"Perception of Brand Name, Price, Features and Product Quality", an empirical study in Small Car Segment

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Abstract

Performance of Auto Industry in 2021-22

Production

The industry produced a total 22,933,230 vehicles including Passenger Vehicles, Commercial Vehicles, Three Wheelers, Two Wheelers, and Quadricycles in April 2021 to March 2022, as against 22,655,609 units in April 2020 to March 2021.

Domestic Sales

Total Passenger Vehicle Sales increased from 2,711,457 to 3,069,499 units. Sales of Passenger Cars decreased from 1,541,866 to 1,467,056 units, while sales of Utility Vehicles increased from 1,060,750 to 1,489,178 units in April 2021 to March 2022 compared to the previous year. During the same period 113,265 units of Vans were sold compared to 108,841 units in April 2020 to March 2021.

The overall Commercial Vehicles sales increased from 568,559 to 716,566 units. Sales of Medium and Heavy Commercial Vehicles increased from 160,688 to 240,577 units and Light Commercial Vehicles increased from 407,871 to 475,989 units in April 2021 to March 2022 compared to the previous year.

Sales of Three Wheelers increased from 219,446 to 260,995 units in April 2021 to March 2022 compared to the previous year.

Two Wheelers sales decreased from 15,120,783 to 13,466,412 units in April 2021 to March 2022 over same period last year.

Exports

In April 2021 to March 2022, Passenger Vehicle Exports increased from 404,397 to 577,875 units, Commercial Vehicle Exports increased from 50,334 to 92,297 units, Three-Wheeler Exports increased from 393,001 to 499,730 units and Two Wheelers Exports increased from 3,282,786 to 4,443,018 units in April 2021 to March 2022 over same period last year.

This study examines the Perception of Brand, Price, Features and Product Quality among the prospective buyers of small cars. The study was conducted in the city of Coimbatore with a sample size of 540. The study investigates the impact of Brand, Price and Features on Product Quality. The much-debated price-quality relationship is also studied. Various tools like One-Way ANOVA and Tukey's HSD etc are used to analyse the data.

Automobile Production Trends
(In Numbers)

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Category	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Passenger Vehicles	3,801,670	4,020,267	4,028,471	3,424,564	3,062,280	3,650,698
Commercial Vehicles	810,253	895,448	1,112,405	756,725	624,939	805,527
Three Wheelers	783,721	1022,181	1,268,833	1,132,982	614,613	758,088
Two Wheelers	19,933,739	23,154,838	24,499,777	21,032,927	18,349,941	17,714,856
Quadricycles	1,584	1,713	5,388	6,095	3,836	4,061
Grand Total	**25,330,967**	**29,094,447**	**30,914,874**	**26,353,293**	**22,655,609**	**22,933,230**

Automobile Exports Trends
(In Numbers)

Category	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Passenger Vehicles	758,727	748,366	676,192	662,118	404,397	577,875
Commercial Vehicles	108,271	96,865	99,933	60,379	50,334	92,297
Three Wheelers	271,894	381,002	567,683	501,651	393,001	499,730
Two Wheelers	2,340,277	2,815,003	3,280,841	3,519,405	3,282,786	4,443,018
Quadricycles	1,556	1,605	4,400	5,185	3,529	4,326
Grand Total	**3,480,725**	**4,042,841**	**4,629,049**	**4,748,738**	**4,134,047**	**5,617,246**

In 2021, **79.1 million motor vehicles were produced around the world**, an increase of 1.3% compared to 2020. In this infographic you will find the number of motor vehicles produced in 2020 and 2021, per world region.

According to the report, the Global Automotive Market consisted of **85.32 million units in 2020**, and is expected to reach 122.83 million units by 2030. The industry is expected to grow at a CAGR of 3.71% from 2020-2030.

Japanese automaker Toyota becomes the new No. 1. The global auto industry is highly competitive, and it is dominated by companies in Europe, Japan, the United States, and South Korea.

China is the largest automobile market worldwide, both in terms of demand and supply. China's automobile registrations climbed to approximately 21.1 million units in 2020, representing a rise of around 6.6 percent.

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US, Japan, Germany, France, and the UK produced about 80% of motor vehicles through the 1980s. 1990s: South Korea became a volume producer. In 2004, Korea became No. 5 passing France. 2000s: China increased its production drastically, and became the world's largest producing country in 2009.

China is the top country by car sales in the world. As of 2021, car sales in China was 21.5 million units that accounts for 38.84% of the world's car sales. The top 5 countries (others are Japan, the United States of America, India, and Germany) account for 61.86% of it.

The market size, measured by revenue, of the Car & Automobile Manufacturing industry is **$104.2bn** in 2022.

