Air Pollution and Odd-Even Scheme from the Perspective of Theory of Reasoned Action

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Abstract

Environment degradation poses a serious threat to survival of human race. In this regard, air pollution poses immediate risk. Pollution free air is scarce commodity. Delhi has earned a dubious distinction of being one of the most polluted cities of the world. This has pressed the City government to embark upon Odd-Even scheme achieve drastic reduction in vehicles hitting the roads. The intriguing aspect of this scheme was that even though people apparently exhibit concern about pollution the scheme was resisted vociferously some groups. In this background this study was undertaken to investigate people response using theory of reasoned action. For this purpose, a structural equation modeling was developed by by specifying structural and measurement variables. The constructs in the model were attitude, social norms and perceived behavioral control as antecedents or independent variables that influence dependent construct of intentions. It was found that out of three independent variables, only relationship that was found to be statistically significant was between perceived behavioral control and intentions. It flows from the study that the contribution of independent variables to dependent variable must be strengthened by increasing their beta value by launching appropriate communications and behavior facilitating programs.

Keywords: Consumer attitude, behavioral intentions, odd-even scheme, social norms, perceived behavioral control.

Introduction

Marketing success depends upon consumer response. The business marketers attempt to elicit positive buying response from their consumers. And the marketing success is measured by various metrics including sales and market share at the aggregate level. The statistics of sales or share is composed of individual behavioral responses. Firm wins when its target consumer acts to buy its product or services. This however is achieved by orchestrating available tools and techniques and exposing them to target consumer with an assumption that their processing would extract desired behavioral response. This often is based on the assumption that consumers are cognitive decision makers. Their behavior is explained by information processing or cognitive perspective. The consumer behavior is affected by the psychological process of cognition, where information is processed before a feeling or behavioral response (Engel and Blackwell, 1982; Howard and Sheth, 1969; Ray, 1982). How marketing mix variables

are to be blended is typically done on the basis of consumer behavior insights. Cognition is the primary influencer of consumer behavior. The 'Theory of Planned Behavior" (TPB) helps in understanding human behavior and devise effective mediations (Ajzen, 1985). According to the theory, a person's attitude is an important determinant of the behavior. The origin of the 'Theory of Planned Behavior' lies in the field of social psychology. During the 18th century, psychologists proposed theories explaining the influence of attitude on behavior. The relationship between attitude and behavior was then enriched with the contribution of several researchers in the 19th century (Thurston, 1929; Allport, 1935; Dobb, 1947; Rosenberg and Hovland, 1960; Wicker, 1969).

In order to reach the ultimate goal of extracting a positive response, marketers influence and motivate consumers through communications. However, the communication cannot directly induce the consumers to purchase. Understanding of critical elements that affect behavior is essential for the marketers. The 'Hierarchy of Effects' model (Lavidge and Steiner, 1961), postulates information needs to be processed and marketing communication works through a series of effects viz. awareness, knowledge, liking, preference, conviction and purchase. Behavioral response is thus an effect of antecedent factors. This model suggests that consumer behavior cannot be directly influenced by taking a jump over information processing system. The pervasiveness of commercial communication is a testimony to the efficacy of this model. The goods and service marketers seek to get their sales registers ringing by communicating and subtly transforming consumer attitude.

The use of marketing principles and techniques in the non for profit arena is not new. About a half century ago the idea of applying marketing approach was suggested to bringing about socially desirable change (Kotler and Zaltman, 1971). Many social change campaigns fail to accomplish very little in terms of desired outcomes. This is attributable to factors like poor targeting, ineffectiveness of messages in triggering motivation, and lack of suggestion on ways to behave (Kotler and Roberto, 1989).The social change is difficult to achieve because these involve attitude change unlike commercial marketing where consumer are only directed toward a brand. The car companies for example don't have to change attitude toward driving. A positive attitude already exists. However, the promoter of pollution control or anti-smoking can succeed only by changing existing attitude towards car driving or smoking. Attitude change is difficult compared to attitude reinforcement (Lazarsfeld and Merton, 1949). The social change campaigns are likely to be more successful if they are made the same way as commercial campaigns are created. They must activate motivation, give direction on how to respond, provide mechanisms necessary for action and cost in adoption of socially desirable behavior must be lower than the cost (Weibe, 1952). The socially relevant change is difficult to achieve because idea's perceived irrelevanceand importance, behavior change involves cost and inconvenience and produces little personal benefit (Rothschild, 1979).

