Impact of Gender on Pre-Purchasing Behaviour of Consumers of Electric Vehicle

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Abstract

The demand of electric vehicle is increasing day by day because of its contribution in environmental health. The main objective of this study was to explore the gender impact on pre-purchasing behaviour of consumers of electric vehicle. The study was based on the quantitative design. The study was conducted in the Kathmandu valley among the electric vehicle users. The total sample size was 55. The standard structured questionnaire survey was used to collect the data. the study found that majority (72.7%) of the owner of electric vehicle were male. comparatively higher number (23.6%) customers had given most important to the information of electric vehicle based own their previous experience whereas least (1.8%) customers had given most important to the information disseminated through advertisement. Similarly, higher numbers (61.8%) customers reported that if they had any doubts or queries about the electric vehicle before purchasing decision, they directly consulted with the Company dealer to be clear in their queries. There was no impact of gender on pre-purchasing behaviour of customers of electric vehicles. Both male and female had similar practice of seeking the information before taking purchase decision. The future researcher should conduct the research on the purchase decision factors related to the electric vehicle users.
Keywords: Behaviour, Consumer, Electric-vehicle, Gender, Pre-purchasing

Introduction

Polluted air is harmful for Human health and environment. The pollution created by transport sector directly contributes in greenhouse gas emissions so there is need to think about the alternative of diesel and petrol vehicles. World Health Organization (WHO) characterizes air pollution as contamination of the indoor or outside condition by any concoction, physical, or biological agent that adjusts the normal qualities of the environment. Normal wellsprings of air contamination are family unit ignition gadgets, engine vehicles, modern offices, and forest fires (World Health Organization (WHO), 2017). Air pollution is a complex mixture of thousands of segments, dominant part of which incorporate airborne Particulate Matter (PM) and vaporous toxins like ozone (O3), nitrogen dioxide (NO2), unstable natural mixes (like benzene), carbon monoxide (CO), sulfur dioxide (SO2), and so forth (Newby, Mannucci, & al., 2015). Kathmandu city is fully crowded with various types of vehicles. With the increasing numbers of vehicles, the air pollution is also increasing. Recently, the demand of electric vehicles (EV) is increasing in Nepal because people are aware on the need of clean environment, and health consciousness. The Kathmandu Post had published one news on title, Electric vehicles are the future of mobility, but is Nepal ready?" on dated October 26, 2019, reported that the number of EVs in the country, including private two- and four-wheelers and public vehicles, reached 21,000 in 2017 according to the Electric Vehicle Association of Nepal (EVAN). In 2018, that number crossed 45,000. Today, around 10 percent of vehicles sold in the country are EVs. The data shows the growing demand of EV among the consumers. Nepal Government has also promoting the electric vehicle by providing the subsidy in tax and increasing the amount of finance service of Bank.

Purchasing behaviour of customer is influenced by various factors. The empirical results of Wang, Fan, Zhao, Yang, and Fu showed that the attitude toward HEVs, subjective norm, perceived behavioral control (the three primary elements of the Theory of Planned Behavior model) and personal moral norm partially mediate the effect of consumers' environmental concerns about their intention to adopt HEVs (Wang, Fan, Zhao, Yang, & Fu, 2016). Ziegler noted that environmentally aware potential car buyers have a higher stated preference for EVs (Ziegler, 2012). Nayum, Klockner, and Mehmetoglu showed that EV buyers had a significantly different socio-psychological profile from any group of conventional car buyers (Nayum, Klöckner, & Mehmetoglu, 2016). A consumer's propensity to buy an EV increases with youth, education and green life style (Hidrue, Parsons, Kempton, & Gardner, 2011). People between their mid-twenties and mid-sixties are more willing to buy EVs because, in the case of those in their mid-twenties, they are young enough to show a high level of environmental value and, in the case of those in their mid-sixties, they are old enough to have a medium-high level of income (Hackbarth & Madlener, 2013; Junquera, Moreno, & Álvarez, 2016). According to Creusen, females respond to products differently as they appreciate the more symbolic facets of the

product. In their mind, beauty, prestige, or any other emotional aspect is of high importance for them. Men, on the other hand, evaluate products from their functional perspective and practicality. Involvement is also important as products tend to have gender as well (Creusen, 2010). Douglas and Phillips argue that based on perception in society, products and services have their feminine and masculine identities, and consumers tend to identify themselves with them. Thus, the gender of products and services has an effect on consumer attitudes (Douglas & Phillips, 2010). Coming back to Hoyer & MacInnnis (2007), the gender of products does not seem to be strictly set. Nowadays, there are many products on the market which are less sex-typed and more oriented to satisfy the shifting needs of consumers. For example, females are starting to have a more positive attitude towards motorbikes and cars which have been considered a male domain for a long time, or men are using more skin-care products (Hoyer & MacInnis, 2007).

