A STUDY ON CONSUMER BEHAVIOR AND PREFERENCE IN PASSENGER CAR MARKET – ANDHRA PRADESH

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ABSTRACT:

Consumer preferences combined with their budget culminates into final purchase which the automobile industries need to tap. The paper evaluates a Engel-Coleman-Blackwell model through which consumer preferences can be determined which is a four stage process of Input, Information, Decision process and variable Influencing. In the next segment, methods of estimating consumer preference is discussed including survey and its limitation as well as Revealed Consumer preference which gauges the preferences in retrospect after the choice has been made. Using the latter, the paper analyses the consumer preference in Electric car segment, technological innovation, high priced small car segment, diesel-petrol preference and body style. The paper concludes by stressing on the enumeration of consumer preference for successful decisions on product designs, branding and distribution and focus on predicting it to an extent with the consumer research activity which is indispensable to satisfy the consumers in the long run.

Keywords: Consumer/Buyer Preference, Satisfaction etc.,

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Consumers make decisions by allocation of their scarce income across all possible bundle of goods in order to derive greatest satisfaction. The preferences may depend on plethora of factors inter alia, culture, education and individual tastes. [2] The preferences can be mapped through use of indifference curves.The dawn of automobile manufacturing started in India when Hindustan Motors in 1942 and premier auto in 1944 started indigenous production. [3] The industry has come a long way since then with the fiscal year ending in 2016 with production of 20,366,432 vehicles of which share of two wheelers, passenger vehicles, three wheelers and commercial vehicles were 76 percent, 15 percent, 4 percent and 4 percent respectively as shown in Table 1. Passenger Vehicles segment grew at 4.66 percent during April-March 2016 over same period last year. Passenger Cars grew by 2.19 percent For the first time in history car sales crossed two million in a financial year [4] as shown in Table 2.
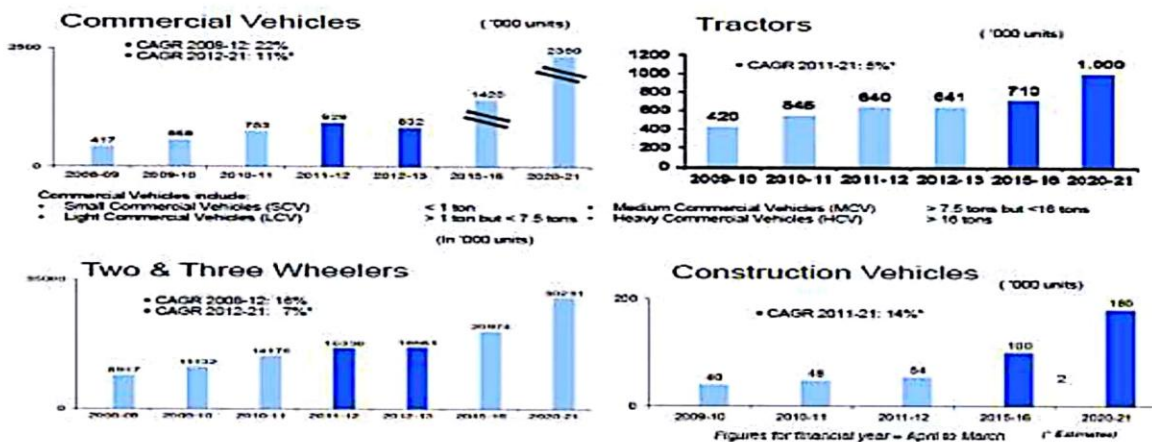
TABLES

Table 1

Table 2

HOW DOES CONSUMERSMAKE CHOICE

THE ENGEL-KOLLAT-BLACKWELL MODEL OF CONSUMER BEHAVIOUR

A model of consumer decision making will help us to better understand the formation of consumer preference. The Engel-Kollat-Blackwell model [5] was formed to describe increasing amount of knowledge of consumer behavior. It is a four stage process:

1. **Input -**The focus of the model is on five fundamental decision-process stages:

