Sustainability Development in India: The User Prospect

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Abstract

Competitive business environment is been focusing on pertinent infrastructure, technology, economies transform themselves to adapt to the changing institutional environment, largely ignoring the sustainability aspect from the employee's viewpoint. However, researchers opine that real improvement in sustainability cannot occur if the employee perception is not been considered. Employee's perception is significant as it impacts their 'buying behaviour' as well as enables the employer provider to meet their expectations better, and provides relevant information to the policy makers to improve the sustainability, which lead the firm to achieve a proper 'fit' with the environment through changes in strategy (Summer *et al*., 1990; Zajac, Kraatz and Bresser, 2000).The main purpose of the current study is to assess the perception of employee towards the sustainability development of the automobile sector in northern zone based on the scale developed by Chow and Chen (2011) after making few amendments as per the requirement of the study on the sample of 300 employees. A response rate of 89 per cent was obtained resulting in 267 complete questionnaires. The 44-item scale employed in the study comprised 13 homogeneous sub-scales and tested well for reliability. The findings illustrated some interesting differences in employee perception regarding sustainability and how they varied between different automobile companies and according to the demographic status of employee. The most surprising finding of the paper that sustainability was perceived to be higher in FWAMS (Four Wheeler Automobile sector) as compare to the TWAMS (Two Wheeler Automobile sector). Inadequate knowledge of the employees about the organisation's collaboration with UN's Global compact, inability in fighting against consumer's discrimination, firm's inability to measure and control the health and safety risks, poor implementation in measuring public's exposure to toxic products were the important drawbacks reported at TWAMS. This is an outrageous as TWAMS as it is been considered as the more preferable sector by the lower, middle as well as the high class families. The present study gives a light to the prerequisite of appearance of similar manner of research to explore the consumer as behavior toward sustainability in other sectors. One limitation of the study is the use of self amended measures and the coverage of the single sector, which can reduce the generalizability of the findings.

Keywords: environment protection, health and safety, legal compliance, sustainability, user, waste minimization.

1. INTRODUCTION

The debate regarding sustainability in business and the economy has been ongoing for several decades. Initially focused on general concerns regarding economic growth (e.g. ecological economics), the debate has not only gained strong momentum and diffused in different scientific fields working on business and economics, but has also reached the realm of applied business itself. It seems that everyone is for sustainability and sustainable development. Therefore, it is difficult to be against it. The less one knows about it, the better it sounds. If we profess to be concerned about the welfare of future generations and not terribly concerned about the welfare and needs of the poor today there is a terrible inconsistency in our thinking stated Nobelist Robert Solow (Solow 1991).

The term Sustainable Development has come into common use but has no clear meaning as applied (Daly, 1996; Redclift, 1992). The use of the term is institutional, yet its meaning has become vague, ambiguous, undefined, and often contradictory (O'Riorden, 1985). To some extent the term has become a cliche´ (Le´le´, 1991; Mitcham, 1995) applied to almost anything remotely related to the business processes, the society in which those processes operate, and the environment in which both processes and society are embedded. A sustainable organisation, according to Benn and Dunphy (2004), in addition to focusing on economic performance, actively supports the ecological viability of the planet and its species, contributes to equitable and democratic practices, and social justice.

Notwithstanding the growing public awareness of the need for a sustainable economy, global challenges such as population growth, poverty, public health, sanitation and drinking water availability, global warming, overfishing, pressure on biodiversity, degradation of soil and reduction of fertile land for agriculture – in general, overall scarcity of ecological resources – still remain unresolved issues and point away from a more sustainable global human society. All of these issues indicate that we still have a long way to go to achieve a sustainable economy.

Historically, unsustainable development and continued environmental degradation have affected the poor more than they have the rich. The poor rely heavily on common environmental resources and have few alternatives to escape the adverse consequences of pollution or environmental degradation. Examples are: urban air quality, lead paint, soil erosion, asbestos, hazardous toxic waste disposal sites (mostly located in economically deprived areas), and groundwater contamination.

Previous research has demonstrated that many managers believe they do not have the skills necessary to make their organisations more sustainable. In 2002, research revealed that of 114 companies from the Global 1,000 list of companies, 94% believed a business sustainability strategy could result in financial benefits, but only 11% actually implemented one (Ernst and Young, cited in van Marrewijk 2003). One reason for this low percentage of implementation, according to van Marrewijk, was likely to be a lack of understanding about what constitutes practices and initiatives that promote sustainability. Given the attention that has been focussed on business sustainability since 2002, it might be expected that managers are now better informed about how to make their organisations more sustainable. Recent research, however, suggests this is not the case. A survey by KPMG International (2008) found that for the large majority of companies understanding how to make their businesses more sustainable was a challenge. The areas that posed the greatest difficulty for approximately 80% of companies included identifying and prioritising issues, developing strategies and policies, and measuring performance. This finding is consistent with anecdotal evidence from our consulting work that suggests there is limited understanding of how to make business more sustainable and one way to address the identified lack of understanding of business sustainability identified by the Australian Industry Group and Sustainability Victoria (2007) and KPMG International (2008) could be through management education.

