one of the reasons for not success of those safe water supply projects in the arsenic affected areas. In order to strong our hypothesis, the present

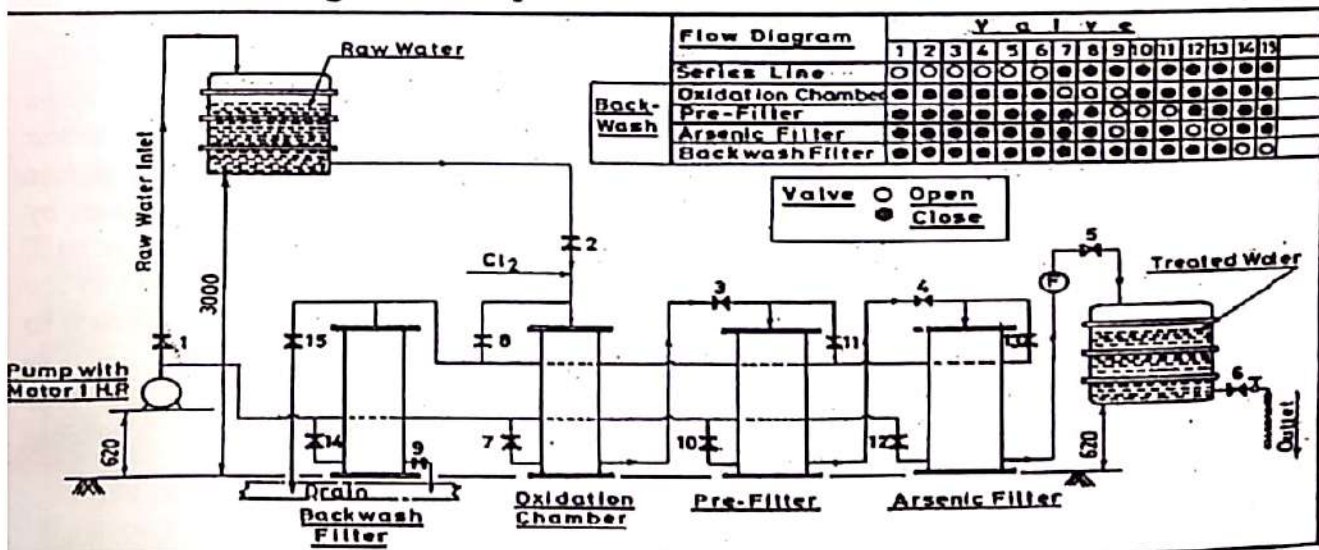


article describes one success story where women having the sole responsibility of supplying and managing the water supply project in Nadia district another arsenic affected district in West Bengal. The data analysis is qualitative in nature based on the Focus Group Discussion (FGD) with the end-users and members of the water committee as well as all female members involved in water management (during March and October, 2012).

#### 4. A NOTE ON SRP AND SWAJALDHARA WATER SUPPLY SCHEME

The Sectoral Reform Programme (SRP) in the rural water supply programme of the Ministry of Rural Development, Government of India (GoI) was introduced in April, 1999. The main aim of the SRP is to replace the govt-oriented, centralized, supply driven rural water supply programme by a people-oriented, decentralized, demand-driven and community-based programme. Here, full participation of the end-users in pre-planning, planning and implementation, decision making in the choice of technology and management systems are being emphasized. 10 percent capital cost sharing by users, cent percent Operation & Maintenance (O & M) by users and emphasis on conservation measures for sustained supply of water through surface water, rainwater. The SRP initiative was scaled up throughout the country by launching 'Swajaldhara' in December, 2002. Under the SRP and Swajaldhara framework, individual water supply schemes are expected to be planned designed, implemented, operated and maintained by the community through Village Water and Sanitation Committees (VWSCs). Since collection of drinking water is primarily done by women they need to be actively in planning, choice of technologies, location of systems, implementation, O & M of the water supply schemes. Towards this end, at least one third members of the VWSCs shall be women and they should get preference in training for repair of hand pumps, etc. Formation of user groups exclusively of women in villages may be promoted (<http://megphed.gov.in/knowledge/schemes/Swajguide.pdf> accessed on 03.10.12). Once the plant installed, beneficiary group contribute a monthly subscription for the O & M purpose of the plant. Collected money will be maintained by the committee and spent for electric bill, salary of the operating person etc. a schematic diagram of the water treatment plant is shown in figure 1.

Figure 1: Swajaldhara - Pal Trockner Model



Source: Personal communication with Pal Trockner officials, Kolkata



While the household treatment units are initially easier to install than the community-based system, the latter provides a more sustainable solution with a potential for economic growth. During 2002-2007, total 25 (out of sanctioned 195) community-scale arsenic removal units have been installed in the villages of West Bengal, a state of India neighboring Bangladesh and Rs.3631 lakh was already released for this project ([www.indiastat.com](http://www.indiastat.com)).

## 5. REFLECTION FROM THE FIELD: A SUCCESS STORY

After knowing the arsenic menace in Nadia district<sup>1</sup> (Table 1 shows groundwater arsenic status in Nadia district), a large number of arsenic mitigation options were installed. But all were defunct due to the lack of community participation. During December 2010, a community based arsenic mitigation option under swajaldhara scheme was installed in the village Haringhata of Haringhata block under Haringhata- I Gram Panchayat in Nadia district. The exact location of the swajaldhara water project is in the premises of Haringhata Rural Hospital, beside Bara Jaguli Chowmatha of National Highway-34.

Table 1: Groundwater Arsenic Concentration Status in Nadia District

Range of Arsenic Concentration ( $\mu\text{g/L}$ )	Number of Water Samples	
	(PHED, WB Report)	(SOES, JU Report)
Safe by WHO Standard (1-10)	9757	14044
Additionally Safe by West Bengal Standard (11-50)	12213	9810
Unsafe by All Standards (> 50)	7662	4940
Total	7281	28794

Source: PHED report, 2006 and SOES (JU) report, 2006

At every stage of the installation as well as the operation of the treatment units, special care has been taken to ensure community participation. Total installation cost of the water project is Rs. 7.33 lakh financed by Central government. Initially, there was no need of community contribution as it is installed in a government plot. The villagers have constituted a water committee so that they can themselves manage the treatment unit. What is important is that the committee has a number of women members at every stage. The water committee has decided that it is maintained and operated by women led SHGs (total 17 members by shifting duties, two hours per day) and the beneficiaries have to contribute small water tariff (20 paisa/liter) towards maintenance of the project. A tariff coupon has to be issued to the people in the queue before taking water. The water committee appoints one plant operator to look after the regular backwashing of the water plant (two times daily), and one accountant to maintain an update of daily income and expenditures of the swajaldhara water project. Year wise auditor report is also maintained. Water is supplied for 10 hours per day (Morning:

<sup>1</sup> In Nadia, Out of 26 blocks, 17 blocks are affected by arsenic pollution covering 1343 villages. 38, 53,000 people in these villages are in arsenic risk. Average arsenic concentration in tubewell water samples= 171  $\mu\text{g/L}$ , Min value = 3  $\mu\text{g/L}$  and Max value= 3200  $\mu\text{g/L}$  (Das 2011).



8.00a.m-1.00p.m, Evening: 3.00p.m-8.00p.m). As on September, 2012, on an average 250-300 households collect arsenic free water from this unit daily. People come from around 10-15 km away to collect water by cycle/motor cycle etc. Per day income generated from this project ranges from Rs.800- Rs.1400. For a systematic management of the fund, the water committee deposits the amount of money collected in each month in a local bank and that in turn generates a steady flow of fund available to them in order to undertake the desired activities. A part of income is spent for electric bill (on an average Rs.470/month), salary of the SHG members (Rs.700x17=Rs.11900/month), salary for the operator and accountant (Rs.650 x2=Rs.1300), regular maintenance of the project and so on. Supplied water is tested for arsenic in a year. End-users are highly satisfied with the quality of the water. A huge health benefits occurred due to the consumption of this water reported by the end-users. Man days are saved due to water related diseases. As a whole productivity and the quality of life of the villagers improves. After meeting all the necessary expenditures, the water committee is able to save more than one lakh rupees (as on September, 2012) and also able to make a fixed deposit of Rs. 75000/- in bank. The water committee is now able to contribute money towards some social welfare and other activities. In this way the water supply project helps in health benefits, employment generation, rural women empowerment and social capital formation. This is a finest example of women-centric water management towards sustainable water supply in arsenic affected areas of West Bengal.

