

**STATISTICAL ANALYSIS ON CUSTOMER'S  
PREFERENCE FOR PRODUCT FEATURES**

**BY**

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BENIN CITY**

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**SUBMITTED TO THE DEPARTMENT OF  
STATISTICS, FACULTY OF PHYSICAL  
SCIENCES, UNIVERSITY OF BENIN, BENIN CITY  
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# CERTIFICATION

This is to certify that this project report was carried out by Chika Nicole Williams in the Department of Statistics, Faculty of Physical Sciences, University of Benin, Benin City.

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Prof. A. Iduseri  
(Project Supervisor)

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Date

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Prof. A. Iduseri  
(Head of Department)

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Date

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External Examiner

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Date

# DECLARATION

I, Chika Nicole Williams, hereby declare that this project work titled “STATISTICAL ANALISYS ON CUSTOMER’S PREFERENCE FOR PRODUCT FEATURES” is a record of an original work done by me through research and study in the Department of Statistics, Faculty of Physical Sciences, University of Benin, Benin City under the supervision of Prof. A. Iduseri.

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Chika Nicole Williams

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Date

# Acknowledgement

I extend my heartfelt gratitude to the following individuals, whose unwavering support and encouragement have been instrumental in the successful completion of this work:

My Beloved Parents, Mr. and Mrs. Williams – Your Love, constant advice and encouragement, and sacrifices have been the cornerstone of my strength and determination. Your belief in me has made all the difference

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My Siblings – Your advice, wisdom and guidance have been invaluable and have shaped this journey in profound ways.

Lots of Thanks.

Chika Nicole Williams.

# **DEDICATION**

I want to dedicate this project work to God Almighty whose divine guidance, strength and grace have enabled me to complete this work. May it bring honor to His name and inspire others to seek His wisdom.

With Humble Gratitude.

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## **Abstract**

Understanding customer's preference for product features is crucial for businesses seeking to optimize their offerings and increase sales. This study aims to identify key product features that significantly influence purchasing decisions.

The research specifically examines customer preference across different demographic groups, such as age and income levels, to determine variations in product feature importance. Using chi-square test for analysis, this study evaluates the association between demographic factors and product features preferences, providing insight into customer's decision-making patterns.

Based on the analysis it was found that the key product features that affect customers purchasing decision is quality and performance. The findings will help businesses tailor their marketing and product development strategies to better align with customer expectations.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.0 BACKGROUND OF STUDY**

In today's competitive market, understanding customer's preference is crucial for businesses to design and develop products that meet their needs. Identifying customer's preference is vital for developing effective market strategies and creating products that meets costumer's needs. Researches has long recognized the importance of understanding customers preferences, studying them to inform business strategies and drive growth (Grannot et al, 2010; Yang et al; 2012).

To achieve success a firm must constantly monitor and understand costumer's behavior and preferences as costumers are the ultimate decision-makers and hold the power in the business world. When considering a purchase costumers typically evaluate multiple considerations before making a choice where product features are a critical deciding factors.

The Characteristics and attributes of a product often serve as the key differentiator, swaying costumers to select one option over the other. Product features are essential because they offer customers a transparent and concise overview of what a product has to offer enabling them to make informed decision and set realistic expectations.

Customers have varied expectations when it comes to product features. They seek products that are user-friendly, deliver high performance, and boast modern design. Additionally, customers increasingly prioritize eco-friendly and sustainable products that align with their values. They also desire personalized products that cater to their individual needs and preferences. Moreover, customers are eager to embrace innovative products that introduce new technologies and features. To succeed, businesses must understand and adapt to these evolving customer preferences, delivering products that meet their expectations and foster loyalty.

In a crowded market place where numerous brands offer comparable products, unique and well-designed features can be a key differentiator, setting a product apart from its rivals and making it more attractive to costumers.

## **1.1 COSTUMER'S PREFERENCE**

Customer's preference represents the unique tastes and tendencies that drive customers decision-making when selecting from various products or service. These preferences are shaped by a range of influences including personal experiences, cultural background, social environment and individual values, which ultimately determine what product or service resonate with them.