In the late twentieth a collective conscious emerged across globe for the need bring about behavioral change which is both socially and ecologically compatible. The unbridled consumerism is beginning to threaten the planet earth. And this has given birth to pro-planet movements touching diverse issues like consumption reduction, energy conservation, biodiversity preservation, and pollution control. On the social front, the issues include seek gender equality, discrimination and eradication of other social ills. In this context, one of the burning issues facing India's capital is alarming levels of pollution. Expert reports suggest the Delhi's air quality is the worst among world's capitals. The air is not breathable due of presence of various pollutants including the suspended particle matter. One of the assumed contributors to air pollution is emissions caused by vehicles. With an intention to curb air pollution, Delhi Government announced Odd-Even scheme. The essence of this scheme was to reduce the presence of almost half of the total vehicles on the road. This case typically fits into a social change issue. This initiative of the government presented us with an opportunity to study people behavior using the "Theory of Reasoned Action' (Fishbein andAjzen, 1975) and the 'Theory of Planned Behavior' (Ajzen, 1985) using structural equation modeling.These theories seek to understand the relationship between attitude and behavior and how behavior can be influenced. Therefore the behavior change strategies of any kind must be developed on a thorough understanding of variables such as subjective norms, perceived behavioral control and attitude towards behavior which act as antecedents to intention to behave and behavior.

The Study

The unchecked industrialization and perusal of economic growth has caused tremendous harm to the environment. The problem of environmental degradation is real. The fundamental constituents like air, water, soil are badly affected by increasing population, economic activity and pollution (Chertow, 2001). The earth is a burdened planet and consumption oriented culture in its present form is simply not sustainable. Pollution of all kinds has degrading effect on environment. One such area of concern is the alarming levels of air pollution. The air in some of the cities is technically unsafe and is likely to a major contributor to health problems of citizens. Among the contributors to degradation of air quality the top two are industry and automobiles (Kay, 1999). There is strong connection between automobiles and air pollution because a gallon of

gasoline through its journey from manufacture, distribution and ultimately burning spews 25 pounds of noxious carbon dioxide and other gases which cause global warming (Alexander and Kanner, 1995).

The air pollution is one of the serious concerns for governments and policy makers. Air being one of fundamental requirements for sustaining life on the planet is gradually is being filled with pollutants of different kinds. In many cities the air has become so toxic that it poses a severe health hazard. The high levels of air pollution are linked with various health problems including infant mortality, lung infection, respiratory disorders and cancer. Studies have found strong associations between the presence of fine particulate matter and lung cancer and cardiopulmonary diseases (Dockery et al., 1993). In another study (Samet et al., 2000) also discovered correlation between fine particulate matter and risk of dying from cardiovascular and respiratory diseases. Compared to developed countries, people in developing countries like India face greater health risk because of complete absence or poor monitoring of pollution levels. About forty thousand people die premature death due to pollution (DeLaroix, 2000)

Delhi probably secures notorious distinction of being world's one of the most air polluted cities. Its pollution levels even sometimes cross that of Beijing. For instance in December 2015 Delhi's air had 230.9 micrograms per cubic metre ($\mu g/m^3$) of PM 2.5 compared to Beijing, which recorded a PM 2.5 concentration of 139.7$\mu g/m^3$ on average weekly basis (Sethi, 2015). A World Bank Study citied Delhi as worst among the 381 cities from developing countries. It is 19 of the 20 most polluted cities from South Asia (Dash, 2015). The inhabitants of Delhi are exposed to sustained high levels of PM 2.5, which has dubious distinction of penetrating into lungs causing health ailments like asthma, respiratory and heart diseases. This high level of air pollution is attributed to reasons such as vehicular exhaust, burning of biomass, dust, industrial activity and construction. The vehicular population of Delhi keeps increasing everyday by 1400 and about 8.5 million cars are registered in the city.

The alarming levels of air pollution is frequently debated and discussed in different forums. A sense of urgency and desperation is often exhibited both by experts and citizens. But a concerted and integrated approach to controlling pollution is not adopted. The tokenism is confined to intermittent advertising, pollution control drives and blocking flow heavy vehicles en route to other states. The ODD-EVEN scheme of the Delhi Government is latest effort in the direction of improving the quality of air. But this scheme differs from the earlier schemes. It instead of taking a cognitive or informational route to behavior changeadopts a radical approach of extracting a forced behavior modification.It is based on the notion that desperate times require desperate measures. In this background, the present paper attempts to explore the ODD-EVEN scheme from the perspective of consumer attitude framework specifically drawing insights from the theory of planned action and theory of reasoned behavior.