Rolls-Royce Phantom. The grandest and greatest luxury conveyance in motordrome was replaced by Rolls-Royce in 2017 and given a glittering five-star road test welcome by our road testers shortly thereafter.

Germany. Germany is famous for producing iconic cars from brands like Audi, Volkswagen, BMW, and Mercedes-Benz. It's particularly well-known for making vehicles that are reliable, packed with innovative features, and with popular designs to match.

Today, **Tamil Nadu** is one of the top 10 automobile hubs in the world. Chennai has the capacity to produce about 1.4 million cars a year, or three cars every minute. In a 15 September 2015 speech at global investors meet in Chennai Jayalalithaa said, "... Chennai will become the world's largest car manufacturing hub.

San Marino — the size of Manhattan — has roughly the same number of registered vehicles as Belize, a country about 400 times its size and containing more than 10 times the number of people. On average, that works out to be 1.6 cars per person (including kids).

New York City (NYC) is the fourth car capital in the world with an amazing 3,702,966 supercars cruising its streets. As always, Lamborghini comes first with 1,166,064 cars, Ferrari next with 1,004,079, and in third place is Porsche with 884,916 of its supercars on the streets of NYC

The Indian state of **Maharashtra** had the highest number of registered motor vehicles, at over 35 million, at the end of fiscal year 2019.

Jay Leno. American comedian and talk show host Jay Leno has over 1600 vehicles in his collection, and they range from tiny micro cars and hot rods, through to a pre-1900 steam car, the latest hyper cars from Europe, an American LaFrance fire engine, and even a Ferret Scout army vehicle!

Maruti Suzuki. Maruti Suzuki or Maruti Suzuki India Limited was founded back in 1981 and is the leader in manufacturing cars in India. In 2020, Maruti Suzuki had a market share of 54.16 percent, however, due to the pandemic, that market share dropped to 45.61 percent in March 2021.

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Price of Made in India cars	
Model	**Ex-showroom price**
Tata Nexon	₹7.39 – 13.73 lakhs
Mahindra Thar	₹13.17 – 15.53 lakhs
Maruti Suzuki Swift	₹5.90 – 8.77 lakhs
Nissan Magnite	₹5.76 – 10.15 lakhs
Renault Triber	₹5.69 – 8.25 lakhs
Skoda Kushaq	₹10.99 – 18.19 lakhs
Toyota Innova Crysta	₹17.30 – 25.32 lakhs
Volkswagen Taigun	₹10.99 – 17.99 lakhs
Kia Seltos	₹9.95 – 18.19 lakhs
Hyundai Venue	₹6.99 – 11.87 lakhs
Honda Amaze	₹6.38 – 11.21 lakhs

India's Automotive Industry is worth **more than $222 bn** and contributes 8% of the country's total export and accounts for 7.1% of India's GDP and is set to become the 3rd largest in the world by 2030.

Tata Motors is one of the oldest car manufacturers in India. They are also known to be one of the most innovative, having launched the most affordable car in the world, the Tata Nano. Established in 1945, with their first commercial vehicle launched in 1954, the company now has manufacturing plants in India and abroad

As of 2020, India is the **5th largest automobile market in the world**, surpassing Germany in terms of sales.

India's Automotive Industry is worth **more than $222 bn** and contributes 8% of the country's total export and accounts for 7.1% of India's GDP and is set to become the 3rd largest in the world by 2030.

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The Indian Hyundai Verna is known as the Hyundai Accent in some parts of the world. Verna also delivers a considerable number among the Indian cars that are exported to other parts of the world.

Review of Literature

Price & Perceived Quality

Several studies have investigated the role and influence of price upon perceived quality of a product. It has been pointed out that the price cue may play a significant role in quality assessment process due to the following reasons: (1) the information about price is generally available (Monroe, 1971); (2) the buyer cannot be sure about the continued availability of other possible criteria to assess the quality of a product; (3) the price is usually the least ambiguous stimulus; and (4) the price is frequently a concrete and measurable variable for the shopper (Shapiro, 1968). But the results of empirical studies are not so obvious. One of the reasons for such findings is that various aspects of price such as an absolute threshold of pries (acceptable range of prices), differential threshold and reference price have not been paid prior attention. This section attempts to make a critical review of these issues and determine their implications for quality management.