Problem recognition, search for alternatives, alternate evaluation (during which beliefs may lead to the formation of attitudes and preference) which in turn may result in a purchase intention and purchase outcomes, elaborated in Table 3.
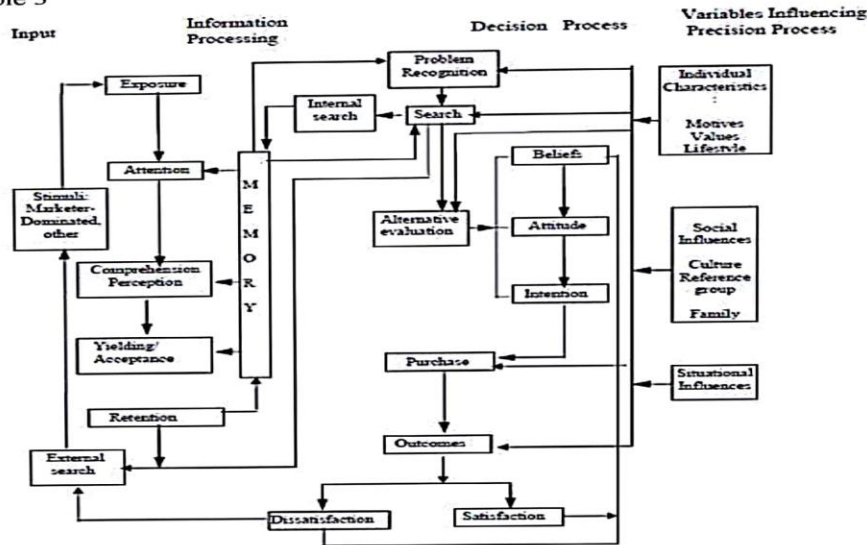
Table 3

Table 4

Make	Model	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Segment	Body	MoM %	YoY%
Renault	Duster	1194	3184	4211	5406	5251	4485	C2	SUV	-14.6	
	Fluence	102	131	128	107	82	68	D1	Sedan	-17.1	-54.4
	Koleos	43	29	26	57	31	36	D2	SUV	16.1	-12.2
	Pulse	437	572	524	483	436	515	B2	Hatch	18.1	
	Scala		120	688	737	807	820	C1	Sedan	1.6	
Skoda	Fabia	215	291	222	256	133	219	B2	Hatch	64.7	-85.1
	Laura	151	168	236	225	209	216	D1	Sedan	3.3	-42.4
	Rapid	1505	1128	1433	1131	1099	1890	C2	Sedan	72.0	45.8
	Superb	89	125	146	163	120	199	D2	Sedan	65.8	-57.7
	Yeti	85	77	284	6	51	52	D1	SUV	2.0	-84.0
Tata	Aria	65	39	25	147	341	5	D1	MUV	-98.5	-98.0
	Indica + Vista	8852	7591	7936	6692	6956	5600	B1	Hatch	-19.5	-39.8
	Indigo + Manza	6816	3629	3706	5748	3079	3455	C1	Sedan	12.2	-49.8
	Nano	5485	6507	5491	4004	3503	2202	A	Hatch	-37.1	-70.5
	Safari + Storme	865	1167	864	1005	1052	1374	C2	SUV	30.6	18.4
	Sumo	2896	3129	3315	3318	2959	1451	Utility	MUV	-51.0	-55.3
	Venture	259	249	295	205	141	98	Utility	MUV	-30.5	-83.9
Toyota	Camry	0	60	85	61	46	19	D2	Sedan	-58.7	
	Corolla	540	492	424	332	362	155	D1	Sedan	-57.2	-39.7
	Etios	3760	3721	2627	2105	2050	2157	C1	Sedan	5.2	-60.4
	Fortuner	1316	1289	1301	1378	1025	1260	D2	SUV	22.9	55.0
	Innova	6673	6439	5858	5889	4682	6458	Utility	MUV	37.9	28.6
	Landcruiser	3	11	5	15	4	5	Premium	SUV	25.0	66.7
	Liva	2264	1977	1813	2491	2181	2010	B2	Hatch	-7.8	-54.3
	Prado	13	3	2	9	2	2	Premium	SUV	0.0	-77.8
	Prius	0	3	0	1	0	5	Premium	Sedan		400.0
Volkswagen	Beetle	0	0	0	0	0	0	Premium	Coupe		-100.0
	Jetta	258	342	206	207	199	293	D1	Sedan	47.2	36.9
	Passat	55	68	78	93	62	96	D2	Sedan	54.8	-13.5
	Polo	3498	2431	2974	3399	3390	2096	B2	Hatch	-38.2	-26.1
	Toureg			7	14	7	4	Premium	SUV	-42.9	
	Vento	1546	1556	1905	1894	2023	1975	C2	Sedan	-2.4	-19.0