### 5.1. Social Acceptability

By several indicators one could measure the social acceptability of this project. These are I) users' satisfaction and health benefits, II) increase in the number of end-users, III) increase in water demand.

### 5.2. Users' satisfaction and health benefits

We have interacted with most of the users comprising of different age groups who came to fetch water from the plant from 8 am to 8 pm for three consecutive days and each and every person who were interrogated told that they were quite satisfied with the quality of water. There has been a reported fall in the number of incidences of a few common ailments like diarrhoea and acidity among these users. The local medicine shops were also visited and the people there confirmed that before the setting up of the plant the local demand for medicines sold particularly for gastroenterological diseases and diarrhoea were quite high which have significantly come down after the installation of this water project. Dr. Biswajit Pal, President of this water committee affirmed the same.

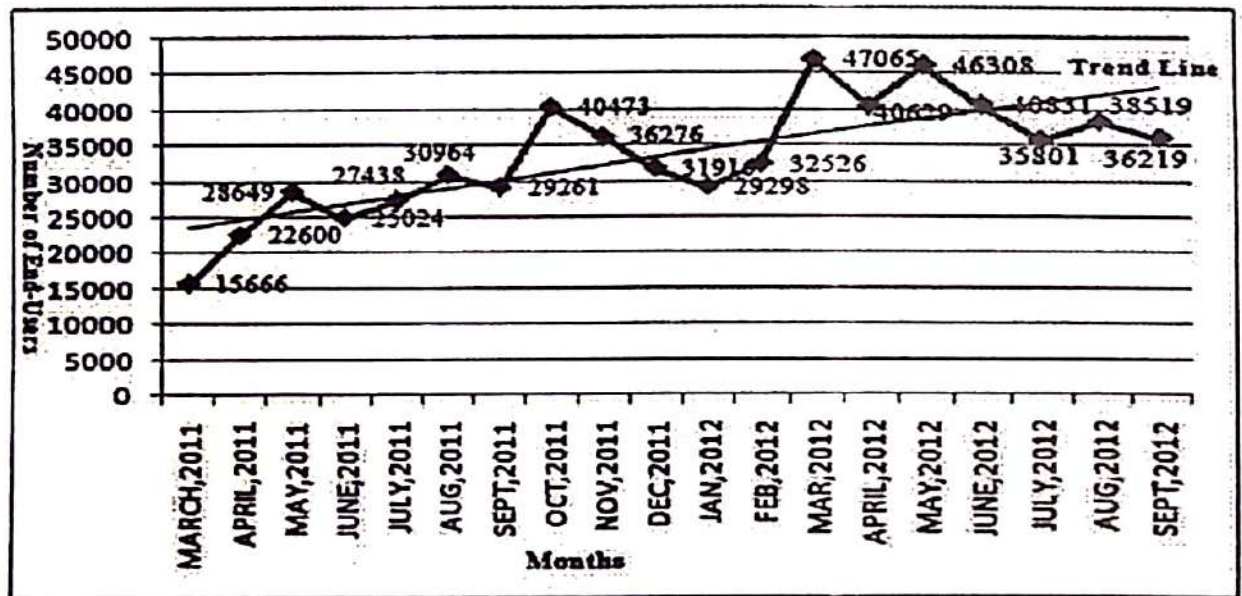
### 5.3. Increase in the number of end-users

Through a focus group discussion with the end-users of this plant we have come to know that 98 percent of them use this water only for dinking. They do not use this water for any other purposes like cooking or anything else. However, their number is still no correct estimate of how many persons take water from this plant on a daily basis. Besides, there is neither an estimate regarding the increase in the number of users of this plant over a period of time. The only thing that is recorded is the amount of money that has been earned daily through the sale of water. On the basis of this information, we have tried to see whether the number of end-users of the plant have been increasing or decreasing over the months since the very inception of the plant.



This can be explained with the help of an example. In January 2012, water worth Rs.23438/- was sold. Dividing this total amount of rupees by 20 paise, we can calculate how many litres of water were sold in that month (i.e.117190 litres). Now if we divide this quantity by 4 litres, we come to know how many people drank water from this plant in that given month (i.e. 29298). In this way we can calculate the same for every month and we observe that whereas 15,666 people had used water of this plant in March 2011, the number of the present users is 36,219 (as on September, 2012). Figure 2 clearly depicts the rising trend in the number of end-users over the period March 2011 to September, 2012.

Figure 2 : Increasing Number of End-Users



#### 5.4. Increase in water demand

No systematic record is kept of how many litres of water are sold on a daily or a monthly basis. People of different localities daily collect water from this plant in different quantities starting from 1 litre to 50 litres. However, one keeps no record of how many water are daily supplied. We have tried to see how many litres of water had been supplied over the months since the inception of the plant. In other words, we have tried to estimate effective demand of water from the plant over the months. To calculate this we have divided the amount of money earned in a month through the sale of water by 20 paise to get the effective demand of water in that given month. Effective water demand over the period March 2011 to September, 2012 shown in figure 3 revealed a positive trend.

#### 5.5. Financial sustainability of the project

We have observed that one of the unique characteristics of this project is that it can sustain itself on its own by generating the amount of money needed for its operation and maintenance. At present the water committee has introduced a system which is proven to be financially sustainable. They have deposited a large amount of money in the local bank and through its interest a part of the operational expenses is met. Recently the need has been felt to replace the arsenic media in this plant which is expected to cost around Rs. 20,000/-. They are ready to cope with this financially and to address this urgent requirement. Table 2 presents the bank transactions of the water committee.



