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## A STUDY ON THE INDIAN SMALL CAR MARKET AND FACTORS INFLUENCING CUSTOMERS' DECISIONS TOWARDS PURCHASE OF SMALL CARS'

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### ABSTRACT

*The small car market in India is growing at a very fast pace. India has become the third largest manufacturer and the second largest market for small cars overtaking Brazil. As per the Society of Indian Automobile Manufacturers (SIAM) small cars contribute for 80% of the domestic market and the exports are rising at a greater speed. This study has been carried out to understand the changing preferences and requirements of customer's of small cars. The changing lifestyle, increase in disposable income, and standard of living in the middle class families make them to aspire a car at an early age. The findings of the study would help car manufacturers to get an insight into product development, design and distribution and to develop specific promotional tools to reach various segments of the society to influence the decision making towards purchase of small cars. The study would also provide meaningful insight to students and research scholars to pursue similar studies in future.*

### KEYWORDS

Customers, Preference, Purchase Decisions, Small cars.

### INTRODUCTION

The automobile industry is considered to be one of the key sectors of any economy, due to its capability of linkages with the other sectors of the economy. The small car market in India is growing at a very fast pace. India has become the third largest manufacturer and the second largest market for small cars overtaking Brazil. As per the Society of Indian Automobile Manufacturers (SIAM) small cars contribute for 80% of the domestic market and the exports are rising at a greater speed.

### DEFINITION OF A SMALL CAR

A small car (Europe) is also known as compact cars (North America) is a classification of cars which are larger than a super mini but smaller than or equal to a mid-size car. The term often leads into confusion, this car class is also known as the C-segment across Europe. Current compact car size, for US and international models respectively, is approximately 4,100 mm (161 in) and 4,450 mm (175 in) long for hatchbacks, or 4,400 mm (173 in) and 4,750 mm (187 in) long for convertibles, sedans (saloon) or station wagons (estate car). Multi-purpose vehicles and sport utility vehicles based on small family cars (often called compact MPVs and compact SUVs) have similar sizes, ranging from 4,200 mm (165 in) to 4,500 mm (177 in) in the U.S., and from 4,400 mm (173 in) to 4,700 mm (185 in) in international-based models.

In Japan, any vehicle that is over 3.4 m (11.2 ft) long, 1.48 m (4.9 ft) wide, 2 m (6.6 ft) high and with an engine over 660 cc (40 cu in) but is under 4.7 m (15.4 ft) long, 1.7 m (5.6 ft) wide, 2 m (6.6 ft) high and with engines at or under 2,000 cc (120 cu in) is considered a compact vehicle. The dimension standards are absolute, meaning special consideration is not made for SUVs, CUVs, minivans, station wagons or hatchbacks.

Common engines are 1.5 to 2.4-litre straight-4s, using either petrol (gasoline) or diesel fuel, with a range between 100 bhp (75 kW) and 170 bhp (127 kW). Some models also have economical 1.3 or 1.4-litre units. High-performance versions, may have 2.5-litre engines, or even V6 3.2-litre units, ranging maximum outputs from 170 bhp (127 kW) to 300 bhp (224 kW). India also follows the same norms, but recently Toyota and Honda have asked the Indian govt to redefine the 'Small Car' definition. Instead of the length of the car and engine size, they want the fuel efficiency, emission norms and passenger safety as the criteria for the definition

### THE TOP SMALL CARS IN INDIA

**Reva**, the India's first electric car is a 2-door fully automatic hatchback that is fun to drive and easy to manoeuvre.

**Alto** is Maruti Udyog's subcompact offering to India and has become the most popular design and sold like 'hot cake' in the small car segment. The Maruti **WagonR** met with a lukewarm response from the market and the initial sales were sluggish at best largely because the **Hyundai Santro** was launched much before and was still in the spot light. However, WagonR has picked up its popularity and become a fast moving car in the small car segment. GM launched **Chevrolet Spark** in India as a come-back vehicle to the long forgotten Matiz. The Korean auto major launched the **Hyundai i10** at the end of 2007 to bridge the gap between the Getz Prime and the Santro Xing.