2. **INFORMATION-** information is sought by the consumer to make a satisfying and in all probability, better choice. The process of search begins typically when the consumer takes a conscious decision to purchase a product and ends with its purchase. There are two ways in which information can be obtained. First is the external search which includes information from sources such as friends, books and magazine articles on automobiles, sales-persons at dealerships, and actual experience test-driving new automobile. Second is to scan long term memory which requires little cognitive effort. [6]

3. **DECISION PROCESS-** in this stage, the consumer's exposure, attention, perception, acceptance, and retention of incoming information come into play. The buyer is initially exposed to the information, then he interprets the stimuli, and retain the message by transferring it into long term memory. [7]

4. **VARIABLES INFLUENCING-** it consists of individual as well as environmental factors that influences the preference and consequently choice of customer. Individual characteristics represent lifestyle, personality, values, motives and the social influences are reference teams, family and culture. Situational influences like consumer's money condition also influence the consumption choice method [8].

I. ESTIMATION OF CONSUMER PREFERENCE

Estimation of consumer preference provides managers with necessary insight to help them formulate product design policies and determine optimal sales. Identification of preferences is one of the major problems so that changes in demand of a differentiated product can be estimated when quantity of one or more attributes is modified. [9] The automobile industry adopts the following methods:

A. Survey- it is the most conventional method used to obtain large and random market data of consumer belonging to varied groups, having varied tastes. Then psychometric techniques such as factor analysis, multidimensional scaling, cluster analysis, preference regression, expectancy value and choice analysis are utilized. [10] After these processes , a rough estimate is arrived at.

Limitations [11]

Justification bias- an already chosen or an alternative which is familiar is preferred by the consumer to reduce decision effort.

Lexicographic response bias- consumers consider only the subset of attributes and ignore and ignore trade offs with other attributes.

Experimental bias- interviewer/respondent interaction, lack of cogency in performing experimental tasks etc

It represents desire rather than preference under constraints.(eg budget constraint)

