FACTORS INFLUENCING CUSTOMERS TO BUY APPARELS ON MYNTRA IN BANGALORE

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Abstract

With tremendous development of fashion e-commerce in India, with predicted growth to $713 billion by 2022 from $545 billion in 2019. Fashion platforms can showcase their products worldwide with a marginal investment of money.

The paper seeks to analyse the major factors that influence people to buy apparels from Myntra compared to other existing platforms. Factors that influence customers to buy any product depends not only on an individual's preferences and tastes but it also depends on the how various platforms attract their customers. Understanding how decisions can influence purchase pattern becomes crucial as it helps companies to effectively win the hearts and minds of the customers. The type of research design used in this research is descriptive in nature. The primary data was collected for the present study by a structured questionnaire given to 100 respondents in Bangalore. The results of the study have indicated Good Quality and reasonable price are the major factors influencing people to prefer Myntra and there is a significant relation between the opinion of services provided by Myntra to Occupation and Education of customers.

Keywords: E-commerce, Myntra, Descriptive Research, Customer Behaviour, Apparels, Fashion

1. INTRODUCTION

Internet Marketing in its simplest terms refers to the marketing and selling of goods and services using the internet as the sales and distribution medium. The Internet has reduced the world into a global village, has made distance irrelevant and time zones little more than an inconvenience. Businesses in the remote parts of India can easily service clients in the bright cities of America, while goods produced in China are sold to consumers in all parts of the world. Internet Marketing offers anybody over a certain age with access to a computer and access to an Internet connection, the opportunity to go into business for themselves with little or no start-up costs.

Today, we can sit in one place and shop from a wide range of worldwide fashion labels, with our favourite items delivered to our homes. Because of the advancement of e-Commerce and online purchasing trends. Myntra, as we all know, is one of the most well-known names in India's e-Commerce business.

Flipkart is the parent company of Myntra. It is an Indian online shopping platform that houses top goods and gives its customers with the best possible service. It gives customers the option

of shopping from a large range of national and international brands. Clothing, fashion accessories, footwear, watches, sunglasses, personal care and grooming products, sports and active wear, and bags and bag packs are all available on Myntra. Myntra also sells bed linen, furniture, home decor items, kitchenware, cutlery, and lamps and lights, among other things.
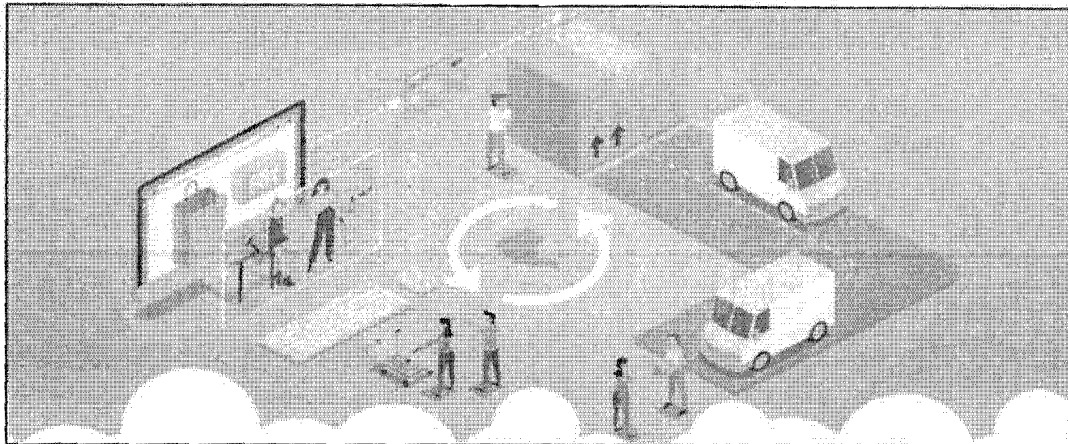
Myntra is a popular online store that sells a wide variety of items. In comparison to other online platforms, it features excellent apparel styles and brands. People prefer the company since it offers the most up-to-date fashion and distinctive products. It's also started unique programmes like 'simple 30 day returns and exchanges' and 'trial and purchase.' Customers who are hesitant to acquire from online platforms will be completely satisfied and at ease as a result of this.

Through twelve rounds of funding, Myntra has raised a total of USD 333.1 million. Accel Partners, NEA-IndoUS Ventures, IDG Ventures, Tiger Global, and Premji Invest are among the significant investors. Other private investors have also contributed to Myntra's finances.

In the year 2007, Myntra was formed by a group of IIT graduates, Mukesh Bansal, Ashutosh Lawania, and Vineet Saxena. It wasn't the first Indian startup to work on an e-commerce platform, as a result, the competition was fierce. Their marketing mix was the strategy that helped them succeed. They focused on the garment and fashion industry. They gradually covered all aspects of the same, resulting in a comprehensive covering of all lifestyle products. By 2014, they had established themselves as a brand in the Indian market.

Another wonderful area where Myntra worked was technology. They began with an online platform and have continued to update their technology. They quickly shifted to a mobile app version after noticing the usage pattern. It provided its competitors a big boost by 2016.

Myntra's core success area has also remained logistics. They quickly expanded to include over 9000 Pin codes in India, causing a stir among competitors. With well-managed logistics, the gap between physical purchases and purchases made through an e-commerce platform can be minimised. Myntra made certain of this in order to maintain its dominance in the Indian fashion industry.

2. Review of Literature

Nirali Patel (2021) conducted a study to analyse the customer perception towards online shopping. She analysed from the study that almost 65% of consumers desired faster delivery in rural areas and that the description of the product must be accurate. The author also analysed that consumers face issues during the online payment process and needed improvement in that area.

Neetu Kumari (2021) performed a comparative study to analyse the customer satisfaction between Amazon, Myntra and Flipkart in Pune city. The author inferred that among all factors, discounts and offers, availability of product and competitive price were the three major factors that affect the satisfaction level of the customer.

Dr.Shad Ahmad Khan, Dr.Thoudam Prabha Devi, Dr.Antony Ligori, Mr.Muhammad Saleem (2020) conducted a study on customer satisfaction and customer loyalty in online shopping on university students of Bhutan. The paper investigated the loyalty and satisfaction of university students of Bhutan in organized ecommerce sites. Considering the factors of acceptance of technology and quality of service in online, the study checked the relationship and impact of "e-satisfaction" and "e-loyalty" in the context of online shopping among university students of Bhutan. It was found out that quality of service online has more influence on customer satisfaction as compared to technology acceptance factors and this will ultimately lead to customer loyalty.

Akshantha and Dr. Manoj Kumara NV (2019) performed a Post-Performance Evaluation of Acquisition- A Study of Flip kart and Myntra. The study period was for length of 4 years for 2017 to 2019. And they utilized tolls for T-test and correlation. The authors found that profitability more or less depends upon the better utilization of resource, domestic or cross-border has different effect on the performance of the acquiring firm. The result and analysis of the key financial ratios of the acquiring firms showed that the impact of merger was different for Indian acquisition and cross-border acquisition.

Rudresha C.E, H.R. Manjunatha and Chandrashekarappa .U (2018) studied the consumer's perception towards online shopping. The study concluded that online shopping will take over as the prime marketing and selling channel in India in near future. Some of the research findings were that majority of the people agreed that in near future online shopping would be more on demand than offline shopping, that online marketing would have a wider scope in the coming years. They also analysed that more people prefer cash on delivery than net banking and a large number of respondents encouraged other people to enter into e-shopping.

Rose Francoise Bertram and Ting Chi (2018) conducted a study on companies' business responses to fashion e-commerce's environmental impact. They analysed and compared prior studies regarding the different environmental effects of apparel e-tailing versus traditional retailing in terms of carbon emissions, waste, and energy usage. Their findings showed that, under almost all circumstances, online shopping was better for the environment than in-store shopping, but few factors, like excessive packaging, shipping speed and apparel returns, add

more carbon footprint and waste to the environment. They concluded by stating that apparel e-tailers are adapting to eco friendly business models and even reverse the negative environmental effects as technology is advancing.

Madalena Pereira, Paulo Martins, Rui Miguel and Isabel Trindade (2018), conducted a study on e-commerce and mobile commerce for fashion business to examine collections of fashion design apps of brands and retail chains, from the view of materials, styles and product categories. They gathered many insights like female customers prioritise satisfaction and then comfort, whereas men prefer comfort and later satisfaction. They also concluded that the preference traits connected with mobile commerce depends upon piece variety, multiplicity of style and opportunity to coordinate.

Simone Guercini, Pedro Mir and Catherine Prentice (2018), studied new marketing in fashion e-commerce and they introduced new marketing models and tools in the fashion e-commerce market. They have described topics like customization and entry of fashion bloggers and influencers have caused a huge impact on the marketing policies and that this has lead to a co-existence of traditional and new marketing tools.

Anupindi Sravani (2015): analysed M-commerce platform and fashion: Myntra that in this technological world people would favour handheld devices like smartphones for transactions. The author inferred from the study conducted that Myntra has a higher competitive advantage, not only in terms of price and quality but also in terms of consumer expectations. The study also concluded that Myntra's marketing ideas of having latest trends and provision of services to customers are the reason for its high popularity.

Dr Sandeep Kumar(2021) analysed the Consumer behaviour in fashion retail industry and role of Ecommerce in Indian fashion retail industry. The study describes the process, benefits and also some challenges in an emerging economy in the context of Indian Fashion Retail industry. The author inferred from his study that the traditional impact from manufacturing is progressively being substituted by customer relationship. E-commerce provides opportunities for both large clothing and small retailers. Also e-tailing of fashion products proved cheaper than physical stores a number of times because, e-stores offer huge discounts as they order products in bulk.

Need For the Study

With rise in purchase of apparels on online platforms , it is essential to understand the factors that influence customers decisions to effectively increase sales and expand promotions according to consumer's preferences.

3. RESEARCH METHODOLOGY

Research Problem

Myntra is one of the major Indian fashion e-commerce companies that acts as a one stop shop for all fashion and lifestyle needs. There are many clothing giants in India, but Myntra surpasses all of them and has taken over the fashion e-commerce market. So it becomes necessary to study the factors influencing customers to buy on Myntra in Bangalore.

Research Questions

1. What influences people to buy on fashion e-commerce sites
2. What motivates people to prefer Myntra over its competitors

Objectives

1. To identify the factors influencing people to buy from fashion e-commerce platforms
2. To study the existing customer's perception and attitude towards Myntra

3.1 Research Design

Type of Research - Descriptive Research Design

The research design is developed to deliver a suitable framework for study. The type of research design used in our research is descriptive in nature. The descriptive research attempts to describe a subject, often by creating a profile of a group of people, or events, through the collection of data and the tabulation of the frequencies on various research variables and their interaction. The study reveals who, what, when, where, or how much the study concerns a hypothesis in which the research asks about or states something about the size, form, distribution, or existence of a variable. The major purpose of descriptive research is description of a situation or issue as it exists currently.

Data Collection Method

Data Collection is essential as it helps in collecting relevant information with the help of which the researcher can predict, analyze, and evaluate different results. Primary data refers to information obtained directly by the researcher for the specific purpose of the study. It are useful for current as well as for future studies. The primary data was collected for the present study by structured questionnaire given to the respondents. The study was conducted with 100 respondents in Bangalore. The questionnaire consists of three parts. The first part consists of the demographic questions regarding gender, age, educational qualification and occupation. The second part includes questions determining awareness of fashion e-commerce websites, Purchase frequency and Brand Awareness. The third part consisted of Brand Preference and Brand Image. Secondary Data was collected from similar studies, articles, journals, and research papers

3.2 Sample Design

The study is micro in nature and the data was collected from 100 customers. So convenience sampling was the method adopted.

Population	Customers Of Myntra
Measuring Tool	Questionnaire

Sample Size	100
Sampling Method	Convenience Sampling
Data Analysis Method	Tables, Graphs and Descriptive Statistics
Hypothesis Testing Tools	Chi-Square Test

LIMITATIONS OF THE STUDY

The sample size is very small and is only limited to 100 respondents. There was time constraint while performing the research.

TOOLS FOR HYPOTHESES TESTING AND DATA ANALYSIS

A google form has been made to develop the questionnaire and collect the responses.

Chi - Square Test has been used to test the hypotheses, which was conducted by using Advanced Excel. It is a statistical hypothesis test which is used to determine if there is a significant difference in observed and expected frequencies. The purpose this test is to evaluate if a difference between observed data and expected data is due to chance, or is due to a relationship between the variables considered. Hypothsis was tested with 95% confidence level i.e. at 5% significant level.

$$\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

χ^2 = chi squared
O_i = observed value
E_i = expected value

4. Data Analysis And Interpretation

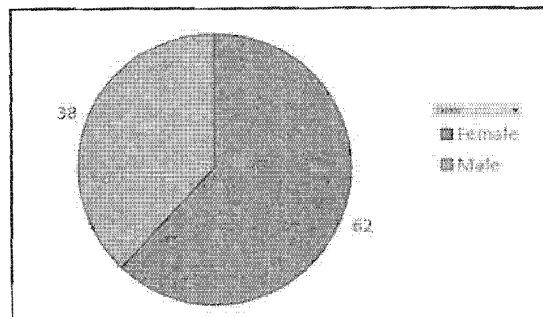## 4.1 Demographic Analysis

Fig.6.1 Gender Distribution of Respondents

From the figure 6.1, it is inferred that 62 percentage of respondents are female and 38 percentage of respondents are male.
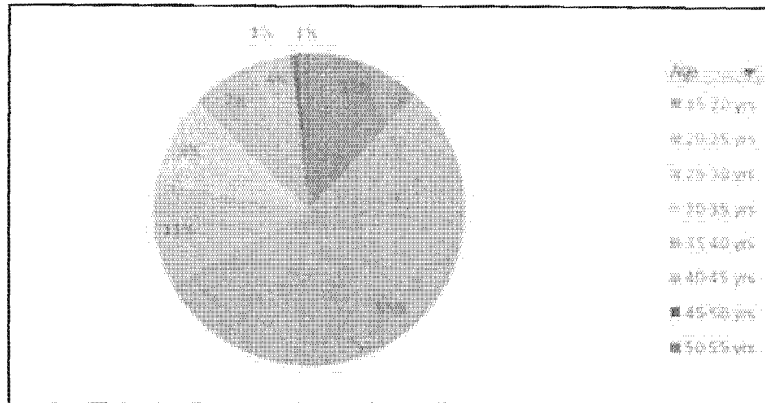
Fig 6.2 Age Distribution of Respondents

From the figure 6.2, it is inferred that maximum number of respondents are between the ages of 20 to 25 around 55 percentage. Another 23 percentage consists of people between the ages of 15-20 years and 25-30 years.
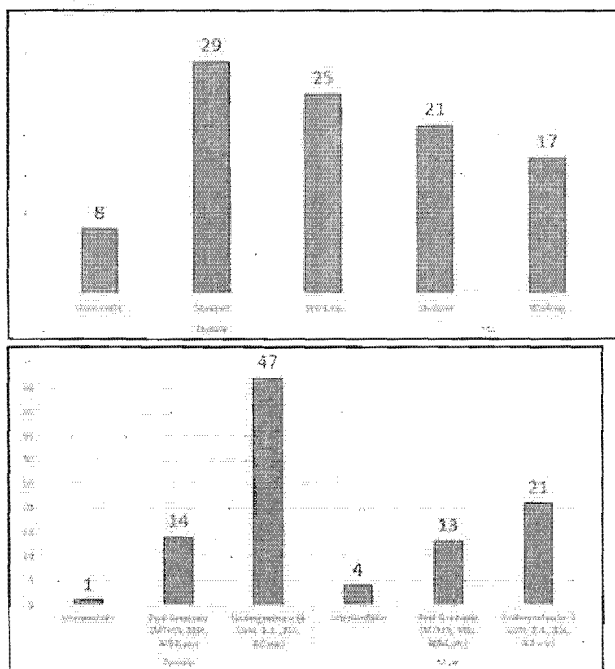

Fig 6.3 Distribution of Female and Male respondents based on Occupation

Fig 6.4 Distribution of Female and Male respondents based on Education

From the figure 6.3, it is inferred that the maximum number of female respondents are either Students or Working, which is similar to the distribution of male respondents but a small number of female respondents around 8 percent are housewives. And from Fig 6.4 we can infer that in both male and female respondents, undergraduate is the highest qualification, with 47 percent of female and 21 percent of male respondents who are undergraduates. We can also interpret that the number of post graduates are less but highest qualification being intermediate is the lowest among all.
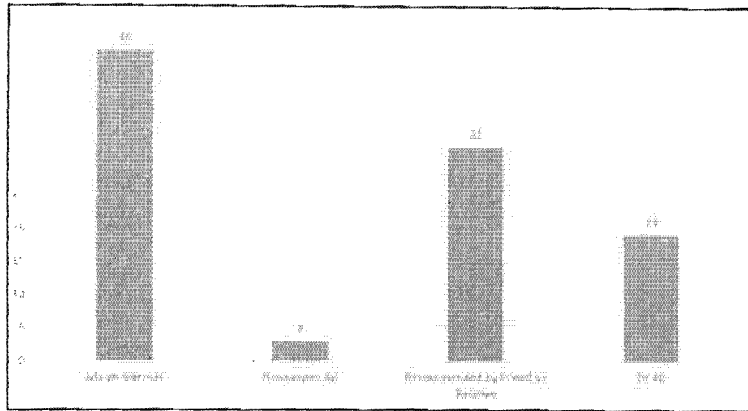
Fig 6.5 Brand Awareness