2. NEED FOR STUDY

Developing countries are spotlighting on relevant infrastructure, advance technology, behavioral science, and health outcomes in terms of deaths and disability-adjusted life years, largely ignoring the sustainability aspect from the user's viewpoint. In 2002, research revealed that of 114 companies from the Global 1,000 list of companies, 94% believed a business sustainability strategy could result in financial benefits, but only 11% actually implemented one (Ernst and Young, cited in van Marrewijk 2003). User's perception is significant as it impacts their 'buying decision'. Studies in developing nations such as Canada, Australia (Fisher and Bonn, 2011), New Zealand (New Zealand trade and Enterprises, 2009) and Bangladesh (Andaleeb, 2000) have confirmed the impact of sustainability on the consumer. Evidently, sustainability is important and demands continuous attention. Keeping this in mind, the current study aims to measure the perception of users availing automobile services in India with a view to provide valuable information to the policy makers about the areas that need attention for improvement in quality of automobile. Furthermore, it seeks to further develop an analytical framework for the measurement of sustainability development of automobile sector.

3. METHOD

Instrument for survey

The most accepted tool for measuring quality has been SERVQUAL which had been developed by Parasuraman, Zeithaml and Berry, (1985) and has been applied in various businesses including industrial, commercial, noncommercial, and services settings (Babakus and Mangold, 1992; Dabholkar, Thorpe and Rentz, 1996; Kang and Kostas, 2002, Seock-Jin and ll-Soo, 2006). However, despite its extensive application, SERVQUAL has been criticized on both theoretical and operational aspects (Babakus and Mangold, 1989; Carman, 1990; Cronin and Taylor, 1992; Redman and Mathews, 1998).

Some researchers conducted in the recent years have made attempts to develop multi-dimensional scales and measure the sustainability development in the developing nations. Chow and Chen (2011) explored three dimensions of sustainability development: social development, economic development and environmental development. Lo´pez et al. (2007) and Marrewijk (2003) pointed out that corporate sustainability is achieved through social, economic, and environmental development, and that these three dimensions are all interrelated. Melville (2010) argued that CSD is geared toward the triple bottom line—people, planet, and profit, which refers to companies harmonizing the green environment by addressing their efforts to implementing social, economic, and environmental development simultaneously (Elkington 1997). Chow and Chen (2011) developed and validated a 22-item instrument for use in Australia. The dimensions included in the study were Chinese managers enrolled in a MBA. The research tool employed in the present study is based on the scale provided by Chow and Chen (2011) to assess the perception of user towards sustainability development after making adjustment for Indian culture and language. A qualitative study comprising thirteen focus group discussions and twelve in-depth interviews was conducted to identify whether the 22-item scale developed by Chow and Chen (2011) was relevant to rural India. The participants comprised those who had visited the automobile companies in the last six months. Though there was considerable overlapping between the original items and those identified by the Indians, some modifications were made to the original scale to reflect the Indian context. The

generated items with Eigen value of more than 1 were included resulting in 43 items. Each scale item comprised three opinions that ranged from a score of 0 for 'No,' 1 for 'neutral, and 2 for 'Yes.'

Studies have reported sustainability development on consumer's buying behavior or repeat/future visits. So, questions regarding overall sustainability development provided by the Automobile sector and the intention to repeat buying were asked to establish the relationship between sustainability and repeat buying. The second part of the questionnaire solicited information pertaining to demographic characteristics. The questionnaire was then translated from English to Hindi and Punjabi; the varied principal languages of the states. It was pre-tested to ensure that the wording, sequencing of questions, length, and range of scale were appropriate. Low level of literacy and negligible exposure to this kind of study made it difficult for respondents to comprehend the scale.

3.1 Sample size

The study was conducted in the states of Northern India, i.e. Jammu and Kashmir, Haryana, Himachal, Uttar Pradesh, UttraKhand, Rajasthan Delhi and few parts of NCR. Two Wheeler Automobile sector companies (TWAMS) and Four Wheeler Automobile Sector (FWAMS) were selected at random from each of these states. A sample size of 300 was distributed among these districts in proportion to the population of the respective states. This meant that 25 per cent of the respondents were drawn from Uttar Pradesh, another 18 per cent from Punjab, 15 per cent from Haryana, 20 per cent from Rajasthan, 8 per cent from Jammu and Kashmir, and 8 percent from Uttrakhand and remaining from Himachal Pradesh.

The respondents comprising both IB (Industrial Buyer) and Consumer were selected in a purposive manner ensuring that they had utilized sustainability development at the Automobile sector within the last six months. Before administering the questionnaire, the meaning of the scale was explained to them. The representation of scale in the form of money was easier for the respondents to comprehend. Despite tremendous efforts made by the researcher, a response rate of 89 per cent was obtained resulting in 267 complete questionnaires.