Theoretical background and objectives

Marketers of products and services study their consumers' attitude. Insights generated from attitude studies provide help in determining what needs to be accomplished by marketing tools. The attitude to object model measures beliefs, feelings and affective component (Fishbein, 1983). These represent knowledge, feelings and behavioral aspects of attitude. It is hypothesized that all these components have a tendency to be consistent with each other (Dabholkar, 1994; Homer, 2006). This implies that change in one component leads to consistent change in other components. For instance, anti-smoking campaigns attempt to create belief that cigarette smoking is a major cause of mouth cancer. These campaigns by presenting graphic cancer visuals induce smokers to feel bad and horrific about cancer with an expectation it would cause people to abstain from smoking. In reality however, people exhibit discrepant behaviors. For instance, despite knowledge about the pollution and feeling bad about it people yet do not behave to minimize their pollution footprint. Similar observation could be made with respect to healthy life style, rash and negligent driving and drinking. The people who are charged for rash and negligent driving know and feel bad about it yet they do it. People love clean environments yet they litter on streets. The vociferous resistance to the implementation of ODD-EVEN scheme is testimony to this discrepancy.

The lack of consistency between attitude and behavior found in different studies lead improve tri-component model. Several additions were made in order to better its predictive ability (Shimp and Kavas, 1984). Fishbein and Ajzen (1980) proposed 'Theory of Reasoned Action'. It proposed that the best predictor of behavior is intention to behave and added behavioral intentions The antecedents to intentions are attitude to behavior and social norms.. There is likely to higher consistency between attitude and behavioral intentions instead of attitude and behavior (Abelson, 1988). Another addition was recognition of the role or pressure exerted by significant others in influencing behavior. How others think when someone behaves in a particular manner influences his intention to behave. This is labeled as 'subjective norms'. Later in attempt to improve that predictive ability of the model, a new construct was added labeled as 'perceived behavioral control'. This refers to the perceived control or ability over performing a certain behavior. For instance, a person may like to stick to healthy food but cannot because of non-availability of healthy

options. The theory was then reframed as the theory of planned behavior (Ajzen, 1991).

The people of Delhi fully understand the risk they face due to inhaling highly polluted air. The awareness about the air contamination is high. None of the inhabitants of the city is likely to feel good about the quality of air. But this attitude toward pollution does not seem to get reflected in their behavior. This study was undertaken with a motivation to explore this apparent inconsistency specifically with respect to ODD-EVEN scheme. The relationship between the constructs used in the study was hypothesized based on theory of planned behavior. It was intended to find the extent of influence that antecedent variables like social norms, perceived behavioral control have on the dependent variable of intention to behave. The findings are likely to shed light on what specific type of interventions are needed to get the people to behave in less polluting manner based on the variance explanatory power of the antecedent variables.

The Model

The theory of reasoned action as mentioned earlier is an improvement of theory of planned behavior. The model specifies five constructs: attitude, social norms, perceived behavioral control, intention and behavior. It hypothesizes that consumer intention to engage in a behavior is determined by three antecedent variables: attitude, social norms and perceived behavioral control. And intention to engage in a behavior acts as independent variable to the dependent variable of behavior. The intention is the most significant driver of behavior. The intention to engage in a particular behavior is depends upon attitude, subjective norm and perceived behavioral control. These constructs in the model are briefly discussed as below:

Attitude

This variable in the model represents how a person feels about intending to engage in a particular behavior. A person's assessment or feeling may fall on a scale of liking or positive to disliking or negative. For instance, a person may have negative feeling or disliking for engaging in pollution control behaviors liking getting the car checked for pollution or using public transportation. Attitude is a product of cognitive and affective components. The cognitions represent beliefs or thoughts and affect composed to beliefs or knowledge and affect signifies feelings or evaluations.

Social Norms

The second variable in the model is social norms. The behavior does not occur in isolation. Society exerts pressure on its members by prescribing as to what is acceptable. And every society maintains its own standards of behavior and people attach varying importance to 'what others might think'. People don't engage in behavior which are not approved by 'significant others' for the fear of boycott or some other implications. For instance, many young people have positive attitude to smoking but refrain from doing it because elders disapprove it. It can be proposed that when significant other people disapprove polluting behaviors people are likely to avoid these behaviors. One of the reasons for pervasive traffic violations is that 'everybody' does it.There is very little social pressure on people to follow traffic rules. The significant groups that exert pressure come in the form of family, friends, neighbors and colleagues.