From the Fig 6.5, we can infer that 46 percentage of respondents came to know about Myntra from Ads on Internet and also from their friends or relatives. A very small percentage of just 3 percentage got awareness through newspaper advertisement.
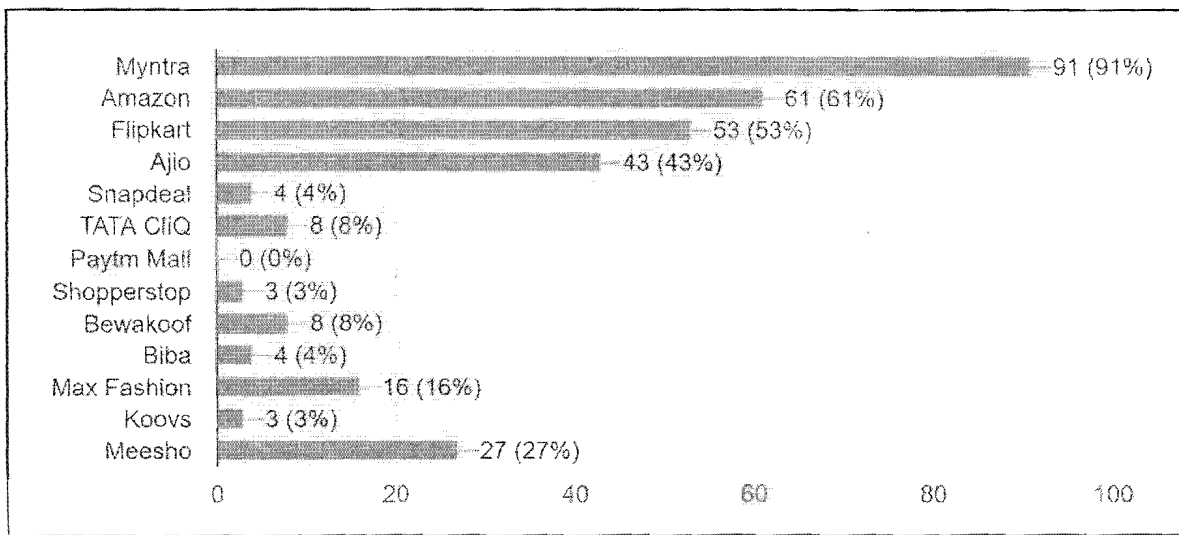

Fig. 6.6 Most preferred Platforms to shop for Apparels

From Fig. 6.6 we infer that Myntra is the most preferred platform by people in Bangalore to buy their apparels with 91 percentage opting that option. Amazon and Flipkart were the next most preferred platforms followed by Ajio and Meesho.
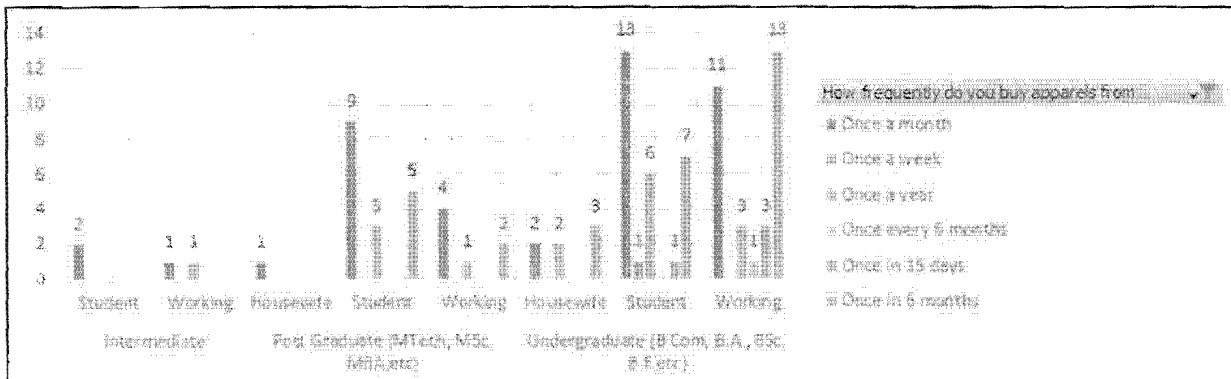

Fig. 6.7 Frequency of buying based on Occupation and Education

From Fig. 6.7, we can infer that most of the respondents buy once a month and once in 6 months. Almost 13 percentage of undergraduate students buy once a month and an equal percentage of undergraduate working respondents buy once in 6 months and 11 percentage of them buy once a month. We can clearly observe that larger share of buying is among undergraduate working when compared to housewives or students.
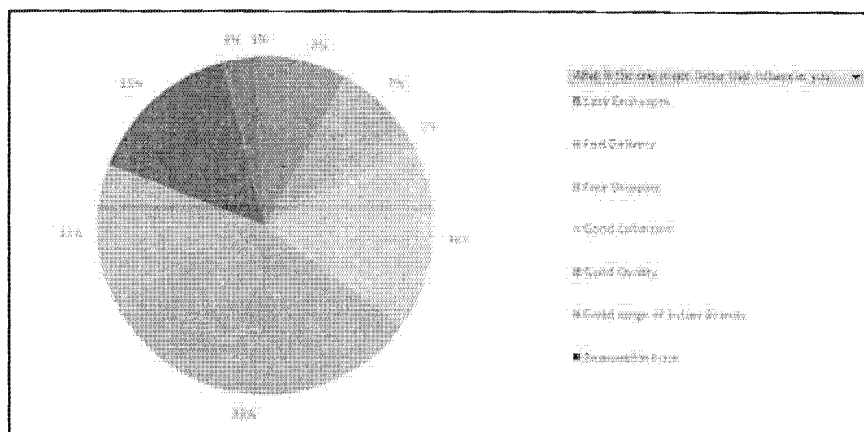

Fig 6.8 Distribution of Factors that influence buying on Myntra

Form Fig. 6.8 we infer that the main factors that draw people towards Myntra are availability of quality products which almost 33 percentage of people responded and the next highest being good collection of apparels and good range of Indian brands.
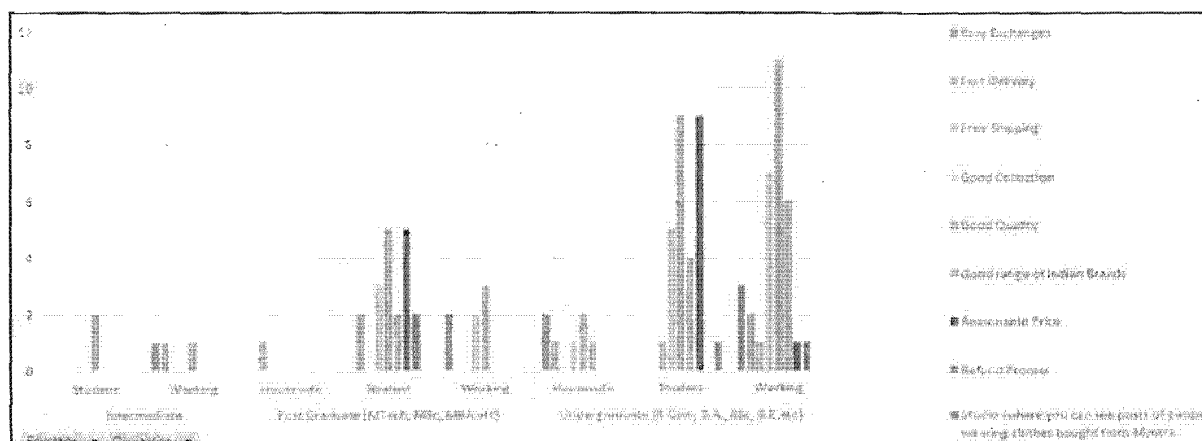

Fig. 6.9 Factors influencing people to prefer Myntra based on Occupation and Education

From Fig. 6.9 we infer that Good Quality and Reasonable price are the major reasons influencing undergraduate students and post graduate students, whereas respondents who have done their post graduation and are working prefer Myntra for Good quality and Good collection of products.
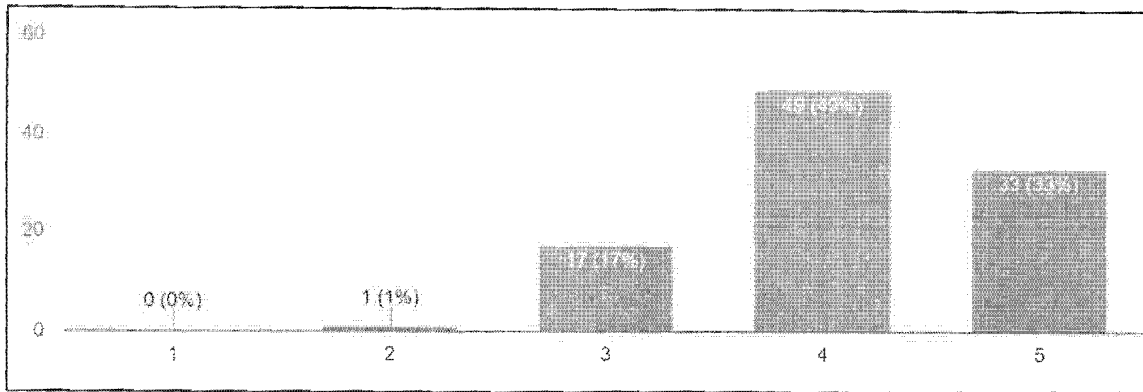
Fig 6.10 Rating of Myntra on a scale of 1 to 5

From Fig. 6.10, we infer that 49 percentage of respondents have given a rating of 4 on 5 and 33 percent have given 5 on 5. So there are factors that are impressive and motivating people to prefer Myntra but at the same time there is still opportunity for improvement and adaption of new ideas.

4.2 HYPOTHESIS TESTING

Hypothesis

H0a: There is no strong relationship between gender and opinion of service provided by Myntra

H1a: There is a strong relationship between gender and opinion of service provided by Myntra

H0b: There is no strong relationship between occupation and opinion of service provided by Myntra

H1b: There is a strong relationship between occupation and opinion of service provided by Myntra

4.2.1 Occupation and Opinion of Service

			Easy Exchanges	Fast Delivery	Good Collection	Good Quality	Good range of Indian Brands	Reasonable Price	Refund Process	Total
Occupation	Housewife	Count	2	2	1	2	1	0	0	8
		Expected Count	.6	.6	1.6	2.7	1.0	1.2	.2	8.0
	Student	Count	0	2	10	16	8	14	2	50
		Expected Count	4.0	3.5	10.0	17.0	8.5	7.5	1.5	50.0
	Working	Count	6	3	9	16	4	1	1	42
		Expected Count	3.4	2.9	8.4	14.3	5.5	6.3	1.3	42.0
Total		Count	8	7	20	34	13	15	3	100
		Expected Count	8.0	7.0	20.0	34.0	13.0	15.0	3.0	100.0

Occupation * Service Crosstabulation

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	25.881 a	12	.011
Likelihood Ratio	28.838	12	.003
N of Valid Cases	100		

a. 13 cells (61.9%) have expected count less than 5. The minimum expected count is .24

In this case, the p-value is smaller than the standard alpha value $(0.011 < 0.05)$, so we reject the null hypothesis. There is *significant* relationship between Occupation and opinion of service.

4.2.2 Education and opinion of Service

Education * Service Crosstabulation

		Easy Exchanged	Fast Delivery	Good Collection	Good Quality	Good range of Indian Brands	Reasonable Price	Refund Process	Total
Education Illiterate	Count	1	2	0	1	0	1	0	5
	Expected Count	.4	.4	1.0	1.7	.7	.8	.2	5.0
Post Graduate (M.Tech, MSc, MBA etc)	Count	1	3	3	10	1	6	3	27
	Expected Count	2.2	1.9	5.1	8.9	3.8	4.1	1.1	27.0
Undergraduate (Sslc, D, BSc, B.Ed)	Count	6	2	16	22	13	8	1	68
	Expected Count	5.4	4.8	12.9	22.4	9.5	10.2	2.7	68.0
Total	Count	8	7	19	33	14	15	4	100
	Expected Count	8.0	7.0	19.0	33.0	14.0	15.0	4.0	100.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	24.792 a	12	.016
Likelihood Ratio	22.777	12	.030
N of Valid Cases	100		

a. 14 cells (66.7%) have expected count less than 5. The minimum expected count is .20

In this case, the p-value is smaller than the standard alpha value $(0.016 < 0.05)$, so we reject the null hypothesis. There is *significant* relationship between Education and opinion of service.

4.2.3. Age and opinion of Service

Age * Service Crosstabulation

			Service							
		Easy Exchanges	Fast Delivery	Free Shipping	Good Competition	Good Quality	Good Range of Indian Brands	Reasonable Price	Refund Process	Total
Age	15-20 yrs Count	0	0	0	1	6	2	2	0	11
	Expected Count	.9	.8	.1	2.2	3.6	1.4	1.7	.3	11.0
	20-25 yrs Count	4	2	1	13	15	8	11	3	57
	Expected Count	4.6	4.0	.6	11.4	18.8	7.4	8.5	1.7	57.0
	25-30 yrs Count	0	1	0	2	5	1	2	0	11
	Expected Count	.9	.8	.1	2.2	3.6	1.4	1.7	.3	11.0
	30-35 yrs Count	3	1	0	3	0	1	0	0	8
	Expected Count	.6	.6	1	1.6	2.6	1.0	1.2	.2	8.0
	35-40 yrs Count	1	1	0	0	5	0	0	0	7
	Expected Count	.6	.5	.1	1.4	2.3	.9	1.1	.2	7.0
	40-45 yrs Count	0	1	0	0	2	1	0	0	4
	Expected Count	.3	.3	.0	.8	1.3	.5	.6	.1	4.0
	45-50 yrs Count	0	0	0	1	0	0	0	0	1
	Expected Count	.1	.1	.0	.2	.3	.1	.2	.0	1.0
	50-55 yrs Count	0	1	0	0	0	0	0	0	1
	Expected Count	.1	.1	.0	.2	.3	.1	.2	.0	1.0
Total	Count	8	7	1	20	33	13	15	3	100
	Expected Count	8.0	7.0	1.0	20.0	33.0	13.0	15.0	3.0	100.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	54.719[a]	49	.266
Likelihood Ratio	52.526	49	.339
N of Valid Cases	100		

a. 60 cells (93.8%) have expected count less than 5. The minimum expected count is .01.

In this case, the *p*-value is greater than the standard alpha value (0.016 < 0.05), so we accept the null hypothesis. There is no *significant* relationship between Age and opinion of service.

5. INTERPRETATIONS AND RESULTS

- There is *significant* relationship between Occupation and opinion of service.
- There is *significant* relationship between Education and opinion of service.
- There is no *significant* relationship between Age and opinion of service.
- As per the study around 46% of respondents came to know about Myntra from Ads on Internet and from their friends or relatives. A very small percentage of just 3% got awareness through newspaper advertisement.
- Around 49% of respondents have given a rating of 4 on 5 and 33% have given 5 on 5. So, there are factors that are impressive and motivating people to prefer Myntra but at the same time there is still opportunity for improvement and adaption of new ideas.

Good Quality and Reasonable price are the major reasons influencing undergraduate students and post graduate students, whereas respondents who have done their post-graduation and are working prefer Myntra for Good quality and good collection of products.

SUGGESTIONS

Offering free shipping for availability for all products.Initiative of Studio feature that enables customers who bought the clothes to post it is a great initiative but has to be improved to enable better customer interaction

CONCLUSION

With the development in technology, more and more people are moving towards e-commerce platforms for shopping apparels. Having a rich understanding about the customers and their requirements is must if an fashion ecommerce retailers want to win their customers and thrive in the online market.

In this research, the survey the factors influencing people to prefer Myntra over other fashion ecommerce platform with reference to Bangalore city revealed that Good Quality and Reasonable Price were the major factors and occupation and Education has a significant relation with the service customers prefer whereas age did not play a significant role.

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Impact of AI on Banking Sector

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Abstract

Artificial intelligence (AI) is the capacity of a digital computer or robot operated by a computer to carry out actions frequently performed by intelligent beings. AI is being implemented in almost every field or industry today.

Banking Sector is evolving and trying to adapt the latest technology as it has to operate with many people on daily basis. Artificial intelligence (AI) is a key driver of this change, with its potential to improve banking services, automate processes, and create new opportunities to serve customers better. Artificial Intelligence (AI) is changing the banking industry by streamlining operations, enhancing customer experience, and creating new business models. The impact of AI in the banking sector is profound and far-reaching, as it enables banks to process large amounts of data quickly and accurately, identify patterns and insights, and make better-informed decisions.

This research paper aims to analyse the impact of AI in the banking sector by examining its benefits, challenges, and scope for potential applications. The study will focus on the benefits of AI in improving customer experience, reducing operational costs, and enhancing risk management. Research Methodology used is questionnaire. The questionnaire was developed to collect data from five banks (SBI, Karnataka Bank, Bank of Baroda, ICICI, Canara Bank) and also from the customers of the respective banks. The total responses were around 300 and the method used to select the samples was convenience random sampling. The results showed significant and positive response regarding the adaptation and scope of AI in banking sector.

Jamovi was used to analyse the data and generate Descriptive Statistics as well as Anova. Through this the research will explore the potential applications of AI in the banking sector, such as chatbots, personalized financial advice, and fraud detection. The paper will also examine the ethical implications of AI in banking. The research will contribute to a deeper understanding of the impact of AI in the banking sector and its potential to change the industry. The study will provide insights into the benefits, challenges, and potential applications of AI and identify areas for future research and development in this rapidly evolving field.

Key Words: Artificial Intelligence, Banking Sector, Impact, Potential Applications, Customer Experience, Risk Management

Introduction

Artificial intelligence is a field that combines computer science and large datasets to solve problems. Several industries, including banking, are being transformed by artificial intelligence (AI). AI has the potential to transform the way banks operate, by automating manual processes, improving customer service, and reducing costs. It has grown in popularity in the banking business in recent years, with many institutions investing extensively in AI technologies.

The impact of AI on the banking sector has far-reaching implications for both the industry and its customers. Some of the areas where AI is expected to have a significant impact include fraud detection, customer service, loan processing, risk management, and investment management. AI will enable banks to better understand their consumers and conduct considerably more in-depth analyses than a human would.

According to a Business Insider research, approximately 80% of banks are aware of the potential benefits that AI could bring to their industry. The banking and finance industry is rapidly using AI to increase efficiency, service, productivity, and cost-cutting. Artificial intelligence has become an indispensible part of our daily lives, and banks have already begun to incorporate it into their goods and services. Some of the areas where AI is expected to have a significant impact include fraud detection, customer service, loan processing, risk management, and investment management.

This research paper will explore the ways in which AI is impacting the banking industry and the scope of AI in future in the same sector. Five banks were selected for the study i.e., Karnataka Bank, SBI, Canara Bank, Bank of Baroda and ICICI. To gain more insight about the impact a survey was conducted through Questionnaire with sample size of 309 respondents and the sampling method used here was convenience random sampling. The secondary data was collected by reviewing the literatures related to the topic of research Impact of AI on Banking Sector and also by referring to other related websites and articles.

Literature Reviews

1. A STUDY ON ARTIFICIAL INTELLIGENCE (AI) IN BANKING AND FINANCIAL SERVICES
   (A Geetha Assistant Professor, Department of Commerce, Dr. M.G.R. Educational and Research Institute-2021)

   This article focuses on artificial intelligence (AI) in banking and financial services in Chennai to monitor the implementation of artificial intelligence methodology in banks as well as client or consumer responses. According to the findings of the study, private banks and private financial institutions are implementing various AI services for the benefit of their consumers in order to keep them satisfied with their services. Also, financial services must be improved more effectively because some customers are dissatisfied with banking services. The outcome also provided novel ideas for improving AI practises in the workplace.