B. Revealed preference [12] the concept of revealed preference theory is that it works in reverse order because it is difficult to assume that the consumer has in his mind a mathematical formula while making a choice between different options. So what this theory does is that it infers these utility functions, based on the choice that has actually been made. Thus, by **closely analyzing the sales of automobiles** in different segments across the market, one can gauge the inclination of the consumers of that market. It is based on two axioms: Weak axiom of revealed preference [13]: it means that if A is revealed preferred to B, then it means that if consumer ever chooses B it is because there was enough left over in budget to facilitate choice of B too. Strong axiom of revealed preference [14]- it brings in transitivity. If A is reveal preferred to B and B is reveal preferred to C, then it means that A is indirectly reveal preferred to C, graphically represented in Fig 1.
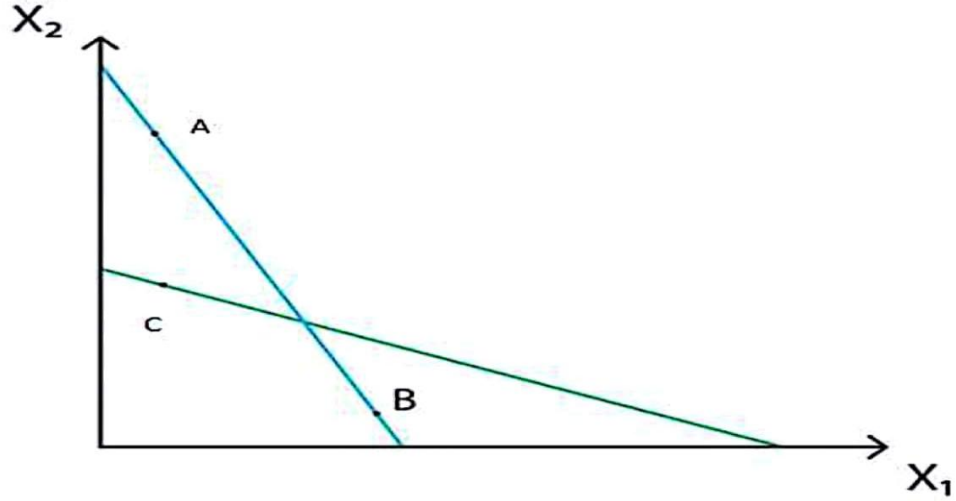
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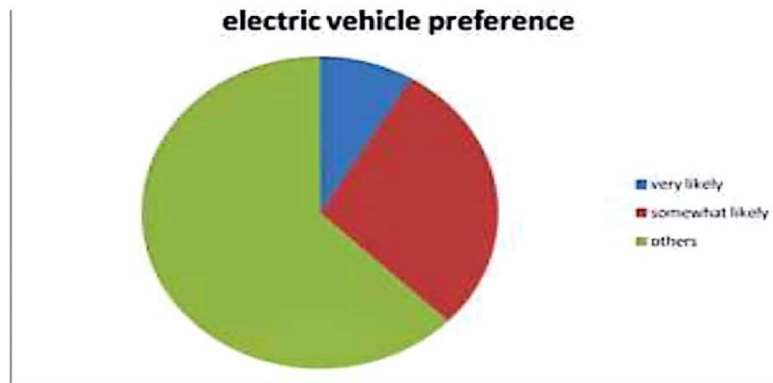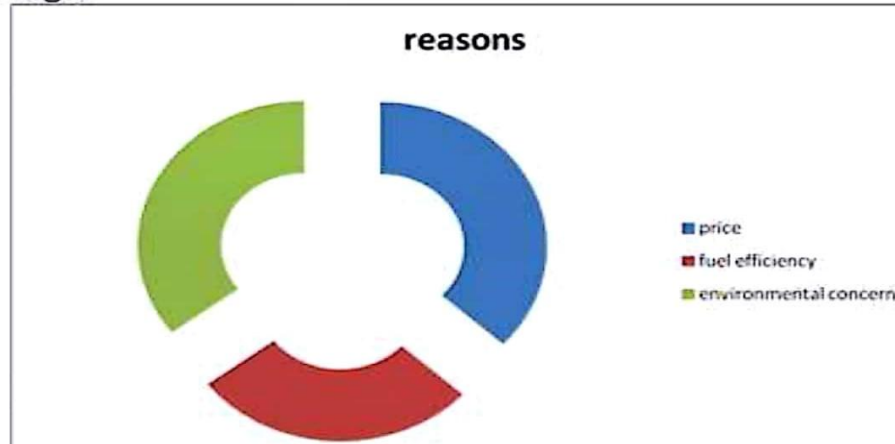**FIG 1**

FIG 2

electric vehicle preference

Fig 3

reasons

This substantially reduces the quantum of empirical evidence needed to define consumer preference. The aggregation of the collected data helps find out the general truth about a population's preference.

