



Special Issue - Innovative Commerce: Bridging Business and Computer Applications (ICBBCA-2026)

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A COMPARATIVE STUDY ON CUSTOMER PREFERENCE BETWEEN DESKTOP PERSONAL COMPUTERS AND LAPTOPS IN MADURAI CITY

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Abstract

The present study titled “A Comparative Study on Customer Preference Between Desktop PCs and Laptops” aims to analyze and compare the preference of customers towards two major personal computing devices, namely Desktop PCs and Laptops. In the modern digital era, computers have become an essential part of everyday life, widely used for education, business, professional work, communication, and entertainment. With the availability of multiple options in the market, customers often face difficulty in choosing between Desktop PCs and Laptops due to differences in price, performance, portability, durability, and usage.

Keywords: Customer preference, Desktop PCs, Laptops, Consumer buying behavior, Portability, Performance, Price factors, Customer satisfaction, Technology usage

Introduction

In today’s rapidly evolving technological environment, computers have become an essential tool in almost every aspect of human life. Advances in information technology have transformed the way people communicate, learn, work, and conduct business. Computers are now widely used by students, professionals, businesses, and households for various purposes such as education, communication, and entertainment. As digital platforms continue to grow, the demand for efficient and reliable computing devices has also increased, leading to significant growth and competition in the computer industry.

Among the available computing devices, Desktop PCs and Laptops remain the most commonly used. Desktop computers are known for their high performance, durability, and cost-effectiveness, making them suitable



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for tasks that require strong processing power. They are widely used in offices, educational institutions, and businesses where mobility is not a major concern. Many users involved in activities such as software development, graphic designing, video editing, and gaming prefer desktop computers because of their superior performance and reliability.

Statement of the Problem

Due to rapid technological development, customers today have multiple options when purchasing a computer, especially between Desktop PCs and Laptops. Both devices differ in terms of price, performance, portability, and usage, which often creates confusion among customers. Changing lifestyles, online education, and work-from-home culture have further influenced customer preferences. Many customers lack proper technical awareness, leading to unsuitable purchase decisions and dissatisfaction. Hence, there is a need to study and compare customer preference between Desktop PCs and Laptops and identify the factors influencing their choice.

Objectives of the Study

- To examine and compare customer preference between Desktop PCs and Laptops.
- To analyze the factors influencing customers in selecting a particular type of computer.

- To understand the level of satisfaction among Desktop PC and Laptop users.
- To identify the problems faced by customers while using these devices.
- To provide insights that help customers make informed purchase decisions and assist manufacturers in improving product offerings.

Scope of the Study

The scope of the present study is confined to the comparative analysis of customer preference between Desktop PCs and Laptops. The study focuses on understanding customer perception, usage behaviour, and satisfaction level based on factors such as price, performance, portability, durability, and brand image. The research is limited to selected respondents from a specific geographical area due to time and accessibility constraints.

Research Methodology

Research Design

Research design refers to the systematic plan adopted to collect, analyze, and interpret data related to the research problem. In the present study, a descriptive research design is adopted as it helps in describing the characteristics and preferences of customers using Desktop PCs and Laptops. This design is suitable for identifying patterns in customer behavior and understanding their level of satisfaction and expectations.



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Nature of the Study

The nature of the study is both descriptive and analytical. It is descriptive as it provides a detailed description of customer preferences and demographic characteristics. It is analytical as it involves comparison and interpretation of data using appropriate statistical tools to draw meaningful conclusions.

Sources of Data

Primary data

Primary data for the present study was collected through a structured questionnaire administered to customers using Desktop PCs and Laptops. The questionnaire was designed to gather information regarding demographic details, usage patterns, preference factors, and satisfaction levels of the respondents.

Secondary data

Secondary data for the study was collected from various sources such as textbooks, research journals, magazines, websites, and previous research studies related to consumer behaviour and computer technology.

Sample Size

Sample design refers to the process of selecting a representative group of respondents from the population for the purpose of data collection. In the present study, the convenience sampling method is

used due to time and cost constraints. A sample of 110 respondents is selected from the study area, comprising students, professionals, and general computer users. The selected sample is assumed to represent the characteristics of the population to a reasonable extent.