2. ARTIFICIAL INTELLIGENCE AND AUTOMATION IN FINANCIAL SERVICES: THE CASE OF RUSSIAN BANKING SECTOR
   (Goncharenko, I A; Miglionico, A. - In: LAW AND ECONOMICS YEARLY REVIEW. - ISSN 2050-9014. - 8:1(2019))

   The impact of innovation in the Russian banking sector is discussed in this article. This innovation, known as FinTech, includes cryptoassets, artificial intelligence, and RegTech (i.e., applications of digital technology by regulation and compliance actors). In this context, the essay examines the progress of artificial intelligence in Russia, with a focus on robotics and automated mechanisms used in financial

institutions. It also provides an outline of the Central Bank of Russia's policies and their principal effects on the payment system. The consequences of machine learning and automation for monetary policy, prudential regulation, and investor protection are examined.

3. BANKING 4.0: "THE INFLUENCE OF ARTIFICIAL INTELLIGENCE ON THE BANKING INDUSTRY & HOW AI IS CHANGING THE FACE OF MODERN DAY BANKS"

(Dr. Navleen Kaur, Supriya Lamba Sahdev, Dr. Monika Sharma and Laraibe Siddiqui. - International Journal of Management, 11 (6), 2020)

This study focuses on the concept of AI in the banking industry, how it has brought about revolutionary developments in banking, and its impact on human labour. Numerous routine and manual operations that were formerly handled by people are increasingly being replaced by automated machines equipped with advanced technology.

Given how quickly the sector is changing, this report provides an overview of the present applications of AI in the banking industry and how it is transforming the face of banking in India.

4. THE RISE OF ARTIFICIAL INTELLIGENCE IN BANKING SECTOR

(Khyati Kochhar, Harsh Purohit, Ravisha Chutani.- THE 5TH INTERNATIONAL CONFERENCE ON EDUCATIONAL RESEARCH AND PRACTICE (ICERP) 2019)

In this article, the researcher examined the application of artificial intelligence in the banking industry, how AI is boosting business performance, how AI is being implemented in the banking sector, and the influence of AI on Indian banks. This paper's technique makes use of both primary and secondary data. The researcher interviewed 50 bank specialists to learn about the influence of AI in Indian banks. The current study is descriptive in nature and is thought to be the first of its sort on artificial intelligence with special reference to the banking sector, with a focus on Indian and foreign institutions.

5. A STUDY ON THE IMPLEMENTATION AND THE IMPACT OF ARTIFICIAL INTELLIGENCE IN BANKING PROCESSES

(Rashmi R., Nirmal Raj VK.- Asian Journal of Management Year : 2021, Volume : 12, Issue : 1)

The research paper's main focus is on A.I on banking operations, with the reason being the global scams, as well as a lack of technology being the main cause for fraudulent activities and scams. To assess the influence of AI on bank performance, a questionnaire with 34 factors including several banking procedures is developed. Employees and customers were among those who responded. The study found that the majority of the variables favoured the use of artificial intelligence in the banking sector. According to the regression model, the independent variable, understanding customer behaviour, has the least impact on the dependant variable, the impact of AI on bank performance.

6. ROLE OF ARTIFICIAL INTELLIGENCE IN COMBATING CYBER THREATS IN BANKING

(Vishal Dineshkumar Soni Department of Information Technology, Campbellsville University, Campbellsville, Kentucky 2019, Volume : 4, Issue : 1)

The banking and financial sectors strive to use artificial intelligence to reduce cybercrime and cyber dangers. AI approaches offer a variety of opportunities that support the banking industry's success and expansion. Maintaining transparency and providing explanations of ability are crucial for preserving trust in artificial intelligence. Artificial intelligence tools give information about client behaviour and interests. AI is used to manage the automated platform known as robo-advice. Protection of personal data also involves artificial intelligence. AI has provided the banking industry with the proper architecture so they can detect fraud in transactions. AI is closely related to the field of cyber security. AI-based fraud detection systems are used to both identify and stop different types of cybercrimes.

7. CONSUMERS' PERCEPTION OF ARTIFICIAL INTELLIGENCE IN BANKING SECTOR

(Marina Ryzhkova, Ekaterina Soboleva, Anastasia Sazonova, Mikhail Chikov, National Research Tomsk State University 2020)

We examine how artificial intelligence (AI) has affected the growth of the banking industry. Banks use AI to assess customers' financial position, offer digital help and financial advice, and more. The study also offers examples of marketing for AI products and some concepts for innovative AI-based banking services. Despite the quick adoption of AI across several industries, this technology's effectiveness is largely dependent on how people feel about and are loyal to it. According to our research, businesses and consumers in Russia are favourable towards AI. The AI implementation in the work of Sberbank professionals is viewed favourably by them; they see these solutions as aids in carrying out mundane tasks and are not scared of being fired. In their daily lives and at business, they employ AI solutions.

8. IMPLICATIONS OF IMPLEMENTATION OF ARTIFICIAL INTELLIGENCE IN THE BANKING BUSINESS WITH CORRELATION TO THE HUMAN FACTOR

(Krunoslav Ris, Zeljko Stankovic, Zoran Avramovic, Pan-European University Apeiron 2020)

Banks still rely on a legacy system while dealing with a huge number of consumers on a regular basis. Modern technological advancements have made it possible to automate practically all manufacturing processes from beginning to end, necessitating a revolution in antiquated financial management institutions. Banks are missing out on a chance to modernise some of their business models, free up people from tedious work, stop fraud, make better decisions, and ultimately make losses by failing to keep up with modern trends and times. Just as other industries have modernised, such as with medical checks, medical reports, and evaluations, banks can implement new Virtual Assistants and Artificial Intelligence (A.I.) machine learning technologies. This research paper will elaborate and highlight the impact of artificial intelligence implementation on the banking sector processes. By utilising a variety of analytical methods, including SPSS, this research is based on both quantitative and model-based

evidence of system performance. Institutions benefit from increased productivity, profitability, and less reliance on human labour thanks to automation.

9. ARTIFICIAL INTELLIGENCE: IN BANKING A MINI-REVIEW
(Aaron Smith, Haitham Nobanee 2019)

The application of artificial intelligence that has been happening in the financial sector will be looked at in this review. There are a variety of viewpoints on artificial intelligence (AI) and its potential to increase efficiency in a variety of industries. The banking sector is the same. There has been worry that the financial sector may potentially be negatively impacted by artificial intelligence. In the conversations and studies that follow, this literature review will be discussed in more detail.

10. BANKING 4.0: ARTIFICIAL INTELLIGENCE (AI) IN BANKING INDUSTRY & CONSUMER'S PERSPECTIVE
(Umara Noreen, Attayah Shafique, Zaheer Ahmed, Muhammad Ashfaq, College of Business Administration, Prince Sultan University, Riyadh 11586, Saudi Arabia)

Artificial intelligence, also known as machine learning, has become more prevalent and is crucial in the modern banking period. The goal of the current study is to analyse how consumers view the spread of artificial intelligence in Asian nations. The will to adopt AI is negatively but significantly correlated with perceived risk. The results of this study will provide valuable information for strategic decision-making in the banking sector. This will make it possible for the banking management to develop a plan to win over customers' trust, which will enable them to control risks and feel confident using digital technology to complete transactions. The banking industry also places a focus on cutting-edge AI technology to enhance client services and spur overall growth by producing more revenue.

Research Methodology

Research Questions

What is the Impact of Artificial Intelligence on the banking sector?

What is the level of awareness about AI in the banking sector among the customers?

What impact does awareness of AI have on customer trust and loyalty in the banking sector?

What is its future scope in the banking sector?

What are the potential risks associated with adoption of AI in the banking sector?

Objectives

- To identify the potential impact of AI on key areas of banking, such as customer service.
- To identify benefits and challenges associated with the use of AI in banking sector.
- To identify the future scope of AI in the banking industry.

Research Design

The research design is divided into two stages where the first one is qualitative method which includes reviewing the literatures related to the topic impact of AI on banking sector. It helps in gaining insights on benefits and transformation of the banking sector with implementation of AI.

Whereas the quantitative method involves survey of customers of the banks selected for the research which gives real time data in numerical form. The parameters are then measured and assessed to find the relationship between the variables. These insights will provide better understanding of impact and scope of AI in the banking industry.

Sampling Design

Sampling Method- Convenience Random Sampling

Sample Size- 309 respondents

Data Collection Design

Primary Data Sources- This data was collected through questionnaire floated in Google form.

Secondary Data Sources- This data was collected through literature reviews, different websites and articles.

Analytical Design

Software used for the analysis of the primary data collected is Jamovi.

Using this software statistical analysis such as Descriptive Statistics and Anova was conducted to find the relationship between the variables and predict the impact.

Hypothesis

H1: There is a significant difference in perception regarding the helpfulness of AI technologies, such as chatbots, smart wallets, and voice assistants, among individuals who use banking services at different frequencies.

H2: There is a significant difference in the concerns of customers based on their familiarity with AI in banking.

Data Analysis

Gender
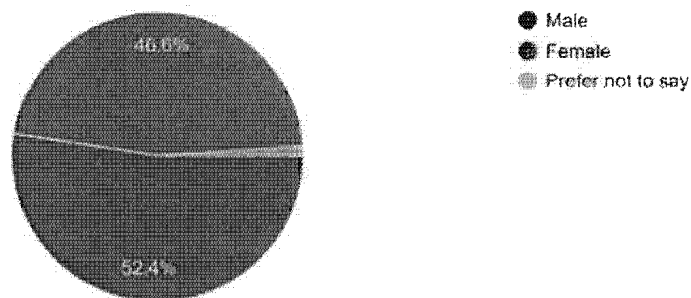
Through this survey it is known that 52.4% respondents are Male and 46.6% respondents are Female whereas the remaining respondents do not prefer to say their gender.

Age
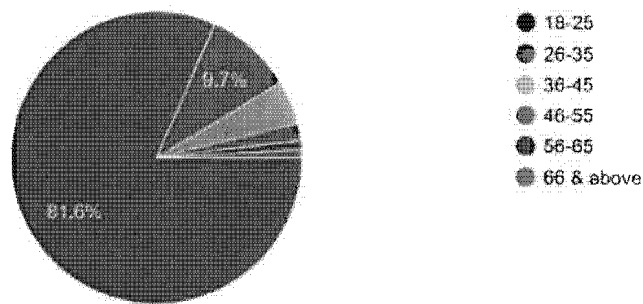
In our survey we got 309 responses. In that 81.6% respondents are of age group 18 – 25 years. 9.7% respondents are of age group 26 – 35 years. Other respondents are of the age group 36 and above years that is remaining 8.7%.

Occupation
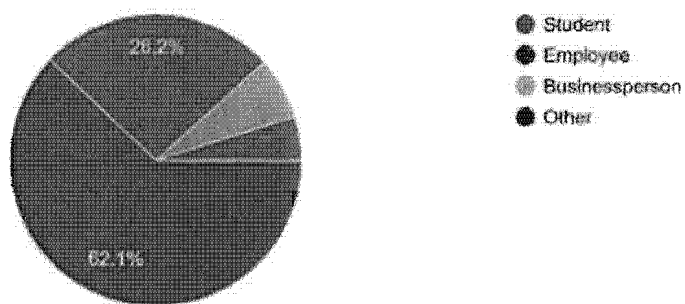
Most of the respondents of the survey are students i.e 62.1%, some respondents are employees i.e 26.2 % and the remaining 11.7% respondents belong to businessperson and category.

Annual Income Range
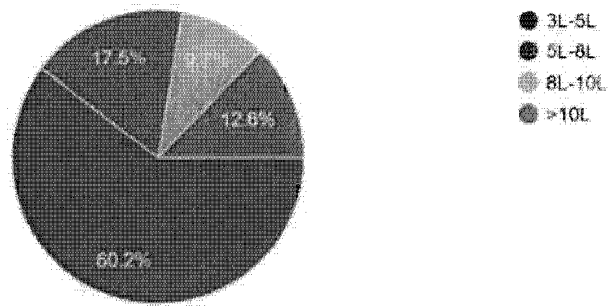
Through this survey, it was found that majority 60.2% respondents have an annual income range of Rs. 3 lakhs – 5 lakhs. 17.5% respondents have an annual income range of Rs. 5 lakhs – 8 lakhs. 12.6% respondents have an annual income range of Rs. 8 lakhs – 10 lakhs. And the remaining 9.7% respondents have an income range more than Rs. 10 lakhs per annum.
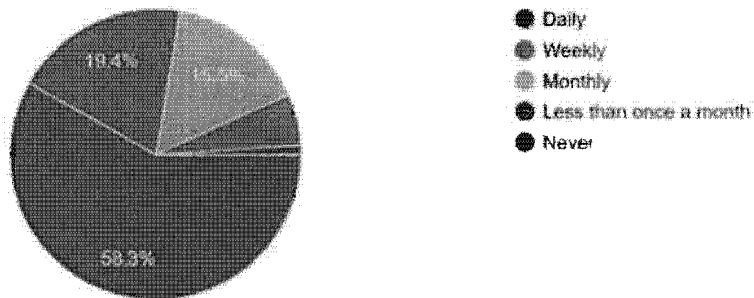
Do you have a bank account?
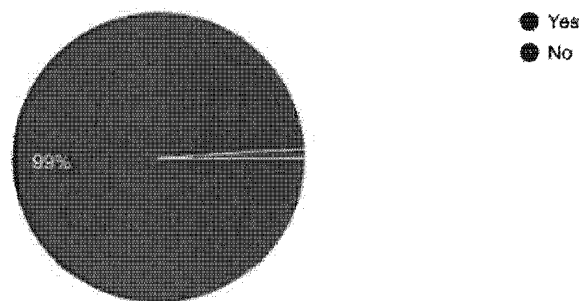
In the survey conducted it can be seen that 99% of the respondents have a bank account in their name.

**In which of the following banks do you have your account?**
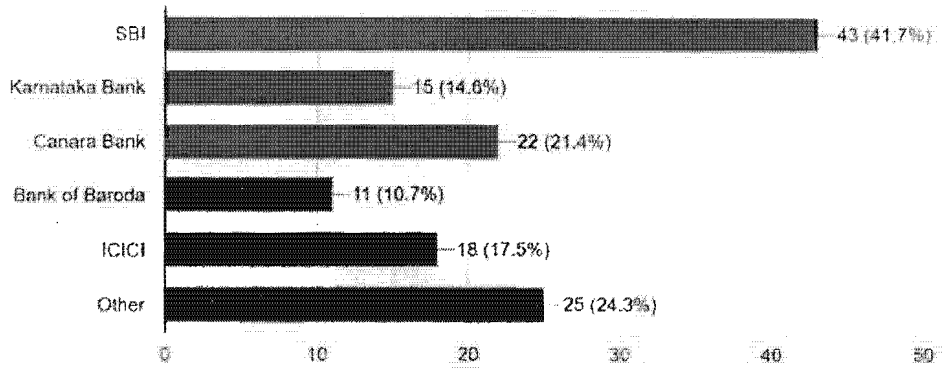
The above graph shows that most of the people have their bank accounts in SBI, ICICI and also in other banks.

How often do you use Banking Services?

Most of the respondents i.e., 58.3% people use banking services daily. 19.4% of the respondents use the banking services weekly. 15.5% respondents use the banking services monthly. Whereas the remaining respondents rarely use the banking services or sometimes never use it.

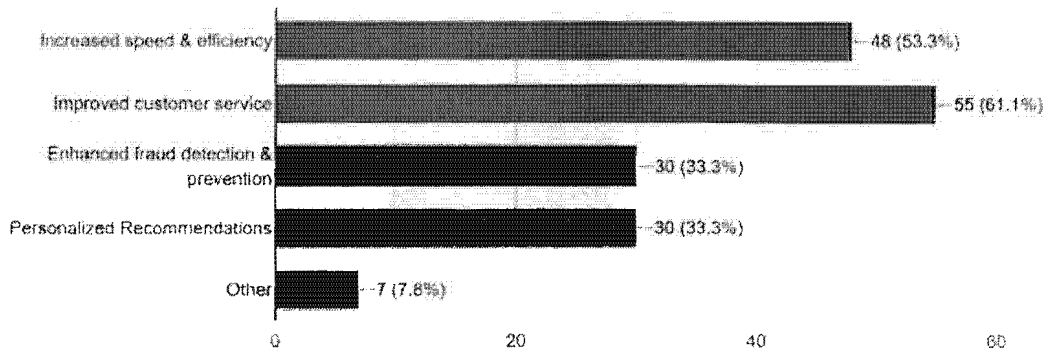**Are you familiar with Artificial Intelligence (AI) in Banking Sector?**
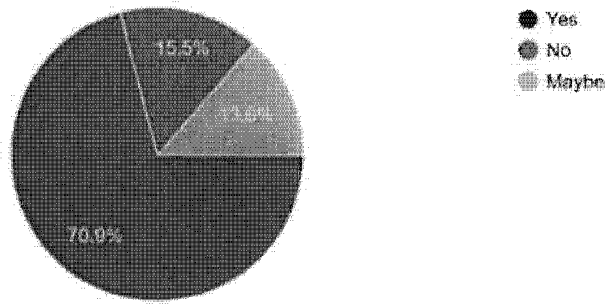
Majority of the respondents i.e., 70.9% are familiar with the AI in Banking Sector and 15.5% respondents do not have any idea about it. Whereas 13.6% respondents know about the AI in Banking Sector but do not consider themselves to be much familiar with it.

**Do you think application of AI such as Chatbots, Smart Wallet, Voice Assistant, etc. has been helpful?**
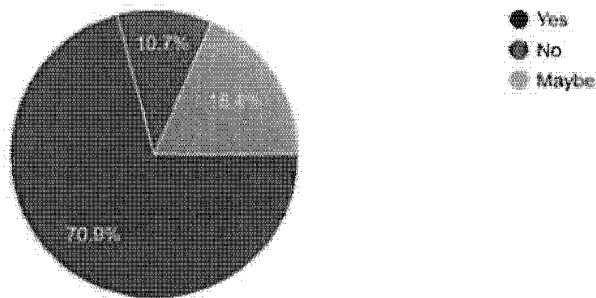
70.9% respondents feel that application of AI in the banking sector has been helpful whereas 10.7% respondents feel the opposite.

If yes, then how has it been helpful?

