



## An Impact of Customer Perception towards Electric Vehicle in Coimbatore City

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### ABSTRACT

This paper includes what are the various factors that affect the overall perception of a consumer towards an EV and whether or not those factors have a relationship with the perception towards the electric vehicle. Also, this study includes topics like why should we switch to electric vehicle and what is the need for an electric vehicle and how should we adopt it and are we ready enough to adopt this technology in to our daily routine. And what are the various types of EV currently present and what all are the factors that directly influence an EV adoption in country like India. And when was first EV introduced and how does it grow from back then until now. This report essentially, provides an in-depth study of the consumer's attitude and perceptions towards Green vehicles. It tries to answer fundamental questions that affect the awareness level and preference of the consumers to opt for an environment friendly car over a normal car.

### INTRODUCTION

An electric vehicle (EV) is a vehicle that uses one or more electric motors for propulsion. It can be powered by a collector system, with electricity from extravehicular sources, or it can be powered autonomously by a battery (sometimes charged by solar panels, or by converting fuel to electricity using fuel cells or a generator). EVs include, but are not limited to, road and rail vehicles, surface and underwater vessel, electric aircraft and electric spacecraft.

### STATEMENT OF THE PROBLEMS:

The aim of the study is to know the impact of customer perception of Electric vehicle. This research study was customer awareness of electric vehicle and to find out the Company problem towards making the electric vehicles and also shortage of raw materials. About the competition in the market for the electric. The electric vehicles are the charging takes longer. The driving range on the full charge will be required for the electric vehicles.

### OBJECTIVE

1. To study awareness of customers about electric vehicles in market.
2. To study the overall forces and barriers that act as a hurdle in the path of the consumer for adopting the EV.

### REVIEW OF LITERATURE

**Fanchao Liao, Eric Molin and Bert van Wee (2017)** states that the many governments have initiated and implemented policies to stimulate and encourage electric vehicle (EV) production and adoption. The expectation is that better knowledge of consumer preferences for EV can make these policies more effective and efficient. The findings are also aim to find out which individual-related variables affect one's preference for EV.

**Sajan Acharya (2019)** This report essentially, provides an in-depth study of the consumer's attitude and perceptions towards Green vehicles. It tries to answer fundamental questions that affect the awareness level and preference of the consumers to opt for an environment friendly car over a normal car.

**Omkar Tupe (2020)** has stated the objective of this paper is to understand consumer perception and the factors important for the purchase of EVs in India. The findings are With the depletion of fossil fuels and constant hike in fuel prices, there is a need for energy transition in vehicles in India.

**Atharva Ayachit (2021)** Therefore, this study aims to investigate the factors influencing consumers' purchase of electric vehicles in order to provide a reference for the design and development of electric vehicles and offer suggestions for companies regarding future consumer purchases of electric vehicles.

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## SCOPE

The scope of the know the present market demand for the electric vehicles in the society. And also, the customer preferences on the electric vehicles in the Coimbatore city. The scope of the study is to know growth in demand for electric vehicles and also know the merits and demerits of the electric vehicles impact of customer perception on the usage of electric vehicles in the present market.

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## METHODOLOGY USED IN THIS STUDY RESEARCH DESIGN:

This Research was aimed at analysing the problems

and prospectus of An impact of customer perception towards electric vehicle in Coimbatore city. In this method questionnaires are asked directly to the customer using electric vehicles and the answers are collected in a question sheet in ticking their answers for appropriate question.

### SAMPLE SIZE:

The sample size is 123 respondents

### AREA OF THE STUDY:

This study is conducted in the Coimbatore city.

### DATA COLLECTION:

Data are facts may be derived from several source.

Data is of two types Primary and Secondary.

### PRIMARY DATA:

Primary data consist of face-to-face interaction, Searching something for Creative information about particular research or project.

### SECONDARY DATA:

Secondary data was collected with help of internet, newspaper, magazines, research paper, journals, books and respective websites were also used to gather the data and information.

### SAMPLING METHOD:

The respondents were selected by convenient sampling method.

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## LIMITATION OF THE STUDY:

Any new entry of a company into the EV market in India will not be possible before studying the Indian consumer, their requirement, and their purchasing power. Sample size is limited to 123 respondents.

### TABLE: Simple percentage analysis

Showing Personal factors and problems faced.

Factors	Options	No. of Respondents	Percentage
Gender	Male	73	59.3
	Female	50	40.7
Age	18-28	119	96.7
	28-38	2	1.6
	38-48	1	0.8
Annual income	Above 48	1	0.8
	Below 2 lakhs	95	77.2
	2lakhs-4lakhs	19	15.4

	4lakhs-6lakhs	8	6.5
	Above 6lakhs	1	0.8
Vehicles owned	Yes	90	73.2
	No	33	26.8
Type of vehicle	Electric vehicle	9	7.3
	Petrol vehicle	104	84.6
	Diesel vehicle	9	7.3
	LPG	1	0.8
Having electric vehicle	Yes	26	21.1
	No	97	78.9
Know about electric vehicle	Television	26	21.1
	Newspaper	14	11.4
	Internet	51	41.5
	Friends/relatives	32	26
Driven an electric vehicle	Yes	69	56.1
	No	54	43.9
Vehicles owned	Two or more vehicles	44	35.8
	One fuel and one electric vehicle	11	8.9
	Two or more electric vehicle	2	1.6
	More than two vehicles	11	8.9