Figure 3 : Effective Demand for Water

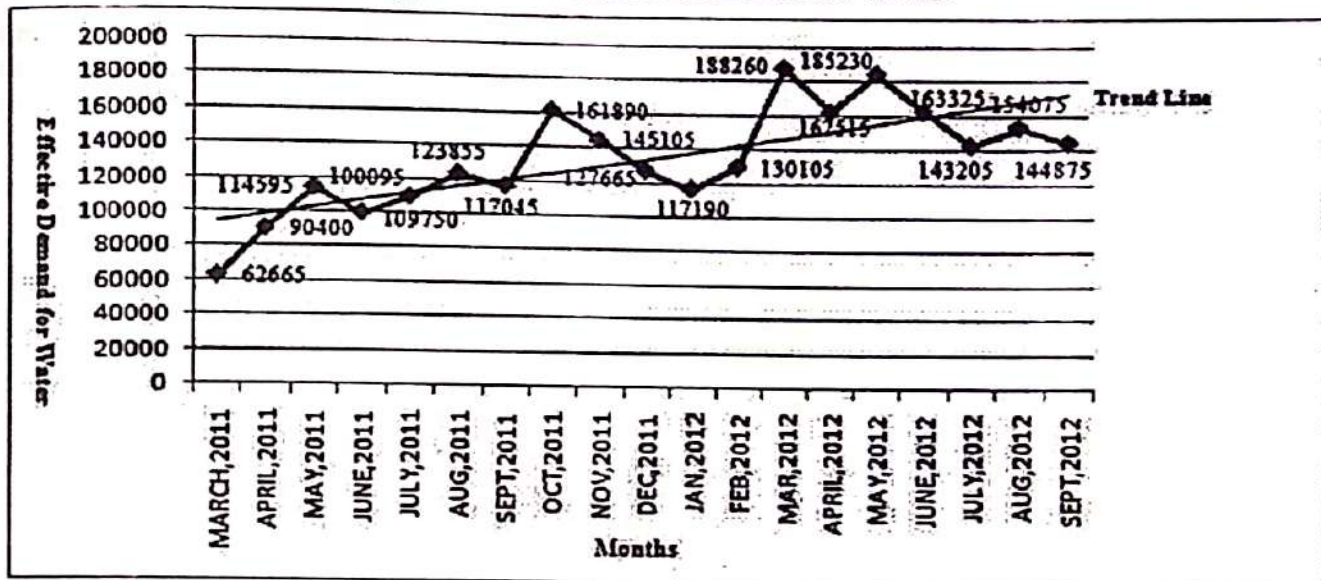


Table 2: Bank Transactions of the Water Committee

Month	Bank Deposit (in Rs.)	Bank Withdrawal (in Rs.)
March,2011	7057	2000
April,2011	12710	3500
May,2011	12202	3000
June,2011	19466	6600
July,2011	16630	1500
Aug,2011	67720	4600
Sept,2011	5200	0
Oct,2011	19000	0
Nov,2011	16000	0
Dec,2011	16760	0
Jan,2012	0	0
Feb,2012	22000	0
Mar,2012	17000	0
April,2012	24000	0
May,2012	17000	0
June,2012	14000	0
July,2012	12000	0
Aug,2012	15000	0
Sept,2012	0	0
<b>TOTAL</b>	<b>313745</b>	<b>21200</b>

Source: Field survey



### 5.6. Benefits from the Project

Unlike many of the arsenic free water projects (i.e. Swajaldhara) where women participation was at the minimum level (most of which are now defunct), the arsenic free water project at Haringhata in Nadia is completely run and managed by the women folk. This plant is not only successfully managed but it has also several other benefits.

### 5.7. Continuous access of arsenic free water

The direct beneficiary of this water plant is mainly the local people who reside in an arsenic afflicted area are otherwise deprived from arsenic free water and they could have continuous access to arsenic free safe drinking water only because of this plant. If they had no access to arsenic free water, they could have suffered from a number of health hazards caused due to the continuous consumption of arsenic contaminated water.

### 5.8. Employment Generation

This plant has provided the local women folk with an opportunity to engage themselves in work. The number of women employees in this water plant might not be very significant. However this should be recognized that this plant has opened a scope to the local women folk to be employed which could be considered as one of its positive outcomes.

### 5.9. Women Empowerment

The women employees have become self dependent through this plant and can take some important economic decisions in their own lives like meeting the demands of the growing needs of their children as well as their educational expenses. Mrs. Sabita Dhali, a 40 year old lady who works in this plant told us that she could afford to spend Rs. 500/- for her son's private tuitions from her earned income. Mrs. Namita Ghosh, the 35 year old group leader of the self help group told that she did not have to ask for money from her husband as she could now spend a little for her own necessities. With the deposited sum, she had bought a mobile phone and she could also spend for its monthly recharge from whatever she earned from there.

### 5.10. Social Welfare Activities

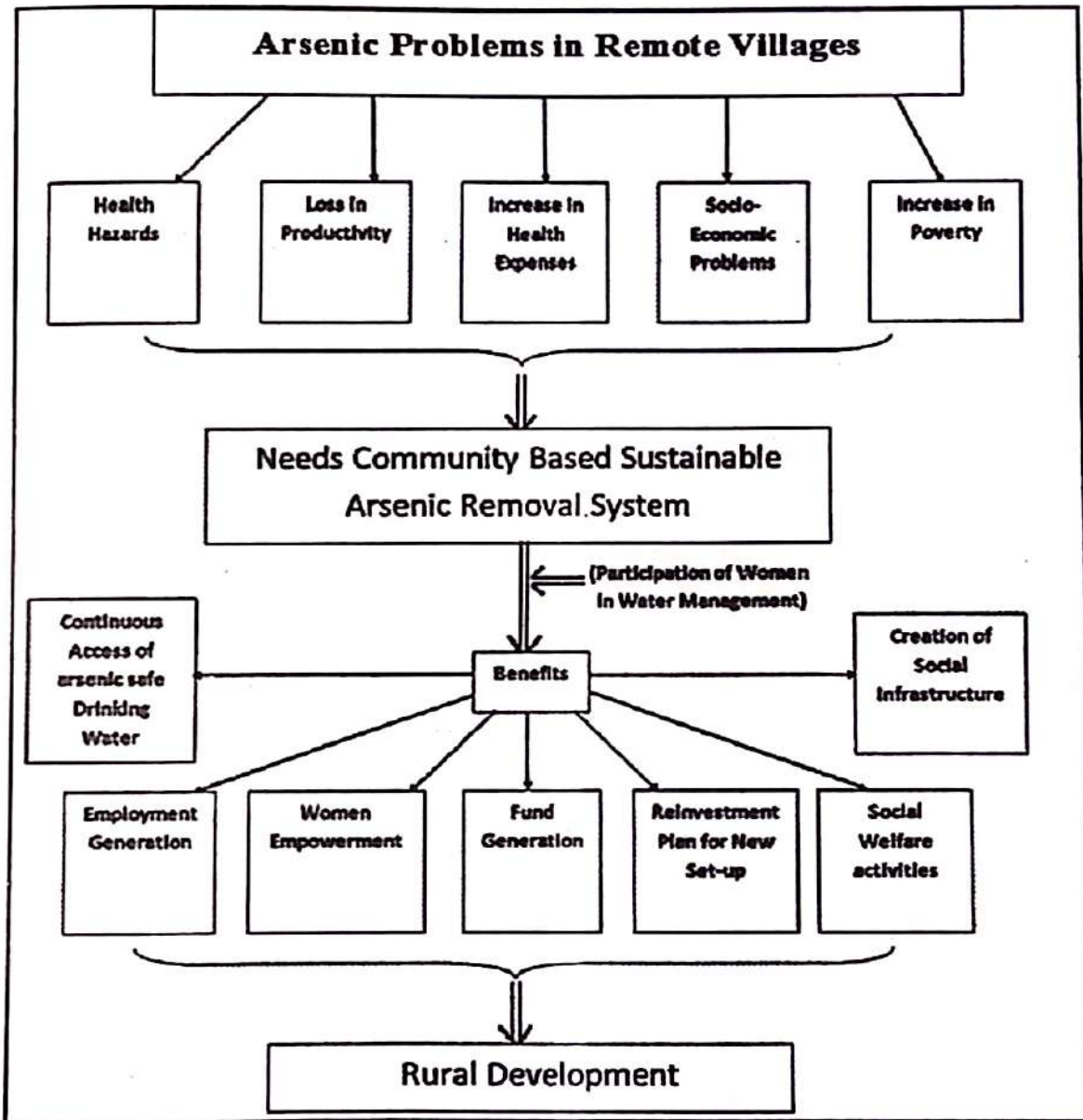
(i) Anjaman Bibi, a 75 years old lady belong to below poverty line, whose house was damaged in Aila and after repeated requests to the local BDO/ GP Pradhan to be resettled in her dwelling, she could not get any assistance from them except a tripol. The govt officials could not help her for the very reason that she had no ownership over the plot in which she had been residing for years. According to the guidelines of Indira Awaas Yojana (IAY), one should own a land property. At that difficult point of time this water committee stood beside her and built a tin made kachcha new house costing Rs. 8500/.

(ii) This water committee has decided to distribute clothes for 50 poor people during the coming Puja festival. Among them 30 male candidates will be provided by *Lungi* and the remaining female candidates will be given *Saree*.

(iii) This water committee also helped one of the mental patients in this locality, who was 35 years old and named Rabindranath Sen. The committee shared a part of his medical expenses.



**Figure 4: Benefits from the Women Managed Water Treatment Plant in an Arsenic Affected Area**



(iv) Last but not the least this project has been continuously supplying arsenic free water without charging any money to all the hospital patients and their relatives, all the hospital staff (on duty), all the local school children as well as all the participants of the social programmes like the occasion of Independence day or the blood donation camp organized by the local committee.