## **1.2 PRODUCT FEATURES**

Product features are unique attributes, properties or capabilities that set a product apart from others. These features can differ significantly depending on the product's type, purpose and the specific needs and preferences of the intended customer's base. They are developed to fulfill customers' needs and demands. Product features also facilitate customization and personalization. Customers increasingly seek products that align with their individual preferences and needs. By offering a wide range of features, businesses can cater to diverse customer requirements.

## **1.3 STATEMENT OF PROBLEMS**

Businesses often find it challenging to pinpoint the ideal product features that will resonate with their target audience, leading to inefficiencies and lost opportunities. The analysis of customer preference data is frequently hindered by the use of overly simplistic statistical methods, which fail to capture the intricacies of customer decision-making. Moreover, existing approaches to analyzing customer preference data often necessitate advanced statistical expertise, creating a barrier for many businesses. The sheer volume and complexity of customer preference data can also lead to information overload, making it difficult to extract meaningful

insights. Furthermore, customer preferences are often influenced by contextual factors, which existing approaches fail to account for. As a result, companies often rely on intuition or limited data to inform product development decisions, leading to a mismatch between product offerings and customer needs. This underscores the need for a more sophisticated statistical approach to analyzing customer preference data, one that can uncover the underlying patterns and relationships in the data and drive data-informed product development strategies.

#### **1.4 OBJECTIVES OF THE STUDY**

1. Identifying key product features that influence customer purchasing decision
2. Analyze customer preference across various demographics (age, income etc.)

#### **1.5 SIGNIFICANCE OF STUDY**

Analyzing customer preferences for product features is crucial for businesses to understand what drives customer satisfaction and purchasing decisions. By applying statistical methods to customer preference data, businesses can pinpoint the most influential features and optimize their products accordingly.

This analysis also enables businesses to categorize customers into distinct groups based on their preferences, allowing for targeted marketing and product development tailored to specific segments.

Moreover, statistical analysis reveals how customer preferences vary across different demographics, regions, and industries, enabling businesses to develop products that cater to diverse customer needs.

By tracking changes in customer preferences over time, businesses can stay ahead of market trends and adjust their strategies to meet evolving customer demands.

Ultimately, statistical analysis empowers businesses to make data-driven decisions, reducing reliance on assumptions and intuition. By leveraging customer preference data, businesses can optimize product development, marketing, and resource allocation to drive growth and success.

## **1.6 SCOPE AND LIMITATIONS OF THE STUDY**

### **1.6.1 Scope**

This study aims to explore the significance of customer preferences in shaping product development and marketing strategies. It seeks to understand the key factors that influence customer purchasing decisions and how these preferences differ across various industries and markets.

The research will delve into the impact of customer preferences on product development and marketing, including the importance of innovation, sustainability, and personalization in meeting customer needs. It will also examine the challenges

and opportunities that arise when incorporating customer preferences into product development and marketing.

The study will focus on several key industries, including consumer goods, technology etc. The study aims to provide a comprehensive understanding of customer preferences and their role in driving product development and marketing.

The expected outcomes of this research include a deeper understanding of customer preferences and their impact on product development and marketing, as well as practical guidance for businesses seeking to better meet the needs of their customers. This study will contribute to the existing body of knowledge on customer preferences and provide valuable insights for businesses looking to stay competitive in today's market.

### **1.6.2 Limitations**

The study has some potential drawbacks. These includes

1. Data quality issues that may affect the accuracy of the analysis
2. Limited sample size that may not be representative of the entire population
3. Survey fatigue that may lead to lower response rates or less accurate response

4. Temporary changes in customer preference that may not be captured in the analysis.

## **1.7 RESEARCH QUESTIONS AND HYPOTHESIS**

### **1.7.1 Research Questions**

1. What are the key product features that customers prefer?
2. How do customer's preferences for product features vary across different demographic groups (age and income)?
3. What is the relationship between customer's satisfaction and importance of various product features?
4. Can we predict future customer preference for product features based on current data?

### **1.7.2 Research Hypothesis**

The research hypotheses are as follows:

#### **HYPOTHESIS 1**

**Null Hypothesis ( $H_0$ ):** There is no significant association between income level and the perception that higher-priced products are generally of better quality.