Increased speed & efficiency — 48 (53.3%)
Improved customer service — 55 (61.1%)
Enhanced fraud detection & prevention — 30 (33.3%)
Personalized Recommendations — 30 (33.3%)
Other — 7 (7.8%)

Majority of the respondents feel that application of AI in banking sector has helped in improving the customer service and has increased the speed and efficiency of banking services. Some respondents also feel that it has helped in detecting & preventing fraudulent activities and also has helped in giving personalized recommendations.

How do you feel about AI being used in the banking services of the bank you use?

1 — 4 (3.9%)
2 — 7 (6.8%)
3 — 51 (49.5%)
4 — 28 (27.2%)
5 — 13 (12.6%)
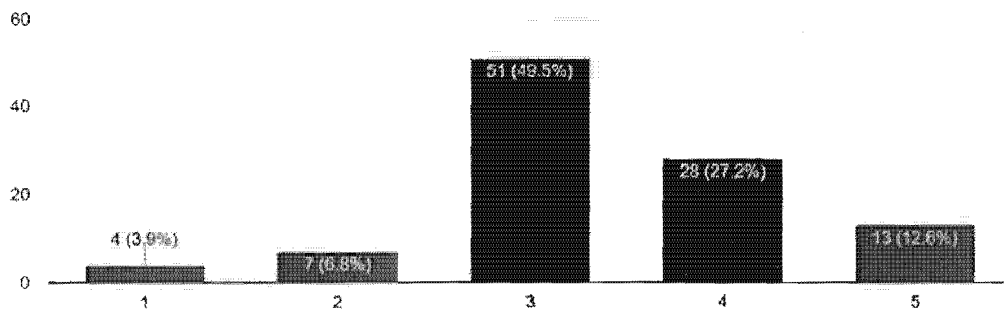
According to the responses ,we can opine that 49.5% of the respondents have rated 3 for the banking services using AI provided by the banks they use.

Have you had any negative experiences with AI-powered banking services of the bank you use?
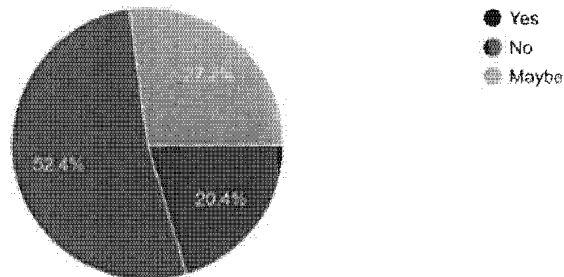

Majority of the respondents i.e., 52.4% have not had any negative experiences with AI-powered banking services of the bank they use. But there are still 20.4% of respondents who have had bad experiences with AI-powered banking services.

**What concerns do you have about using AI-powered banking services?**
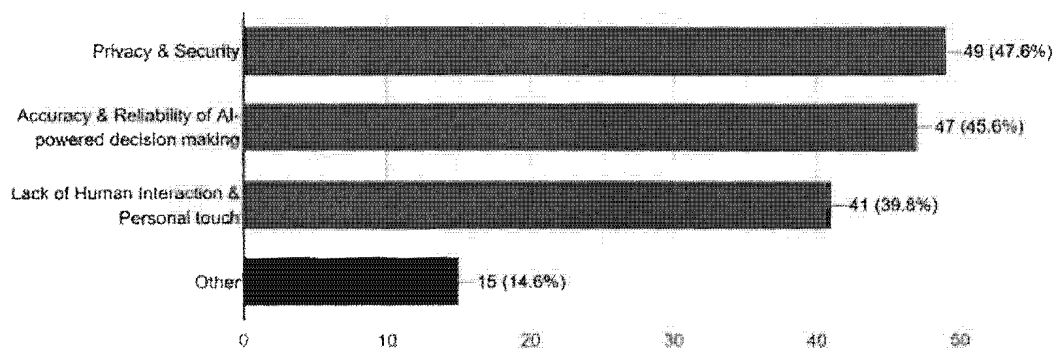
According to the survey, we can say that approximately 45% - 48% of the respondents are concerned about the privacy, security, accuracy & reliability of AI-powered decision making in the banking sector. Some respondents feel that there has been an increase in the lack of human interaction and personal touch.

How do you think AI will impact the banking sector in future?
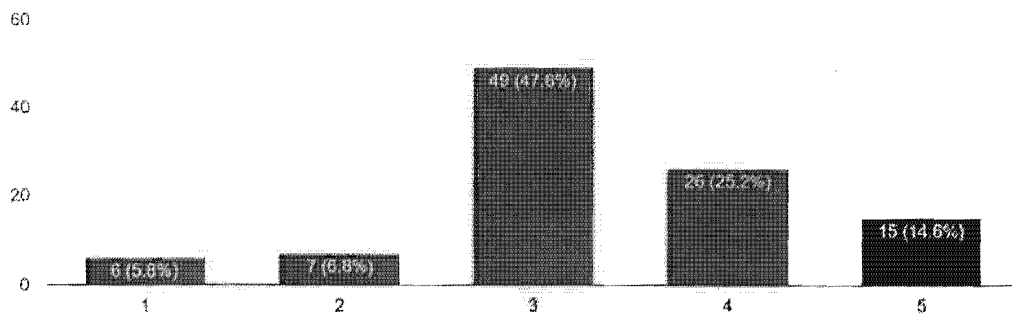
Most of the respondents feel that AI will have positive impact on the banking sector in the future.

How likely are you to use AI-powered Banking Services in future?
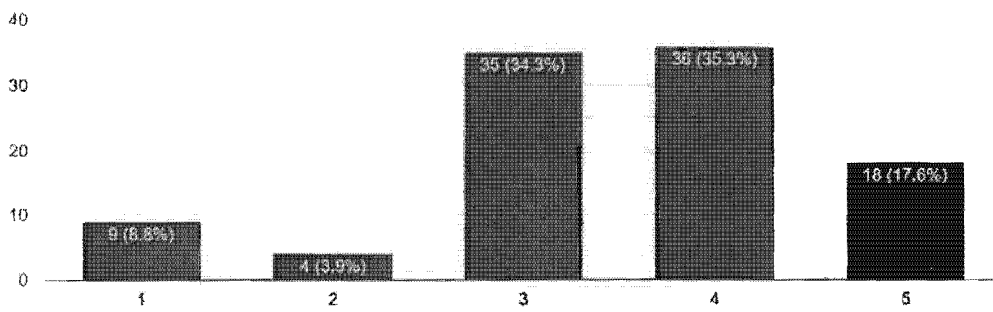
The majority of the respondents are very likely to use the AI-powered banking services in the future.

Descriptive Statistics

Descriptives

Descriptives

	Gender	Annual Income Range	Do you have a bank account?	How often do you use Banking Services?	Do you think application of AI such as Chatbots, Smart Wallet, Voice Assistant, etc. has been helpful?	Are you familiar with Artificial Intelligence (AI) in Banking Sector?	Have you had any negative experiences with AI-powered banking services of the bank you use?	How likely are you to use AI-powered Banking Services in future?
N	309	309	309	306	309	309	309	306
Missing	103	103	103	106	103	103	103	106
Mean	1.49		1.01	1.69	1.48	1.43	2.07	3.49
Std. error mean	0.0296		0.00559	0.0538	0.0448	0.0410	0.0391	0.0630
Median	1		1	1.00	1	1	2	4.00
Mode	1.00		1.00	1.00	1.00	1.00	2.00	4.00
Standard deviation	0.520		0.0982	0.941	0.788	0.720	0.687	1.10
Variance	0.270		0.00965	0.885	0.620	0.518	0.473	1.21
Range	2		1	3	2	2	2	4
Minimum	1		1	1	1	1	1	1
Maximum	3		2	4	3	3	3	5
Skewness	0.268		10.0	1.09	1.22	1.36	-0.0883	-0.663
Std. error skewness	0.139		0.139	0.139	0.139	0.139	0.139	0.139
Kurtosis	-1.45		99.6	-0.0431	-0.264	0.293	-0.875	0.124
Std. error kurtosis	0.276		0.276	0.278	0.276	0.276	0.276	0.278

The variables included in the survey are gender, annual income range, whether the respondent has a bank account, how often they use banking services, whether they think AI applications such as chatbots, smart wallets, and voice assistants have been helpful, whether they are familiar with AI in the banking sector, whether they have had any negative experiences with AI-powered banking services of the bank they use, and how likely they are to use AI-powered banking services in the future. The mean and mode for gender indicate that there were slightly more females (1.49) than males in the sample, with a range of 2 (i.e., there were also respondents who identified as other genders). The mean and median for annual income range are not provided, but it appears that the responses were grouped into categories rather than reported as continuous variables.

The mean for the variable indicating whether respondents have a bank account is 1.01, which suggests that the majority of the sample has a bank account. The mean for the frequency of banking service use is 1.69, indicating that on average, respondents use banking services fairly frequently. The mean for the helpfulness of AI applications is 1.48, indicating that respondents generally find these applications to be helpful.

The mean for familiarity with AI in the banking sector is 1.43, indicating that respondents are moderately familiar with this topic. The mean for negative experiences with AI-powered banking services is 2.07, suggesting that there have been some negative experiences reported. Finally, the mean for likelihood of future use of AI-powered banking services is 3.49, indicating that respondents are generally somewhat likely to use these services in the future.

The skewness and kurtosis values indicate the degree and shape of departure from a normal distribution for each variable. For instance, the skewness of the variable indicating how often respondents use banking services is positive, indicating that the distribution is skewed to the right and has a long tail on the right-hand side. Similarly, the kurtosis of the variable indicating negative experiences with AI-powered banking services is positive, indicating that the distribution has a higher peak than a normal distribution.

Frequencies

Frequencies of Annual Income Range

Annual Income Range	Counts	% of Total	Cumulative %
3L-5L	186	60.2 %	60.2 %

Frequencies of Annual Income Range

Annual Income Range	Counts	% of Total	Cumulative %
5L-8L	54	17.5 %	77.7 %
8L-10L	30	9.7 %	87.4 %
>10L	39	12.6 %	100.0 %

The population is divided into four income ranges - 3L-5L, 5L-8L, 8L-10L, and >10L. The table provides the count of individuals falling into each income range, the percentage of individuals in each income range relative to the total population, and the cumulative percentage of individuals for each income range.

the majority of the population (60.2%) falls into the income range of 3L-5L annually. 17.5% of the population falls into the income range of 5L-8L annually, followed by 9.7% in the income range of 8L-10L annually. Finally, 12.6% of the population falls into the income range of >10L annually.

The cumulative percentage of individuals is calculated by adding up the percentage of individuals in each income range and all the preceding ranges. For example, 77.7% of individuals fall into the income range of 5L-8L and all the preceding ranges, while 100% of individuals fall into the income range of >10L and all the preceding ranges.

Frequencies of Do you have a bank account?

Do you have a bank account?	Counts	% of Total	Cumulative %
1	306	99.0 %	99.0 %
2	3	1.0 %	100.0 %

The research paper indicates that the vast majority (99.0%) of the sample population has a bank account, with only a small proportion (1.0%) indicating that they do not have one. It is unclear from the given information how large the sample size was, what population it represents, or the methodology used to collect the data.

Frequencies of Do you think application of AI such as Chatbots, Smart Wallet, Voice Assistant, etc. has been helpful?

Do you think application of AI such as Chatbots, Smart Wallet, Voice Assistant, etc. has been helpful?	Counts	% of Total	Cumulative %
1	219	70.9 %	70.9 %
2	33	10.7 %	81.6 %
3	57	18.4 %	100.0 %

The majority of respondents (70.9%) believe that the application of AI such as Chatbots, Smart Wallet, Voice Assistant, etc. has been helpful. 10.7% of the respondents were unsure, and 18.4% of the respondents believe that these AI applications have not been helpful.

The data suggests that the majority of people have had positive experiences with these AI applications, while a smaller proportion is still undecided or believes that they are not helpful. It is important to note that the data does not provide any insights into the specific reasons behind these perceptions, and further research would be necessary to understand the factors driving these attitudes towards AI applications.

Frequencies of Have you had any negative experiences with AI-powered banking services of the bank you use?

Have you had any negative experiences with AI-powered banking services of the bank you use?	Counts	% of Total	Cumulative %
1	63	20.4 %	20.4 %
2	162	52.4 %	72.8 %
3	84	27.2 %	100.0 %

The results indicate that out of the total respondents, 20.4% reported no negative experiences with AI-powered banking services, 52.4% reported some negative experiences, and 27.2% reported significant negative experiences. The cumulative percentage indicates that 72.8% of the respondents reported having some negative experiences or more.the results suggest that a significant proportion of users have had negative experiences with AI-powered banking services, highlighting the need for banks to address these issues and improve the user experience.

Frequencies of How likely are you to use AI-powered Banking Services in future?

How likely are you to use AI-powered Banking Services in future?	Counts	% of Total	Cumulative %
1	27	8.8 %	8.8 %
2	12	3.9 %	12.7 %
3	105	34.3 %	47.1 %
4	108	35.3 %	82.4 %
5	54	17.6 %	100.0 %

The respondents were asked to rate their likelihood of using AI-powered banking services on a scale of 1 to 5, with 1 indicating a low likelihood and 5 indicating a high likelihood. The responses were then categorized into five groups based on the rating, and the frequencies and percentages for each group were calculated. The results show that the majority of respondents (82.4%) are either somewhat likely (rating of 4) or very likely (rating of 5) to use AI-powered banking services in the future. Only a small percentage of respondents (8.8%) indicated that they are unlikely (rating of 1) to use such services.

Hypothesis Testing

H0: There is no significant difference in perception regarding the helpfulness of AI technologies, such as chatbots, smart wallets, and voice assistants, among individuals who use banking services at different frequencies.

H1: There is a significant difference in perception regarding the helpfulness of AI technologies, such as chatbots, smart wallets, and voice assistants, among individuals who use banking services at different frequencies.

Results of Hypothesis Testing:

ANOVA

ANOVA

ANOVA - How often do you use Banking Services?

	Sum of Squares	df	Mean Square	F	p
Do you think application of AI such as Chatbots, Smart Wallet, Voice Assistant, etc. has been helpful?	0.00	NaN			
If Yes, then how has it been helpful?	1.56	1	1.561		0.156
Do you think application of AI such as Chatbots, Smart Wallet, Voice Assistant, etc. has been helpful? ✻ If Yes, then how has it been helpful?	17.57	6	2.929		0.001
Residuals	189.84	246	0.772		

Note. Singular fit encountered; one or more predictor variables are a linear combination of other predictor variables.

Assumption Checks

Homogeneity of Variances Test (Levene's)

F	df1	df2	p
9.45	20	246	< .001

ANOVA analysis was performed to determine if there was a significant difference in perception regarding the helpfulness of AI technologies among individuals who reported

using them. The results of this analysis showed that the p-value was 0.001, indicating that there was a significant difference in perception regarding the helpfulness of AI technologies among these individuals.

A homogeneity of variances test (Levene's) was conducted to check the assumption of equal variances across the different groups. The results of this test showed that the p-value was less than 0.001, indicating that there was a significant difference in variance across the groups.

In summary, the research paper suggests that the increased use of AI technologies in the banking sector has led to improved efficiency, cost savings, and enhanced customer experience, as evidenced by the significant difference in perception among individuals who reported using them.

Hypothesis Testing

H0: There is no significant difference in the concerns of customers based on their familiarity with AI in banking.

H1: There is a significant difference in the concerns of customers based on their familiarity with AI in banking.

Results of Hypothesis Testing:

<u>ANOVA</u>

ANOVA

ANOVA - Are you familiar with Artificial Intelligence (AI) in Banking Sector?

	Sum of Squares	df	Mean Square	F	p
Have you had any negative experiences with AI-powered banking services of the bank you use?	0.00	NaN			
What concerns do you have about using AI-powered banking services?	2.65	5	0.530		0.295
Have you had any negative experiences with AI-powered banking services of the bank you use? ∗ What concerns do you have about using AI-powered banking services?	20.04	13	1.542		< .001
Residuals	121.77	283	0.430		

Note. Singular fit encountered; one or more predictor variables are a linear combination of other predictor variables.

ANOVA - Are you familiar with Artificial Intelligence (AI) in Banking Sector?

	Sum of Squares	df	Mean Square	F	p

Assumption Checks

Homogeneity of Variances Test (Levene's)

F	df1	df2	p
12.3	25	283	< .001

ANOVA was used to examine the relationship between negative experiences with AI-powered banking services and concerns about using AI-powered banking services. The results show that there is no significant relationship between negative experiences and concerns (p = 0.295), but there is a significant relationship between the combined effect of negative experiences and concerns (p < 0.001).

Finally, the assumption of homogeneity of variances is tested using Levene's test, which shows that there is a significant difference in variances between the groups (p < 0.001).

Overall, the study suggests that customers who are less familiar with the use of AI in banking may have concerns about privacy, security, and level of human involvement in service delivery. However, there is no significant relationship between negative experiences and concerns, and the assumption of homogeneity of variances is violated.

Conclusion

The results showed a significant and positive response regarding the adaptation and scope of AI in the banking sector. Approximately 80% of respondents were aware of the potential benefits that AI could bring to the industry. The survey also revealed that customers are familiar with AI-powered banking services such as chatbots, smart wallets, voice assistants, etc. and find them helpful. However, some customers had negative experiences with AI-powered banking services. The survey also revealed that customers are likely to use AI-powered banking services in the future.

The impact of AI in the banking sector is profound and far-reaching, as it enables banks to process large amounts of data quickly and accurately, identify patterns and insights, and make better-informed decisions. AI can be used to improve customer experience, reduce operational costs, and enhance risk management. This study contributes to a deeper understanding of the impact of AI in the banking sector and its potential to change the industry. It provides insights into the benefits, challenges, and potential applications of AI and identifies areas for future research and development in this rapidly evolving field.