4. RESULTS
4.1 Scale Properties

To examine the structure of the relationship among variables representing the sustainability development in Northern Indi, factor analysis technique was used. Before running a factor analysis, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett's test of sphericity were executed. KMO generated a score 0.89, which was highly significant. Bartlett's test of sphericity supported the appropriateness of using factor analysis to explore the underlying structure of sustanbility. An "Eigen value greater than 1" criterion was engaged for formative the quantity of factors.

It leads to distribute the loading among the selected factors to interpret results easily. Factor loadings of 0.5 or greater than that were regarded as significant. Table 1, represent that the factor analysis of the 44-item scale on the basis of principal component extraction by using Varimax rotation converged in eleven iterations and resulted in thirteen homogeneous sub-scales. SPSS version 14 software was used for performing all statistical analysis. The factors obtained were named as per their nature of construct keeping in mind the statements that had higher loading on a specific factor. Subsequently, they were named 'knowledge of sustainability development and corporate value,' 'consumer right,' 'ensuring health and security,' 'responsible procurement,' industrial hygiene', 'environment protection', 'legal compliance', integrity', 'transport' , 'leadership and management' , 'waste minimization', 'recycling' and 'management.'

The first subscale with Cronbach alpha 0.88 included seven items related to 'Knowledge of Sustainable Development and Corporate Values, the second subscale, 'consumer right' with Cronbach alpha 0.82 comprised of 4items, the third subscale, 'ensuring health and security' with Cronbach alpha 0.81, included five items, the fourth subscale with Cronbach alpha 0.84 contains one item related to 'industrial Hygeine', the next subscale, 'management' with Cronbach alpha 0.76, comprised two items, the sixth subscale with Cronbach alpha 0.92 contains one item related to 'environmental protection', the seventh subscale with Cronbach alpha 0.86 contains one item related to 'responsible procurement', the eighth subscale with Cronbach alpha 0.79 contains one item related to 'Legal compliances', the ninth subscale with Cronbach alpha 0.83 contains one item related to 'integrity', the tenth subscale with Cronbach alpha 0.82 contains one item related to 'transportation', the eleventh subscale with Cronbach alpha 0.87 contains one item related to 'leadership and management', the next subscale with Cronbach alpha 0.74 contains one item related to 'waste minimization' and last subscale with Cronbach alpha 0.88 contains one item related to 'recycling'.

The reliability of the scale was also tested. It had an overall Cronbach's alpha value of 0.89 that ranged from 0.92 to 0.79 for the subscales. The reliability was highest for 'Corporate Social Responsibility Policy' (0.92) and lowest for 'giving services to the user after the purchasing the vehicle' (0.68).

Table 1: Factor Analysis of the sustainability development Instrument

Components/Factor	Communalities					Cummulatives
Variables	**1**	**2**	**3**	**4**	**5**	after extraction
Knowledge of Sustainable Development and Corporate Values						
Engaged in a Sustainable Development Approach?	-.588	-.156	.011	-.192	.007	.80
Signed up the UN's Global Compact?	.405	.097	.493	-.073	-.040	.78
Has you find someone in charge of Sustainable Development?	-.463	-.186	-.352	-.061	-.027	.86
Adopted a responsible procurement policy	.427	.055	.602	-.186	.052	.86
Automobile sector fully engage in Sustainable Development?	-.508	-.233	-.288	-.092	.052	.84
Firm undergone a life-cycle analysis?	.166	-.007	.772	-.109	.226	.94
Do you find another customer to be satisfied with the sustainability development?	-.235	-.120	-.451	-.141	-.228	.84
Consumer Rights						
Firm vigilant about fighting against any form of consumer discrimination?	.174	.011	.720	-.101	.302	.90
Firm vigilant about respecting their customers	.047	-.078	-.561	-.035	-.375	.77
Is your firm vigilant about giving services to the user after the purchasing the vehicle?	.138	.127	.134	-.369	-.352	.68
Is your firm vigilant about retaining the customer's preference for the company	.218	.175	.171	-.421	-.431	.71
Ensuring Health and Safety						
Ensuring health and safety while using the vehicle?	-.194	-.042	.570	-.086	-.114	.76
Firm vigilant about fighting against any form of consumer discrimination?	.563	.206	-.130	-.418	-.053	.87
Is your firm vigilant about respecting their customer?	-.279	-.219	.579	.341	-.071	.89
Have the operating health and safety risks to user been identified, measured and controlled?	.419	-.168	-.280	.261	.575	.81
Are the consequences of accidents in terms of health and safety risks assessed for the environment	-.378	.616	.106	-.011	.432	.84
Industrial Hygiene						
implemented a process enabling the govt. to measure public's exposure to toxic products	.221	.562	.321	.334	.043	.83
Management						
Staff is been aware of the emergency management plans in force in your firm?	-.353	.741	.159	.029	-.071	.83
Are they regularly updated?	.120	.201	-.043	.543	-.393	.77
Environmental Protection						
Adopted a quality policy?	-.175	.320	.230	-.120	-.180	.64
Responsible procurement						
Do you check that your suppliers comply with your environmental management criteria?	.682	.271	.150	-.377	-.051	.85