Perceived Behavioral Control

This variable represents a person's capacity to engage or sustain in engaging a particular behavior. For instance, a person who dislikes pollution and is part of social milieu in which important groups around him or her also disapprove pollution creating behaviors may not intend to engage in pollution minimizing behaviors because of perceived lack of his control over sustaining these behaviors. Perceived behavioral control represents perception of difficulty or ease in performing a behavior. It in other words implies the perceived control that one has over a certain situation. For instance, in our example a person may perceive that he or she does not have resources to follow Odd-Even scheme or there are reasons outside his or her control that would not allow him or her to follow the scheme. The people who perceive less control are unlikely to intend to engage in pollution controlling behavior.

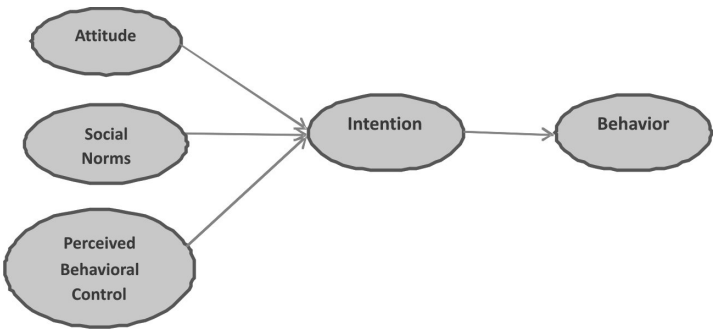


Figure1: Proposed Framework for Assessing the Odd-Even Scheme

Intention

Intention reflects an individual's readiness or conviction to engage in a behavior. The theory of reasoned action proposes intentions are better predictor of behavior instead of attitude, subjective norms and perceived behavior control directly. Intentions represent the conviction or commitment to carry out a particular action. Intention is affected by attitude, social norms and perceived behavioral control.

Behavior

Behavior is in this model is dependent upon intention to behave. It is the actual performance or conduct of the individual.

Research Methodology

The TPB formed the basis of this study. As mentioned earlier, the purpose was to explore investigate how it fared in Delhi and how the variables proposed in the model explain its acceptance. By studying the explanatory power of the independent variables of dependent variables, government can adopt specific measures to improve their influence. A general mass awareness building campaign or making an emotional appeal may not be the correct way of going about it. In order to pursue the above objectives, the study relied upon both secondary and primary research approaches. For the purposes of data collection, detailed study was undertaken to find suitable framework which could be used to study behavior in the context of non for marketing situation.

After the detailed study of the constituent constructs of TPB, a structured questionnaire was developed. The items were developed on the basis of construct defining the construct domain based on available literature. A structured, non-disguised questionnaire was administered.A sample of 150 respondents was chosen on convenient basis. The justification for the adoption of convenience sampling was to be able to collect data before the launch of second phase of Odd-Even Scheme. The only filter used to select the respondent was that they must be the resident of national capital region and they use personal vehicle of transportation. The data were analyzed using SPSS and AMOS. The analysis was performed using structural equation modelling and estimates were found for different paths of indicated in the model. Before, the path analysis the instrument's validity and reliability was checked.

Findings and Discussion

Reliability Analysis

The survey instrument was designed to get responses on the five constructs that formed the structural and measurement model. The five sections in the questionnaire captured responses on constructs under the study- attitude; social norms, perceived behavioral control, intentions and consumer behavior were subjected to reliability analysis. Each of these constructs employed multi-item five point Likert scale on which subjects marked their responses. In studies like this, one of the preliminary steps is to check the instrument reliability and Cronbach Alpha is calculated for this purpose. It is done to find out the internal consistency of the construct under study. The items that used to capture a dimension should be internally consistent. The consistency indicates how well the items measure the construct. Statistically it is found by checking the inter-item correlations.

The reliability of the survey instrument was established finding the Cronbach Alpha. Statistically the prescribed threshold limit is 0.7 and above (Nunnally, 1978). All the constructs were found to be consistent as they all crossed the threshold limit of 0.7, except for behavior with a Cronbach Alpha of 0.551. The behavior in the study is represented with three items BH1, BH2 and BH3. The items BH3 did not correlate well and therefore this item was deleted which led to a significant improvement in the reliability coefficient. The altered measure with two items BH1and BH2 produced a reliability estimate of 0.758, adequate to carry further analysis.The Table -1 reports the reliability coefficients of the construct used in the study.