ANALYSIS OF CONSUMER PREFERENCE IN THE AUTOMOBILE MARKET
A. FOR ELECTRIC CARS

In a survey conducted by Zpryme Research and Consulting involving 1046 men and women about their hunch to buy an electric vehicle in the next two years, 8.2% of respondents agreed that they were **very likely** to buy an electric vehicle, 28.7% considered **somewhat likely** and in the next five years, 25.8 % of the **somewhat or very unlikely** category will buy one, [15] shown in Fig 2. According to 66.8% of those surveyed, **price** was the primary reason for the purchase consideration. For the 50.4% of the respondents, it was **fuel efficiency**, for 64.1% of those who were very or somewhat likely to buy, **environmental concern** was a big concern. [16] shown in Fig 3. Of those who were **very or somewhat likely,** 33.7% would settle for a driving range of 650 kms whereas 33.3% would settle for 500kms. [17] shown in Fig 4. 31.1 percent of those surveyed said they would pay a bit more for an electric vehicle than for a conventional vehicle, with 12.6% saying they would pay upto 2.5 lakhs more, and 5.2 percent agreeing to pay extra 5 lakhs. [18] From the data it can be inferred that in the next 2-5 years there would be a reasonable demand for electric vehicle somewhere between 30-40% with driving range of about 500-650 kms with consumers willing to pay 2.5_5 lakhs more than the conventional vehicles.
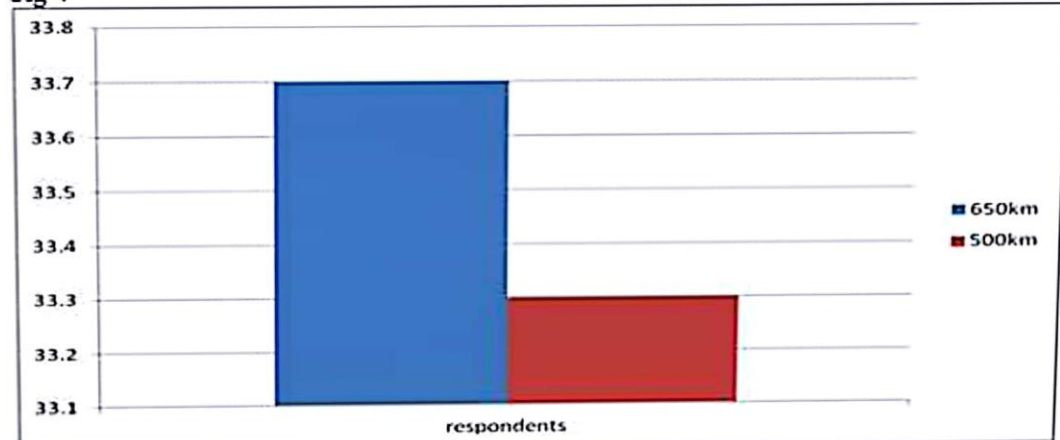
Fig 4

Fig 5

B. FOR TECHNOLOGICAL INNOVATION IN DRIVING EXPERIENCE

In a survey conducted by Cisco examining consumer's preference for technology in driving as well as **buying** experience. The consumers are using much advanced tools of communication technology to bring on board both car dealership and manufacturer. Almost half (**47%**) of the 1500 people surveyed globally give credence to brand's

technological reputation while purchasing a vehicle.

Main Highlights:

☐ Most Consumers begins their purchasing process online- 83% of the consumers begin their

research for information online as compared to only 17% who prefer to call up or visit the dealership.

☐ Preference for a more automated for tracking maintenance cost tracking of gas prices from vehicle is desired by 52% of the consumers which was the highest priority as compared to 46% of consumers for tracking insurance prices, and 35% for tracking roadside assistance availability, and 32% wanted to track recall information. [19]

☐ Willingness to trade personal information for customization security and savings

a. Lower insurance/maintenance: 74% are willing to save on insurance and maintenance cost by trading their driving habits. [20]

b. Increased personal security: 60% are willing to trade their biometric information like DNA and fingerprints for car security**.** [21]

c. **Customized cars**: 65% would trade heir Height/Weight and entertainment preference for a more customized car suitable to consumer's preference. [22], Fig 5.

☐ Preference for driverless or automated automobiles: more than half i.e. 57% of the total surveyed agreed that they will prefer a driverless, self propelling automated car over manually driven one. in **India, 86% of the sample** acquiesced to it. [23]

C. PREFRENCE FOR HIGH PRICED SMALL CARS

according to the J.D. Power Asia Pacific 2012 India Sales Satisfaction Index (SSI) Study [24] average time period required by a consumer to purchase a small car remains at 10 months. Although the level of income and transaction price has risen in India, the preference for owning small cars remains unchanged. What has changed primarily is aspirations of consumers to own high priced small cars. [25] This has resulted in greater choices for consumers who have a propensity to migrate towards value offering. An increase in the average household income and preference of consumers for better styling and features has driven vehicle shoppers to buy higher-spec small cars, resulting in owners' income stretch remaining unchanged. [26]

D. PREFERENCE FOR DIESEL CARS OVER PETROL ONES

In 2012, high petrol prices made consumers shift towards diesel propelled vehicles and as many as 43% of the total purchase was of diesel cars which was 11% higher than what it was in 2011.

[27] But it substantially increased the waiting time to 17 days on average which was double to what it was in 2011 because of increased demand. [28]

E. BODY STYLE DISTRIBUTION

55% of the total purchase in the market is of hatchbacks as compared to 18% each of sedan and MUV and 9% SUV [29]. The consumers show preference for hatchbacks as it costs less, especially in the Indian market because of wide spread income disparity. [30] shown in fig 6.

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