Legal Compliance						
Does your firm prohibit any actions liable to break applicable laws or distort free competition	.696	.293	.147	-.316	.007	.86
Does your firm reject any form of active or passive corruption in domestic or international transactions?	-.237	-.184	.532	.411	.072	.85
Integrity						
Have you enacted a moral code of conduct?	.495	-.125	-.165	.316	.563	.87
If yes, have they implemented a system to check compliance?	-.407	.599	.072	-.121	.388	.83
Transport						
Transport policy in order to reduce the environmental impact of travel?	.279	.578	-.206	.324	.146	.84
Promote public transport use or walking and cycling	-.375	.697	.019	-.010	-.028	.79
Leadership and Management						
A Sustainability/ Sustainable Development policy or plan?	.60	.238	-.077	-.410	-.084	.88
Is it communicated to alls users?	-.319	-.211	.490	.404	.105	.83
Corporate Social Responsibility Policy?	.500	-.168	-.056	.324	.554	.92
Is it communicated to all users?	-.395	.577	-.029	-.109	.375	.79
Organization has an environmental policy?	.257	.584	-.281	.313	.070	.91
Is it communicated to all users?	-.332	.749	.211	.061	-.055	.91
Do you find organization monitor and report on its performance in Sustainable Development?	.715	.302	.231	-.357	-.082	.86
You have 'Sustainable Development champions'.	-.288	-.221	.563	.393	-.04	.90
Waste Minimisation/ Resource Efficiency						
Promote efficient use of resources?	.485	-.207	-.103	.318	.519	.89
Double –sided printing?	-.434	.546	-.108	-.128	.379	.90
Reuse scrap paper?	.128	.564	-.315	.281	.061	.89
Does your staff use reusable mugs and glasses (rather than disposable cups)?	-.369	.741	.170	.038	-.055	.79
Recycling						
Organization recycles office paper?	.225	.235	.238	.561	-.383	.76
Do you recycle other waste (e.g. aluminum cans, plastics)?	.310	.264	.163	.526	-.360	.77
Do you think all staff knows how to use your recycling system?	.293	.183	-.059	-.568	-.355	.78
Do you still have difficulty finding a recycling collector in your area?	.241	.180	-.073	.497	-.364	.80

Extraction Method: Principal Component Analysis with four factor extraction. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 11 iterations.

4.2 Demographic Analysis

Table No. 2 Demographic profile of the respondents

Variables	N	Percentage
Gender	Male = 139	52.06
	Female = 128	47.94
Qualification	Graduate = 191	71.54
	Post Graduate = 76	28.46
Income	< Rs.10,000 = 46	17.23
	Rs. 10,000 – 20,000 = 122	45.69
	> Rs. 30,000 = 99	37.08
Age	< 25 years = 139	52.06
	>25 years = 128	47.94

Table 3 Components of sustainability development that Impact buying behaviour Relative to Demographic Characteristics and TWAMS and FWAMS

Demographic Variables	R	R^2	Adjusted R^2	B	F	Significance
Knowledge of Sustainable Development and Corporate Values						
Male	.114	.013	.009	-.114	3.474**	.063
Female	.114	.013	.009	.114	3.474**	.063
Graduate	.033	.001	-.003	-.033	.286**	.593
PG	.033	.001	-.003	.033	.286**	.593
income>10,000	.063	.004	.000	.063	1.056**	.305
10,000-20,000	.020	.000	-.003	.020	.103**	.749
<20,000	.028	.001	-.003	.028	.202**	.654
>25 Yrs.	.186	.035	.031	-.186	9.523	.002
<25 Yrs.	.186	.035	.031	.186	9.523	.002
Consumer Rights						
Male	.007	.000	-.004	-.007	.013**	.908
Female	.007	.000	-.004	.007	.013**	.908
Graduate	.042	.002	-.002	.042	.467**	.495
PG	.042	.002	-.002	-.042	.467**	.495
income>10,000	.010	.000	-.004	-.010	.029**	.865
10,000-20,000	.017	.000	-.003	.017	.081**	.776
<20,000	.025	.001	-.003	-.025	.165**	.685
>25 Yrs.	.042	.002	-.002	-.042	.465**	.496
<25 Yrs.	.042	.002	-.002	.042	.465**	.496
Occupational Health and Safety						
Male	.006	.000	-.004	-.006	.010**	.919
Female	.006	.000	-.004	.006	.010**	.919
Graduate	.037	.001	-.002	.037	.372**	.542
PG	.037	.001	-.002	-.037	.372**	.542
income>10,000	.026	.001	-.003	-.026	.175**	.676
10,000-20,000	.069	.005	.001	.069	1.258**	.263
<20,000	.056	.003	-.001	-.056	.831**	.363
>25 Yrs.	.065	.004	.000	-.065	1.113**	.292
<25 Yrs	.065	.004	.000	.065	1.113**	.292
Industrial Hygiene						
Male	.046	.002	-.002	.046	.562**	.454
Female	.046	.002	-.002	-.046	.562**	.454
Graduate	.015	.000	-.004	-.015	.056**	.813
PG	.015	.000	-.004	.015	.056**	.813
income>10,000	.062	.004	.000	-.062	1.007**	.317
10,000-20,000	.081	.007	.003	-.081	1.763**	.185
<20,000	.138	.019	.015	.138	5.181*	.024
>25 Yrs.	.029	.001	-.003	-.029	.230**	.632
<25 Yrs	.029	.001	-.003	.029	.230**	.632
Management						
Male	.108	.012	.008	-.108	3.105**	.079