**Alternative Hypothesis (H<sub>1</sub>):** There is a significant association between income level and the perception that higher-priced products are generally of better quality.

## **HYPOTHESIS 2**

**Null Hypothesis (H<sub>0</sub>):** There is no significant association between income and the importance of product quality in purchasing decisions.

**Alternative Hypothesis (H<sub>1</sub>):** There is a significant association between income and the importance of product quality in purchasing decisions.

## **HYPOTHESIS 3**

**Null Hypothesis (H<sub>0</sub>):** There is no significant association between age group and the influence of product design on overall satisfaction.

**Alternative Hypothesis (H<sub>1</sub>):** There is a significant association between age group and the influence of product design on overall satisfaction.

## **HYPOTHESIS 4**

**Null Hypothesis (H<sub>0</sub>):** There is no significant association between income level and the preference for a product with better performance over one with more features but lower performance.

**Alternative Hypothesis (H<sub>1</sub>):** There is a significant association between income level and the preference for a product with better performance over one with more features but lower performance.

# **CHAPTER TWO**

## **LITERATURE REVIEW**

### **2.1 INTRODUCTION**

Customers' preferences for product features are a crucial aspect of product development and marketing. Understanding what matters most to customers can help businesses create products that meet their needs and exceed their expectations (Kotler & Keller, 2016). According to Kotler and Keller (2016: 469), consumer preference is a consumer's attitude towards a product formed through an evaluation of the various choices available. Research shows that customers' preferences are influenced by personal, social, and cultural factors, as well as individual differences such as personality traits and cognitive styles (Solomon, 2014; Wang et al., 2015). Customers tend to prioritize features such as quality, performance, design, and price (Kotler & Keller, 2016), and also value innovative, user-friendly, and status-enhancing features (Hsee & Zhang, 2004).

However, customers' preferences can vary across different product categories and usage situations (Hoyer & Brown, 1990). For instance, personal and business use may have different feature priorities.

To develop effective product development and marketing strategies, businesses must understand customers' feature preferences (Kotler & Keller, 2016). By identifying and prioritizing key features, businesses can create products that meet customer needs and drive growth.

Understanding customer preferences is crucial for businesses to create value and drive growth (Kotler & Keller, 2016). Customers' preferences are closely tied to product features (Veryzer & Borja de Mozota, 2005). Research has shown that customers tend to prefer products with features that meet their needs, wants, and expectations (Anderson & Mittal, 2000).

Customers' preferences for product features are a critical aspect of product development and marketing (Kotler & Keller, 2016). Customers also tend to prefer products with features that are innovative, easy to use, and provide a sense of status or prestige (Hsee & Zhang, 2004).

Research has also shown that customers' preferences can change over time due to factors such as technological advancements, changing lifestyles, and increasing environmental awareness (Wang et al., 2015).

Product features are the characteristics of a product that define its functionality, performance, and overall value proposition (Kotler & Keller, 2016). Research has shown that product features play a crucial role in shaping customer preferences and

purchasing decisions (Anderson & Mittal, 2000). Customers tend to prioritize product features based on their individual needs and preferences (Hsee & Zhang, 2004), and are more likely to be satisfied with products that meet their expectations and provide a sense of value (Anderson & Mittal, 2000).

Product features can also influence customer perceptions of a brand's quality and reputation (Aaker & Keller, 1990), with certain features becoming associated with specific brands (Kotler & Keller, 2016). Understanding product features and their impact on customer behavior is essential for businesses to develop effective product development and marketing strategies. Product features must align with customers expectations and market needs to maximize adoption and retention (Khan et al, 2022)

Product features can be functional, aesthetic, or experiential (Bettman et al., 1998), and influence customers' perceptions, attitudes, and behaviors (Hsee & Zhang, 2004).

The relationship between customer preferences and product features is dynamic and context-dependent (Luo et al., 2012), and is influenced by individual differences (Wang et al., 2015) and usage situations (Hoyer & Brown, 1990) and plays a significant role in shaping customer preferences. Customers prioritize features that provide functional benefits (Hoyer et al, 2023).