Brand Name & Perceived Quality

The brand name cue or its image had a significant main effect on perceived quality when it was one of the cues provided to a consumer either in isolation or in combination with some other cue. Such results may be attributable to several reasons, among them are: (1) the brand name cue is easy to judge as the price cue (Shapiro, 1973), (2) the familiar brands have high predictive and confidence values; (3) the well-advertised brands generally have high predictive and confidence values; and (4) the "brand name cue is a symbolic index to an informational chunk that consists of data about several attributes of a product, among them, perhaps, are price, size, shape, manufacturer, and performance factors" (Olson, 1976, p 40). Those subjects who use band name cue to access an informational chunk, the separate exposure to the specific price cues adds no extra information beyond that already known, and, therefore, a significant price effect is unlikely (Olson, 1976) and brand image will have a significant effect. It is concluded, therefore that the brand name or its image will have a significant effect were a brand possess an image either because a consumer is extremely familiar with it or because it is widely advertised.

Features & Perceived Quality

Attributes that signal quality have been dichotomized into intrinsic and extrinsic cues (Olson 1977; Olson and Jacoby 1972). Intrinsic cues involve the physical composition of the product. In beverages, intrinsic cues would include such attributes as flavor, color, texture, and degree of sweetness. Intrinsic attributes cannot be changed without altering the nature of the product itself and are consumed as the product is consumed. (Olson 1977; Olson and Jacoby 1972). Extrinsic cues are product-related but not part of the physical product itself. They are by definition, outside the product Price, Brand Name, and level of advertising are examples of extrinsic cues to quality.

The intrinsic-extrinsic dichotomy of quality cues is useful for discussing quality but is not without conceptual difficulties. Other methods of classification scheme include (1) tangible/intangible, (2) distal/proximal (Brunswick 1956), and (3) direct/inferential. However, each of these dichotomies has the same "fuzzy set" problems that are inherent in the intrinsic/extrinsic dichotomy. Notably, with each scheme, some cues (particularly packaging) would be difficult to classify. Because the intrinsic/extrinsic dichotomy has a literature underpinning it, because it is widely used and recognized, and because it has clear managerial implications, it was retained in this study.

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Objectives

1. To classify Cars on the basis of Brand Names
2. To conduct Tukey's HSD to find out the homogeneous Brand Names
3. To classify Cars on the basis of Price
4. To conduct Tukey's HSD to identify homogeneous Price Ranges
5. To classify Cars on the basis of features
6. To conduct one-way ANOVA to identify homogeneous groups
7. To classify Cars on the basis of Perceived Quality
8. Classification of Brands in terms of quality by Tukey's HSD.

Classification of Small Cars on the Basis of Brand Name

The respondents were asked to rate the brands on a five-point scale on the basis of brand favourability. Table 4.20 summarizes the mean and standard deviations of the brands selected for this purpose. The ratings are as follows. The rating was done on a five-point scale and both mean and standard deviations were calculated. Tata Tiago (4.42); Datsun Redi-GO(4.26);Bajaj Qute (4.10); Maruti Alto 800(4.07); Hyundai Eon (3.26); Renault Kwid (3.20); S-Presso (3.04);Celerio (2.94); Ignis(2.80);Wagon R (2.59).

Table 4.20 : Brand Perception-Small Cars

Brand Named	N	Mean	SD
Tata Tiago	540	4.42	0.84
Datsun Redi-GO	540	4.26	0.81
Bajaj Qute	540	4.10	0.86
Maruti Alto 800	540	4.07	0.87
Hyundai Eon	540	3.26	0.83
Renault Kwid	540	3.20	1.05
Maruti Suzuki S-Presso	540	3.04	0.83
Maruti Celerio	540	2.94	0.92
Maruti Suzuki Ignis	540	2.80	0.95
Maruti Wagon R	540	2.59	0.91

Manipulation of Brands

ANOVA was done to classify brands into homogeneous groups using Tukey's HSD. Thus, eight groups were obtained based on mean and standard deviation. They were Group-1 (Tata Tiago), Group-2 (Redi-Go), Group-3 (Bajaj Cute), Group-4(Maruti Alto 800), Group-5 (Hyundai Eon), Group-6 (Renault Kwid), Group-7 (S-Presso), and Group-8 (Celerio, Ignis and Wagon R).

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Table 4.21 : Tukey's HSD-Brand Perception-Small Cars

Brand Factor	N	1	2	3	4	5	6	7	8
Tata Tiago	540	4.42							
Datsun Redi-GO	540		4.26						
Bajaj Qute	540			4.10					
Maruti Alto 800	540				4.07				
Hyundai Eon	540					3.26			
Renault Kwid	540						3.20		
Maruti Suzuki S-Presso	540							3.04	
Maruti Celerio	540								2.94
Maruti Suzuki Ignis	540								2.80
Maruti Wagon R	540								2.59

Classification of Small Cars on the Basis of Quality Perception

The respondents were asked to rate the brands on a five-point scale on the basis of brand quality. Table 4.22 summarizes the mean and standard deviations of the brands selected for this purpose. The ratings are as follows. The rating was done on a five-point scale and both mean and standard deviations were calculated. Tata Tiago (4.42); Datsun Redi-GO (4.25); Bajaj Qute (4.20); Maruti Alto 800(4.19); Hyundai Eon (3.45); Renault Kwid (3.28); S-Presso (3.27); Celerio (3.20); Ignis (2.98); Wagon R (2.86).