	One electric vehicle	2	1.6
	One petrol vehicle	53	43.1
Preference of vehicle	Electric scooter	26	21.1
	Electric car	19	15.4
	Bike/scooter(p)	38	30.9
	Car(P)	23	18.7
	Car(D)	17	13.8
Period of petrol vehicle	Less than 1 year	23	18.7
	1-2 years	15	12.2
	2-3 years	17	13.8
	More than 3 years	53	43.1
	Never used	15	12.2
Period of electric vehicle	Less than 1 year	37	30.1
	1-2 years	8	6.5
	2-3 years	7	5.7
	More than 3 years	2	1.6

	Never used	69	56.1
Cost maintenance	Electric	35	28.5
	Petrol	59	48
	Diesel	20	16.3
	LPG	9	7.3
Opinion about electric vehicle	Speed	34	27.6
	Price	32	26
	Design	12	9.8
	Long distance	37	30.1
	Fire accidents	8	6.5

Preference electric vehicle	Cost	39	31.7
	Maintenance	34	27.6
	Design	9	7.3
	Speed	8	6.5
	Mileage	21	17.1
	Distance coverage	12	9.8
Charges more comfort	Yes	73	59.3
	No	50	40.7
Comparison made	Yes	73	59.3
	No	50	40.7
High demand	Yes	75	61
	No	48	39
Barrier for purchasing	Doubts about usability	35	28.5
	Relative price point	33	26.8
	High of cost	29	23.6
	Mileage consumption	26	21.1
Environment friendly	Strongly agree	35	28.5
	Agree	49	39.8
	Neutral	19	15.4
	Disagree	5	4.1
	Strongly disagree	7	5.7
	Don't know	8	6.5
Cost about electric vehicle	Strongly agree	19	15.4
	Agree	30	24.4
	Neutral	41	33.3
	Disagree	16	13

	Strongly disagree	3	2.4
	Don't know	14	11.4
Demographic people	Younger adults	30	24.4
	Children	18	14.6
	Middle aged people	63	51.2
	Old aged people	12	9.8
Encourage people to use	Public charging infrastructure	42	34.1
	Priority parking	12	9.8
	Zero emission freight	33	26.8
	Advertisement	36	29.3

### INTERPRETATION

This study reveals that majority of respondents 59.3% are Male, Majority 96.7% of the respondents are belongs to 18-28 years, Majority is the 77.2% of the respondents are earn upto above the 6 lakhs, Majority is 73.2% of the respondents are given yes, Majority is 84.6% of the respondents are belongs to petrol vehicle ,Majority is 78.9% are belongs to no, Majority is 41.5% respondents are belongs to Internet, Majority is 56.1% respondents are belongs to yes, Majority is 43.1% respondents are belongs to one petrol vehicle, Majority is 30.9% respondents are belongs to Bike/scooter(p),Majority is 43.1% respondents are belongs to more than 3 years, Majority is 56.1% respondents belongs to never used electric vehicles, Majority is 48% respondents are belongs to petrol, Majority is 30.1% respondents are belongs to not comfortable for long distance travel, Majority is 31.7% respondents are belongs to cost, Majority is 59.3% respondents are belongs to yes, Majority is 59.3% respondents are belongs to yes, Majority is 61% respondents are belongs to yes, Majority is 28.5% respondents are belongs to doubts about usability, Majority is 39.8% respondents are belongs to agree, Majority is 33.3% respondents are belongs to neutral, Majority is 51.2% respondents are belongs to middle aged people, Majority is 29.3% respondents are belongs to advertisement.

### FINDINGS

1. This study reveals that majority of respondents 59.3% are Male.
2. Majority 96.7% of the respondents are belongs to 18-28 years.
3. Majority is the 77.2% of the respondents are earn upto above the 6 lakhs.
4. Majority is 73.2% of the respondents are given yes.
5. Majority is 84.6% of the respondents are belongs to petrol vehicle.
6. Majority is 78.9% are belongs to no.
7. Majority is 41.5% respondents are belongs to Internet.
8. Majority is 56.1% respondents are belongs to yes.
9. Majority is 43.1% respondents are belongs to one petrol vehicle.
10. Majority is 30.9% respondents are belongs to Bike/scooter(p).
11. Majority is 43.1% respondents are belongs to more than 3 years.
12. Majority is 56.1% respondents belongs to never used electric vehicles.
13. Majority is 48% respondents are belongs to petrol.
14. Majority is 30.1% respondents are belongs to not comfortable for long distance travel.
15. Majority is 31.7% respondents are belongs to cost.
16. Majority is 59.3% respondents are belongs to Yes.
17. Majority is 59.3% respondents are belongs to yes.

18. Majority is 61% respondents are belongs to yes.
19. Majority is 28.5% respondents are belongs to doubts about usability.
20. Majority is 39.8% respondents are belongs to agree.
21. Majority is 33.3% respondents are belongs to neutral.
22. Majority is 51.2% respondents are belongs to middle aged people.
23. Majority is 29.3% respondents are belongs to advertisement.

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## SUGGESTIONS

1. Electric vehicle are more user- friendly and everyone must aware of that rumors and reviews of single user. Make people aware about global warming threads and create more awareness then encourage the people to use e- vehicles instead of combustion types of vehicle.
2. Electric vehicles produce less life cycle emission than traditional cars. Electric emission are lower because creating electricity requires burning less gasoline or diesel.
3. Quicker charging batteries with high capacity of usability may pull more users towards the Electric vehicles.

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## CONCLUSION

Consumer behavior plays a critical role in shaping the impact of customer perception towards electric vehicle. Consumers' attitudes, perceptions, and preferences are shaped by various factors such as personal values, lifestyle, social influences, and marketing communication. Brand image, product features, quality, price, and availability are some of the key factors that influence consumer preferences for electric vehicle brands. In addition, companies must continuously innovate and differentiate their products to meet the changing needs and preferences of consumer.

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