Produced exclusively in India, the world-class **A-star** makes a successful journey around the globe. The Czech car manufacturer, Skoda Auto of the Volkswagen Group has introduced its second generation **Skoda Fabia** in India as a 2008 model

### REVIEW OF LITERATURE

**Florian A. A. Becker Ritterpach and Jutta C.E Ritterpach (2008)** explored the reasons for emergence, consolidation and challenges to Indian small car, under range of context conditions including political, social, economic and infrastructural conditions. A survey was done on potential buyers drawn from 9 cities accounted for 60% - 70% of country's car owning population, who travelled 800 km per month on an average.

**Rajneesh Tiwari, Mahipat Renawat and Andreas Lange (2009)** The study was conducted with the objectives to identify govt policies that influenced the development of automobile industry, and to explore the role played by govt. The findings of the study stressed the need to improve infrastructure and increased the skilled labour, to ensure social and political harmony to avoid slowing of reforming policies and to create a conducive eco- system by supporting world class innovations.

**S M Satish and Sivakumaran Bharadwaj, (2010)** The study was the first to attempt the segmentation of car buyers in India. It was a search on identifying the patterns of search behaviour of consumers considering personality related variables based on Freudian psychoanalytic theory of personality.

**Ramendra (2009)** studied on how the demand potential of small car market in India was going to be satisfied by various players like Tata Motors – launching of its most anticipated model Tata Nano in India in the ultra-cheap small cars market segment and the other auto manufacturers of premium small cars like the leading auto manufacturer Honda Motor Co's Honda Jazz. After analyzing various factors like engine capacity, fuel efficiency... The study was conducted to analyse the impact of increase in cars on environment and suggested the need for developing eco friendly/ green cars and cheap cars like Tata Nano.

**J. Clement Sudhakar and Dr R. Venkatapathy (2008)** conducted the study in Coimbatore city, Tamil Nadu, India analysed the factors influencing the purchase of cars, influence of peer group and the most influencing peer group. It was found that brand image, value, publicity, dealer's network, after sales service and vehicle performance were significant. As far as peer group influence was concerned influence of friends was higher for purchase of small cars and both friends and co workers for midsize cars.

## NEED OF THE STUDY

Small car segment has been predicted to be growing at a greater speed with the change in life style and disposable income especially of the middle class segment. This study had been carried out to understand the changing preferences and requirements from customer's perspective. This would help the car manufacturers in designing small cars as per customer's expectations and to develop promotional tools to reach various segments of the society and influence the decision making towards purchase of small cars. The study would also provide meaningful insight to students and research scholars to pursue similar studies in future.

## STATEMENT OF THE PROBLEM

The small car market in India is increasing at a greater pace. The Society of Indian Automobile Manufacturers (SIAM) has predicted 350million middle class will contribute for the growth of Indian Small car market. The small car manufacturers are trying to increase their market share through a healthy competition. A study on consumer preferences towards small cars in India is aimed to analyse the changes in consumer preferences and expectations towards small cars in the Indian car market, with reference to Bangalore.

## OBJECTIVES

1. To provide a brief overview of the Indian small car market
2. To study the consumer preference towards small cars
3. To recognize the major factors influencing the decision to buy a small car
4. To ascertain the important attributes of a car that influences the decision to purchase a small car
5. To identify the preferred sources of information used by consumers to buy small cars
6. To ascertain the influence of peer group, family members, media, SMS, and internet in purchase decisions of small cars

## HYPOTHESIS

H<sub>1</sub> : There is no significant relationship between age and preference towards small cars.