In the Nepalese context, there are no adequate study done on the consumer's attitude and preference towards purchasing of electric vehicle so this study will be beneficial to all concerned person and authorities to know the gender perspective on pre-purchasing behaviour of consumers of electric vehicle.

Materials & Methods
The study was based on the quantitative design because it had collected the data by using the structured survey questionnaire having with the close ended questions. This study employed descriptive research design. Descriptive research design was used to measure the pre-purchasing behaviors of customers of Electric vehicle. The study analyzed the pre-purchasing behavior of customers of electric vehicle from the gender perspectives. The study was carried out in Kathmandu Valley targeting the consumers of electric vehicle. The total sample size was 55. Judgmental sampling technique was used to select the respondents. The reliability of data was checked by calculating the Cronbach's Alpha value which was .934 which indicates the excellent quality of data.

Result & Discussion
The study had collected the demographic data of respondents as well as it had also explored the gender perspective on pre-purchasing behaviour of customers of electric vehicle. The data presented in Table 1 shows the demographic distribution of respondents. The data presents the distribution of gender, caste, marital status, education, and occupation.

1. Demographic Information of Respondents

Table 1: Demographic Information of Respondents

		Frequency	Percent
Gender	Male	40	72.7
	Female	15	27.3
	Total	**55**	**100.0**
Caste	Chhetri	11	20.0
	Brahamin	14	25.5
	Newar	23	41.8
	Tamang	3	5.5
	Marwadi	2	3.6
	Rai	1	1.8
	Others	1	1.8
	Total	**55**	**100.0**
Marital status	Married	54	98.2
	Unmarried	1	1.8
	Total	**55**	**100.0**
Education	Under SEE	1	1.8
	High School	4	7.3
	Certificate or + 2	6	10.9
	Bachelor	23	41.8
	Masters	17	30.9
	M.Phil	2	3.6
	PhD	2	3.6
	Total	**55**	**100.0**
Occupation	Business	29	52.7
	Govt. Job	7	12.7
	Non-government job (NGOs)	4	7.3
	Private job	11	20.0
	Self-employee	1	1.8
	Retired	2	3.6
	Student/unemployed	1	1.8
	Total	**55**	**100.0**

Source: Field Survey, 2020

The study asked the question of owner of electric vehicle who had detail information and authority of electric vehicle. In this connection, the study found that majority (72.7%) of the

owner of electric vehicle were male. Similarly, the caste-based analysis shows that comparatively the highest number (41.8%) of Newar were the customer of elective vehicle whereas least number (1.8%) of Rai and other caste were reported about the use of electric vehicle. Almost all customers were married. The educational status shows that higher number (41.8%) vehicle users had Bachelor level education whereas very lest (3.6%) customers had MPhil and PhD level of education. Besides that, the study had also analyzed the occupation of electric vehicle users. The data shows more than fifty percent (52.7%) of electric vehicle users were business person followed by 20 percent had private job whereas very least (1.8%) number of self-employees were the electric vehicle users.

2. Source of Information of Electric Vehicle

The one objective of this study was to identify the pre-purchasing behaviour of customers who searched the information of electric vehicle before doing the purchase decision. Any customers tried to know the various features, facilities, quality and service of electric vehicle before selecting any brand and types of vehicle. In this connection, the study had asked the source of information of electric vehicle.