According to Kotler and Armstrong (2018: 209), consumers will choose based on product attributes that will shape consumer preferences to arrive at a final decision during the purchase process. Businesses can use this information to develop effective product development and marketing strategies that meet customer needs and drive growth (Kotler & Keller, 2016).

Studies have consistently shown that customer satisfaction is closely tied to product features (Anderson & Mittal, 2000; Hoyer & Brown, 1990). Customers are more likely to be satisfied with products that meet their expectations and provide value (Anderson & Mittal, 2000). Specific product features like quality, performance, and design can significantly impact customer satisfaction (Bettman et al., 1998).

Additionally, customer satisfaction can also be influenced by perceived value, which can be affected by factors like price, brand reputation, and customer support (Kotler & Keller, 2016). Overall, product features play a crucial role in shaping customer satisfaction, and businesses should carefully consider their target market's needs and preferences when developing and marketing their products.

# **CHAPTER THREE**

## **METHODOLOGY**

### **3.1 INTRODUCTION**

Understanding customer preferences for product features is crucial for businesses aiming to improve product design, marketing strategies, and customer satisfaction. In this study, we aim to analyze customer preferences for key product features—such as price, quality, design, and performance—using a structured approach. By conducting a questionnaire-based survey, we will collect data from customers, focusing on their preferences and perceptions of these features. We will employ a chi-square test of independence to determine if significant relationships exist between customer demographics (e.g., age, gender, income) and their preferences for specific features. This analysis will help in identifying patterns and relationships that could guide strategic decisions for product improvement and targeted marketing. This study employs a quantitative research design, using a survey questionnaire to collect data and statistical analysis to identify patterns and relationships.

### **3.2 SOURCE OF DATA**

The data for this study will be collected through a questionnaire designed to capture customer preferences across various product features and basic demographic information. The questionnaire will be divided into two sections:

**Demographic Information:** This section will collect data on age, gender and income level.

**Preference Questions:** Respondents will indicate their level of preference for each feature (price, quality, design, performance) on a Likert scale, such as "Important," "somewhat Important," "not important".

The questionnaire was administered physically through face-to-face interviews. The questionnaires were administered over one week and Respondents were informed of the study's objectives and assured confidentiality to encourage candid responses. Any incomplete questionnaires were excluded from further analysis.

### **3.3 METHOD OF DATA ANALYSIS**

The analysis of customer preferences for product features will be conducted using a systematic approach, with steps that encompass data preparation, descriptive statistics, and inferential analysis using the chi-square test of independence. The main objective is to interpret customer preferences by

identifying significant relationships between demographic factors and their preferences for specific product features (price, quality, design, and performance).

Here's a more detailed breakdown of the process

### **3.4 DESCRIPTIVE STATISTICS**

Mean, median, mode, standard deviation, and frequency distributions were calculated to summarize demographic characteristics and feature preferences.

#### **Mean**

The mean is the average of a set of numbers. It is calculated by adding up all the values and dividing by the total number of values.

#### **Median**

The median is the middle value in a sorted list of numbers. If there are an odd number of observations, it is the center value; if even, it is the average of the two middle numbers.

The median is useful for understanding the central tendency of data, especially when there are outliers or skewed distributions (e.g., income levels in demographic data).

## **Mode**

The mode is the most frequently occurring value in a dataset. It is useful in identifying the most common preference among customers or the most common demographic category (e.g., most frequent age group or income level).

## **Standard Deviation**

Standard deviation measures the spread or dispersion of a dataset. It indicates how much individual data points deviate from the mean. A small standard deviation indicates that data points are close to the mean, while a large standard deviation shows more variability. It helps understand the variability in customer ratings for product features like quality or design.

## **Frequency Distribution**

A frequency distribution is a table or chart that shows how often each value or category occurs in a dataset. It is used to summarize demographic data (e.g., age groups, income levels) and product features (e.g., how many customers rated a feature as "Important," "Somewhat Important," or "Not Important"). It provides a visual representation, such as a histogram or bar chart, to help identify trends and patterns in customer preferences.