Table-1: Reliability Coefficients for the Constructs

Dimension	Reliability Coefficient
Attitude	0.775
Social Norms	0.769
Perceived Behavioral Control	0.819
Intention	0.718
Behavior	0.758

Structural Equation Modelling

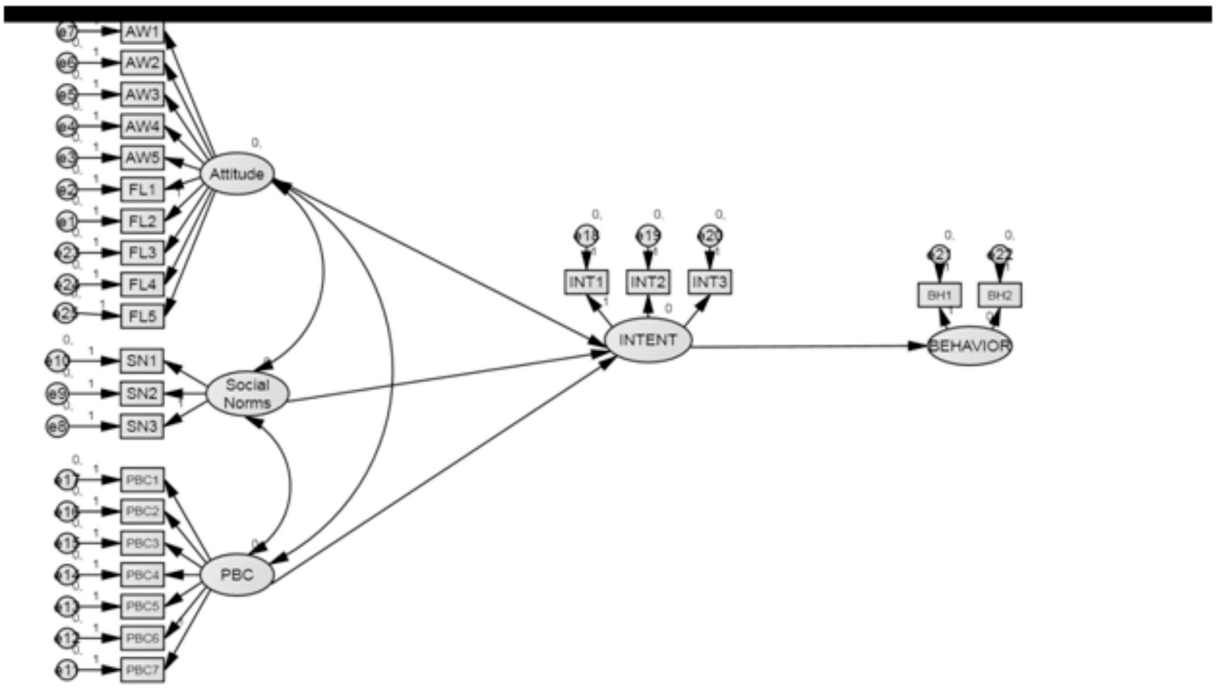
Structural equation modelling is better compared to regression in examining the relationships between variables.This technique assesses multiple regression equations simultaneously in a comprehensive structural model (Hair et al., 1998; Gerbing and Anderson, 1988) helps in testing the theory by an assessment of the order of relationships between endogenous and exogenous variables (Byrne, 2001; Tabachnick and Fidell, 2001). For example, in our analysis two regressions equations are needed be run simultaneously. First, the intention to behave dependent upon three independent variables: attitude, social norms and perceived behavioral control. And the second regression equation prescribes behavior as dependent variable and intention as independent variable. For examining the inter-relationships between the constructs under investigation, structural equation modeling was applied. SEM utilises Maximum Likelihood estimation that provides for estimates by maximizing the probability of obtaining observed covariancesfrom same population suggested by correlation estimates.In its intent the SEM is not an exploratory technique rather it is confirmatory in nature. It does not seek to find or explore a model rather it seeks to check the validity of a given model. Two models are specified in structural equation modelling: the structural and measurement model. The structural model indicates the relationship or causal dependencies between exogenous and endogenous variables. The measurement model on the other hand exhibit relations between latent variables and their indicators.

Structural Model

The focus on SEM is generally on latent constructs. These latent constructs are abstract in nature which is not directly measured. In our study the for instance attitude, social norms and intention are latent constructs. These are theoretical constructs. The structural model specifies the inter-relationship between the latent constructs. The latent constructs represented by indicators or items. These are called are called measured or manifest variables. The figure 1 shows the structural model in which attitude, social norms, perceived behavioral control, intent and behavior are the latent variables in the study. The complete structural and measurement model is depicted in figure 2 in which attitude is represented by 10 observed variables: 5 variables assess awareness and 5 variables assess feelings, social norms is measured through 3 observed variables, perceived behavioral control is represented by 7 observed variables, intent by 3 and behavior by 2 observed variables.