Table 2: Source of Information of Electric Vehicle

		Not Important	Less Important	Moderately Important	Slightly Important	Most Important	Total
From Friends and relatives	Male	5.0%	5.0%	40.0%	30.0%	20.0%	100.0%
	Female	6.7%		53.3%	20.0%	20.0%	100.0%
Total		**5.5%**	**3.6%**	**43.6%**	**27.3%**	**20.0%**	**100.0%**
From own previous experience	Male	7.5%	2.5%	12.5%	50.0%	27.5%	100.0%
	Female	6.7%		13.3%	66.7%	13.3%	100.0%
Total		**7.3%**	**1.8%**	**12.7%**	**54.5%**	**23.6%**	**100.0%**
From family members	Male	2.5%	10.0%	37.5%	40.0%	10.0%	100.0%
	Female			40.0%	26.7%	33.3%	100.0%
Total		**1.8%**	**7.3%**	**38.2%**	**36.4%**	**16.4%**	**100.0%**
From Advertising	Male	5.0%	40.0%	22.5%	30.0%	2.5%	100.0%
	Female	6.7%	33.3%	26.7%	33.3%		100.0%
Total		**5.5%**	**38.2%**	**23.6%**	**30.9%**	**1.8%**	**100.0%**
From dealer's representative	Male	2.5%	5.0%	30.0%	42.5%	20.0%	100.0%
	Female	6.7%		20.0%	73.3%		100.0%
Total		**3.6%**	**3.6%**	**27.3%**	**50.9%**	**14.5%**	**100.0%**
From car users	Male	2.5%	15.0%	32.5%	27.5%	22.5%	100.0%
	Female		6.7%	53.3%	26.7%	13.3%	100.0%
Total		**1.8%**	**12.7%**	**38.2%**	**27.3%**	**20.0%**	**100.0%**
From auto shows	Male	7.5%	22.5%	32.5%	27.5%	10.0%	100.0%
	Female		13.3%	53.3%	20.0%	13.3%	100.0%
Total		**5.5%**	**20.0%**	**38.2%**	**25.5%**	**10.9%**	**100.0%**
Internet	Male	12.5%	10.0%	22.5%	40.0%	15.0%	100.0%
	Female		6.7%	20.0%	53.3%	20.0%	100.0%
Total		**9.1%**	**9.1%**	**21.8%**	**43.6%**	**16.4%**	**100.0%**

Source: Field Survey, 2020

The above data shows that comparatively higher number (23.6%) customers had given most important to the information of electric vehicle based own their previous experience whereas least (1.8%) customers had given most important to the information disseminated through advertisement. Information sharing from friends and relatives, from car users, family members and auto shows were the source of information for the car users. This is the age of technology so people can collect information quickly from the online technology. Internet is main online source where people can search more information of their interest. As the discussion with the customers, quality service, reliability and affordability of price, brand reputation, after sales service, guarantee/warranty, resale value, discounts, offer, gifts, pick up etc. were the main
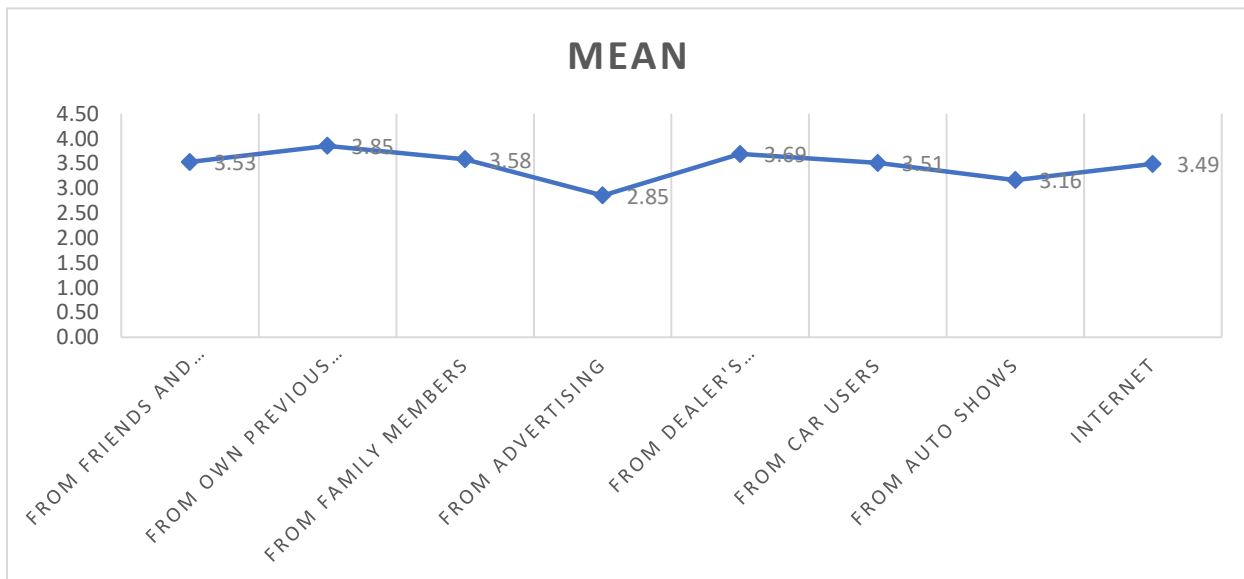
things of queries before taking purchase decision.