H<sub>2</sub> : There is no significant difference between the gender and preference towards small cars

## RESEARCH METHODOLOGY

Research data was collected through a questionnaire that was developed with various factors, attributes and information sources the customer would prefer for decision-making. The same was administered to 400 people of which the researcher was able to collect 340 questionnaires and 329 questionnaires were fit to be used for data analysis and 11 were rejected. The convenience sampling technique under non-probability sampling method was used to administer the questionnaire. The questionnaires were distributed to the respondents of various age groups, working in different sectors and residing across Bangalore city. The questionnaire consisted of 11 questions overall, with sub sections so as to collect the information on various factors, attributes and information sources considered by the respondents to buy a small car. The researcher personally interviewed people across various age groups, who owned cars and who were planning to buy cars and who were instrumental/ influential in making a decision to buy a car, to know the factors and attributes considered generally to purchase a car. To test the reliability and validity a Cronbach alpha test was conducted on a pilot study with a sample size of 30 with a result of 0.814. The questionnaire was modified after taking into consideration all the valuable inputs. The analysis was done using the multi variate tool of Factor Analysis especially the Principal Component analysis to reduce a large set of correlated variables into smaller number of uncorrelated principal components and chi square analysis for testing the hypothesis.

1.1: TABLE SHOWING RELIABILITY TEST

CASE PROCESSING SUMMARY

		N	%
Case	Valid	30	100.0
	Excluded	0	.0
	Total	30	100.0

RELIABILITY STATISTICS

Cronbach Alpha	No of Items
.814	48

## OPERATIONAL DEFINITION

According to the Ministry of Finance, India small cars means a car at 4 metre length and a maximum 1.2 litre engine specification for petrol and 1.5 litre for diesel. A small car is car less than a sedan.



RESULTS & DISCUSSION

TABLE 1.2: FACTORS CONSIDERED IN MAKING A DECISION TO BUY A SMALL CAR

Rotated Component Matrix using Varimax rotation Eigen Value > 1.013				
	Component			
	1	2	3	4
<b>FACTOR 1 : MY FAMILY MY CAR</b>				
Safety and comfort of driving	0.771394	0.183899	0.099081	-0.15001
Parking space	0.590828	0.061139	0.353818	-0.23885
No of people in the family	0.561941	0.050667	-0.09295	0.193015
Frequency of travel	0.537888	0.05253	0.310559	0.212872
Income level of the family	0.523422	0.07735	-0.12178	0.311217
<b>FACTOR 2 : INFRASTRUCTURE &amp; CREDIT</b>				
Increase in auto and bus fares	-0.04807	0.739507	0.359851	0.050139
Credit facilities and allowances	0.207045	0.673234	-0.1664	0.164665
Lack of adequate public transport	0.156694	0.619431	0.074386	-0.09174
<b>FACTOR 3 : SPECIAL REQUIREMENTS &amp; TAX BENEFITS</b>				
Special requirement of the family	0.15219	-0.01748	0.783361	-0.00931
Tax benefits	-0.07589	0.41317	0.601472	0.138305
<b>FACTOR 4 : STATUS &amp; DISTANCE</b>				
Status increases with the purchase	-0.03479	0.131136	-0.03919	0.705732
Distance travelled influences car purchase	0.23589	-0.08865	0.165686	0.687597

**INTERPRETATION:** The consumers consider the safety and comfort while driving for themselves and their family members as an important criteria followed by Infrastructure and credit and tax benefits and the customers have given least preference to the status increase with purchase of small car and distance travelled.