Female	.108	.012	.008	.108	3.105**	.079
Graduate	.032	.001	-.003	.032	.265**	.607
PG	.032	.001	-.003	.032	.265**	.607
income>10,000	.054	.003	-.001	-.054	.770**	.381
10,000-20,000	.011	.000	-.004	-.011	.034**	.853
<20,000	.043	.002	-.002	.043	.484**	.487
>25 Yrs.	.023	.001	-.003	-.023	.138**	.710
<25 Yrs	.023	.001	-.003	.023	.138**	.710
Environmental Protection						
Male	.015	.000	-.004	.015	.061**	.805
Female	.015	.000	-.004	.015	.061**	.805
Graduate	.057	.003	.000	.057	.876**	.350
PG	.057	.003	.000	-.057	.876**	.350
income>10,000	.068	.005	.001	-.068	1.238**	.267
10,000-20,000	.011	.000	-.004	.011	.031**	.861
<20,000	.033	.001	-.003	.033	.293**	.589
>25 Yrs.	.030	.001	-.003	-.030	.239**	.625
<25 Yrs	.030	.001	-.003	.030	.239**	.625
Responsible Procurement						
Male	.016	.000	-.004	-.016	.064**	.800
Female	.016	.000	-.004	.016	.064**	.800
Graduate	.100	.010	.006	.100	2.682**	.103
PG	.100	.010	.006	-.100	2.682**	.103
income>10,000	.035	.001	-.003	-.035	.320**	.572
10,000-20,000	.033	.001	-.003	-.033	.293**	.589
<20,000	.053	.003	-.001	.053	.740**	.390
>25 Yrs.	.016	.000	-.004	-.016	.064**	.800
<25 Yrs	.016	.000	-.004	.016	.064**	.800
Legal Compliance						
Male	.052	.003	-.001	-.052	.726**	.395
Female	.052	.003	-.001	.052	.726**	.395
Graduate	.050	.003	-.001	.050	.678**	.411
PG	.050	.003	-.001	.050	.678**	.411
income>10,000	.020	.000	-.003	-.020	.111**	.739
10,000-20,000	.099	.010	.006	.099	2.623**	.107
<20,000	.087	.008	.004	-.087	2.038**	.155
>25 Yrs.	.031	.001	-.003	-.031	.257**	.613
<25 Yrs	.031	.001	-.003	.031	.257**	.613
Integrity						
Male	.130	.017	.013	.130	4.535**	.034
Female	.130	.017	.013	-.130	4.535**	.034
Graduate	.002	.000	-.004	.002	.001**	.973
PG	.002	.000	-.004	-.002	.001**	.973
income>10,000	.076	.006	.002	.076	1.539**	.216
10,000-20,000	.102	.010	.007	-.102	2.799**	.095
<20,000	.046	.002	-.002	.046	.550**	.459
>25 Yrs.	.028	.001	-.003	.028	.210**	.647
<25 Yrs	.028	.001	-.003	-.028	.210**	.647
Transport						
Male	.025	.001	-.003	.025	.168**	.682
Female	.025	.001	-.003	-.025	.168**	.682
Graduate	.016	.000	-.004	.016	.064**	.801
PG	.016	.000	-.004	-.016	.064**	.801
income>10,000	.089	.008	.004	.016	.064**	.801
10,000-20,000	.055	.003	-.001	.055	.804**	.371
<20,000	.011	.000	-.004	.011	.033**	.856
>25 Yrs.	.016	.000	-.004	.016	.064**	.800
<25 Yrs	.016	.000	-.004	-.016	.064**	.800
Leadership and Management						