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CHIEF EDITOR
DR. PUNITH CARIAPPA

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Paper ID: ASICON 217

A STUDY ON STUDENTS PREFERENCE TOWARDS EDTECH OVER TRADITIONAL LEARNING METHODS

Sagi Sampi, Amit Kamadollishettaru , Jabez M, Prof. Noor Firdoos
RV Institute of Management

Abstract

The emergence of educational technology in India has given a boost in the learning methodology of students allowing them to use technology in the classrooms. More and more people started using technology for their learning needs owing to technology advances and its ubiquitous nature. This applied aspect of technology in the field of education, well known as educational technology, provides the finest output for both teachers and learners. Hence it is essential that students and in-service teachers be they elementary, primary, secondary, or higher secondary level teachers, be introduced to educational technology. During covid-19, educational institution has understood the importance of educational technology and those who were already in edtech space saw a huge enrolments and scope. Users realised that this technology helps students to learn and understand at their own place which saves their time. It facilitates them to be more productive rather than wasting their time in travelling to reach their educational institutions. EdTech has not only helped students but also the teachers in delivering quality content and saving their time by recording their classes once, which students can watch any number of times, according to their flexibility and convenience. There is a huge scope for EdTech in the coming years as India is a developing country. EdTech is gaining prominence these days and it has a huge potential in coming years but there are some exceptions to it as some of the learning/courses needs traditional approach and EdTech will not replace traditional learning 100%, interaction could not be better as it will be in the offline space. The survey revealed

that most of the students experience edtech platforms and have taken courses externally as well, but they prefer traditional learning. Nearly 70% to 80% of them believe EdTech could replace traditional learning in near future.

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A STUDY ON CUSTOMER PREFERENCES TOWARDS ELECTRIC VEHICLES IN KARNATAKA

Srujana S, Kaparthi Bhavana, Prof. Noor Firdoos
RV Institute of Management

Abstract

Electric cars (EVs) are becoming increasingly popular, which might help reduce issues like pollution, global warming, and dependence on oil. Electric vehicles (EVs) are gaining a lot of attention these days. The path to their commercial success is not simple, though. Despite many governments utilising rigorous promotional measures, the current market penetration of EVs is very low. In this study, the findings of a comprehensive data gathering exercise—a survey with 192 respondents—conducted in Karnataka, India, are presented.

In order to provide direction to decision-makers and offer direction for prospect research, this study tries to explore into the consumer preferences for EVs. We quickly go over the modelling approaches utilised in a few different areas. Review of consumer preferences for aspects of money, technology, infrastructure, and policy are made. Consumer choice categorisation was then completed, with the results thoroughly discussed. These categories included socioeconomic diversity, psychological influences, mobility, social influence, etc. We cover the research agenda for creating consumer-friendly EV courses in our final section and offer suggestions for additional study.

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*years*
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Perception of Fashion and Sustainability among Gen Z

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Co-Authors: **Guru Basavaraj K M, Deepak Girish Kalyani, Chetan Singh M**

RV Institute of Management

Abstract

The fashion industry has been continuously evolving over the years and the current trend is to use sustainable production and consumption practices. Sustainable fashion brands are trying to reach out to Gen Z consumers, who are known for their pro-environmental behaviour. This study examines the attitudes and perceptions of Gen Z consumers towards eco-friendly fashion. We have conducted a survey through google forms with certain questionnaire to gather information and to understand the views of Gen Z in particular to sustainable fashion. The study focuses on price value image, customer knowledge, and their willingness to indulge in following sustainable fashion.

We had sent the forms to convenience sample of 350 individuals from which 320 responded back. out of those 320 only 308 were complete. Once the data collection was complete, we used descriptive statistics and various quantitative techniques to analyse the data. The findings suggest that Gen Z consumers are interested in sustainable fashion and are willing to pay a premium for eco-friendly clothing. The study highlights whether the consumer or customer in this case Gen Z's buying behaviour changes with respect to their level of awareness about various sustainable factors. The study also tries to eliminate the fact that Subsequent purchase of sustainably produced clothes by Gen Z is not with the belief that fashion industries Future in sustainable fashion, thus showing there are many other factors that influences the buying behaviour or patterns of Gen Z regarding to the sustainable fashion.

Keywords: Generation Z, Fashion Industry, Fashion Trends, Sustainable Fashion, Sustainable Practices, Marketing strategies

Introduction

Fashion refers to the styles and trends of clothing, accessories, and beauty products that are popular at a particular time. It is an industry that constantly evolves, driven by designers, influencers, and consumers who shape and redefine what is considered fashionable.

Gen Z, also known as the post-millennial generation or the iGeneration, refers to the cohort of individuals born between 1997 and 2012. As the first true digital natives, Gen Z has grown up in a world of constant connectivity and technological innovation. This generation is characterized by their diverse, progressive, and socially conscious worldview, with a strong emphasis on individuality, inclusivity, and authenticity. Gen Z is the most racially and ethnically diverse generation to date, with a global outlook and a passion for making a positive impact on the world. They are also known for their savvy and discerning approach to consumerism, placing a high value on sustainability, transparency, and social responsibility in their purchasing decisions. As they continue to enter the workforce and gain more purchasing power, Gen Z is poised to become a major force in shaping the future of business, culture, and society.

Gen Z, also known as the "digital natives," is the generation born between 1997 and 2012. In Bangalore, Gen Z makes up a significant portion of the population, with an estimated 23% of the city's population belonging to this age group. Bangalore is known for its booming tech industry, and as a result, many Gen Z individuals in the city are highly educated and tech-savvy.

Fashion can have a significant impact on the environment, with the production of clothing and accessories often involving the use of harmful chemicals, excessive water consumption, and exploitation of workers in low-wage countries.

In recent years, there has been an increased awareness of the need for more sustainable and ethical practices in the fashion industry, with a focus on reducing waste and pollution and improving working conditions The fashion industry is one of the largest industries in the world, and it is also one of the most polluting. Gen Z, also known as the "sustainability generation," is known for their concern for the environment and their desire for transparency and accountability from businesses. To gain a better understanding of the perception of fashion and sustainability among Gen Z, we conducted this study in Bangalore.

Review of Literature

1. Drivers to implement the circular economy in born-sustainable business models: a case study in the fashion industry.

   (Cristina M. Ostermann, Leandro da Silva Nascimento, Fernanda Kalil Steinbruch and Daniela Callegaro-de-Menezes, 2020)

   The study focuses on identifying the drivers that motivate born-sustainable businesses to implement circular economy principles in their operations. The study found that the main drivers for born-sustainable businesses to implement circular economy principles were related to environmental concerns, regulatory pressure, and economic benefits. The article suggests that these drivers may vary depending on the business context, but environmental concerns were consistently cited as a primary motivator for implementing circular economy principles.

2. Sustainable fashion: New approaches

   (Kirsi Niinimäki (ed.), 2013)

   Some of the variables that may be explored in the book include consumer attitudes and behaviour towards sustainable fashion, design strategies for eco-friendly products, business models for sustainable fashion brands, and the environmental impact of textile production and disposal.The articles in the book are likely to be diverse, reflecting the range of topics and research questions explored. However, some possible findings may include insights into consumer preferences for sustainable fashion, successful strategies for sustainable fashion design and business, and opportunities and challenges for textile recycling and sustainable material development.

3. Sustainable Retailing in the Fashion Industry

   (Shuai Yang, Yiping Song and Siliang Tong ,2017)

   The authors identify several key findings related to sustainable retailing in the fashion industry. They find that there are both internal and external drivers that motivate fashion retailers to adopt sustainable practices, such as cost savings, brand reputation, and regulatory pressure. However, there are also barriers to sustainable retailing, such as lack of knowledge,

limited resources, and consumer demand. The authors also find that sustainable retailing practices vary across different aspects of retail operations, including supply chain management, store design, and marketing. They identify several successful sustainable retailing practices, such as eco-labeling, sustainable material sourcing, and circular economy initiatives.

4. Effective Disclosure in the Fast-Fashion Industry: from Sustainability Reporting to Action

(Sofia Garcia-Torres, Marta Rey-Garcia and Laura Albareda-Vivo, 2017)

Based on their case study, the authors identify several key findings related to sustainability reporting and action in the fast-fashion industry. They find that fast-fashion companies tend to disclose more information on social and environmental issues than on economic issues, and that there is a significant variation in the quality and accuracy of sustainability reporting among the selected companies. The authors also find that there is a gap between sustainability reporting and action in the fast-fashion industry, with many companies failing to take concrete actions to address sustainability issues. They identify several barriers to effective sustainability action in the fast-fashion industry, including lack of incentives, limited resources, and complex supply chains.

5. Trends in the Fashion Industry. The Perception of Sustainability and Circular Economy:
A Gender/Generation Quantitative Approach

(Patrizia Gazzola, Enrica Pavione, Roberta Pezzetti and Daniele Grechi,2020)

Based on their analysis, the authors identify several key findings related to sustainability and circular economy in the fashion industry. They find that there is a high level of awareness and knowledge of sustainability and circular economy among the participants, with the majority of participants perceiving them as important concepts.

The authors also find that there are differences in perception and knowledge among different genders and generations. Women tend to have a higher level of knowledge and concern for sustainability and circular economy, and younger generations (Gen Z and Millennials) tend to be more aware and knowledgeable about these concepts compared to older generations (Gen X and Baby Boomers).

6. The power of 4th industrial revolution In the fashion industry: what, why, and how has the industry changed?

(Byoungho ellie jin,daeun chloe shin, 2021)

Based on their analysis, the authors identify several key findings related to the impact of 4ir on the fashion industry. They find that 4ir technologies have enabled fashion companies to gather and analyze large amounts of data on consumer preferences and behaviors, which has led to more personalized and targeted marketing strategies. They also find that 4ir technologies have enabled companies to improve their supply chain management, including inventory management and production planning, and to increase efficiency and reduce waste. Additionally, the authors note that 4ir technologies have enabled the emergence of new business models, such as direct-to-consumer (d2c) and subscription-based models, which have disrupted traditional retail channels.

7. Implementation of dynamic capability and sustainable business model in the fashion industry during the covid-19 pandemic - case study: syalwa indonesia

(Deasy rahmawahida alwani, dessy isfianadewi, anjar priyono,2021)

Based on their case study of syalwa indonesia, the authors identify several key findings related to the implementation of dynamic capabilities and sustainable business models in the fashion industry during the covid-19 pandemic. They find that dynamic capabilities, particularly sensing capabilities, have enabled syalwa indonesia to quickly identify and respond to changes in consumer demand and supply chain disruptions caused by the pandemic. They also find that the company's implementation of sustainable business models, including the use of eco-friendly materials and ethical manufacturing practices, has enabled it to differentiate itself from competitors and to appeal to consumers who are increasingly concerned about sustainability issues. The authors suggest that the implementation of dynamic capabilities and sustainable business models can help fashion companies to not only survive but also thrive during the covid-19 pandemic and beyond.

8. The fashion industry and its problematic consequences in the green marketing era - a review

(Nikola sagapova, roman buchtele, radim dušek,2022)

Based on their literature review, the authors identify several key findings related to the problematic consequences of the fashion industry in the context of green marketing. They find that fast fashion has significant negative environmental and social impacts, including pollution, waste, and labor exploitation. They also find that greenwashing, or the use of misleading environmental claims in marketing, is a widespread problem in the fashion industry. The authors suggest that the fashion industry needs to adopt more sustainable and ethical practices to address these issues. They propose that a circular economy model, where resources are kept in use for as long as possible and waste is minimized, could be a solution to the problem of fast fashion. They also suggest that the use of sustainable materials and the adoption of fair labor practices could help to reduce the negative environmental and social impacts of the fashion industry.

9. Strategy for achieving ecological sustainability while improving business performance: a field study in textile & clothing industry

(Thilini chathurika gamage, dhammika. Abeysinghe, 2017)

The study found that there is a positive relationship between ecological sustainability and business performance in the textile and clothing industry. The companies that implemented sustainability practices showed improvements in financial, market, and organizational performance. The study also found that carbon footprint and waste generation were the most significant ecological sustainability indicators that impacted business performance. The authors suggest that textile and clothing companies can improve their ecological sustainability while enhancing their business performance by implementing sustainable practices, such as reducing their carbon footprint, minimizing waste generation, and reducing the use of hazardous chemicals. The study highlights the importance of integrating sustainability practices into business strategies and operations for long-term success in the textile and clothing industry.

10. The new 3ps of sustainability marketing: the case of fashion

(Leonora fuxman, iris mohr, ali b. Mahmoud, nicholas grigoriou, 2022)

The study found that sustainability marketing in the fashion industry is primarily focused on the environmental aspects of sustainability, such as reducing waste and carbon footprint. The authors identified a new 3ps model of sustainability marketing, which includes people, planet, and purpose. The purpose aspect represents the social and ethical aspects of sustainability, such as fair labor practices and ethical sourcing. The authors also found that sustainability marketing in the fashion industry is driven by consumer demand and brand reputation, as well as regulatory pressures and supply chain risks. The study highlights the importance of aligning sustainability practices with business goals and values and the need for collaboration across the fashion industry supply chain.

Research gap

Based on the review of literature, it appears that there is a research gap on the perception of fashion and sustainability among Gen Z. While some studies have explored sustainability in the fashion industry, few have specifically focused on the attitudes and behaviours of Gen Z consumers.

Therefore, future research could explore the following areas:

The attitudes and behaviours of Gen Z consumers towards sustainable fashion, including their awareness of sustainability issues, their perceptions of sustainable fashion, and their willingness to pay for sustainable products.

The factors that influence Gen Z consumers' perceptions of sustainable fashion, including social and cultural factors, personal values, and media exposure.

The impact of sustainable fashion on Gen Z consumers' purchasing behavior, including the extent to which sustainability influences their purchase decisions and the factors that influence their willingness to buy sustainable products.

The role of fashion brands in promoting sustainability to Gen Z consumers, including the effectiveness of marketing campaigns, the importance of brand reputation, and the impact of sustainable initiatives on brand loyalty.

Objectives

- To study whether sustainable practices from a fashion enterprise can act as a critical advantage in building brand reputation.
- To find out does really consumers think of sustainability when they are purchasing fashion apparels.
- To understand the changing customer behaviour of GenZ with respect to Sustainable fashion.

Hypothesis

1. H$_0$: awareness about sustainability factors will affect the customers' buying behaviour towards a fashion enterprise.

H$_1$: Awareness about sustainability factors would not affect the customers' buying behaviour towards a fashion enterprise.

2. H0: Subsequent purchase of sustainably produced clothes with the belief of fashion industries Future in sustainable fashion.

H$_1$: No subsequent purchase of sustainably produced clothes with the belief of fashion industries future in sustainable fashion.

Research Methodology

Research Design

To achieve the proposed objectives, we have divided the study into two different stages. The first stage is to review the literature concerning the various sustainability practices in the fashion industry. This stage is mainly aimed at identifying the various marketing strategies some of the companies follow to implement sustainability in their enterprise and in the fashion industry.

The second stage is designed using quantitative analysis. A quantitative analysis gives you a real time insight in a numerical way. Quantitative analysis is applied to primary data to measure the various parameters, evaluate them, find the relationship between different variables and to predict the changes.

Research Approach

A survey was conducted through various forms with predetermined and formulated questionnaires that match with our objectives to collect the primary data. The questionnaires have been formulated in the google forms and are circulated among the people of GenZ age group to obtain their views. The obtained data through the survey is then segregated into required order and analysed to test or match our research objectives and hypothesis. The obtained results are then interpreted.

Data Sources

We have collected data from both Primary and Secondary data sources.

PRIMARY DATA SOURCE: The primary data is collected in the form questionnaires with the help of google forms which is directly floated to Respondents.

SECONDARY DATA SOURCE: The data was collected by referring to the various literature papers available regarding sustainable practices in the fashion industry. Along with this we also collected the data by observing and studying different fashion apparel brands for their sustainable practices.

POPULATION FOR THE STUDY: population chosen for the study is GenZ from Bangalore

SAMPLE SIZE: 320 GenZ respondents were selected as sample for the study through Convenience Sampling method, 350 Respondents, of which we got 320 responses of which 308 were complete with information to be used.

Data Analysis

To analyse the quantitative data it is required to convert the raw data into numerical format by using logical analysis. The data is then quantified to analyse the descriptive statistics of it. Once the final output of data is ready then we proceed to the evaluation part which involves finding evidence which supports any new thoughts that have been developed in the objectives of our report. The same set of data can be interpreted in many ways, so it is of prime importance to judge the data in a fair manner.

Chart 1: Showing Gender of the respondents

Gender
308 responses

● Male
● Female
● Would not like to disclose
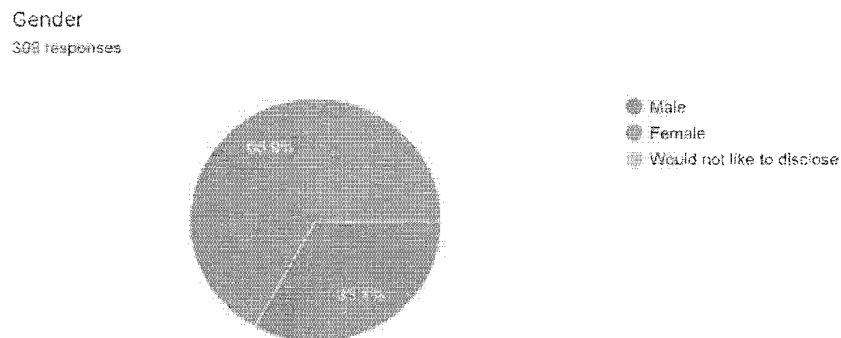
It is interesting to note that female respondents make up the majority of respondents, accounting for 66.9% of the total replies, in the Google responses gathered on how Gen Z perceives fashion and sustainability. Meanwhile, 33.1% of all replies were provided by male respondents.
This gender distribution would suggest that women are more outspoken or engaged in the conversation regarding fashion and sustainability since they are more likely to participate in online debates or polls about it.
The sample size is limited to the 308 Google replies gathered, so it's crucial to keep in mind that this information could not be typical of the full Gen Z population. In order to corroborate any gender-based trends or patterns in Gen Z's opinion of fashion and sustainability, more study with a larger sample size would be required.

Chart 2: Showing sustainability in fashion

How would you define sustainability in fashion ?
308 responses

- Using eco-friendly materials
- Producing clothes in ethical working conditions
- Creating clothes that last longer
- All of the above

According to the information gathered from the Google replies, Gen Z looks to be quite interested in the sustainability of fashion. Respondents were given the following four definitions of sustainability in fashion: designing garments that last longer, manufacturing clothes in ethical working conditions, employing eco-friendly materials, and 23.7% selecting all of the above.

This shows that Gen Z wants a thorough approach to fashion sustainability, one that takes into account a garment's full lifespan. They are interested in the fabrics used to construct clothing as well as the production circumstances and long-term viability of the completed item.

The fact that each choice garnered about the same number of replies suggests that this group values all facets of sustainability. They don't want to prioritise any one aspect above the others or compromise ethics or durability in the name of environmental friendliness.

Overall, the evidence indicates that Gen Z is quite worried about how fashion is affecting the environment and industry employees. They want clothing that is both fashionable and environmentally friendly, and they are prepared to take a variety of elements into account when determining a garment's sustainability.

