CLASSICAL DATA MINING AND PREDICTION FOR ANALYZING DATA FROM DIFFERENT COFFEE CONSUMERS

Satheesh Varman\textsuperscript{1} Dr. J. Sudarvel\textsuperscript{2}
\textsuperscript{1}Research Scholar in Management
Karpagam Academy of Higher Education, Coimbatore
\textsuperscript{2}Assistant Professor in Management,
Karpagam Academy of Higher Education, Coimbatore

ABSTRACT

Coffee is universally consumed beverage for ages irrespective of culture and gender. This globally recognized drink is one of the most important trading commodities in the world. As the Coffee is an agricultural product, it's processed from the coffee cherry that is been cultivated and harvested from the coffee plant which involves natural and rustic factors. The quality of coffee beans is varying greatly from its land where the Coffee has been planted. It is vital to understand the preference of consumers towards buying coffee brands and marketers must have a piece of substantial knowledge on coffee consumption and its pattern. This paper is aimed to understand consumer preference for Coffee in the Coimbatore district.

Keywords: Mining, prediction, classification, Consumer, Consumer Preference.

I. INTRODUCTION

The International Coffee Organization (ICO) has reported on 31st July 2020 and declared that the global coffee consumption of the year 2019/2020 is 1,01,09,520 tons in which India alone has consumed around 88,080 tons. India is one of the fastest emergent markets in world’s Coffee production. Intake of Coffee was bounded to Southern States except for few areas in northern part of India where savoring tea is more popular.

Aroma and flavor are the key aspects which come to mind when consumer think about Coffee. Apart from the two, coffee consumption in moderation can be classified as a healthy beverage. Primarily, Coffee consumers take Coffee in the morning as a kickstart to brighten the mood and enhance the energy levels. Each and every sip of Coffee soothes the mind and act as stress buster and helps in relaxation.

In past few years, Coffee has been reached and crossing the dominant phase at par with tea. Only in recent times, Coffee drinking has become more popular among the commonalities, mainly in the middle class [1-7].

Universal beverage Coffee is globally accepted as the world's one of the largest trading commodities. As the Coffee is an agricultural product, it is processed from the coffee cherry that is been cultivated and harvested from the coffee plant. The quality and unique parameters of coffee beans are varying greatly from its land where the Coffee is planted. The harvested coffee cherries are to be processed via various processes namely, coffee pulping, fermenting, washing and drying for availing parchment Coffee. The same parchment coffee will be processed that makes parchments into the form of Green Coffee. The Green Coffee will be graded and roasted and the roasted coffee beans will be grounded for making a perfect cup of Coffee. The processed Coffee is being manufactured and sold to consumers who are depending upon myriad factors to make this reach. It is vital to understand the behaviors of consumers towards their preferences and marketers must have a piece of substantial knowledge on consumption behaviors and its pattern.

A. Statement of the problem

The decision on purchase of goods or services could be influenced by many factors. Decision-making is more complex and even more important for consumers today than in the past. Consumers are heavily fazed by advertisements, news articles, and marketing emails that provide abundant information but a large extent
messages are ambiguous in nature. In addition, increase in the number and variety of goods, stores, shopping malls and the availability of multi components have complicated the decision making. Consequently, it makes the retailers strive for understanding the consumer preferences as an absolute necessity. Either from national level or from international level, there is an exemplary increase in the number of contenders in the Indian market which in turn takes the competition to higher levels. Furthermore, behavioral changes in consumers, affect industries either directly or indirectly. To captivate customers and to hold on to them, the companies are employing numerous business marketing tricks and strategies. It is highly imperative to understand the consumer behavior and changing patterns thoroughly and discerningly so that a viable strategy or business plan could be formed. When contemplating an imminent spending especially on a product, buyers incline over comparison of choices available for their product interest by focusing on different attribute combinations.

In order to buy a coffee product, consumers have to consider myriad factors right from the price of the products, quality of the product, brand name, trusts in product certification and availability of the products. Consumer preference determines the product sale-ability factor within the budget bracket. Understanding the consumer preference will direct sellers towards the consumer demand, which in turn leads to sustainability of a product in the market. This study focuses on changing patterns in the consumers’ preferences, since every day a new brand arrives in the market and the consumers are subjected to choose over various brands of coffee available in the market.

II. REVIEW OF LITERATURE

In [8], found that the preference of consumers was selecting or picking different varieties of Coffee based on pricing and other promotional offers. Consumers prefer Coffee habitually and this has made them take Coffee often to get themselves relaxed. In [9-12], found that customer preference coffee based on the taste, price, and quality. In [12-17], found that consumer preferences for coffee bean brands. The study has concluded that people in Poland drink mostly the ground and instant coffee, and the amount of consumption has drastically increased in the last few years. Comparatively, ground coffee consumption has seen a drastic increase over instant coffee. The brand named LAVAZZA and JACOBS KRONUNG is the market-leading which is consumed by people of Poland. In [18-22], the results have proved that the evolution of tastes and preferences have also involved the consumption of Coffee. The consumer is influenced by advertising in his choice of Coffee and makes a selection according to the product quality. In [22-25] found that, "server friendliness" looks to be most significant and "media advertising" looks to be the least significant. "personal preference" in consumer independences is most significant and "coffee has become a part of life" is the least significant. From the literature review, it is ascertained that not much more studies have been carried out on ascertaining the factors considered by consumers before choosing Coffee. To fill this vaccum, the present study has been carried out.

A. Limitation and Objective of the study

The study was conducted among consumer’s preference for Coffee in Coimbatore district only. The objectives are

- To know the consumers' preference towards the Coffee in Coimbatore district.
- To study the factors influencing the customer to prefer Coffee.