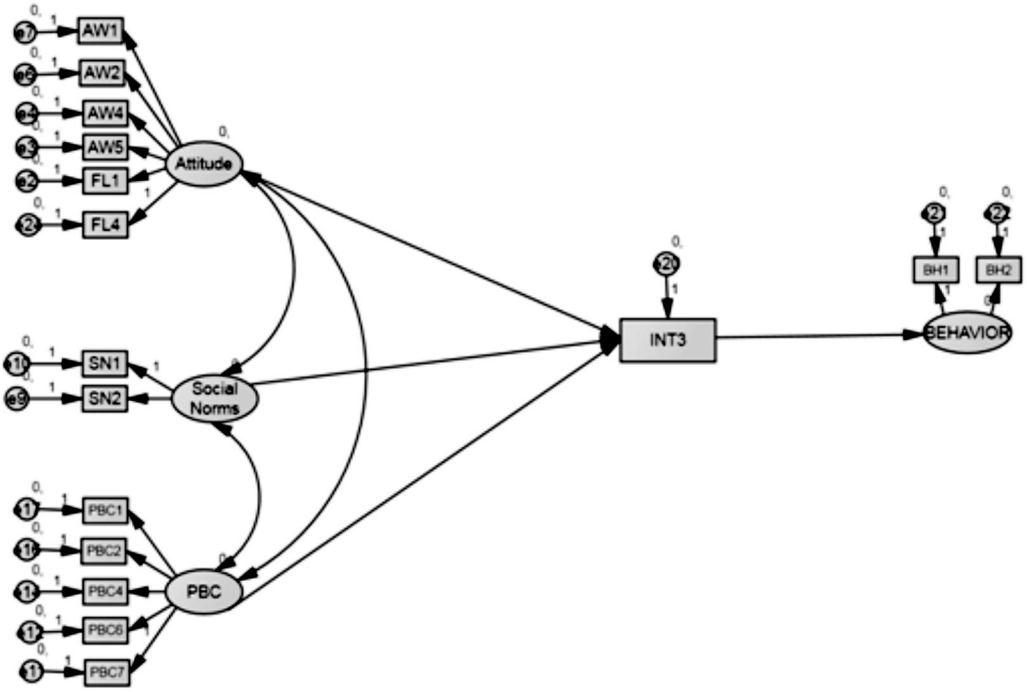
The measurement is generally difficult and error prone therefore each observed variable has an associated error term. This accounts for the measurement error associated with the observed variable. Single headed arrows from one latent variable to the other determine the path coefficient for regression of independent variable onto the dependent variable. The model in the figure 2 resembles a flow chart in which arrows indicate path or causal flow. This path diagram sits at the core of SEM.

Figure 2; Complete structural model



The investigation process started with the specification of structural model based on theoretical analysis of literature. In the first step the correlations between the items indicating the measurement variables for each of the latent constructs were examined. According to the theoretical model, attitude, social norms and perceived behavioral control should predict intentions and intentions should predict behavior. Ideally, the items should be correlated with each other. The absence of correlation between the items indicates that the items are outliers and indicate inconsistency. The recommended treatment these items are to eliminate them. The the correlations between some items were found to be very low (AW3 and INT; FL2, FL3, FL5 and INT; SN3 and INT; PBC3, PBC5 and INT5; and INT1, INT2 and BH3). For the purpose of model estimation, these items were therefore eliminated. The modified structural mode is given in figure 3. In the modified model, the attitude, social norms, perceived behavioral control are measured by six, two and five manifest variables.

Figure 3: Modified Structural Model



After the model was specified, in the second step the model estimation was done. Structural model was estimated with the help of ML (maximum likelihood) method. Thereafter, model estimates were evaluated. To determine the degree of model fit to the observed data, relevant fit indices were examined. An examination of fit indices revealed that the structural model depicting the inter-relationship between the constructs has amoderate fit to the observed data. The normed chi square statistic (CMIN/DF) was found to be 2.541. This was below the threshold limit of 3.0 (Wheaton et al., 77); it indicates the magnitude of discrepancy between the sample and fitted covariance matrix. CFI was found to be 0.937, this score was in close proximity with the recommended level of 0.95 (Hu and Bentler, 99). The RMSEA, the root mean square estimation of error of approximation value stood at 0.079. This indicated a fair fit of the proposed model with the chosen parameters with the population covariance matrix.