TABLE 1.3: ANALYSING THE VARIOUS ATTRIBUTES WHICH MOTIVATES THE CONSUMER TO PURCHASE A SMALL CAR

Rotated Component Matrix (Varimax rotation) Eigen value > 1.047					
	Component				
	1	2	3	4	5
<b>FACTOR: 1 VEHICLE DESIGN &amp; COST OF OWNERSHIP</b>					
Safety issues while driving	.720	.086	.127	-.020	.208
Driving comfort	.715	.149	.202	.068	.208
Ease in transmission(smoothness of gears)	.658	.101	.004	.183	4.568
Fuel efficiency	.576	-.005	.236	.106	.083
Engine capacity	.572	.400	-.005	.100	.087
After sales service	.572	.025	.286	.224	-.205
Boot space	.513	.136	.143	.340	-.225
<b>FACTOR: 2 DELIGHT FEATURES</b>					
Built in music system	.078	.785	-.035	.134	.069
Latest technology like blue tooth, sensor control	.111	.774	.054	.171	-.022
Good air conditioning	.191	.709	.073	.155	.096
<b>FACTOR: 3 MAINTENANCE SUPPORT</b>					
Cost of spare parts	.087	-.053	.750	.201	.100
Cost of maintenance	.268	-.095	.745	.071	-.005
Extended warranty period	.210	.232	.583	-.062	.032
<b>FACTOR: 4 ADDED FEATURES</b>					
Choice of colour	.093	.174	-.162	.619	.103
Good resale value	.290	.084	.203	.598	-.038
Exchange offer	-.094	.201	.366	.560	.061
Auto transmission facility	.179	.148	.067	.522	.035
<b>FACTOR: 5 PRICE AND LOOKS</b>					
Brand- very important	.003	.133	.110	-.028	.722
Price- main criteria	.254	-.221	.099	.418	.516
Looks of the car	.423	.294	-.159	.236	.479
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 6 iterations.					

**INTERPRETATION:** The customers prefer attributes like driving comfort, engine capacity, fuel efficiency, boot space, cost of spare parts and extended warranty period. It's surprising to know that this segment does not consider the price, brand and the looks as an important attribute for purchase decision.

TABLE 1.4: CUSTOMERS' RESPONSE TO THE SOURCES OF INFORMATION PREFERRED BEFORE PURCHASING A SMALL CAR

Rotated Component Matrix			
	Component		
	1	2	3
<b>FACTOR 1- NEWS YOU CAN USE</b>			
Car magazines can be a trusted source	.677	.230	.037
I prefer motor shows & Auto Exhibitions to get the information on the latter trends	.665	.007	-.033
News paper articles are very genuine	.608	.316	-.010
Internet, World Wide Web will be a good source of information	.576	-.203	.347
Manufacturer brochures give a better idea compared to any other source	.466	.400	.071
I take inputs from the experience of other car owners	.357	.208	.313
<b>FACTOR-2 : PUBLICITY &amp; IMAGE</b>			
Television programs and coverage are very genuine	.026	.784	.194
TV and magazine advertising can be a trusted source	.242	.759	-.097
<b>FACTOR 3 OPINION MATTERS</b>			
I take inputs from the experience of other car owners	.113	-.101	.821
I always consider the opinion of friends, relatives and colleagues as very important	-.055	.211	.815

**Interpretation** The respondents considered car magazines, motor shows and auto exhibitions as the most preferred source of information followed by TV and magazine advertising and the opinion of friends and relatives are the least preferred source

TABLE 1.5: FACTORS WHICH THE CONSUMERS GIVE MORE IMPORTANCE WHILE BUYING A SMALL CAR

Rotated Component Matrix Varimax rotation			
	Component		
	1	2	3
<b>FACTOR 1 CLOSE CIRCLE</b>			
family	.708	-.033	.049
friends	.688	.279	.201
<b>FACTOR 2 MOBILE FRIENDLY</b>			
SMS	-.607	.344	.076
<b>FACTOR 3 MEDIA CIRCLE</b>			
others	-.078	-.976	.145
media	-.403	.523	.508
<b>(N/A)</b>			
Internet	-.210	.137	-.944

**Interpretation:** opinion of family and friends influence the most for decision making to purchase a small car. SMS influences over other factors like media. Younger and tech savvy generation would like to spend more time and give preference to messages received through SMS.