III. METHODOLOGY

The primary data was collected through the questionnaire with the consumers of Coffee. Secondary data was collected through various reports from journals, websites, magazines, etc. To study the consumers' preference towards the Coffee, the researcher selected Coimbatore district as an area of study.

The present study is descriptive in nature. Convenient sampling method was used in this research[49][50]. 420 consumers have been selected in Coimbatore district for this research. By employing Krejcie, R. V., & Morgan, D. W. (1970) table, the sample size required for the study 384. Considering the data reliability and accuracy sample size increase to 420 [26-27]. The researcher used simple percentage Garrett Ranking method to analyze and to interpret data.

A. Analysis and Interpretation

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TABLE I

General Profile

<table>
<thead>
<tr>
<th>S. N O</th>
<th>Factor</th>
<th>Classification</th>
<th>No. of Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age</td>
<td>21-30 yrs</td>
<td>162</td>
<td>38.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>31-40 yrs</td>
<td>208</td>
<td>49.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>41-50 yrs</td>
<td>50</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>Gender</td>
<td>Male</td>
<td>71</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>349</td>
<td>83</td>
</tr>
<tr>
<td>3</td>
<td>Occupation</td>
<td>Student</td>
<td>23</td>
<td>5.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Business</td>
<td>46</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Professionals</td>
<td>216</td>
<td>51.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Employed</td>
<td>80</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>House wife</td>
<td>55</td>
<td>13</td>
</tr>
<tr>
<td>4</td>
<td>Marital status</td>
<td>Married</td>
<td>290</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unmarried</td>
<td>130</td>
<td>31</td>
</tr>
<tr>
<td>5</td>
<td>Monthly income</td>
<td>Up to Rs 15000</td>
<td>63</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rs 15001-25000</td>
<td>183</td>
<td>43.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rs 25001-35000</td>
<td>109</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Above Rs 35000</td>
<td>65</td>
<td>15.5</td>
</tr>
</tbody>
</table>

Source: Primary data

From the table, it is clear that majority of the respondents 49.50 per cent belongs to the age group of 31-40 years of age 349 of the respondents are female. 51.5 per cent of the respondents belong to professionals’ category. 290 of the respondents are married and 43.5 per cent of the respondents have a monthly income Rs 15001-25000.

B. Consumers’ Preference Towards the Coffee

To determine factors considered by consumer before choosing coffee, Garrett ranking is employed.

TABLE II

<table>
<thead>
<tr>
<th>Preference</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>Res Score</th>
<th>Mean Score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td>8</td>
<td>28</td>
<td>20</td>
<td>272</td>
<td>40</td>
<td>32</td>
<td>16</td>
<td>4</td>
<td>42</td>
<td>2223</td>
<td>52.94</td>
</tr>
<tr>
<td>Sales offer</td>
<td>12</td>
<td>12</td>
<td>16</td>
<td>32</td>
<td>24</td>
<td>240</td>
<td>40</td>
<td>44</td>
<td>42</td>
<td>1767</td>
<td>42.09</td>
</tr>
<tr>
<td>Flavour</td>
<td>8</td>
<td>16</td>
<td>24</td>
<td>20</td>
<td>28</td>
<td>20</td>
<td>84</td>
<td>220</td>
<td>42</td>
<td>1377</td>
<td>32.80</td>
</tr>
</tbody>
</table>

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It is seen from the above table that, according to the Garrett Ranking test, the factors which induces the respondents to consumers’ preference towards the Coffee, are namely, brand name of the Coffee, price, quantity (Package Size), quality, taste, sales offer, advertisement, and flavour of the coffee.

C. Findings

- Majority of the respondents belong to the age group of 31 – 40 Years
- 83 % of the respondents are female
- 69 % of the respondents are married
- Majority of the respondents monthly income is Rs 15001 – 25000
- Garrett Ranking test, the factors which induces the respondents to consumers’ preference towards the Coffee, are namely, brand name of the Coffee, price, quantity (Package Size), quality, taste, sales offer, advertisement, and flavour of the coffee.

D. Suggestions

The study has revealed the areas which need focus for improvements and suggestions for some key areas are below:

1) Coffee flavours are aplenty but local coffee drinkers are not exposed to its myriad variants. Steps to bring exposure of flavours towards the coffee takers could bring lot of development in spread of coffee presence.

2) Advertisements to promote the coffee sales should be considered by the coffee sellers. Marketing is an essential component in business development. Excluding big coffee brands, there is no advertising among coffee makers/sellers. With technology enhancement, the marketing has become an easy reach to the business groups. Especially Whatsapp, Facebook and Instagram where at a certain levels of advertising can be done without extra cost.

3) Sales offer or discounts are always a magnet for attracting consumers. Aesthetic presentation may add value to the product but it can be minimized by bringing eco friendly packaging and this amount could be used to give offers to tempt the consumers to purchase.
4) Taste of coffee should be a trump factor for any brand. By taking geographical aspects of coffee beans, brands should consider to allow their consumers to savour different tastes of coffee at their preferable price/cost. Not only it would excite consumers but also brings a novelty factor to the coffee sellers/makers.

IV. CONCLUSION

Consuming Coffee is a unique habit of people, which significantly dominates the lifestyle. The habit of coffee-drinking is being treated as cultural-based and a socio-economic entity which makes it an integral part in the life of humankind. Understanding the coffee buying behaviour of consumers will undoubtedly enable those marketers who serve Coffee to form their business in the most upgraded manner. The marketers can be guided strongly with observed aspects for serving Coffee to the consumers. The gender-based use, the daily number of coffee intake and location-based consumption can enable marketers to plan ahead and successfully serve the coffee lovers of the world.

REFERENCES


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