Relationships

In the model given the figure 3, causal relationship has been specified with the help arrow. The arrow heads point at dependent variable and it originates from independent variable. These also imply hypothesis or causal relationships. In order model, a relationship of dependence of intention on three variables of attitude, social norm and perceived behavioral control has been hypothesized. Further, it is hypothesized that behavior is influenced by intentions. The testing of these hypotheses are done by estimating the path coefficients. These coefficients show how much of change in dependent variable is accounted for by the dependent variable. Maximum Likelihood Estimation was used to assess the overall adequacy of the comprehensive model by investigating the causal relationships by testing hypothesis with the help of path analysis (SEM). As given in table 2, the path coefficients (standardised estimates) of the structural model are given.

These indicate the magnitude and direction of relationships between the latent constructs and thus are used for accepting/rejecting the hypotheses.

Table 2: Standardised estimates for hypothesized relationships

Hypotheses	Relationship	Standardized Estimate	Standard Error	Critical Ratio	P Value
H1	Attitude→Intention	**0.525**	0.227	2.240	0.025
H2	Social Norms→Intention	**0.205**	0.154	1.044	0.297
H3	Perceived Behavioral Control→Intention	**0.765**	0.122	3.813	***
H4	Intention→Behavior	**1.000**	0.127	4.067	***

*** This implies regression weights significant at 0.1% significance level.

In the first two columns, the hypothesized relationship of causal relationship or dependence has been shown. The hypotheses and along with statistics relating to standardized estimates, standard errors, critical ratios, the p values are also reported in this table. The standardized estimates are the standardized regression weights; standard error is with respect to the regression weight estimate; critical ratio is the z estimate derived by dividing the regression weight estimate by the estimate of its standard error, it tells by how much standard error is the regression weight estimate above zero and p value is the estimation of whether the probability of getting the given critical ratio in absolute value is less than 0.001.

The four paths which signify the hypothesized relationships are: Attitude - Intent, Social Norms -Intent, Perceived Behavioral Control -Intent and Intent - Behavior. The path coefficients between attitude to intention and social norm to intention are not found to be significant. But the path coefficient indicating a causal relationship between perceived behavioral control and intention was found to be significant. Further, the path coefficient between intention and behavior was also found to be significant.

Discussion

The important question is what does the acceptance and rejection of significance of relationships between the constructs investigated in this study hold for the policy makers.

Attitude and intention to behave: the insignificant path coefficient shows that people who do not feel good about the pollution do not intend to adopt pollution control behaviors. That is attitude do have a significant impact on intentions. This lack of connect is also could be observed in sustainable consumption behaviors. Many people have positive attitude in support for social causes like sustainability yet they don't intend to behave in ecologically sensitive manner. Their behavior tends to be largely passive (Grunert and Juhl, 1995).One study explored the gap between attitude and intention by looking into the role personal and situational characteristics of involvement and values, perceived uncertainty and behavioral control with respect to sustainable food consumption. The study reported that low consumer involvement and lack or non-availability of options allow consumer intention to behave low despite positive attitude (Vermeir and Verbeke, 2005). How this gap between attitude and intention can be bridged?

The policy implications that flow from this study is that the simple awareness building campaigns are not sufficient. These build cognitions and people do have high awareness about the problem of rising pollution. Like in commercial marketing, most brands extract positive behavioral response from their target customers by increasing the consumer involvement with the issue by connecting with consumer values or higher order motivations (e.g. how bad breadth could lead to social rejection or good clothes make you perform better). The people involvement with the pollution should be shifted to higher level by connecting it with something that people high significance to like health of their children or how health cost would hit them. Further, unless alternate options are provided, attitude are unlikely have significant effect on intentions. In this regard, the public transportation has a great role to play. There are people who would like to take their car checked for pollution control but don't do so because lack of ample and convenient pollution control centers.

Social norms and intentions: an individual's behavior is influenced by the social groups. Social norms pressurize people into ways that are in conformity to norms and values. In closed cultures like that of many Asian countries, social groups tend to be very powerful and deviations invite retaliation of different degrees. Social norms prescribe behaviors that are acceptable. For instance wearing of revealing clothes invites social disapproval and sanctions. Our study revealed low significance to social norms on intention to behave in less polluting manner. It implies lack of influence of social influence on intentions. People neither get social reward or gain when they engage in pro-environment behaviors nor get punished for engaging in polluting behavior. This reveals absence of social pressure on people with regard to anti-pollution behaviors. This may be due the fact that pollution has not achieved the status of being a social norm and therefore non-adoption of Odd-Even is unlikely to be disapproved and punished. The tree conservation has on the other hand has gained eminence and people exhibit strong reaction to felling of trees.