**5.11. Development of social infrastructure**

(i) This water supply project has also a share in the development of social infrastructure. It has contributed in the construction of a Sulabh Complex in the locality.



Whereas its total installation cost is Rs. 2 lakhs and has been provided by the govt, 20 percent of it i.e. Rs.20, 000/- has been funded by the water committee.

(ii)The project also spent Rs. 10,000/- in road construction. Moreover, they have installed two glow sign boards worth Rs.3000/- each and maintain one street light in front of the local hospital to help and guide the pedestrians.

(iii)They have planned to spend money for re-sinking one defunct deep tubewell in the locality where people can use it for bathing, washing etc.

(iv)Water committee also decided to install such women managed plant in some other arsenic affected area also.

## 6. CONCLUSION

Arsenic Contamination of drinking water is not atypical in West Bengal. West Bengal (after Bangladesh) is one of the most arsenic affected areas compared to the rest of the world. Millions of people are exposed to arsenic in West Bengal. If good quality water is not provided to the people, a lot of deaths will take place within a few decades to come. Even a large proportion of people in the affected areas are still unconscious of arsenic poisoning and its health, social and economic effects. A large number of technologies were installed to mitigate the arsenic pollution problem. But most of the efforts were not sustain. There were so many reasons. Among them one is the non-inclusion of the women in water management. The present article shows how the engagement of the women can make one water supply project sustainable.

On an average 34,000 villagers are greatly benefitted by the setting up of this water committee run unit from which they can regularly drink arsenic-safe water. This arsenic removal unit has a number of positive technical features like the robust and re-generable adsorbent media. This unit is proved to be economically sustainable as well and the monthly tariff that the villagers have to pay in order to meet the operating cost of the units is quite little. The women's leadership of these projects generates goodwill within their communities and self-esteem amongst the women themselves, leading to women's empowerment. Implementation of women led Swajaldhara project in the village has not only solved drinking water problem but also brought smiles on the face of villagers especially women folk. The success of this type of women centric arsenic mitigation system has reached a point where a rapid replication of it is very much possible in other parts of the West Bengal as well. ●

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# The Issues in the Field of Surrogate Advertising: An Empirical Study in India

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**ABSTRACT: Purpose** – *The ban on advertising for liquor and cigarette is now likely to be extended to surrogate advertising that defeats its purpose. Brand extension strategy is used here in response to the ban on advertisements of some product category. In this connection, this particular study aims to quantify the ill-effects caused by it, which will definitely increase consumer's responsibility towards their health.*

**Design/methodology/approach** – *Preliminary assessment of antecedents or previous circumstances and consequences of surrogate advertising, using a study model designed based on the literature framework.*

**Originality/value** – *This study has been undertaken to address the deficiency of research in the field of surrogate advertising by exploring people's perceptions towards such controversial advertising practices and related ethical issues.*

**Key Words** : *Surrogate advertising, brand extension, corporate reputation*

## 1. INTRODUCTION

Corporate communication carries the essence of a corporate identity (Balmer 1998; Scott and Lane 2000). As ethical concerns are an inseparable factor of business, advertising cannot ignore them. It is a communication process directed from the marketers towards the consumers. The basic objective of advertisement is to provide information and create awareness about the product and the market. According to Wells and Burnet (1998, p.13)

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advertising is a paid non-personal communication from an identified sponsor using mass media to persuade or influence an audience. However, many times some advertisements are accused of misleading the mass. Such accusations came in the lime light when the flashes are on the advertisements that are openly endorsing liquor and tobacco products. Consumer awareness was carried out on topics ranging from MRP to Gold Hallmarking, ISI marked products, expiry dates, etc., but not on surrogate advertisements. This particular study aims to quantify the direct and indirect ill effects caused by this kind of advertisements and aims to increase consumers' degree of personal responsibility towards their health.

## 2 REVIEW OF LITERATURE

**Surrogate advertisement:** A surrogate advertisement is one in which a different product is promoted using an already established brand name. Such ads help in contribution to brand recall (ASCI – Laws Governing Ads). 'Surrogate advertising' is one of the emerging ethical issues in advertising in India (Chander and Sharma 2007). Advertising leads to awareness. Keller (2003) defines awareness as "the customers' ability to recall and recognize the brand as reflected by their ability to identify the brand under different conditions and to link the brand name, logo, symbol, and so forth to certain associations in memory". Surrogate advertising is performing the same in a substitute way. Despite significant contributions in the past, there is still a growing need for answers in the area of business ethics and social responsibility of the firm (Donaldson 2003; Harrison and Freeman 1999; Walsh et al. 2003). Chander and Sharma (2006) found that, the attitude of the respondents towards surrogate advertisements are much on the negative side. Through surrogate advertising, tobacco and alcohol companies leave unethical impact on their corporate reputation, challenge consumers ethical consciousness, government policies, corporate strategic practices, etc.

**Corporate reputation and communication:** Corporate reputation implies individual's knowledge or emotions since these indicate an awareness of the firm. As surrogate advertising is an issue of unethical corporate communication and as it is being argued that rather than sales promotion it is violating the ethical concern of the society where the corporate is operating, it seems an important variable of interest in the present context. To obtain a reputational status, a company should consider different ethical dimensions of advertising (Cunningham and Cunningham 1977; Zanot and Pincus 1983; Hunt and Vitell 1986; Zinkhan et al. 1989; Treise et al. 1994; Miniard 1999; Cohan 2001; Perry and Berky 2002). Fombrun and Van Riel (1997) and Pruzon (2001b) sought to subsume corporate image and identity within reputation. Bromley (2001) defined a firm's image as "the internal collective state of mind that underlies its corporate communications efforts (successful or not) to present itself to others". A corporate identity is their reputations through corporate communication (Balmer and Gray 1998; 2000). The behaviour of firms and the values guided the means of achieving the goals, can be broadly extended to corporate communication. A failure to communicate ethical values and socially responsible behaviour impacts on corporate identity as it depends on organizational values and behaviours (Fombrun 1996; Van Riel and Balmer 1997). Benetton positions its corporate identity successfully with strong ethical values in its marketing communication campaigns and social initiatives (Borgerson et al. 2009). It is desired that a responsible corporate should be participating actively in ethical social dilemmas (Löhman and Steinholz 2003; Philipson 2004) and proper communication, as it is an important part in ensuring future business (Charter and Polonsky 1999). Empirical evidence has supported the



argument that consumers gave a positive appraisal if news media focus on ethical issues (Christians and Nordenstreng 2004; Berkman and Shumway 2003) and it will definitely hurt firm's reputational indicator. As a consequence, once there is negative impact in a company's reputation because of ethical issues like surrogate advertising, it is nearly impossible to influence the consumers' attitude and their enduring beliefs towards the positive way.

*Questionable use of best corporate practices:* Brand extensions can be defined as the stretch of the established franchise to a different product class (Aaker and Keller 1990). The argument is on using brand extension strategy by the tobacco and alcohol companies to promote their products in a surrogate way and through surrogate advertising. In promoting other products as extensions of the same brand name, the advantage is that it requires lower marketing and brand development costs (Smith and Park 1992), borrows awareness and positive associations from the parent brand (Aaker and Keller 1990; Volckner and Sattler 2006; Ahluwalia 2008) and appeals to the prospects. Mehta (2003) and Sirisha and Mukund (2003) give lights on the deceptiveness of surrogate advertising and how they are entering into new businesses like cassettes and CDs, mineral water, soda, giving sponsorship on holiday packages, entertainments with the same brand name, logo or symbols. Parent brand category dominance (Keller 2003) may help the surrogate advertisers to keep hold of their actual business. There is nothing to counter as so far no universal model has been widely recognized which could offer guidelines for brand extension practices (D'Astous et al. 2007; Sood and Dreze 2006; Echambadi et al. 2006) or anything declared that brand extension is not allowed for banned products. Thus, surrogate advertising leads questionable implementation of the brand extension strategy using restricted brand names.