Table 4.22 : Quality Perception-Small Cars

Brand Named	N	Mean	SD
Tata Tiago	540	4.42	0.87
Datsun Redi-GO	540	4.25	0.84
Bajaj Qute	540	4.20	0.83
Maruti Alto 800	540	4.19	0.83
Hyundai Eon	540	3.45	1.01
Renault Kwid	540	3.28	0.87
Maruti Suzuki S-Presso	540	3.27	0.90
Maruti Celerio	540	3.20	0.86
Maruti Suzuki Ignis	540	2.98	0.93
Maruti Wagon R	540	2.86	0.98

Manipulation of Brands

ANOVA was done to classify brands into homogeneous groups using Tukey's HSD. Thus, five groups were obtained based on mean and standard deviation. They were Group-1 (Tata Tiago, GO), Group-2 (Bajaj,800), Group-3 (Kwid, S-Presso), Group-4(Celerio, Ignis), Group-5 (Wagon R).

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Table 4.23 : Tukey's HSD-Quality Perception-Small Cars

Brand Factor	N	1	2	3	4	5
Tata Tiago	540	4.42				
Datsun Redi-GO	540	4.25				
Bajaj Qute	540		4.20			
Maruti Alto 800	540		4.19			
Hyundai Eon	540		3.45			
Renault Kwid	540			3.28		
Maruti Suzuki S-Presso	540			3.27		
Maruti Celerio	540				3.20	
Maruti Suzuki Ignis	540				2.98	
Maruti Wagon R	540					2.86

Classification of Small Cars on the Basis of Price Bands

The respondents were asked to rate the prices on a five-point scale on the basis of price. Table 4.24 summarizes the mean and standard deviations of price bands selected for this purpose. The ratings are as follows. The rating was done on a five-point scale and both mean and standard deviations were calculated. 2.48 (3.07);2.99(3.40);3.69-5.14(3.55);3.83(3.76);3.11-5.21(3.92);3.78-5.23(4.07);4.66-5.83(4.20);4.93-6.45(4.24);5.1(4.44);5.18-7.95(4.52).

Table 4.24 : Price Perception-Small Cars

Price Band (Rs. Lakhs)	N	Mean	SD
2.48	540	3.07	0.82
2.99	540	3.40	0.82
3.69-5.14	540	3.55	0.94
3.83	540	3.76	0.98
3.11-5.21	540	3.92	0.97
3.78-5.23	540	4.07	1.01
4.66-5.83	540	4.20	1.04
4.93-6.45	540	4.24	0.98
5.1	540	4.44	1.00
5.18-7.95	540	4.52	0.98

Table 4.25 : Tukey's HSD-Price Perception-Small Cars

Price Factor	N	1	2	3	4	5	6	7	8
2.48	540	3.07							
2.99	540	3.40							
3.69-5.14	540		3.55						
3.83	540		3.76						
3.11-5.21	540			3.92					
3.78-5.23	540				4.07				
4.66-5.83	540					420			
4.93-6.45	540						4.24		
5.1	540							4.44	
5.18-7.95	540								4.52

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Manipulation of Price Bands

ANOVA was done to classify price bands into homogeneous groups using Tukey's HSD. Thus, eight groups were obtained based on mean and standard deviation. They were Group-1 (2.48,2.99); Group-2 (3.69-3.83); Group-3 (5.21); Group-4(5.23); Group-5 (5.83), Group-6(6.45); Group-7(5.1); Group-8(7.95).

Table 4.26 : Feature Perception-Small Cars

Brand Named	N	Mean	SD
Torque NM	540	4.42	0.89
Mileage KMPL	540	4.26	0.86
Power PS	540	3.90	0.89
Displacement CC	540	3.79	0.83
Price	540	3.62	0.89

Discussion

Brand Names

It is evident that the market leaders Tata Tiago is having a batter brand perception compared to other brands.

Price Levels

Different price levels were given to identify the price points. Ten levels of price were given for the survey but, Tukey's HSD Revealed 5 price points.

Features

The analysis revealed that Torque and Mileage were considered as the most important features

Perceived Quality

The study revealed that Tata Tiago and GO got the best Perceived Quality (PQ) ratings among the HFD Brands. This shows a positive price-quality relationship.

Conclusion

The study was an attempt to bring out the perception of various health food drink brands as well as the price-quality relationship. The author was reasonably successful in his attempt.

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