### 3.5 THE TEST OF INDEPENDENT

Expected frequencies are been computed on the basis of the hypothesis (null hypothesis  $H_0$ ). The computed  $\chi^2$  value is given as

$$\chi^2 = \frac{\sum^r \sum^c (O_{ij} - E_{ij})^2}{E_{ij}} \quad (3.1)$$

Where

r = Numbers of rows

c = Numbers of columns

$E_{ij}$  = Corresponding expected frequency

$O_{ij}$  = Observed frequency of the respondents

N = Grand total.

This is always greater than some critical values e.g.  $\chi^2 = 0.95$  or  $\chi^2 = 0.98$ , which are the critical values of 0.05 and 0.01 significant levels. Base on this conclusions are made either the observed frequency differs significantly from the expected frequency or  $H_0$  is been rejected at the corresponding level of significance. Otherwise we accept it.

# CHAPTER FOUR

## DATA ANALYSIS

### 4.0 INTRODUCTION

This chapter is devoted to the analysis and interpretation of the data gathered in the course of study. The data used for this study is primary data from 100 questionnaires. The data was analyzed using chi-square.

**Table 4.1: Age Distribution**

Age group	Frequency	Percentage
18 – 24	25	25%
25 – 34	30	30%
35 – 44	20	20%
45 and above	25	25%

**Table 4.2: Gender Distribution**

Gender	Frequency	Percentage
Male	55	55%
Female	45	45%

**Table 4.3: Income Distribution**

Income Level	Frequency	Percentage
40000- 50,000	20	20%
50,000 - 60,000	25	25%
60,000 - 70,000	30	30%
70,000 - 80,000	15	15%
80,000 and above	10	10%

#### **4.1 RESEARCH HYPOTHESIS**

##### **Hypothesis 1,**

H<sub>0</sub>: There is no significant association between income level and the perception that higher-priced product are generally of better quality.

H<sub>1</sub>: There is a significant association between income level and the perception that highly-priced product are generally of better quality.

**Table 4.4**

Income Level	Yes	Not Really	No	Total
40,000-50,000	10	7	3	20
50,000-60,000	15	8	2	25
60,000-70,000	20	6	4	30
70,000-80,000	9	5	1	15

80,000 +	6	3	1	10
Total	60	29	11	100

**Table 4.5**

$$E_{ij} = (\text{Row Total} \times \text{Column Total}) / \text{Grand Total}$$

Income Level	Yes	Not Really	No	Total
40,000-50,000	12	5.8	2.2	20
50,000-60,000	15	7.25	2.75	25
60,000-70,000	18	8.7	3.3	30
70,000-80,000	9	4.35	1.65	15
80,000 +	6	2.9	1.1	10
Total	60	29	11	100

**Table 4.6**

$$\frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

Income Level	Yes	Not Really	No
40,000-50,000	0.3333	0.2483	0.2909
50,000-60,000	0	0.0776	0.2045
60,000-70,000	0.2222	0.8379	0.1485
70,000-80,000	0	0.097	0.2568
80,000 +	0	0.0034	0.0091

$$\chi_{cal}^2 = 0.333 + \dots + 0.0091 = 2.73$$

$$df = (r-1)(c-1) = (5-1)(3-1) = 8$$

For  $\alpha = 0.05$

$$\chi_{tab}^2 = 15.507$$

Decision: Since  $\chi_{cal}^2 < \chi_{tab}^2$  we do not reject  $H_0$  and conclude that there is no significant association between income level and the perception that higher priced product are generally of better quality.

### Hypothesis 2,

$H_0$ : there is no significant association between income and the importance of product quality in purchasing decisions.

$H_1$ : there is a significant association between income and the importance of product quality in purchasing decision.

**Table 4.7**

Income Level	Very Important	Somewhat Important	Not Important	Total
40,000-50,000	12	6	2	20
50,000-60,000	18	6	1	25
60,000-70,000	22	7	1	30
70,000-80,000	12	3	0	15
80,000 +	8	2	0	10

Total	72	24	4	100
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**Table 4.8**

$$E_{ij} = (\text{Row Total} \times \text{Column Total}) / \text{Grand Total}$$

Income Level	Very Important	somewhat Important	Not Important	Total
40,000-50,000	14.4	4.8	0.8	20
50,000-60,000	18	6	1	25
60,000-70,000	21.6	7.2	1.2	30
70,000-80,000	10.8	3.6	0.6	15
80,000 +	7.2	2.4	0.4	10
Total	72	24	4	100