*Surrogate advertising increases consumers' advertisement involvement:* In the current study, involvement can be simply defined in the context of motivational properties evoked by a particular stimulus such as advertisement. Involvement is a motivational condition in which people have an impact on their decisions and actions. And it carries intensity, direction and persistency towards usage, purchase decision (Craig et al. 1990), etc. This study seeks to know whether surrogate advertising may advance the degree of involvement towards the tobacco and alcohol products. The key purpose of using surrogate advertising, is to motivate consumer characteristic like influencing their positive mood for the core brand (Nijssen et al. 1995; Broniarczyk and Alba 1994; Gurhan-canli and Maheshwaran 1998; Barono et al. 2000; Flaherty and Pappas 2000; Klink and Smith 2001). Using tobacco and alcohol brand names in ads help in advertising involvement (Andrews 1988), facilitates message-oriented thoughts, message-argument recall as well as brand recall (ASCI). Active involvement identification is an important outcome of media exposure.

*Defying Government policies and socially irresponsible behaviour:* Keller and Aaker (1997) defines Corporate Social Responsibility as a "firm's philosophy to improve the quality of life in local communities through various activities and programmes". In contrary, Chander and Sharma (2006) opine that surrogate advertising promotes wrong impressions and leads to social degradation. "Business is not divorced from the rest of society. How companies behave affects many people, not just shareholders. A company should be a responsible member of the society in which it operates" (Internet, World Business Council for Sustainable Development, 2006). Through surrogate advertising, companies are showing their socially irresponsible behaviour. Companies are not only violating ethical issues but also abusing corporate social responsibility. "Godfrey Philips Bravery Awards" is an example of media-hyped CSR activity. The company would justify the advertisement by claiming that it is an example of social



responsibility. By using the tobacco brand, they are only, contradicting with their aim and responsibility towards society.

### 2.1. So the Questions Raised Are

- As ethical concerns are an inseparable factor of business, does corporate communication carries the essence of a corporate identity?
- In case, sale of some products like liquor/tobacco are not banned by the government of a country, should advertising on these products be banned in that country?
- Can corporate use surrogate advertising in order to promote these types of products?
- Is this a questionable use of corporate best practices?
- Aren't they defying Government policies and showing socially irresponsible behaviour?
- Does surrogate advertising increase consumers' advertisement involvement?

### 2.2. Research Gap Addressed

Although the previous studies examined the ethicality of advertisements on controversial products like cigarettes, alcoholic beverages, but in India, there are still a number of unresolved issues in the area of surrogate advertising. This study has not been confined on the controversial use of various antecedents of surrogate advertising but further extended on the consequences like,

- corporate irresponsible nature,
- challenging consumers' ethical concern,
- defying government policies, and
- questionable use of brand extension strategy, which are largely neglected issues yet.

### 2.3. Proposed Study Model from the above Discussed Literature Framework

The research accounted in this paper is a preliminary assessment of some antecedents or previous circumstances and consequences of surrogate advertising, using a study model designed (Figure 1) based on the existing literature framework on the subject.

## 3. THE OBJECTIVES OF THE PAPER

This study has been undertaken:

- To address the deficiency of research in the field of surrogate advertising by exploring people's perceptions towards such controversial advertising practices and related ethical issues.
- To quantify the direct and indirect ill-effects caused by surrogate advertising.

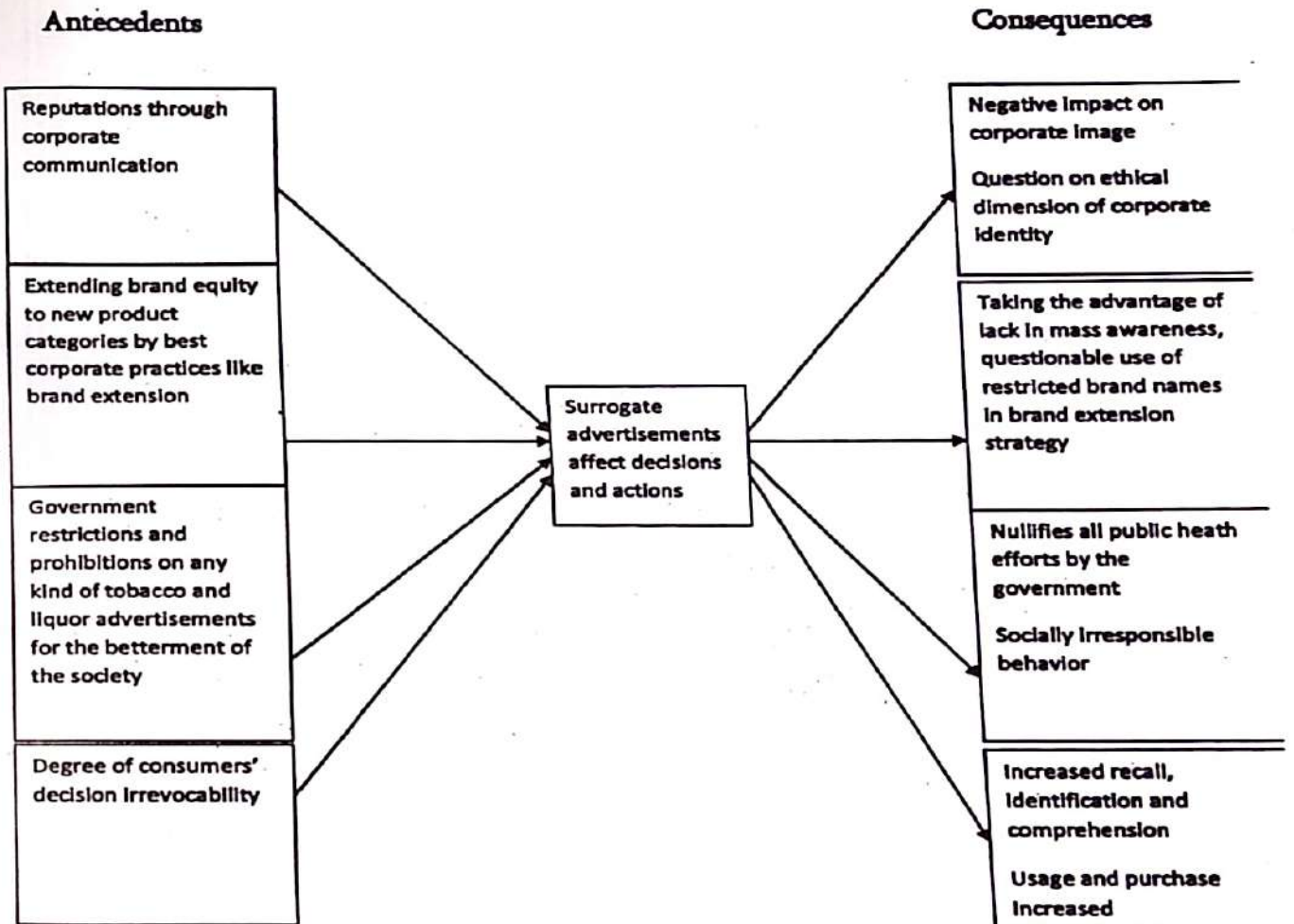
## 4. METHODOLOGY

Quantitative analyses are done using descriptive statistics and chi-square tests, based on a survey using convenience sampling for a sample size of 242 respondents in Kolkata, India using a structured and comprehensive questionnaire-based survey. The analysis is divided into two parts. First, visual summaries of data have been provided using graphs, which can quickly and completely describe essential observations of surrogate advertising. In the second part, the



chi-square test of association is used to find associations between constructs like purchase decision, brand recall and surrogate advertising.

Figure 1: Depiction of Proposed Study Model<sup>1</sup>



## 5. ANALYSIS

In this section, we attempt to analyse the responses to questions (Appendix I) one by one.