Male	.020	.000	-.003	.020	.107**	.744
Female	.020	.000	-.003	-.020	.107**	.744
Graduate	.020	.000	-.003	.020	.108**	.743
PG	.020	.000	-.003	-.020	.108**	.743
income>10,000	.033	.001	-.003	-.033	.294**	.588
10,000-20,000	.073	.005	.002	.073	1.439**	.231
<20,000	.052	.003	-.001	-.052	.720**	.397
>25 Yrs.	.035	.001	-.003	-.035	.322**	.571
<25 Yrs	.035	.001	-.003	.035	.322**	.571
Waste Minimisation/ Resource Efficiency						
Male	.036	.001	-.002	.036	.343**	.558
Female	.036	.001	-.002	-.036	.343**	.558
Graduate	.073	.005	.002	-.073	1.420**	.235
PG	.073	.005	.002	.073	1.420**	.235
income>10,000	.027	.001	-.003	-.027	.197**	.658
10,000-20,000	.002	.000	-.004	-.002	.001**	.970
<20,000	.022	.000	-.003	.022	.128**	.720
>25 Yrs.	.020	.000	-.003	.020	.109**	.741
<25 Yrs	.020	.000	-.003	.020	.109**	.741
Recycling						
Male	.009	.000	-.004	.009	.020**	.889
Female	.009	.000	-.004	-.009	.020**	.889
Graduate	.075	.006	.002	.075	1.517**	.219
PG	.075	.006	.002	-.075	1.517**	.219
income>10,000	.014	.000	-.004	.014	.052**	.820
10,000-20,000	.049	.002	-.001	.049	.627**	.429
<20,000	.057	.003	.000	-.057	.876**	.350
>25 Yrs.	.037	.001	-.002	-.037	.365**	.546
<25 Yrs	.037	.001	-.002	.037	.365**	.546
TWAMS						
Male	.002	.000	-.004	-.002	.001**	.972
Female	.002	.000	-.004	.002	.001**	.972
Graduate	.007	.000	-.004	-.007	.012**	.912
PG	.007	.000	-.004	-.007	.012**	.912
Below 10	.031	.001	-.003	-.031	.261**	.610
10-20	.131	.017	.014	-.131	4.654*	.032
Above 20	.166	.028	.024	.166	7.507	.007
Below 25	.121	.015	.011	.121	3.925*	.049
Above 25	.121	.015	.011	.121	3.925*	.049
FWAMS						
Male	.002	.000	-.004	.002	.001**	.972
Female	.002	.000	-.004	-.002	.001**	.972
Graduate	.007	.000	-.004	.007	.012**	.912
PG	.007	.000	-.004	-.007	.012**	.912
income>10,000	.031	.001	-.003	.031	.261**	.610
10,000-20,000	.131	.017	.014	.131	4.654*	.032
<20,000	.166	.028	.024	-.166	7.507	.007
>25 Yrs.	.121	.015	.011	-.121	3.925*	.049
<25 Yrs	.121	.015	.011	.121	3.925*	.049

- * Statistically significant at 0.05 level
- ** Statistically significant at 0.01 level

Table No. 4 Differences in sustainability development between TWAMS and FWAMS

Scale	TWAMS N= 104 Mean S.D.	FWAMS N= 161 Mean S.D.	t	Sig.
Knowledge of Sustainable Development and Corporate Values				
Engaged in a Sustainable Development Approach?	1.52 .50	1.55 .49	-.53	.37
Signed up the UN's Global Compact?	1.52 .50	1.53 .49	-.24	.66
Has you find someone in charge of Sustainable Development?	1.53 .50	1.55 .49	-.23	.66
Adopted a responsible procurement policy	1.47 .50	1.53 .50	-1.00	.86
Automobile sector fully engage in Sustainable Development?	1.55 .49	1.55 .49	-.02	.96
Firm undergone a life-cycle analysis?	1.50 .50	1.57 .49	-1.13	.14
Do you find another customer to be satisfied with the sustainability development?	1.55 .49	1.54 .49	.276	.57
Consumer's Rights				
Firm vigilant about fighting against any form of consumer discrimination?	1.52 .50	1.57 .49	-.77	.18
Firm vigilant about respecting their customers	1.54 .50	1.49 .50	.81	.22
Is your firm vigilant about giving services to the user after the purchasing the vehicle?	1.39 .49	1.44 .49	**-.**85	.08
Is your firm vigilant about retaining the customer's preference for the company	1.41 .49	1.42 .49	-.14	.77
Ensuring Health and Safety				
Ensuring health and safety while using the vehicle?	1.38 .48	1.47 .50	-1.50	.00
Firm vigilant about fighting against any form of consumer discrimination?	1.42 .49	1.47 .50	-.78	.02
Is your firm vigilant about respecting their customer?	1.41 .49	1.48 .50	-1.13	.03
Have the operating health and safety risks to user been identified, measured and controlled?	1.49 .50	1.43 .49	.88	.19
Are the consequences of accidents in terms of health and safety risks assessed for the environment	1.43 .49	1.49 .50	-1.02	.08
Industrial Hygiene				
implemented a process enabling the govt. to measure public's exposure to toxic products	1.47 .50	1.42 .49	.67	.24
Management				
Is your staff aware of the emergency management plans in force in your firm?	1.43 .49	1.44 .49	-.23	.63
Are they regularly updated?	1.46 .50	1.43 .49	.42	.43
Environmental Protection				
Has your firm adopted a quality policy?	1.45 .50	1.45 .49	-.02	.96
Responsible procurement				
Do you check that your suppliers comply with your environmental management criteria?	1.45 .50	1.47 .49	-.32	.51
Legal Compliance				
Does your firm prohibit any actions liable to break applicable laws or distort free competition	1.46 .50	1.42 .50	.52	.34
Does your firm reject any form of active or passive corruption in domestic or international transactions?	1.47 .50	1.44 .49	.38	.48
Integrity				
Have you enacted a moral code of conduct?	1.49 .50	1.42 .49	1.08	.11
If yes, have they implemented a system to check compliance?	1.40 .49	1.49 .49	-1.49	.01
Transport				
Transport policy in order to reduce the environmental impact of travel?	1.49 .50	1.42 .50	1.08	.11
Promote public transport use or walking and cycling	1.41 .49	1.45 .49	-.64	.19