**Table 4.9**

$$\frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

Income Level	Very Important	Somewhat Important	Not Important
40,000-50,000	0.4	0.3	1.8
50,000-60,000	0	0	0
60,000-70,000	0.0074	0.0056	0.0333
70,000-80,000	0.1333	0.1	0.6
80,000 +	0.0889	0.0667	0.4

$$\chi_{cal}^2 = 0.4 + \dots + 0.4 = 3.94$$

$$df = (r-1)(c-1) = (5-1)(3-1) = 8$$

For  $\alpha = 0.05$

$$\chi_{tab}^2 = 15.507$$

Decision: Since  $\chi_{cal}^2 < \chi_{tab}^2$  we do not reject  $H_0$  and conclude that there is no significant association between income level and the importance of product quality in purchasing decision.

### Hypothesis 3,

$H_0$ ; There is no significant association between age group and the influence of product design on overall satisfaction.

$H_1$ ; There is a significant association between age group and the influence of product design and overall satisfaction.

**Table 4.10**

Age Group	Yes	Not Really	No	Total
18 – 24	15	7	3	25
25 – 34	18	10	2	30
35 – 44	14	4	2	20
45 and above	10	8	7	25
Total	57	29	14	100

**Table 4.11**

$$E_{ij} = (\text{Row Total} \times \text{Column Total}) / \text{Grand Total}$$

Age Group	Yes	Not Really	No	Total
18 – 24	14.25	7.25	3.5	25
25 – 34	17.1	8.7	4.2	30
35 – 44	11.4	5.8	2.8	20
45 and above	14.25	7.25	3.5	25
Total	57	29	14	100

**Table 4.12**

$$\frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

Age Group	Yes	Not Really	No
18 – 24	0.0395	0.0086	0.0714
25 – 34	0.0474	0.1943	1.1524
35 – 44	0.593	0.5586	0.2286
45 and above	1.2675	0.0776	3.5

$$\chi_{cal}^2 = 0.395 + \dots + 3.5 = 7.74$$

$$df = (r-1)(c-1) = (4-1)(3-1) = 6$$

For  $\alpha = 0.05$

$$\chi_{tab}^2 = 12.592$$

Decision: Since  $\chi_{cal}^2 < \chi_{tab}^2$  we do not reject  $H_0$  and conclude that there is no significant association between age group and the influence of product design on the overall satisfaction

**Hypothesis 4,**

$H_0$ ; There is no significant association between income level and the preference for a product with better performance over one with more features but lower performance.

$H_1$ ; There is a significant association between income level and the preference for a product with better performance over one with more features but lower performance.

**Table 4.13**

Income Level	Yes	Not really	No	Total
40,000-50,000	12	5	3	20
50,000-60,000	17	6	2	25
60,000-70,000	21	7	2	30
70,000-80,000	12	4	1	15
80,000 +	7	3	0	10
Total	67	25	8	100

**Table 4.14**

$$E_{ij} = (\text{Row Total} \times \text{Column Total}) / \text{Grand Total}$$

Income Level	Yes	Not Really	No	Total
40,000-50,000	13.4	5	1.6	20
50,000-60,000	16.75	6.25	2	25
60,000-70,000	20.1	7.5	2.4	30
70,000-80,000	10.05	3.75	1.2	15
80,000 +	6.7	2.5	0.8	10
Total	67	25	8	100

**Table 4.15**

$$\frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

Income Level	Yes	Not Really	No
40,000-50,000	0.1465	0	1.225
50,000-60,000	0.0037	0.01	0
60,000-70,000	0.0403	0.0333	0.0667
70,000-80,000	0.0002	0.0167	0.0333
80,000 +	0.0134	0.1	0.8

$$\chi_{cal}^2 = 0.1465 + \dots + 0.1 = 2.49$$

$$df = (r-1)(c-1) = (5-1)(3-1) = 8$$

For  $\alpha = 0.05$

$$\chi_{tab}^2 = 15.507$$

Decision: Since  $\chi_{cal}^2 < \chi_{tab}^2$  we do not reject  $H_0$  and conclude that there is no significant association between income level and the preference for a product with better performance over one with more features but lower performance.