### 5.1. According to You this Type of Surrogate Advertising:

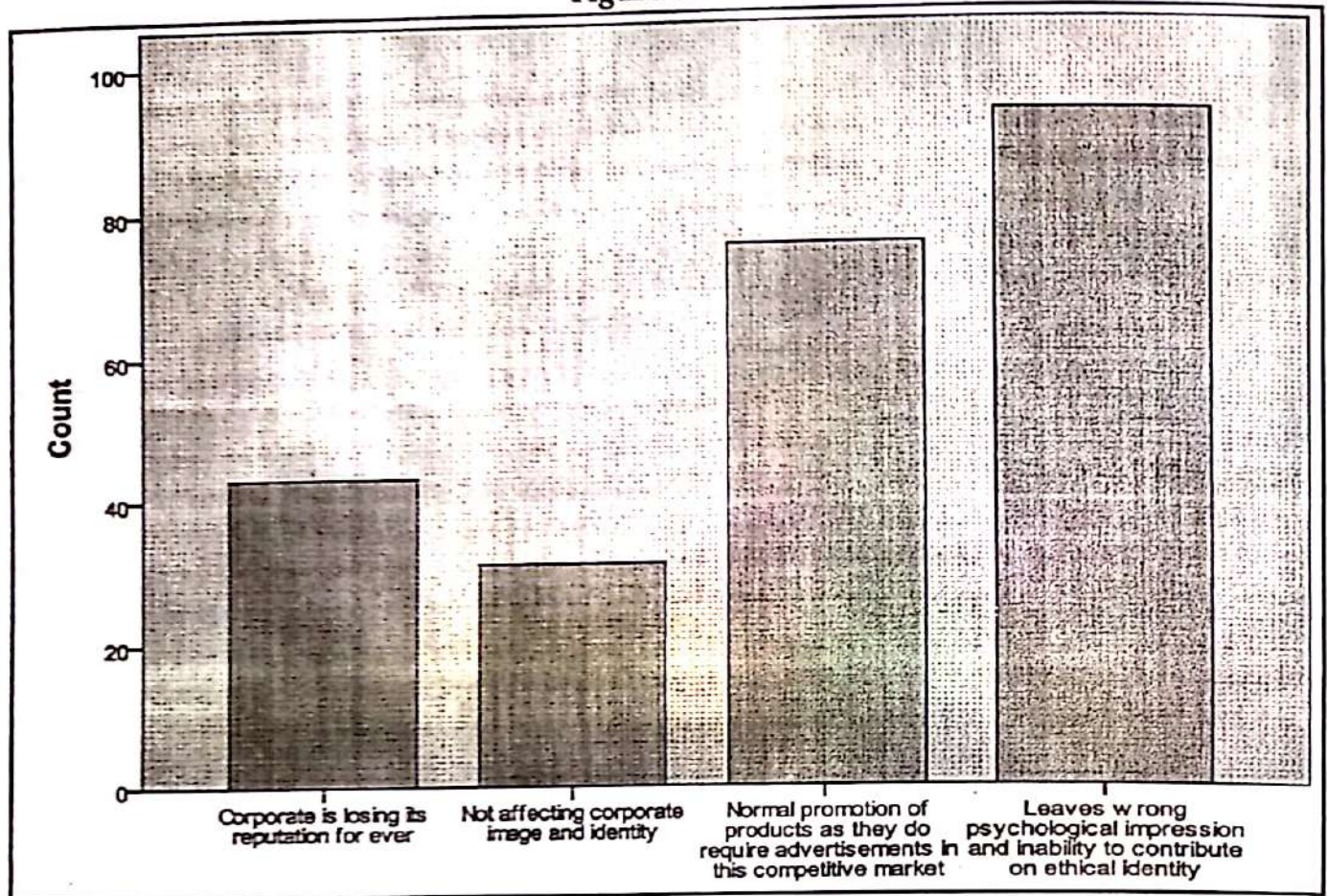
A large amount of respondents believe that it increases involvement towards tobacco and alcohol. Another big chunk of respondents believe it to be as a normal promotion of products. The logic behind this is that if there is no restriction on sell then why on advertising. It is necessary to advertise in the competitive market. Few respondents found it responsible for

<sup>1</sup> Solid arrows signify direct influences



loosing corporate reputation and few found it is not affecting corporate image and identity at all (Figure 2).

Figure 2



### 5. 2. According to You, Introducing Mineral Water, CDs under the Tobacco and Alcohol Brand Name is:

Common mass is unaware of the fact that brand extension is a qualified branding strategy but it is used in brand stretching of restricted products via introducing mineral water, CDs etc. (Figure 3)

### 5.3. Can You Identify the Brand of the Ad Campaign in which Saif Ali Khan, Yuvraj Singh and Harbhajan Singh Played Music on the Streets?

The largest amounts of respondents easily spot the brand name. It emphasizes the strong identifiable level of the original brand through surrogate Ads (Figure 4).

### 5. 4. According to You what would be the Probable Approach to Normalize the Current Problem?

A good number of respondents believe that if the statutory warning could be given in the quantified form it would definitely reduce the impact to a great extent (Figure 5).



Figure 3

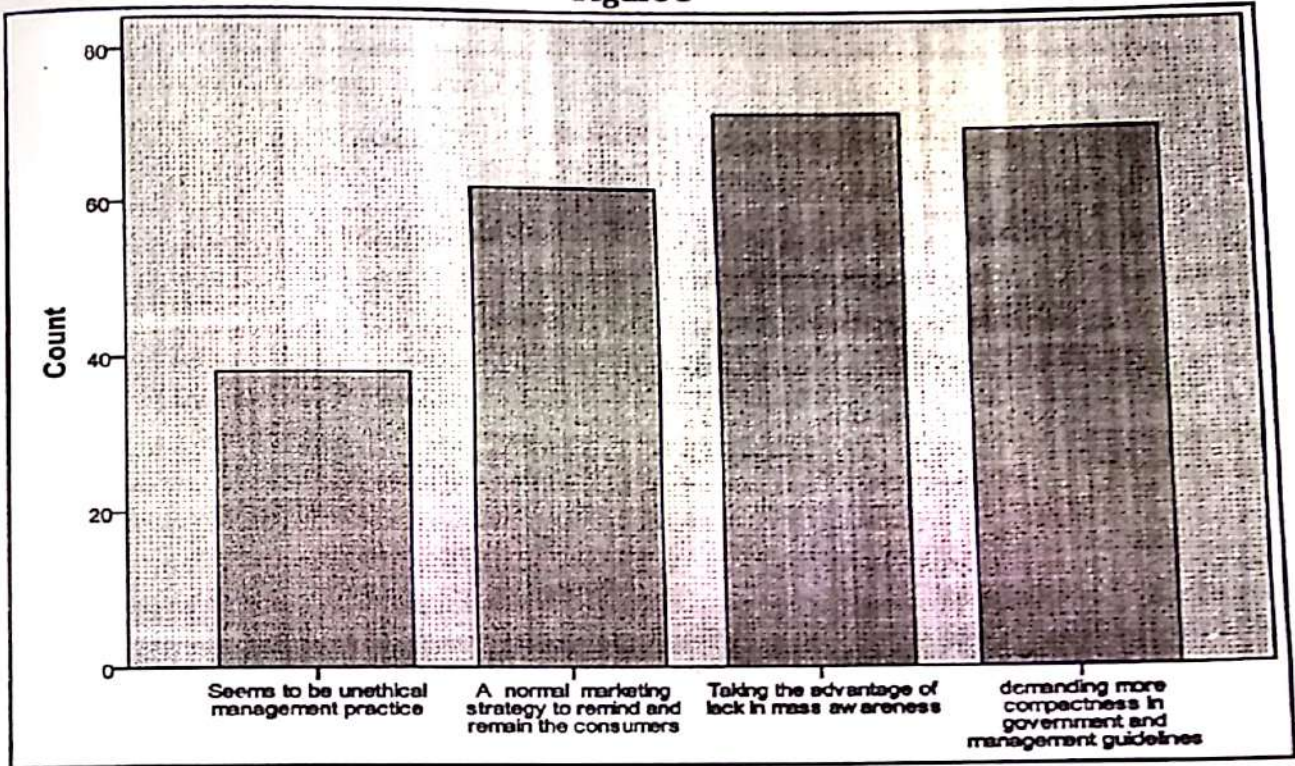


Figure 4: Can You Identify the Brand of the Ad Campaign in which Saif Ali Khan, Yuvraj Singh and Harbhajan Singh Played Music on the Streets?