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Leadership and Management						
A Sustainability/ Sustainable Development policy or plan?	1.43	.49	1.46	.49	-.33	.49
Is it communicated to all users?	1.47	.50	1.46	.50	-.52	.28
Corporate Social Responsibility Policy?	1.45	.50	1.45	.50	.08	.86
Is it communicated to all users?	1.49	.50	1.41	.49	-.12	.03
Organization has an environmental policy?	1.41	.49	1.43	.49	1.18	.03
Is it communicated to all users?	1.43	.49	1.44	.49	-.34	.48
Do you find organization monitor and report on its performance in Sustainable Development?	1.42	.49	1.45	.49	-.13	.78
You have 'Sustainable Development champions'.	1.44	.49	1.45	.49	-.48	.32
Waste Minimisation/ Resource Efficiency						
Promote efficient use of resources?	1.43	.49	1.49	.49	-.27	.57
Double –sided printing?	1.40	.50	1.44	.50	-1.02	.08
Reuse scrap paper?	1.46	.49	1.44	.49	.32	.53
Does your staff use reusable mugs and glasses (rather than disposable cups)?	1.40	.49	1.44	.49	-.59	.22
Recycling						
Organization recycles office paper?	1.44	.49	1.45	.49	.02	.96
Do you recycle other waste (e.g. aluminum cans, plastics)?	1.43	.49	1.42	.49	.06	.02
Do you think all staff knows how to use your recycling system?	1.48	.50	1.42	.49	.93	.14
Do you still have difficulty finding a recycling collector in your area?	1.44	.49	1.41	.49	.42	.02

Perceived sustainability development in TWAMS and FWAMS

Student's *t*-test was done to identify differences between TWAMS and FWAMS. A very surprising finding which came to the fore was that sustainability development in automobile sector was perceived to be higher in FWAMS (Table 4). Table represents that FWAMS is higher than TWAMS ensures a health and safety while using the vehicle (sig .00), respect their customers (sig .03), implemented a system to check compliance in term of code of conduct (sig .01) and Firm vigilant about fighting against any form of consumer discrimination (sig .02). Furthermore, they responded that FWAMS has a sound environmental policy as compare to TWAMS. But very interesting finding come forward during the research was that the company policy of the Consumer sustainability development is not communicated to all the consumers, the reason may be that they convey all they convey type of this information as per the income and buying behavior of the consumer. Whereas TWAMS conveys this information very efficiently to their consumers.

5. DISCUSSION AND CONCLUSION

The study examines the quality of primary healthcare services in rural areas in northern India by using a 43-item scale. This scale was based on a 22-item instrument developed and validated Chow and Chen (2011), categorized in three components, i.e. social development, economic development and environmental development. Few amendments were done in the scale as per the applicability area. These amendments had emerged after focus group discussions and in-depth interviews. The scale tested well for reliability with an overall Cronbach's alpha value of 0.89. The mean scores were reported to be positive for all the factors; being high for 'Leadership and Management' (11.56) and 'Knowledge of Sustainable Development and Corporate Values,' (10.77), Employee Rights,' (5.91) and very low for 'Industrial Hygiene' (1.44) and 'Environmental Protection' (1.45).

Interestingly, it is been discovered that users of TWAMS and FWAMS have a positive buying behavior for the automobile in future. Ability to provide proper consumer services, ensuring health and safety, proper environmental policy and proper recycling of the waste were more important than other factors, whereas suppliers comply with the environmental management criteria, break applicable laws or distort free competition and promote public transport use or walking and cycling became unimportant while all other aspects of automobile sector assumed great significance. This is another lesson for automobile sector.

Changes in education and income, the buying behavior of the consumer also changes. Buying behavior of the consumer is generally depending upon the income, age and education of the consumer. If a consumer has a good financial stability then ultimately he will prefer to purchase the branded automobile company. However, it was surprising to observe that less aged consumer and those with less income did not consider themselves to buy only a two wheel automobile, but they are also willing to purchase FWAMS for leading the comfort life.