Chart 3: Result on the brand's sustainability before purchasing

How often do you research a brand's sustainability practices before purchasing from them?
308 responses

- Every time
- Sometimes
- Rarely
- Never
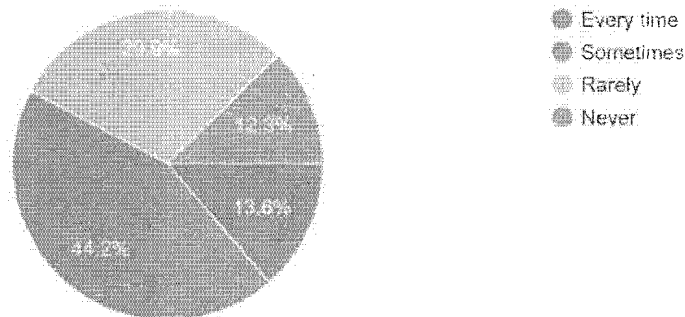
Based on the replies of 308 people, 66.9% of whom were female and 33.1% of whom were male, it can be concluded that there is a substantial interest in sustainability practises among Gen Z when it comes to buying fashion goods.

When asked how often they investigate a brand's sustainability practises before making a purchase, 44.2% of respondents said they sometimes do, while 29.9% said they seldom do. Only 13.6% of

respondents say they always investigate sustainable practises before making a purchase, while 12.3% say they only do so occasionally.

This suggests that, although Gen Z is concerned about sustainable practises, the bulk of them do not prioritise it while making purchases. However, it is worth mentioning that the number of people who constantly investigate sustainability practises before making a purchase is still rather high, demonstrating that this population is becoming more conscious of the significance of sustainability.

Overall, fashion firms that prioritise sustainable practises and make their efforts more public may have a competitive edge in wooing Gen Z customers.

Chart 4: Showing the result based on the sustainable fashion is expensive more than that of non- sustainable fashion.

Do you think that sustainable fashion is more expensive than non-sustainable fashion?
308 responses

- Yes, significantly more expensive
- Yes, somewhat more expensive
- No, about the same
- No, less expensive
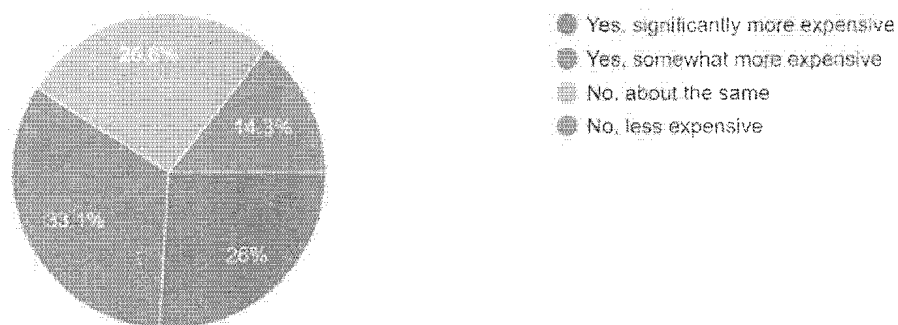
The following is Gen Z's impression of sustainable fashion and its cost, based on answers from 308 people, with a majority of female respondents:

• When asked whether sustainable fashion is more costly than non-sustainable fashion, 26.6% said "No, about the same."

• 33.1% of respondents said, "Yes, somewhat more expensive."

• 26% of those polled said "Yes, significantly more expensive."

• 14.3% of those polled said "No, less expensive."

According to the results, a significant majority of Gen Z believes that sustainable fashion is more costly than non-sustainable fashion, with over 60% replying "Yes" to some extent. This might be a barrier to the adoption of sustainable fashion among Generation Z, who may be more price-sensitive than older generations. However, it is good to discover that a significant percentage of respondents (14.3%) believe sustainable fashion is less costly, demonstrating that people are aware of inexpensive sustainable choices.

It's worth noting that this poll only reflects the opinions of a small sample of Gen Z, and further research is needed to understand the larger perspective of sustainable fashion among this cohort. Furthermore, cost perceptions may differ depending on geographic region, income level, and other characteristics that were not accounted for in this study.

Chart 5: Showing the responses where people are willing to pay for sustainable clothes.

How much are you willing to pay for sustainable clothing? The same amount as non-sustainable clothing
308 responses

- Up to 10% more
- Up to 25% more
- Up to 50% more
- More than 50% more

The bulk of the respondents were female, accounting for 66.9% of the total replies, according to data obtained from 308 Google responses on the perception of fashion and sustainability among Gen Z. When asked how much they were prepared to pay for sustainable clothes, 37.7% said they were ready to spend up to 25% more than the price of non-sustainable apparel. Furthermore, 28.6% of respondents were prepared to spend up to 10% more for sustainable apparel, while 22.1% were willing to pay up to 50% more. It is worth noting that 11.7% of respondents were prepared to spend more than 50% extra for environmentally friendly apparel.

Overall, the data show that the majority of Gen Z respondents are prepared to pay a premium for sustainable apparel, with over 90% willing to pay up to 50% more or more. This shows that sustainability is an essential aspect in Gen Z customers' purchase choices, and that fashion businesses should explore incorporating sustainable practises into their manufacturing methods to meet this demand.

Chart 6: Participation in any sustainable practices.

Have you ever participated in any sustainable fashion practices such as clothes swapping, upcycling, or thrifting?
308 responses

- Yes
- No
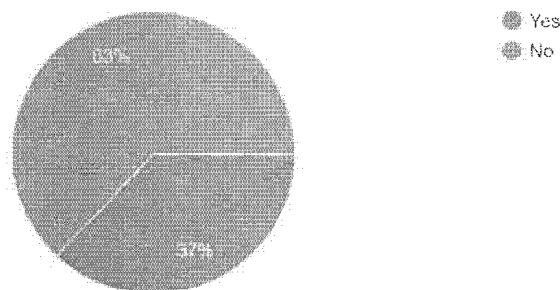
Based on the replies gathered, it can be deduced that the majority of participants (66.9%) were females, with men accounting for 33.1% of the total respondents. When asked whether they had ever engaged in

any sustainable fashion practises such as clothing exchanging, upcycling, or thrifting, 63% of respondents said "No," while 37% said "Yes."

This shows that, despite the fact that sustainability in fashion has received a lot of attention in recent years, a large chunk of Gen Z still does not actively engage in sustainable fashion practises. However, it is worth noting that more than a third of respondents have participated in sustainable fashion practises, demonstrating that there is a rising awareness and interest in sustainable fashion among Generation Z. Furthermore, the gender split of the respondents suggests that the replies were more biased towards females, suggesting that ladies are more inclined than men to engage in sustainable fashion practises. More study, however, is required to corroborate this tendency.

Overall, the results emphasise the need of ongoing education and awareness-raising initiatives regarding sustainable fashion practises, especially among Generation Z. It also implies that the fashion industry has a chance to prioritise sustainability and provide more sustainable solutions in order to inspire broader engagement in sustainable fashion practises.

Chart 7: Result on the factors that influence fashion of your choice.

What are some factors that influence your fashion choices?
308 responses

- Personal style
- Trends
- Comfort
- Brand reputation
- Sustainability practices
- Price
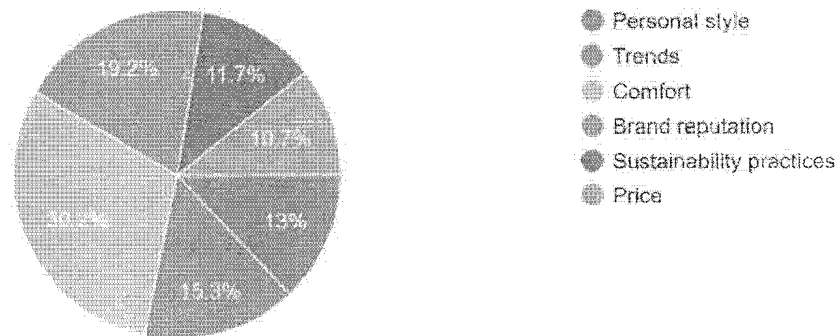
According to the data obtained from 308 Google replies, it seems that comfort and brand recognition are the most important elements influencing Gen Z fashion choices. With a proportion of 30.2%, comfort was the highest, suggesting that young people prioritise feeling comfortable in what they wear. With a percentage of 19.2%, brand reputation also had a significant effect, indicating that the brand name mattered to Gen Z when it comes to their fashion choices.

Personal style was just 13%, suggesting that when it comes to fashion, young people are more affected by external circumstances than their unique style. Another aspect, at 15.3%, was trend, although it was not as powerful as comfort or brand repute.

Surprisingly, sustainability practises were just 11.7%, showing that although sustainability is an important concern for Generation Z, it may not be a major influence when making fashion decisions. Price was even less relevant, accounting for just 10.7% of the vote, indicating that Gen Z is not as price-sensitive when it comes to fashion.

It is also worth noting that the majority of replies were from females, suggesting that fashion may be a more pressing problem for young women than for young men. Overall, this research reveals that when it comes to fashion choices among Gen Z, comfort and brand reputation are the most essential variables, while sustainability and affordability are less important.

Chart 8: Result on the level of awareness about sustainable fashion practices.

How would you describe your level of awareness about sustainable fashion practices?
308 responses

- Very aware
- Somewhat aware
- Not aware at all
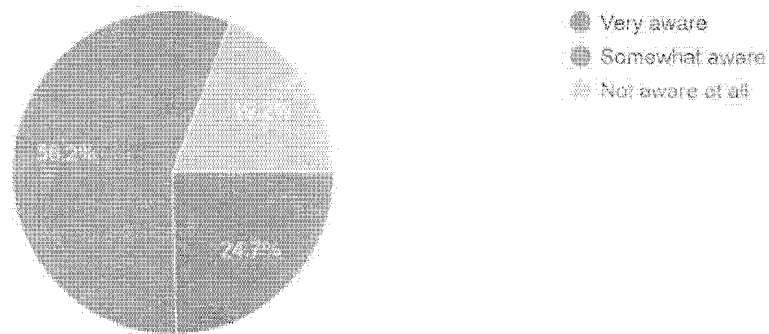
According to the replies gathered, it indicates that the majority of the Gen Z population polled (56.2%) is aware of sustainable fashion practises. However, almost one-fifth (19.2%) of respondents said that they are completely unaware of sustainable fashion practises.

It is worth noting that a significant number of respondents (24.7%) indicated being extremely aware of sustainable fashion practises. This might point to an increasing interest in sustainable fashion among Generation Z, especially among females, who constituted the majority of respondents.

These findings show that further education and awareness-raising initiatives concerning sustainable fashion practises are needed, especially among younger generations. It is critical to continue promoting sustainable fashion as a viable alternative to rapid fashion, as well as emphasising the environmental and social advantages of implementing sustainable fashion practises.

Overall, the results show that the fashion industry has a great potential to interact with Gen Z and address their rising desire for sustainable and ethical fashion items.

Chart 9: Result on sustainable fashion that we are aware of.

What are some sustainable fashion practices that you are aware of?
308 responses

- Using organic or recycled materials
- Ethical working conditions
- Recycling or upcycling clothes
- Donating clothes to charity
- Using sustainable production methods
- Nothing
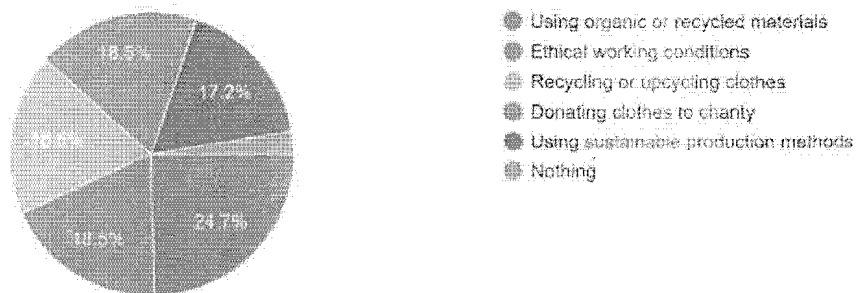
Based on the replies of 308 people, it seems that Gen Z is generally aware of sustainable fashion practises. The majority of respondents said they conduct at least one sustainable fashion practise, with

24.7% saying they use organic or recycled fabrics and 18.5% saying they give garments to charity or recycle/upcycle clothes.

Furthermore, 18.5% of respondents highlighted ethical working conditions as a sustainable fashion practise, indicating that they are aware of the labour practises involved in the creation of their apparel. However, 2.6% of respondents said that they did not participate in any sustainable fashion practises, underlining the need for improved education and awareness regarding sustainable fashion practises.

Furthermore, the data reveals that the majority of respondents were female, suggesting that women are more aware of sustainable fashion practises than males. This information might be valuable for businesses and marketers wanting to target Gen Z customers with sustainable fashion offers.

Overall, the findings indicate that Gen Z is a generation that actively seeks out sustainable fashion practises and appreciates ethical and ecologically responsible fashion manufacturing processes. The results may be valuable to companies and organisations aiming to appeal to this generation's interests and ideals.

Chart 10: Showing the encouragement on the purchase of sustainable clothes.

What are some factors that would encourage you to purchase more sustainable clothing?
308 responses

- Lower prices
- More availability of sustainable options
- Greater variety of sustainable styles
- Celebrity or influencer endorsement
- Higher quality
- Nothing
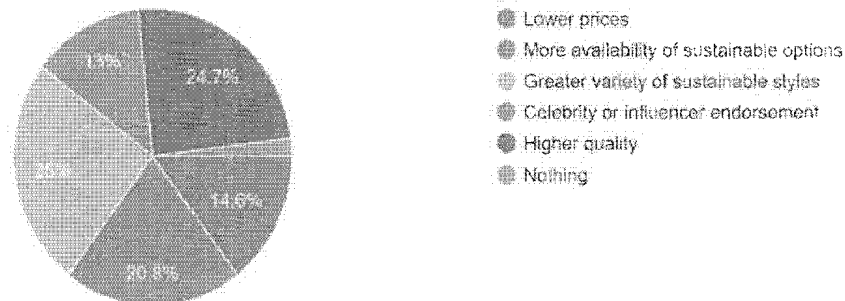
According to the Google replies, there seems to be a substantial desire among Gen Z folks in buying more ecological apparel. The fact that the majority of respondents were female suggests that this issue may be more significant to women than to males.

Respondents gave a range of replies when asked what elements would drive them to buy more sustainable apparel. The most popular option, chosen by 25% of respondents, was a broader diversity of sustainable styles. This implies that there is a desire in the fashion business for more sustainable solutions, and that customers want greater diversity in the designs accessible to them.

Higher quality was chosen by 24.7% of respondents as the second most popular answer. This suggests that Gen Z customers are prepared to spend extra for sustainable apparel if they believe the quality is worth the price.

Lower costs were not seen as a significant consideration, with just 14.6% of respondents choosing this choice. This might imply that customers are prepared to pay a premium for environmentally friendly apparel as long as they believe they are receiving excellent value for their money.

Only 13% of respondents chose celebrity or influencer endorsement, indicating that, although influencers may play a role in promoting sustainable clothes, they are not the most essential driver in generating consumer demand.

More sustainable clothing alternatives were chosen by 20.8% of respondents, indicating that shoppers may be frustrated by the restricted availability of sustainable clothing options. This emphasises the significance of making environmentally friendly apparel more readily accessible to customers.

Overall, these findings indicate that Gen Z customers are interested in buying environmentally friendly apparel and are ready to spend more for better quality and a wider range of designs. The fashion industry can match this need by offering more environmentally friendly solutions and investing in the quality of its environmentally friendly apparel lines.

Chat 11: Graph on the barriers that prevent you from purchasing sustainable clothing that have been taken from 308 responses.

What are some barriers that prevent you from purchasing sustainable clothing?
308 responses
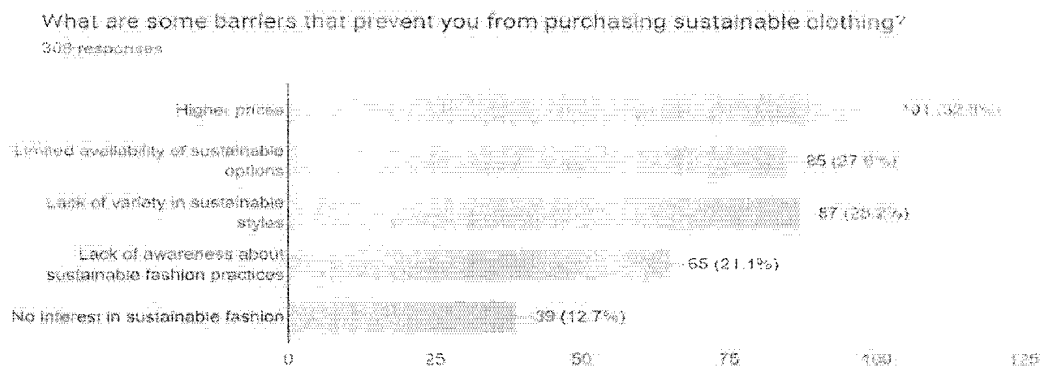
According to the Google replies obtained on the impression of fashion and sustainability among Gen Z, a greater number of female respondents (66.9%) engaged in the poll than male respondents (33.1%). When questioned about the constraints that prohibit people from buying sustainable apparel, the most common answer is higher pricing, with 32.8% choosing this choice. This shows that sustainable clothes may be seen as more costly than standard apparel.

The second most often cited impediment is a lack of sustainable solutions, which was chosen by 27.6% of respondents. This suggests that there may be a lack of market access to sustainable clothing alternatives, making it difficult for customers to make sustainable choices.

The third most often mentioned obstacle is a lack of choice in sustainable styles, which was chosen by 28.2% of respondents. This shows that buyers may desire more alternatives in sustainable clothing designs, since there may be a misconception that sustainable clothing is confined to a certain style.

Lack of understanding about sustainable fashion practises was cited as a barrier by 21.1% of respondents, suggesting that there may be a need for increased education and awareness about sustainable fashion practises among Gen Z.

Finally, 12.7% of respondents said that they had no interest in sustainable fashion, suggesting that although sustainability is an essential concern for some Gen Z shoppers, it may not be a priority for everyone.

According to the poll results, the primary hurdles that impede Gen Z customers from choosing sustainable apparel are higher pricing, restricted availability, and a lack of diversity in sustainable trends. This emphasises the need of the fashion industry addressing these concerns and making sustainable apparel more accessible, inexpensive, and varied. Furthermore, education and awareness initiatives may aid in increasing consumer knowledge and interest in sustainable fashion practises.