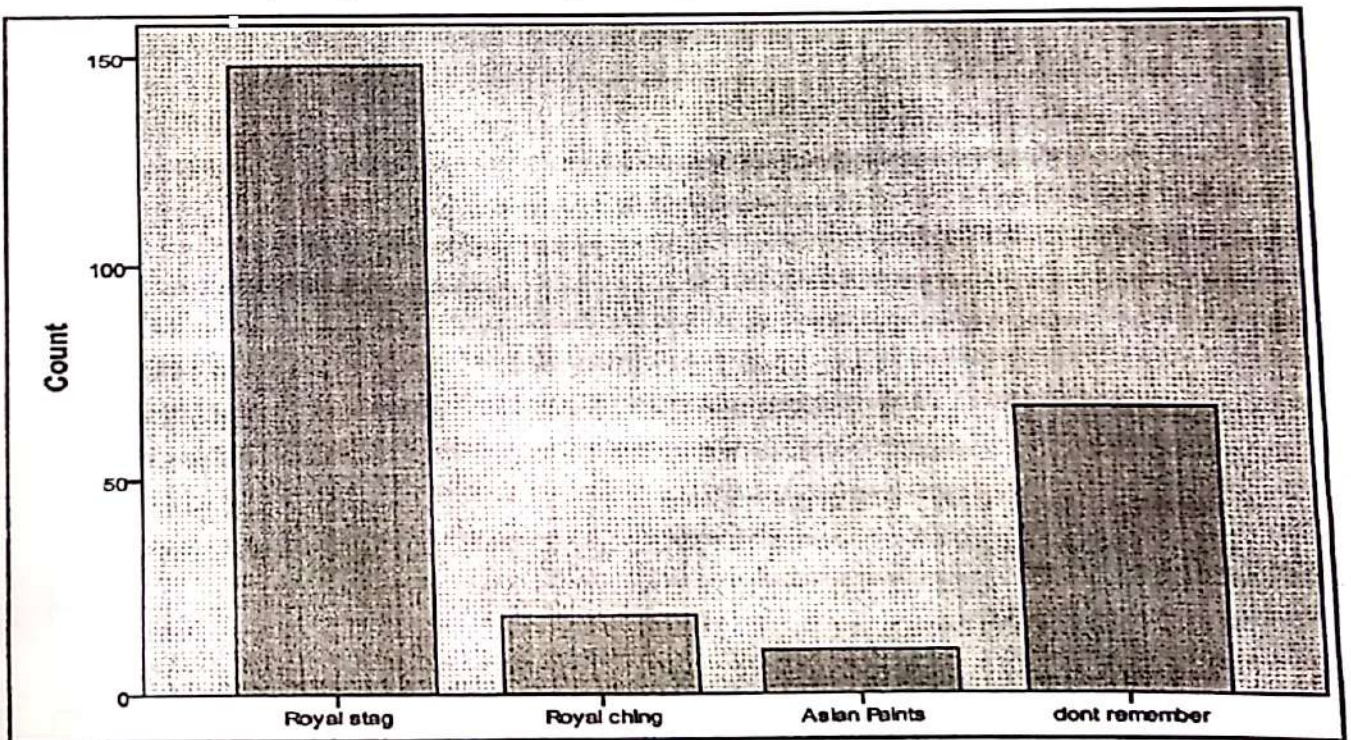
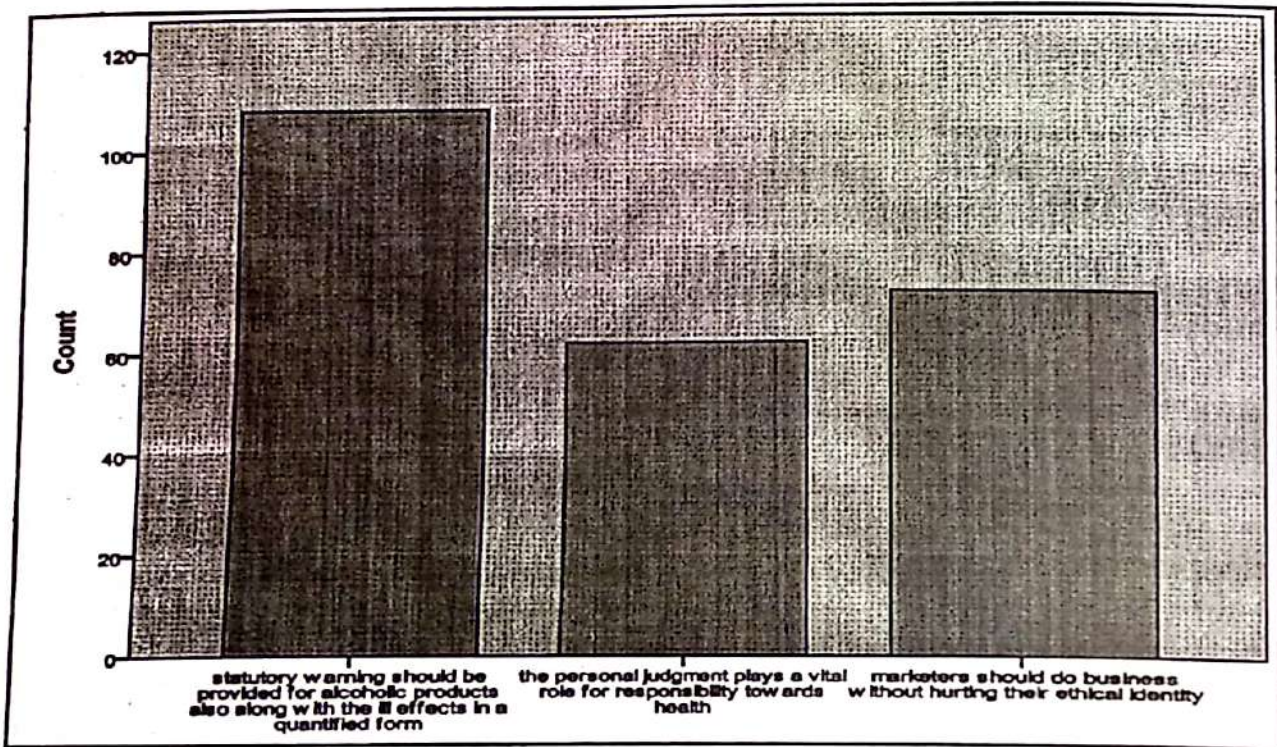




Figure 5 : According to You what would be the Probable Approach to Normalize the Current Problem?



**5. 5. Is there Any Significant Relationship between Number of Tobacco and Alcohol Brand Advertisement Viewership and Increase in Usage and Purchase Decision?**

The cross tabulation results below reveal that there is a significant association between the viewership and the increase of usage and purchase decision.

**Table 1 : Seen Advertisements on Various Media × Increase Usage and Purchase Decision Cross Tabulation**

			Increase usage and purchase decision		Total
			yes	no	
Seen advertisements on various media	yes	Count	120	98	218
		% within Seen advertisements on various media	55.0%	45.0%	100.0%
		% within Increase usage and purchase decision	85.7%	96.1%	90.1%
		% of Total	49.6%	40.5%	90.1%



	no	Count	20	4	24
		% within Seen advertisements on various media	83.3%	16.7%	100.0%
		% within Increase usage and purchase decision	14.3%	3.9%	9.9%
		% of Total	8.3%	1.7%	9.9%
Total		Count	140	102	242
		% within Seen advertisements on various media	57.9%	42.1%	100.0%
		% within Increase usage and purchase decision	100.0%	100.0%	100.0%
		% of Total	57.9%	42.1%	100.0%

Table 2: Chi-Square Test Results

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7.095 <sup>a</sup>	1	.008		
Continuity Correction <sup>b</sup>	5.982	1	.014		
Likelihood Ratio	7.876	1	.005		
Fisher's Exact Test				.008	.006
Linear-by-Linear Association	7.066	1	.008		
N of Valid Cases	242				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.12.

b. Computed only for a 2x2 table

Chi-square analysis revealed that there is a strong association (significance  $p = .008 < .05$ ) between number of advertisement viewership and increasing usage and purchase decision of tobacco and alcohol products.