The most surprising finding of the paper that sustainability was perceived to be higher in FWAMS as

compare to the TWAMS. Inadequate knowledge of the employees about the organisation's collaboration with UN's Global compact, inability in fighting against consumer's discrimination, firm's inability to measure and control the health and safety risks, poor implementation in measuring public's exposure to toxic products were the important drawbacks reported at TWAMS. This is an outrageous as TWAMS as it is been considered as the more preferable sector by the lower, middle as well as the high class families. This finding contradicts the government's objective of making high sustainability in the TWAMS, so that consumer's buying the two wheeler will not harm the environment. The pertinent who describe that somehow government is successful at his path that TWAMS believe in recycling the waster and ultimately, which leads in the environment safety.

The selection of the applicants was done on the basis of researcher's convenience may reduce the overall generability of the present study but the result of the study urge the government, researchers, businessman, policy makers to consider the perceptions of consumer as well in order to affect improvement in the sustainability development in the automobile sector and subsequently enhance their buying behavior. Instantaneous steps should be undertaken to aware the consumer their rights, industrial hygiene, ensuring health and safety of the consumers. The study was however, limited to northern India. Although there is no shortage of empirical researches on sustainability (Chan 2005; Chang and Kuo 2008; Erol et al. 2009), these recent works have still measured the sustainability dimensions based on qualitative analysis using company declarations (Steurer et al. 2005), on empirical analysis using annual reports (Chang and Kuo 2008), or on approximations using a single indicator of companies (Chan 2005; Lindgreen et al. 2009). But one weakness of this approach to study CSD applications is that these studies have failed to address adequately the needs of industry decision makers and the perception of the consumers. Therefore, it is been advised that similar studies be carried out in the other part of the country and include the Two Wheeler Automobile Sector as well as Four Wheeler Automobile Sector.

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ANNEXURE

Section 1: Knowledge of Sustainable Development and Corporate Values

Scale	Yes	Neutral	No
Knowledge of Sustainable Development and Corporate Values			
Is your firm engaged in a Sustainable Development Approach?			
Has your firm signed up the UN's Global Compact?			
Has your firm appointed someone in charge of Sustainable Development?			
Has your firm adopted a responsible procurement policy			
Do you ask your suppliers to engage in Sustainable Development?			
Have your products undergone a life-cycle analysis?			
Have your other clients asked you to justify your commitments in terms of Sustainable Development?			

Section 2: Consumer Rights

	Yes	Neutral	No
Is your firm vigilant about fighting against any form of job discrimination?			
Is your firm vigilant about respecting social dialogue (freedom of association and collective bargaining)?			
Is your firm vigilant about preventing recourse to any forced or compulsory labor?			
Is your firm vigilant about not having recourse to child labour?			

Section 3: Ensuring Health and Safety

	Yes	Neutral	No
Have you implemented a management system relative to occupational health and safety?			
If yes, do you check that the principles defined therein are complied with?			
Do you pay special attention to compliance with your health and safety management policy?			
Have the operating health and safety risks to staff, suppliers and subcontractors been identified, measured and controlled?			
Are the consequences of accidents in terms of health and safety risks assessed for the environment			

Section 4: Industrial Hygiene

	Yes	Neutral	No
Have you implemented a process enabling you to measure your employees' exposure to toxic products			

Section 5: Management

	Yes	Neutral	No
Is your staff aware of the emergency management plans in force in your firm?			
Are they regularly updated?			

Section 6: Environmental Protection

	Yes	Neutral	No
Has your firm adopted a quality policy?			

Section 7: Responsible procurement

	Yes	Neutral	No
Do you check that your suppliers comply with your environmental management criteria?			

Section 8: Legal Compliance

	Yes	Neutral	No
Does your firm prohibit any actions liable to break applicable laws or distort free competition			
Does your firm reject any form of active or passive corruption in domestic or international transactions?			

Section 9: Integrity

	Yes	Neutral	No
Have you enacted a moral code of conduct?			
If yes, have you implemented a system to check compliance?			

Section 10: Transport

	Yes	Neutral	No
Does your organisation have a travel plan or a transport policy in order to reduce the environmental impact of travel?			
Does your organisation promote public transport use or walking and cycling			
Does your organisation require staff to use cars for their work?			

Section 11: Leadership and Management

Does your organisation have any of the following?

	Yes	Neutral	No
A Sustainability/ Sustainable Development policy or plan?			
Is it communicated to alls staff?			
Does your company have a Corporate Social Responsibility Policy?			
Is it communicated to all staff?			
Does your organisation have an environmental policy?			
Is it communicated to all staff?			
Does your organisation monitor and report on its performance in Sustainable Development?			
Do you have any 'Sustainable Development champions', i.e. do you have staff whose role it is to promote SD or who receive or offer training in SD?			

Section 12: Waste Minimisation/ Resource Efficiency

	Yes	Neutral	No
Does your organisation promote efficient use of resources?			
Does your staff do double –sided printing?			
Does your staff reuse scrap paper?			
Does your staff use reusable mugs and glasses (rather than disposable cups)?			

Section 13: Recycling

	Yes	Neutral	No
Does you organisation recycle office paper?			
Do you recycle other waste (e.g. aluminum cans, plastics)?			
Do you think all staff knows how to use your recycling system?			
Do you still have difficulty finding a recycling collector in your area?			

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