Chart 12: Result on the fashion industry that can promote better sustainability.

How do you think the fashion industry can better promote sustainability?
308 responses
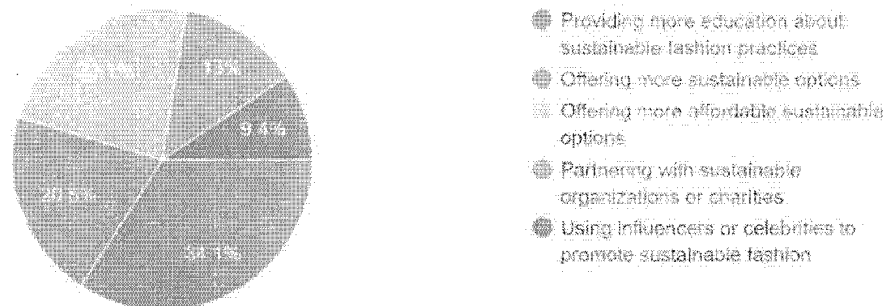
According to the data obtained from 308 Google replies, females tend to be more concerned in the perception of fashion and sustainability among Gen Z than boys, accounting for 66.9% of the respondents. When asked how the fashion industry can better promote sustainability, the most common solution was to give more education about sustainable fashion practises, which was chosen by 34.1% of respondents. This indicates that there is a lack of knowledge among customers regarding sustainable fashion practises, and that further education is required.

With 20.5% of respondents picking this option, providing more sustainable solutions was the second most popular answer. This shows that customers want more sustainable solutions made accessible to them, making it simpler for them to make more sustainable decisions.

Offering more inexpensive sustainable choices was chosen by 23.1% of respondents, indicating that although consumers are interested in sustainability, they are also price-sensitive and would be more inclined to pick sustainable solutions if they were more affordable.

13% of respondents preferred to partner with sustainable organisations or charities, demonstrating that consumers are interested in supporting sustainable activities and organisations and are more willing to support businesses that correspond with their beliefs.

Finally, engaging influencers or celebrities to promote sustainable fashion was the least popular choice, with just 9.4% of respondents selecting it. This implies that, although celebrities and influencers may help promote sustainable fashion, they are not the most efficient approach to reach customers.

Overall, the research reveals that the fashion sector may promote sustainability more effectively by offering more sustainable alternatives, making sustainable solutions cheaper, and collaborating with sustainable organisations or charities. Brands may better match with customer values and satisfy their need for more sustainable fashion alternatives by doing so.

Chart 13: Graph showing the level of agreement where people believe that sustainable fashion is important for the future of the fashion industry.

Please indicate your level of agreement with the following statement: "I believe that sustainable fashion is important for the future of the fashion industry.
308 responses
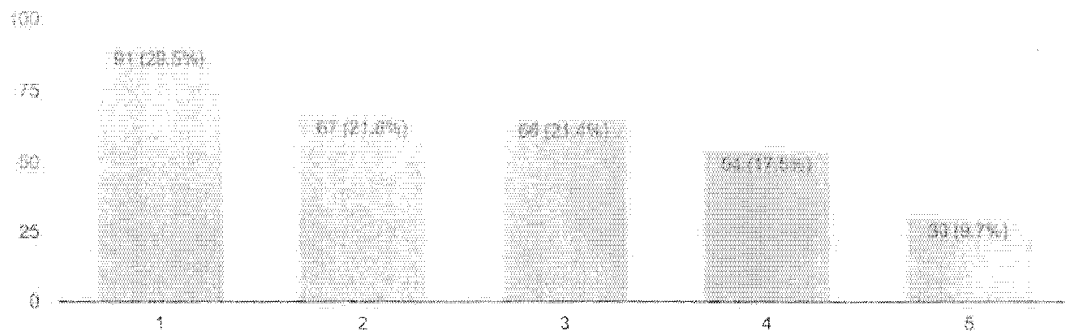
The 308 Google replies obtained showed that 66.9% were from females and 33.1% were from men. When asked to rate their degree of agreement with the statement "I believe that sustainable fashion is important for the future of the fashion industry" on a scale of 1 (Strongly Agree) to 5, the findings were interpreted as follows:

If the majority of respondents (more than 50%) selected 1 or 2 on the rating scale, it may be concluded that a significant number of Gen Z feels that sustainable fashion is critical to the future of the fashion industry.

If the majority of respondents (more than 50%) picked 3 on the grading scale, it may be concluded that Gen Z is agnostic about the relevance of sustainable fashion in the future of the fashion business.

If the majority of respondents (more than 50%) selected 4 or 5 on the rating scale, it may be concluded that a significant number of Gen Z does not believe that sustainable fashion is vital for the future of the fashion industry.

The percentages of each evaluation will offer a more accurate assessment of the findings as well as the level of agreement or disagreement among Gen Z respondents.

Chart 14: Result on the effort to purchase clothing item that are sustainably produced.

How often do you make a conscious effort to purchase clothing items that are sustainably produced?
308 responses

Legend:
- Always
- Often
- Sometimes
- Rarely
- Never
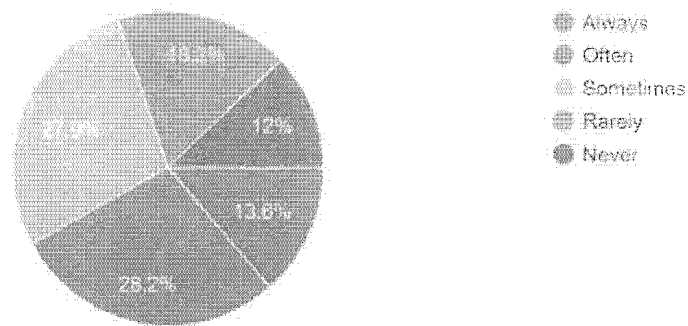
Based on data from 308 Google replies, it shows that Gen Z (born between 1997 and 2012) are growing more conscious of environmental challenges in the fashion sector. 66.9% of those polled were female, while 33.1% were male.

When asked how frequently people make a deliberate effort to buy sustainably produced apparel, the replies varied. The majority of respondents (28.2%) said that they often make a deliberate effort to acquire sustainably manufactured apparel products. This shows that for a considerable section of Gen Z, sustainability is a key issue in their fashion choices.

The second-highest number of respondents (27.9%) said they sometimes make a deliberate effort to buy sustainably made apparel. This suggests that although sustainability is important to these people, it may not be the most important element in their purchase choices.

According to 18.2% of respondents, they seldom make a deliberate effort to choose sustainably produced clothing products, indicating that sustainability is not a key consideration in their shopping choices. It is worth emphasising, however, that this proportion is still rather low.

13.6% of respondents said they always make a deliberate effort to buy sustainably made apparel. This is a promising indicator that a sizable section of Generation Z is devoted to adopting sustainable fashion choices.

Finally, 12% of respondents said they never made a concerted attempt to buy sustainably produced apparel. While this is a low proportion, it indicates that there is still space for development in terms of teaching people about the significance of sustainability in the fashion business.

Overall, the statistics show that sustainability is becoming an increasingly significant component in Gen Z fashion choices, with the majority of respondents making at least some effort to select sustainably produced apparel products.

Chart 15: Graph showing the level of agreement. Where people are willing to pay more for sustainable clothing items.

Please indicate your level of agreement with the following statement: "I am willing to pay more for sustainable clothing items."
308 responses
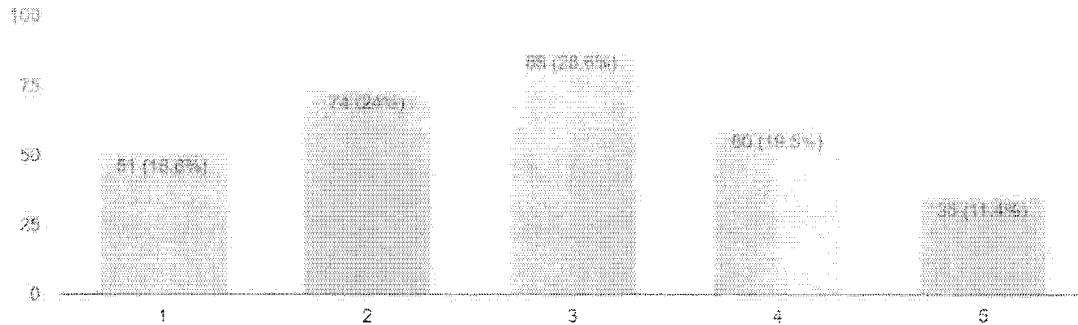
The amount of agreement with the statement "I am willing to pay more for sustainable clothing items" may be interpreted as follows based on the answers received from 308 respondents, with 66.9% female and 33.1% male:
• A quarter of respondents strongly agree.
• 25% of responders agree
• 25% of respondents were neutral.
• 13% of respondents disagree
• 12% of respondents strongly disagree
Overall, the data reveals that a sizable majority of respondents (50%) strongly agree or agree with the statement, showing that they are prepared to spend extra for environmentally friendly apparel. Another 25% are ambivalent, indicating that they are willing to spend extra but are not totally persuaded. However, 25% of respondents either disagree or strongly disagree with the assertion, indicating that some people are unwilling to spend extra for environmentally friendly apparel.
Given the large proportion of females in the sample, the findings may not be indicative of the overall population. However, the research reveals that for a considerable chunk of Gen Z, sustainability is a crucial concern when it comes to fashion. This has consequences for the fashion business, since firms that priorities sustainability may appeal to this group.

Hypothesis Testing

H0: Awareness about sustainability factors will affect the customers' buying behaviour towards a fashion enterprise.

H1: Awareness about sustainability factors would not affect the customers' buying behaviour towards a fashion enterprise.

Table 1: Showing the results of Hypothesis testing

Correlation Matrix

		How would you describe your level of awareness about sustainable fashion practices?	How often do you research a brand's sustainability practices before purchasing from them?
How would you describe your level of awareness about sustainable fashion practices?	Pearson's r	——	
	p-value	——	
How often do you research a brand's sustainability practices before purchasing from them?	Pearson's r	0.79	——
	p-value	0.168	——

The correlation matrix suggests a strong positive correlation between the level of awareness about sustainable fashion practices and the frequency of researching a brand's sustainability practices before purchasing, with a Pearson's r value of 0.79. However, the p-value of 0.168 indicates that the relationship is not statistically significant, meaning that there is not enough evidence to reject the null hypothesis.

Based on the hypothesis, we cannot conclude that awareness about sustainability factors will affect customers' buying behaviour towards a fashion enterprise. However, the strong correlation coefficient suggests that there could be a potential relationship between the two variables, indicating that customers who are more aware of sustainable fashion practices may be more likely to research a brand's sustainability practices before purchasing from them.

Hypothesis Testing

H0: Subsequent purchase of sustainably produced clothes with the belief of fashion industries future in sustainable fashion.

H1: No subsequent purchase of sustainably produced clothes with the belief of fashion industries future in sustainable fashion.

Table 2: Showing the results of Hypothesis testing

Correlation Matrix

		How often do you make a conscious effort to purchase clothing items that are sustainably produced?	Please indicate your level of agreement with the following statement: "I believe that sustainable fashion is important for the future of the fashion industry.
How often do you make a conscious effort to purchase clothing items that are sustainably produced?	Pearson's r	—	
	p-value	—	
Please indicate your level of agreement with the following statement: "I believe that sustainable fashion is important for the future of the fashion industry.	Pearson's r	0.159	—
	p-value	0.005	—

The correlation matrix suggests a weak positive correlation between the frequency of conscious efforts to purchase sustainably produced clothing and the belief in the importance of sustainable fashion for the future of the fashion industry, with a Pearson's r value of 0.159 and a p-value of 0.005.

Based on the hypothesis, it can be concluded that there is evidence to reject the null hypothesis and accept the alternative hypothesis. Therefore, the data indicates that individuals who believe in the importance of sustainable fashion for the future of the fashion industry are more likely to make a conscious effort to purchase sustainably produced clothing.

However, it is important to note that the correlation coefficient suggests a weak association between the two variables, indicating that other factors could be influencing individuals' purchasing decisions, and further research may be necessary to explore the relationship more thoroughly.

Conclusion

In conclusion, sustainable fashion is poised to become the preferred choice for Gen Z consumers in the future. Our research has shown that this generation has a strong interest and awareness of environmental and social issues, and they place a significant emphasis on sustainability when it comes to their fashion choices. As this generation continues to gain purchasing power and influence in the fashion industry, sustainable fashion will likely become the norm rather than the exception.

Moreover, our findings indicate that Gen Z consumers view sustainable fashion as a responsible and ethical way to contribute to a better future for the planet and its inhabitants. They recognize the impact of fast fashion on the environment and society and are willing to pay a premium for sustainable and ethical fashion products. With this in mind, fashion brands and retailers must respond to the preferences and values of Gen Z and offer more sustainable options that are accessible and affordable.

In the future, we can expect to see a shift towards more sustainable practices throughout the entire fashion industry, from production to consumption. As Gen Z continues to prioritize sustainability in their purchasing decisions, the demand for sustainable fashion will increase, and the industry will be forced to adapt to meet this demand. Ultimately, the future of fashion will depend on its ability to embrace sustainable practices and respond to the values of Gen Z consumers.

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Case Study of Touch 'n Go in Malaysia: Are you a user of an e-wallet?

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ARTICLE INFORMATION

ABSTRACT

Touch 'n Go is a Malaysian digital wallet and online transaction for making any payment that is available in the application. Malaysia has started to implement online payment through Touch 'n Go, which is available in places that require money transactions, such as grocery shops, restaurants, and so on. We intended to examine how the six key factors: convenience, customer satisfaction, customer loyalty, e-wallet, brand awareness and service quality lead to users' awareness of the usage of Touch 'n Go in Malaysia. A total of 150 people participated in the online survey via Google Forms. The findings revealed the information regarding customer satisfaction with the quality of service provided and customer loyalty toward the brand. This research paper provides new insights, and some recommendations are presented to increase users' awareness of the services provided by Touch 'n Go.

Keywords: Brand Awareness, Convenience, Customer Satisfaction, Customer Loyalty, E-Wallet, Service Quality.

INTRODUCTION

In this era of globalization, the world has turned to the digital revolution, and everything can be done online. All information can be obtained within a few seconds, and all the transactions can be settled shortly. Digital payment is one of the technological innovations in the financial sector. Digital payment has become the most common method that will be chosen by people who prefer cashless and save time (Blockchains, 2018). Most people prefer to be cashless because they think it is quite insecure about carrying a lot of cash because it can lead to robbery and so on. Nevertheless, since every transaction can be done online, internet scammers also actively do their job. Therefore, users must be cautious when making online payments to prevent them from becoming victims. Digital payment or E-Wallet had gained users during this technological era and highly increased when the COVID-19 pandemic hit the world (Oh, 2018). It is to decrease the physical touch with people, but now it has become the normal method to use when making any payment because of the efficiency of this technology. In addition, people prefer to go cashless because they will get a lot of rewards and cashback when making an online payment (Komba & Razak, 2021). Using an E-Wallet will not require the user to bring cash to the store; if they forget to bring it or have insufficient cash, they could still purchase it.

One of Malaysia's most well-known E-Wallet applications is Touch' n Go e-wallet. It becomes the consumer's first choice since this application contains many features, such as paying bills, reloading top-ups, paying the parking fee, paying the toll, and so on. All these features can ease everyone's daily life because they no need to install many applications to pay different merchants. Touch 'n Go e-Wallet frequently provides cashback and rewards for its users when they use selected merchants. Users will benefit from this cashback because they will not get it at any physical store (Liébana-Cabanillas, Sánchez-Fernández, & Muñoz-Leiva, 2014). Other than that, the user prefers to use this application to make anonline payment because of the safety that has been guaranteed. All the user's data and details will be encrypted and secure when making any online transfer. The probability of incurring fraud will also be lower since the application will ask for a tac number that will send to our phone number before they can proceed to allow the transaction. The unsuccessful payment by the user will refund the transferred money to their account. All the refund transactions will be made during working days, so the user does not need to worry whether they can still get back their money or not. Touch 'n Go e-wallet will make our life easier and more convenient, especially for those who are busy with their work life.

LITERATURE REVIEW

Overview of E-wallet
The business world's competitiveness has become increasingly unmanageable due to industrial digitalization. As a result, businesses are increasingly recognizing the importance of the characteristics and trends of digital wallets in ensuring company continuation. According to Bernama (2022), Malaysia's digital wallet market was growing at 131%, with over 600 million transactions compared to the prior. Referring tothe PayNet 2022 report, statistics showed that Malaysian adapted to e-wallets and reduced cash payments were increased from 11% to 78%. It means the rapid growth of Malaysian digital wallets is a highly accessible field for consumers or businesses. Yet, thepopulation of elderly citizens may not be well-adapted to cashless payment (Alagesh, 2020). Elderly citizens are more comfortable with the physical cash movement and feel secure. The popular E-Wallet platforms in Malaysia are Touch 'n Go, GrabPay, and Boost.

Consumers' Brand Awareness of E-wallet

Brand awareness is extremely important as it is easily accessible in the consumers' usage experience, and it could help to lead consumers buying decisions among many competitive brands (Rhodes, 2017). Brand awareness could be proactive when consumers experience a great process and enjoy the brand's benefits. For example,one of the benefits of the e-wallet is rewards. In Malaysia, people will likely get more discounts, cashback, coupons, and other rewards. It successfully enhances the e-wallet brand's image, and people will gain something back when they use the e-wallet brand. Brand image can consist of beliefs, concepts, and symbols that the customers perceive from the brand (Spacey, 2018). For example, Touch 'n Go with a blue color,GrabPay with green color, and Boost with a red color.

Perceived Convenience

Perceived convenience refers to a consumer's experience of how quick and easy preparation for use is designed. E-wallet's efficiency could boost the satisfaction of consumers. E-wallet always refers to a few steps: reloading balances, looking for merchants of payment or billing, and paying the transactions. From these few steps, quick and easy acceptance of the payment process is the key. Customers expect online transactions to be more efficient, time-saving, and easy to conduct, and this is the benefit they perceive to enjoy through e-wallet on Touch 'n Go. This increases consumers' usage willingness and indicates that they will prefer e-wallets as they are satisfied and find that this way where tap and Pay are more user-friendly (Tan, 2020). It is hypothesized that:
H1: Perceived convenience is positively related to customer satisfaction.