## 4.2 SUMMARIZING CUSTOMER PREFERENCE FOR EACH FEATURE

**Table 4.16**

<b>Product Features</b>	<b>% of customer considering it is important</b>
Price	60% considered price as very important
Quality	72% considered quality as very important.
Design	57% agreed that design influences their satisfaction.
Performance	67% considered performance as very important.

From table 4.16, we observe that;

Quality is the most important feature influencing purchasing decisions.

Performance is the second most important feature.

Price matters but is slightly less important than quality and performance.

Design has the least influence compare to other features.

In conclusion Quality and Performance are the most important features influencing purchasing decisions.

## CHAPTER FIVE

### 5.0 SUMMARY

The statistical analysis on customer's preference for product features has revealed a multifaceted picture of what drives consumer decision making. It is evident from the findings that while price remains a fundamental consideration, its importance is nuanced by factors such as quality, performance and design. Customers increasingly look beyond the initial cost, weighing long term benefits and overall value, which underscores the need for companies to maintain a balanced approach in product development. This research illustrates that each features interacts with the others, creating a complex landscape where the significance of one aspect may vary depending on the market segment or demographic group under consideration. The ability to dissect these interrelationships through robust statistical methods not only enhanced our understanding of current market trends but also lays the groundwork for anticipating future shifts in consumer behavior.

In light of these insights, it is clear that companies must adopt a more dynamic and data-centric approach to product strategy. Rather than relying solely on traditional market intuition, organizations are encouraged to invest in sophisticated analytics that continuously monitor and interpret evolving customer's preference. This means developing systems that can integrate real time feedback with historical data

to create a comprehensive view of the market. Such an approach will empower companies to fine tune their products, ensuring that every features from design to performance is optimized to meet consumers' expectations. Embracing a strategy that is both agile and informed by rigorous analysis will help businesses not only respond to immediate market demands but also position themselves strategically for long term success

Moreover the findings suggest that the future of product development lies in the seamless integration of customer's feedback into every stage of the process. Companies that foster a culture of ongoing dialogue with their customers are better equipped to innovate and adapt. Such comprehensive insight allows for a proactive rather than reactive approach, ensuring products evolves in step with the needs and the desire of the targeted audience. The success of this strategy hinges on the ability to balance affordability with superior quality and performance, thereby building enduring customers trust and loyalty.

Ultimately this analysis serves as a roadmap for businesses aiming to remain competitive in a rapidly changing landscape. This will help companies align their product features more closely with market demands. This in turn will facilitate more targeted marketing, streamlined product design and strategic resource allocation. In an environment where customer's expectations are continually

evolving, the commitment to continuous research and adaptation is not just advantageous it is essential for sustaining growth and long term market relevance.

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# APPENDIX

## QUESTIONNAIRE

### **Statistical Analysis on Customer's Preference for Product Features**

This questionnaire is designed to elicit information for the research work on the above topic, please tick as appropriate. Any information given shall be treated strictly confidential for research purpose.

#### **Section A**

1) What is your age group?

- 18-24
- 25-34
- 35-44
- 45 and above

2) What is your gender?

- Male
- Female

3) What is your average monthly income?

- 40000-50000
- 50000-60000
- 60000-70000

- 70000-80000
- 80000 and above

## Section B

1) How important is price of a product when making a purchase decision?

- Not important
- Somewhat important
- Very important

2) Do you think higher-priced products are generally of better quality?

- Yes
- Not really
- No

3) Does design of a product influences your overall satisfaction with it?

- Yes
- Not really
- No

4) Do you value a unique or innovative design over traditional designs, regardless of the product type?

- Not important
- Somewhat important

- Very important

5) Is the quality of a product a critical factor in your purchasing decision?

- Not important
- Somewhat important
- Very important

6) Do you prefer a product with high quality even if it means paying a premium price?

- Yes
- Not really
- No

7) Does the performance of a product significantly affects your buying decision?

- Not important
- Somewhat important
- Very important

8) Would you choose a product that performs better over one that has more features but lower performance?

- Yes
- Not really
- No