**CHI SQUARE TESTING**

**Hypothesis 1**

H0: There is no significant relationship between age and preference towards small car

H1: consumer preferences do change significantly with changes in age

TABLE 1.6

Age	Preferred			Not preferred			Total
	Observed frequency (o)	Expected frequency (e)	$\frac{(o-e)^2}{e}$	Observed frequency (o)	Expected frequency (e)	$\frac{(o-e)^2}{e}$	
20 - 30	73	97.31	6.07	111	85.57	6.96	184
31 - 40	80	47.60	22.05	10	41.85	24.24	90
41 - 50	17	23.80	23.8	28	20.93	7.07	45
Above 50	5	5.29	0.016	5	4.65	0.03	10
Total	174		<b>51.94</b>	151		<b>38.30</b>	329

The calculated Chi square value is greater than P value, hence H0 is rejected. It is concluded that the preference of consumers on small cars change significantly with changes in age. Therefore null hypothesis is rejected.

**Hypothesis 2**

HO a : There is significant difference between the gender and their preference towards small car

H1a : There is no significant difference between the gender and preference towards small car

**TABLE 1.7**

Gender	Preferred			Not preferred			Total
	Observed frequency (o)	Expected frequency (e)	$\frac{(o-e)^2}{e}$	Observed frequency (o)	Expected frequency (e)	$\frac{(o-e)^2}{e}$	
Male	172	177.02	0.14	36	30.98	0.81	208
Female	108	102.98	0.25	13	18.02	1.40	121
Total	280		0.39	49		2.21	329

Chi square = 0.39 + 2.21 = 2.60 Degrees of Freedom = 1. Calculated Chi square value is 2.60 Degrees of Freedom 1 value = 3.84. The calculated Chi square value is smaller than P value, HO is accepted. It is concluded that there is significant difference between the gender and their preference towards small car.

**RECOMMENDATIONS**

Customers give at most importance to safety and comfort while driving. The manufacturers should look for more innovative ways of strengthening the safety features of the car. The boot space should be increased as it is looked at an important feature by customers across age. Family and friends are the most influential factors considered while making a purchase decision of small cars. The promotional campaigns can be made keeping in mind to attract them. The price, brand and looks of the car are not considered as a major factor affecting the purchase of a small car. The customers are looking for the application of latest technological features, like sensor control, blue tooth technology... Among the respondents, majority of women (89%) preferred to buy a small car. The manufacturers can customize the small cars to suit the requirements of women. Mostly people in the 31 – 40 age group preferred to buy a small car than the younger segment. The car manufacturers should design the cars to attract this growing segment. The 50 and above age group is divided in their opinion whether to buy or not to buy. Promotional offers can be made to attract the older generation to drive a car. There should be uniform specification given on small cars by the govt of India to match the international specification, so that every small car manufacturer will be able to get the concession of excise duty and the benefit is passed on to the ultimate consumers. To reduce the cost of spare parts and maintenance, indigenous component industries should be encouraged which would also create more employment opportunities.

**CONCLUSION**

There is a huge potential waiting to be tapped by the Indian govt and the manufacturers of small cars. There is equal opportunity for the component and other allied industrial growth along with the growing small car market. At the international level, due to saturation of American and European markets the giant car manufacturers are shifting towards Asian, especially Indian car market. The associated organisations like SIAM, ACMA, have projected a total shift towards development of small car market by 2015. Customers are expecting all facilities of luxury segment in the small car segment for which they are willing to pay. The combined effort of govt, manufacturers and various associations involved together should promote a common forum to ensure that the ultimate benefit should go up to the consumer.

**SCOPE FOR FURTHER RESEARCH**

The present study has been conducted on demographic characteristics, the factors and attributes, the consumers would be looking for while purchasing a small car. The psychographic characteristics in decision making would be a potential area of research. The growing educational level of women, increase in working women, make them more confident and independent. A further research is possible on this aspect, specially concentrating the potential of growth in small car market contributed by the preferences of womenfolk. The study can be extended further to semi – urban and rural markets to give an insight to the car manufacturers.

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