Marketers of consumer goods leverage the power of social norms by legitimizing their brands by creating impression of social approval. For instance, a young affluent may experience social disapproval if he does not own an iPhone. What do our findings hold for policy implications? The challenge here is to somehow get pollution into collective conscious and drive its importance by liking it with socially important issue. Here opinion leadership can play an important role along with mass communications. It must acquire the status of a social value for it to be effective in influencing individual behavior. The social groups that wield power should be identified and value of controlling pollution should be spread by following this two-step model of communication. Once the society would begin to expect from its members to engage in pollution control behaviors then only its influence would become significant. It's important that people should have a feeling of being looked down upon when they behave in a polluting.

Perceived behavior control and intention: the relationship between these two constructs was found to be significant. That is PBC significantly influences the intention to behave. Theoretically PBC means the perceived ability of someone to carry out a behavior. The perception of being in control of a situation is important rather than actual control. The people who believe that they can perform a certain behaviors are likely to be motivated to do so. The people who are convinced that they would be able to manage transportation during Odd-Even are more inclined to comply with the scheme. Stated conversely, if people perceive that it would be difficult to manage during Odd-Even would not be inclined in favor of the scheme. It in other words represents 'I can do it' spirit. The people with a sense of 'can do' spirit are likely to be motivated to engage in a given behavior.On the other hand, people devoid of this spirit are likely to indifferent or un-motivated and their indulgence in expected behaviors are likely to be short lived.Therefore it is important that government must create a sense of perceived behavioral control for its anti-pollution efforts to achieve success.

The questions arises what creates a sense of perceived behavioral control? It is these drivers of PBC that must be targeted in order to improve the intention to comply with the Odd-Even scheme in particular and pollution reduction behavior in general. There are two aspects to PBC: the capacity and autonomy. The capacity represents the perception of the ability to carry out behavior. It can be summed up in the statement that 'I am fully sure that I would be able to manage during the Odd-Even days'. The autonomy, on the other hand concerns the degree of control over behavior performance. The external factors may not favor behavior like taxi strike. The PBC is affected by an individual's perceived capacity to carry out behavior. Those who think that they have required skills, capabilities and r resources to perform are likely to have a sense of perceived. It is a sense of self-efficacy (Bandura, 1997). In the context of Odd-Even, those who have alternative vehicle or money to hire cabs are likely to have intention to conform to the scheme. However, people who don't have these are likely to experience lack of control and are likely violate the scheme. The challenge, for the government is to create a sense of perceived control or self-efficacy by endowing people with capacity by of convenient alternate modes of transportation to enhance greater participation in the scheme.

Intention and behavior: The hypothesis that intentions to behave determine actual behavior has been accepted in model. The proposition that intentions are powerful predictors of behavior has roots in theories proposed by Ajzen (1991, 2001). Its predictive prowess is accepted in consumer behavior research. It also finds support in behavior reasoning theory (Westaby, 2005). The predictive ability of intentions however may be situation dependent. The relationship between the two constructs therefore may not be perfect. This study found that intention has great influence on peoples' adoption of the Odd-Even scheme.

Concluding Remarks

Environment pollution, especially air pollution is a major life threatening phenomena. The air which was taken for granted as a naturally provided abundant resource is increasingly becoming scarce and precious. This problem of air pollution is particularly severe in major cities of the world. The pollution levels in some cases have life threatening. As it is said that desperate times require desperate measures, Delhi government exhibited its resolve to reduce pollution by embarking upon Odd-Even scheme. This scheme in a surgical fashion mandated to reduce

number of cars plying on the road by almost half. A mixed set of voices were heard about the scheme. Form the macro perspective the scheme was justified as one the means aimed to reduce air pollution but at micro level it was criticized because the discomfort it would cause to people.

It is this background, this study was undertaken to investigate people response using theory of reasoned action. For this purpose, structural equation modeling was done by specifying structural and measurement variables. The constructs in the model were attitude, social norms and perceived behavioral control as antecedents or independent variables that influence dependent construct of intentions. It was found that out of three independent variables, only relationship that was found to be statistically significant was between perceived behavioral control and intentions. And it was also found that intentions significantly determine behavior. The strategy implications that flow from this research include the following: the attitude and intention link should be strengthened by improving the citizen involvement. And absence or lack of influence of social norms does not allow polluting behaviors to invite social sanctions. Therefore, there is need to develop collective normative consciousness among people against polluting behaviors. Social norms and values are important means to control human behavior by prescribing what is acceptable and what is not.

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