**5.6. Is there Any Significant Relationship between Brand Original Product Category Recall at the Time of Purchase Any of their Extended Product and Knowledge about Tobacco and Alcohol Brands through Surrogate Ads?**

The cross tabulation below shows that the surrogate Ads helps the organization to advertise their product in a different way and make a brand original product category recall at the time of purchase.

**Table 3 : Original Brand Original Product Category Recall at the Time of Purchase of Any of their Extended Product × Knowledge about Tobacco and Alcohol Brands through Surrogate Ads Cross Tabulation**

			Knowledge about tobacco and alcohol brands through surrogate ads		Total
			yes	no	
Original brand original product category recall at the time of purchase any of their extended product	yes	Count	82	48	130
		% within original brand original product category recall at the time of purchase any of their extended product	63.1%	36.9%	100.0%
		% within knowledge about tobacco and alcohol brands through surrogate ads	58.6%	47.1%	53.7%
		% of Total	33.9%	19.8%	53.7%
	no	Count	58	54	112
		% within original brand original product category recall at the time of purchase any of their extended product	51.8%	48.2%	100.0%
		% within knowledge about tobacco and alcohol brands through surrogate ads	41.4%	52.9%	46.3%
		% of Total	24.0%	22.3%	46.3%
Total		Count	140	102	242



	% within original brand original product category recall at the time of purchase any of their extended product	57.9%	42.1%	100.0%
	% within knowledge about tobacco and alcohol brands through surrogate ads	100.0%	100.0%	100.0%
	% of Total	57.9%	42.1%	100.0%

Table 4: Chi-Square Test Results

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.146 <sup>a</sup>	1	.076		
Continuity Correction <sup>b</sup>	2.700	1	.100		
Likelihood Ratio	3.148	1	.076		
Fisher's Exact Test				.090	.050
Linear-by-Linear Association	3.133	1	.077		
N of Valid Cases	242				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 47.21.

b. Computed only for a 2x2 table

According to chi-square test of association, there is no association ( $p = .076 > .05$ ) found between original brand original product category recall at the time of purchase any of their extended product and surrogate ads.

## 6. DISCUSSION AND INTERPRETATION

As per descriptive analysis, major part of the group found the Ads as an offensive corporate activity that leaves wrong psychological impression and shows inability to contribute on ethical identity. Moreover, it challenges consumers' ethical concern, since these behaviours are related to moral feelings about the right and wrong (Clow and Baack, 2007).

In contrary, an amount of respondents supports the fact that it as a normal promotion and marketers do require advertisements of their products in this competitive market as the sales of these products are not banned. Chi-square test reveals there is no association between original brand original product category recall at the time of purchase any of their extended product and knowledge about tobacco and alcohol brands through surrogate ads. Emphasizing there are respondents who are unaffected by the Ad in terms of ABC (awareness, branding, and communication) and it does not affect any more on their purchase decision.



There is also a major group of respondents who are confused about questionable practice of brand extension strategy used in response to the ban on advertisements of one product category.

The result reveals that there is a strong association between the number of tobacco and alcohol brand surrogate advertisement viewership and increase of usage and purchase decision. Media affects on identification and increase the association between exposure and impact. The finding is similar to Basil, 1996.

## 7. CONTRIBUTION

The statutory warning could be more effective to increase consumer personal judgment and awareness if it quantifies how much it is responsible for health hazards. The introduction of more graphic and bigger warnings for cigarettes has impacted on behaviour (Hammond et al. 2003) and is a source of information for consumers (Hammond et al. 2006). It can be said that it will be definitely decrease the consumption rate.

Along with the tobacco the alcohol problem must be addressed in a more concerted manner by international organizations such as the World Health Organization and the United Nations Drug Control Programme, prohibition instead of restricting on advertising and sponsorships of public events, quantification of the number of affected which can create an erroneous impression on consumers.

The paper is offered as an information service to consumers, companies, and academicians and could play a pivotal role in creating mass awareness. Consumer awareness and protection has been recognized as a major thrust area of this study.

## 8. RECOMMENDATIONS

Services or products sometimes go wrong. Therefore, to maintain a brand's reputation it is important to deal with the same effectively. Social responsibility of a brand broadly affects consumers' overall evaluation of the company, which in turn creates a preference of the consumers for the products inherited from the same brand. Empirical evidence has supported that argument that consumers gave a positive appraisal if news media focus on ethical issues (Christians and Nordenstreng 2004; Berkman and Shumway 2003).

While there is a continuous tug of war between government guidelines and corporate strategies, the personal judgment plays a vital role.

Counter-advertising also can be beneficial. It involves circulating information about a product (in this context tobacco and alcoholic products), its effects, or the industry that promotes it, in order to reduce its appeal and use.

## 9. RESEARCH LIMITATION AND INSPIRATION

The literature on surrogate advertising is very scanty as the problem is of recent origin and is confined to the countries where advertising on such products is banned.

In Asian context, many of countries have not given alcohol the serious attention but Indian Government has been taking several steps to restrict and prohibit the same. Sirisha and Mukund (2003) opined that liquor surrogate advertising in India has faced a series of challenges.



These are the findings and recommendations that serve as guidelines for both individuals and organizations; they help make boundaries regarding what is acceptable and what is not. According to Leo Burnett, "Let's gear our advertising to sell goods, but let's recognize also that advertising has a broad social responsibility." •

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**Appendix I**  
**QUESTIONNAIRE**

<b>Personal Information</b>			
Name: _____		Age: _____	
Male/Female _____	Marital Status _____		
Qualification: 1. 12th passed      2. Graduate      3. Post graduate      4. Other			

1. According to you this type of surrogate advertising,
  - a) Leads corporate to lose its reputation forever
  - b) Doesn't affect corporate image and identity
  - c) Acts as normal promotion of products as they do require advertisements in this competitive market
  - d) Creates wrong psychological impression and inability to contribute ethical identity
2. According to you, introducing mineral water, CDs under the tobacco and alcohol brand name:
  - a) Seems to be unethical management practice
  - b) Seems to be a normal marketing strategy to remind and retain the consumers
  - c) Is to take the advantage of lack in mass awareness
  - d) Demands for more compactness in government and management guidelines
3. Can you identify the Brand of the ad campaign in which Saif Ali Khan, Yuvraj Singh and Harbhajan Singh played music on the streets?
  - a) Royal Stag
  - b) Royal Challenge
  - c) Asian Paints
  - d) Don't remember
4. According to you what would be the probable approach to normalize the current problem?
  - a) Statutory warning for the ill effects should be provided in a quantified form
  - b) The personal judgment plays a vital role for responsibility towards health
  - c) Marketers should do business without hurting their ethical identity
5. Is there any significant relationship between number of tobacco and alcohol brand advertisement viewership and increase in usage and purchase decision?
6. Is there any significant relationship between brand original product category recall at the time of purchase any of their extended product and knowledge about tobacco and alcohol brands through surrogate Ads?



## Guidelines for Authors

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- In the text, works are cited using an author-year format as follows: author's last name and year, without comma, in parentheses. For example: one author, (Easton 2003); two authors, (Greene and Watts 1996); three or more authors, (Chen et al. 1986); more than one work cited, (Fama 1981; Geske and Roll 1983; Kaul 1987); with two works by the same author(s), (Nelson 2003, 2005).
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