Sampling Method

Convenience sampling method was used to select respondents based on their availability and willingness to participate. This method allowed easy and quick data collection. It ensured participation from different demographic groups.

Statistical Tools Used

The data collected through the questionnaire is analysed using simple and appropriate statistical tools such as percentage analysis, averages, and graphical representation. These tools help in simplifying complex data and making meaningful comparisons between Desktop PC users and Laptop users. Where necessary, chi-square tests, Descriptive statistics may also be used to identify relationships between variables.

Data Analysis and Interpretation

Table .1
Desktop PCs provide better performance than laptops

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Response	Scale Value (x)	No. of Respondents (f)	f × x
Strongly Agree	5	40	200
Agree	4	34	136
Neither Agree nor Disagree	3	18	54
Disagree	2	10	20
Strongly Disagree	1	8	8
Total		110	418

Source: Primary dataS

Mean Score Calculation

$$\text{Mean} = \frac{\sum(fx)}{N}$$

$$\text{Mean} = \frac{418}{110} = 3.80$$

Inference

The mean score obtained from the Likert scale analysis is 3.80. Since the mean value is greater than the neutral value (3), it indicates that respondents generally agree that desktop PCs provide better performance than laptops.

Interpretation

The results show that a majority of respondents have a positive opinion regarding the performance of desktop PCs compared to laptops. Out of 110 respondents, 40 strongly agree and 34 agree with the statement. Only a small proportion of respondents disagree with the statement. Therefore, desktop PCs are perceived as providing better performance than laptops.

Table 2

Factors Influencing Device Choice

Factor	Frequency	Percent
Price	30	27%
Performance	28	25%
Portability	26	24%
Brand	14	13%
Durability	12	11%
Total	110	100%

Source: Primary data

Chi-Square Tests

Test	Value	df	Asymp. Sig. (p-value)
Pearson Chi-Square	12.74	4	0.013

A. Expected Frequency (E)

$$\text{Number of categories} = 5$$

$$\text{Expected Frequency (E)} = \frac{\text{Total Respondents}}{\text{Number of Categories}}$$

$$E = \frac{110}{5} = 22$$

B. Chi-Square Formula

$$\chi^2 = \frac{\sum (O - E)^2}{E}$$



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Inference

Since the calculated Chi-Square value is greater than the table value, the null hypothesis is rejected. Therefore, there is a significant difference in the factors influencing the choice of computer devices.

Interpretation

The Pearson Chi-Square value is 12.74 with 4 degrees of freedom and a significance value of 0.013. Since the p-value is less than the 0.05 level of significance, the null hypothesis is rejected. This indicates that there is a significant difference in the factors influencing respondents' choice of computer devices. Price is found to be the most influential factor among the respondents.

Findings and Suggestions

Findings

- ❖ The study reveals that the majority of respondents (38%) belong to the age group of 21–30 years, indicating that young people are the major users of computer devices.
- ❖ It is observed that laptops are the most commonly used device (49%) compared to desktop PCs.
- ❖ The analysis shows that price (27%) is the most important factor influencing the purchase of computer devices.
- ❖ Most respondents believe that desktop PCs provide better performance and upgrade options than laptops.

- ❖ The satisfaction analysis indicates that most respondents are satisfied (36%) with their current computer device.

Suggestions

- ❖ Computer manufacturers should improve laptop performance to compete with desktop PCs.
- ❖ Companies should provide affordable pricing options, as price plays a major role in purchasing decisions.
- ❖ Laptop manufacturers should offer better upgrade features such as RAM and storage expansion.
- ❖ Companies should improve product quality and durability to increase customer satisfaction.
- ❖ Online platforms should enhance their sales and service support, since many customers prefer online purchasing.

Conclusion

The study compares customer preference between Desktop PCs and Laptops based on data from 110 respondents. It shows that laptops are more preferred due to portability and convenience. Desktop PCs are chosen for better performance and cost-effectiveness.

Factors like price, performance, and portability influence customer choice. Laptop users face issues like battery and heating, while desktops lack mobility. Customer preference depends on usage, income, and



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lifestyle. Overall, both devices are important, and choice varies based on user needs.

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