Figure 1: Mean value of source of information

The mean value presented in the Figure 1 shows that the own previous experience had higher mean value than other source of information. Very low mean value was found in advertising as a source of information. The mean value of 'from friends and relatives, from own previous experience, from family members, from dealers, from car users' were very close to the 'slightly important, whereas the mean value of 'from auto show, internet, and from advertising' were closed to the 'moderately important'.

3. Most trustworthy source to clear any doubts/ queries

One individual can collect the information of their interest areas by using the various sources but among these sources, people may choose one or two sources which can be more trustworthy for them. People take any decision based on the more reliable information. Here, the study discussed with the customers of electric vehicle about their most trustworthy source of information. In this response, higher numbers (61.8%) customers reported that if they had any doubts or queries

about the electric vehicle before purchasing decision, they directly consulted with the Company dealer to be clear in their queries.

Table 3: If you have any doubts/ queries, to whom did you prefer to approach before purchasing your car?

		Company dealer	Brochure	Auto mechanics	Friends	Family	Car manufacturer	Internet	Total
Gender	Male	60.0%	2.5%	5.0%	20.0%	2.5%	5.0%	5.0%	100.0%
	Female	66.7%		6.7%	13.3%	13.3%			100.0%
Total		61.8%	1.8%	5.5%	18.2%	5.5%	3.6%	3.6%	100.0%

Source: Field Survey, 2020

The data presented in Table 3 shows that second higher number (18.2%) customers visited friends to clear their doubts and queries followed by family (5.5%), auto mechanics (5.5%) and others like internet, car manufacturer and brochure. The result indicates that customers finally believe on the authorized dealers of selected vehicles so company should effectively communicate with the customers and try to provide adequate information in convincing matter so that one customer can take purchase decision.

4. Impact of gender on pre-purchasing behaviour of customers

The main objective of this study was to identify the impact of gender on pre-purchasing behaviour of customers of electric vehicle so the study had statistically calculated the impact of gender on pre-purchasing behaviour. The study run the independent sample t-test to find out the mean differences between the male and female customers. The finding is presented in the Table 4. The mean value of male and females was almost similar.

Table 4: Impact of gender on pre-purchasing behaviour of customers

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
Pre-purchasing	Male	40	27.4250	4.22379	.66784
	Female	15	28.3333	4.04734	1.04502

Independent Samples Test									
	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper

Pre-purchasing	Equal variances assumed	.032	.860	-.718	53	.476	-.90833	1.26492	-3.44545	1.62878
	Equal variances not assumed			-.732	26.202	.470	-.90833	1.24019	-3.45663	1.63996

Source: Field Survey, 2020

The significant value presented in above table shows that there was no significant difference between the male and female on their pre-purchasing behaviour because the p value = .476 which is greater than .05 significant level at the 95% confidence interval. It indicates that there was no impact of gender on pre-purchasing behaviour of customers of electric vehicles. Both male and female had similar practice of seeking the information before taking purchase decision.

Conclusion & Recommendation

The study shows that for the collection of general information at the time of pre-purchasing of electric vehicle. Customers uses various sources like friends and relatives, own previous experience, family members, advertising, company dealer's representative, other car users, auto shows, internet etc. among them, initially people more believed in their own previous experience followed by information of representative of company authorized dealers, internet, family members and other friends and relatives. Though, when customers had any serious queries and doubt about the brand and quality service of electric vehicle, majority of customers directly consulted with the concerned company dealers to be clear about their queries and doubt then they came to the purchase decision. The pre-purchasing time, customers searched the many reliable information about the quality service, reliability and affordability of price, brand reputation, after sales service, guarantee/warranty, resale value, discounts, offer, gifts, pick up etc. of electric vehicle before taking purchase decision. There was no impact of gender on pre-purchasing behaviour of customer of electric vehicle. The future researcher should conduct the research on the purchase decision factors related to the electric vehicle users.

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