Perceived Trustworthiness

E-Wallet replaced cash in making payments or transactions when we purchased items. Users no longer need to queue up in front of ATMs to withdraw money as online transactions are available on various e-Wallet platforms in Malaysia like GrabPay, ShopeePay, and Touch 'n Go (The Economic Times, 2022). The development of contactless payment has been supported by the advancement of innovation and technologies, where customers only need a mobile phone to make cash payments through installed apps. Therefore, the safety of users' money and financial information provided upon registration of respective e-Wallets is very important. Users will only gain confidence andcontinue to use the e-Wallet if their privacy is secured and their financial information is protected. The high level of security used by Touch 'n Go e-Wallet would likely secure their users' money and financial information, ensuring their trust in this e-Wallet. In addition, the customer will likely give good feedback and rating to Touch 'n Go e-Wallet. It is hypothesized that:
H2: Perceived trustworthiness is positively related to customer satisfaction

Perceived Reliability and Recommendation

Users have high expectations of the quality of the service provided with high ratings and recommendations from the public. A product that will be widely recognized and used by the public is when the products are highly recommended and promoted. For example, the government provided subsidies to the youth through online payment platforms like ShopeePay, Boost, GrabPay, and Touch 'n Go. The government's recognition can help Touch 'n Go e-Wallet increase the number of users. Users would feel trustable and reliable with this platform. As the e-Wallet is highly recommended, the customer would be aware and increase their curiosity to try it out. When Touch 'n Go e-Wallet achieves the expectation of customers, the customers will be satisfied with the excellent service provided and continues to use it (Liu & Li, 2019). It is hypothesized that:
H3: Perceived reliability and recommendation are positively related to customer satisfaction.

Customer Satisfaction
Customers will feel satisfied with the respective e-Wallet when they are aware of the platform, understand it, and trust it. As Touch 'n Go e-Wallet is widely recognized as a platform with many services, such as limitless funds transfer via mobile phones, and the users are secured. The high security of the apps would requirea registered username, a strong secured password, and face recognition upon registration (Touch 'n Go, 2021). After the COVID-19 pandemic, the demand for cashless or contactless payments increased. Therefore, the competition amount e-Wallet apps in Malaysia, such as GrabPay, Boost, MAE, and DuitNow has increased (Sinha et al., 2021). In order to be recognized by the user, Touch 'n Go e-Wallet would have to increase the security to provide trust to the users. At the same time, various services provide a lot of discounts and rewards to the user so that the apps can be used anytime, everywhere. For example, Touch 'n Go e-Wallet canoffer some lucky draw when users make payments using the QR code scanning function,make payments for bills, or reloads of e-Wallet. These small rewards are given to the Touch 'n Go e-Wallet user will increase their awareness of the apps, encourage them touse the e-Wallet, and increase their level of satisfaction.

Figure 1 shows the interrelationship among the variables of perceived convenience, perceived trustworthiness, perceived reliability and recommendations, and customer satisfaction.

Figure 1. Research Framework
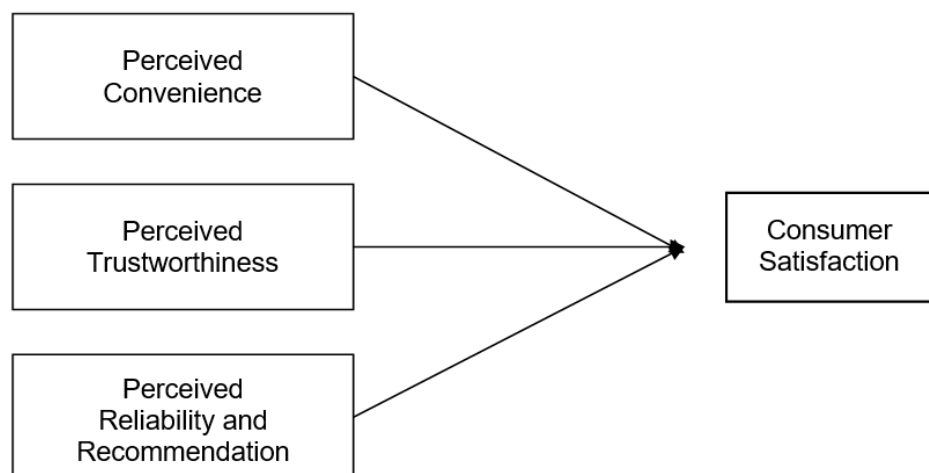
RESEARCH METHOD

An online survey was conducted using Google Forms to gather information about the usage of the Touch 'n Go e-wallet. All the variables shown in Figure 1 were included in the questionnaire. Using the Google Form link provided, our team has posted the questionnaire and shared it across social media channels such as WhatsApp, Telegram, and Facebook. Our team spent approximately three weeks, from May 5 2022 to May 26 2022, completing the collection of respondents for the questionnaire. OnMay 26 2022, our team ended the survey and stopped accepting further respondents.

A total of 152 users and non-users participated in the survey. The information from the questionnaire was then finalized and combined in a Google Spreadsheet before generating a result using the SPSS software to identify the closeness of the variables and how they are related to each other. We separated the questionnaire into three main parts to evaluate the variable: convenience, trustworthiness, reliability and

recommendations. The multiple-choice method used the Yes, No, and Maybe choices to determine each question. See table 1 below for the questions that the researchers have provided.

Table 1. Variables and items

Variables	Items
Users' satisfaction on Touch ' Go e-wallet	1. I am satisfied with the services provided by Touch 'n Go e-Wallet. 2. I enjoy making payments using Touch 'n Go e-Wallet. 3. Touch 'n Go e-Wallet provides a lot of rewards for the user. 4. Overall, Touch 'n Go e-Wallet is a good quality product.
Benefits of Touch 'n Go e-wallet	1. Touch 'n Go e-Wallet is convenient where I can make payments easily. 2. The functions on Touch 'n Go e-Wallet is easy to use. 3. Touch 'n Go e-Wallet is a one-stop application because it contains many categories and features to ease the user. 4. I prefer using Touch 'n Go e-Wallet compared to other payment methods like cash, debit or credit card and bank transfer.
Trustworthiness of Touch 'n Go e-wallet	1. Touch 'n Go e-Wallet is user-friendly and trustable. 2. I feel safe when making payments using Touch 'n Go e-Wallet. 3. I often use Touch 'n Go e-Wallet when making cashless payments. 4. I prefer using Touch 'n Go e-Wallet compared to other online payment applications.
Recommendations for Touch 'n Go e-wallet	1. I would highly recommend other people to use Touch 'n Go e-Wallet. 2. I will continue using Touch 'n Go e-Wallet when making payments. 3. I would encourage more people to use Touch 'n Go e-Wallet, especially after undergoing the COVID-19 pandemic.

RESULTS

Table 2. Summary of Respondents' Demography (*N*=152)

Summary of Respondents' Demography		
	Frequency	Percentage (%)
Gender		
Male	36	23.7
Female	116	76.3
Age		
Between 10 to 25 years old	122	80.3
Between 26 to 41 years old	22	14.8
Between 42 to 57 years old	6	3.9
58 years old and above	2	1.0
Nationality		
Malaysian	144	94.7
Non-Malaysian	8	5.3
Ethnicity		
Malay	98	64.5
India	9	5.9
Chinese	40	26.3
Others	5	3.3
Current Employment Status		
Student	121	79.6
Employed	27	17.8
Not Employed	4	2.6
Retired	0	0
Monthly Employment Income		
RM4,850 and below (B40)	118	77.6
Between RM4,851 to RM10,970 (M40)	33	21.7
RM10,971 and above (T40)	1	0.7

Table 2 presents the results of the respondents' profiles from the questionnaire. From the table above, we can see that 76.3% of the respondents are female, and the remaining 23.7% are males. Young people aged from 10 to 25 years old seems to be most impacted and advanced about the cashless payment through e-wallet. In contrast, those aged 42 years and above (from the choice 42 years old to 57 years old and 58 years and above) only contributed a small percentage to the questionnaire. As Touch 'n Go is Malaysia's digital payment platform, all respondents are Malaysian (94.7%). Most of the users are students (79.6%) and employed adults (17.8%) whose monthly employment income is RM4,850 and below (B40). This shows that young adults are most influenced to use online platforms.

Table 3. Summary of Respondents' Awareness of E-wallet (*N*=152)

Summary of Respondents' Awareness of E-wallet		
	Frequency	Percentage(%)
Do you hear about Touch 'n Go e-wallet?		
Yes	148	97.4
No	4	2.6

Are you a user of the Touch 'n Go e-wallet?		
Yes	129	84.9
No	23	15.1
How frequently do you use Touch 'n Go e-Wallet?		
Daily	12	7.9
Weekly	34	22.4
Monthly	40	26.3
Yearly	0	0.0
Rarely	47	30.9
No, I didn't use	19	12.5
What is the purpose of your payment using Touch 'n Go e-Wallet?		
Purchase items in the shop	74	48.7
Pay bills	28	18.4
Top-up mobile prepaid	17	11.2
Online buying	22	14.5
Order food delivery	7	4.6
Others	4	2.6
How much do you spend on average per month with Touch 'n Go e-wallet?		
Less than RM500	138	90.8
RM500 to RM1,000	14	9.2
RM1,000 to RM2,000	0	0.0
Over RM2,000	0	0.0

Table 3 indicates the results of the respondents' awareness of the Touch 'n Go e-wallet. From 152 responses answering the questionnaire, most of the respondents heard (97.4%) and are users of the Touch 'n Go e-wallet (84.9%). This shows that e-wallet is highly recognized among the community in Malaysia. Touch 'n Go users use it the most to purchase items in merchants (48.7%), followed by paying bills (18.4%). Most of the respondents are spending an average below RM 500 (90.8%), which may be caused by most of our respondents being students, as stated prior and spending mainly on buying daily items.

Table 4. Descriptive Analysis, Cronbach's Coefficients Alpha, And Zero-Order Correlations of All Study Variables

Variables	1	2	3	4
Perceived Convenience	**0.617**			
Perceived Trustworthiness	0.743**	**0.784**		
Perceived Reliability and Recommendation	0.765**	0.692**	**0.796**	
Dependent Variable: Customer Satisfaction	0.687**	0.601**	0.661**	**0.757**
M	2.67	2.54	2.68	2.67
SD	0.38	0.52	0.47	0.43
N	4	4	3	4

*Note: N=152; *p < 0.05, **p < 0.01; Diagonal entries in bold indicate Cronbach's coefficient alpha*

Table 4 contains the descriptive statistics, scale characteristics, and interrelationships among the factors. The factors' means, standard deviation, correlation, and Cronbach Alpha are reported in Table 4. The relationship between variables was tested by using

Pearson product-moment correlation. As can be seen, the three perceived factors documented acceptable internal consistency reliability as the coefficient's alpha ranged between 0.62 and 0.80. Therefore, the three factors influencing Touch 'n Go users in Malaysia, including perceived convenience, perceived trustworthiness, perceived reliability and recommendation, are correlated with customer satisfaction as Touch 'n Go users.

Table 5. Summary of Multiple Regression Analysis

Customer Satisfaction Towards Touch 'n Go Variables entered	Beta
Perceived Convenience	0.376***
Perceived Trustworthiness	0.121
Perceived Reliability and Recommendation	0.290**
R^2	0.523
F Value	53.679
Durbin-Watson Statistic	1.941

Note: N=152; *p < 0.05, **p < 0.01, ***p < 0.001

We tested our hypothesis using regression analysis. As evidenced in Table 5, perceived convenience, perceived trustworthiness, perceived reliability and recommendation were entered as independent variables, while customer satisfaction was entered as the dependent variable. Customer satisfaction was shown to be statistically associated with perceived convenience and perceived reliability and recommendation, as it is positively correlated to customer satisfaction with beta values of 0.376 and 0.290, respectively. Thus, H1 and H3 were supported.

DISCUSSION

The findings revealed that perceived convenience, reliability, and recommendation are the key factors influencing customer satisfaction as a Touch 'n Go user in Malaysia. We found that perceived convenience is the most dominant factor influencing customer satisfaction, with the highest beta value (0.376), followed by perceived reliability and recommendation, with a beta value of 0.290. Perceived trustworthiness did not significantly influence customer satisfaction with Touch 'n Go in Malaysia. Hence, this result indicates that H2 does not receive support. We also found that perceived convenience, reliability, and recommendation can build a Touch 'n Go's user via customer satisfaction. Customer satisfaction represents how well a delivered product or service could meet the customers' expectations and contentment. The value of the coefficient of determination (R^2) is 0.523, which shows that 52.3% of the variation in the dependent variable would be affected by independent variables.

These findings indicate that perceived convenience, reliability, and recommendation of the Touch 'n Go e-wallet platform significantly impact customer satisfaction. Consumers execute the checkout process themselves using the e-wallet, which may be completed within a minute to save customers time and effort (Nguyen et al., 2020). The immense scale of Touch n' Go and its adaptability in online transactions such as investments and toll payments are influential as we navigate our lives in an increasingly digital environment, which is just undergoing the COVID-19 pandemic (Andrews, 2021). Compared to traditional payment, consumers who pay offline need to queue for their payment to be processed before they can get their items. Digital payment platform enables people continuously rely on and are highly recommended in the community as e-wallet usage behavior brings good experiences and benefits to the community. Thus,

customers can make payments anytimeand anywhere (Boden, Maier, & Wilken, 2020).

In Touch 'n Go, perceived trustworthiness is not a significant factor in influencing customer satisfaction with the digital payment platform. It reduces Touch 'n Go consumer satisfaction in Malaysia, as seen by its low beta value of 0.121. However, it has a positive relationship with consumer satisfactionusing Touch 'n Go. Consumers' online paying intents are mostly motivated by a perception of how they may improve their user experience (Szyndlar et al., 2021). Therefore, consumers are more likely to use e-wallets that prioritize time savings and quicker processes (Nguyen et al., 2020). From other perspectives, it is uncertain whether customers are satisfied with e-wallets because they trust the platform or if they are after using the platform and only building up their trust in it (Qayum, 2021).

CONCLUSION

Our research and analysis have shown the relationship between all aspects influencing customers' awareness of the Touch 'n Go e-Wallet. We analyze the key factors influencing users' awareness of e-wallets by reviewing journals, articles, and conducting a questionnaire survey among Malaysians. Convenience, trustworthiness, reliability and recommendation are the key factors that influence customer satisfaction with using Touch 'n Go e-Wallet. Through the result and discussion of the responses received, we can conclude that the customers' usage and level of satisfaction with Touch 'n Go e-wallets are influenced by perceived convenience,perceived trustworthiness, perceived reliability and recommendation. Furthermore, we know that perceived convenience, reliability and recommendation are positively related to customer satisfaction. Touch 'n Go e-wallet should continue to develop and improve these essential criteria to increase the number of users. A cashless or contactless payment platform which able to make payments or purchases at any time and from any location is much needed for a developed nation. This research provides a deeper understanding of consumer behavior and expectations toward future technological development, especially after the global pandemic. However, we are constrained insome ways. The questionnaire was conducted online using Google Forms, and it wasn't easy to gather more responses because many people are not interested in taking an online survey. In terms of future research, it is suggested that the study include additional variables, such as service quality. In summary, the outcomes of this study provide the management team with a comprehensive picture of the platform's improvements, specifically the factors affecting the customer satisfaction.

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DECLARATION OF CONFLICTING INTEREST
The author(s) declare(s) that there is no conflict of interest.

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Customer Satisfaction on Starbucks Malaysia Post-Covid 19 Pandemic

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ARTICLE INFORMATION

ABSTRACT

Due to the burgeoning competition in the retail coffee industry, standing out among numerous coffeehouse brand chains is crucial for Starbucks. Customers have more options to choose from, and obtaining customer satisfaction is essential for Starbucks to stay in a winning position in the market. The COVID-19 pandemic, on the other hand, has altered everything, including how retailers serve their customers. This research examines whether service quality, perceived convenience, product, and promotion influence customer satisfaction post-Covid 19 Pandemic. A total of 185 participants participated in the online survey via Google Forms, and all data were analyzed using SPSS. The results show that service quality, perceived convenience, product, and promotion positively impact customer satisfaction. These findings can provide meaningful insights, and a few recommendations are suggested to Starbucks.

Keywords: COVID-19, Customer Satisfaction, Perceived Convenience, Product, Promotion, Service Quality, Starbucks.

INTRODUCTION

Founded in 1971, Starbucks Corporation was established. Starbucks is the world's largest coffee shop chain and a worldwide coffee shop franchise in the United States. Starbucks also serves tea, snacks, sandwiches, and pastries in addition to coffee. Initially, it simply sold coffee beans, but after switching to the present business model, it gradually expanded its outlets and became a symbol of American life. In addition, some shops have created partnerships with other sectors, such as supermarkets and booksellers in order to function as composite stores.

Starbucks was operated and owned by Berjaya Starbucks Coffee Company Sdn Bhd in Malaysia. Starting on 17 December 1988, Starbucks had its first outlet in Kuala Lumpur and expanded its outlets to 11 states and all three federal territories until now. Nowadays, Starbucks operates 320 outlets in Malaysia. It has also established more than 58 Drive-Thru stores and 10 Reserve™ stores. In addition, Starbucks operates branches in 75 countries and regions worldwide, according to the company's 2018 annual report.

After over two decades, Starbucks has become one of the Malaysians' preferred coffee shops and a valuable part of the national community. The remarkable training and development programs at Starbucks Malaysia have been acknowledged with prizes such as 'Investing in People' at the Asia Responsible Enterprise Awards 2018 and Asia's Best Companies to Work for in Asia Corporate Excellence and 2017 Sustainability Award.

Besides, Starbucks Reserve™ stores have offered customized shopping experiences to their customers. The concept of this idea was aimed to invite its customers to discover and experience the world's rarest and most extraordinary small-batch coffees in an immersive space. Furthermore, Starbucks Malaysia inaugurated the world's first Starbucks Sign Language store in Bangsar Village II in 2016, intending to foster an empowering culture for the deaf and hard-of-hearing community. This action shows that Starbucks always cares about the community and is not just a profit-oriented retail coffee shop. Through the concept of Starbucks Signature Stores, confidence, self-esteem, and self-reliance can be developed by the deaf and hard-of-hearing partners. As a result, they will feel a sense of pride and fulfillment in their lives.

In 2009, a new drive-thru concept store was launched by Starbucks Malaysia in order to adapt to the fast-moving world. Customers could now choose to consume their favorite coffee on the go or in-store in a flexible option. The drive-thru concept has been gradually expanded in more than 10 Malaysian states and federal territories.

Starbucks is focused on offering the best premium coffee whilst enriching the Malaysians' standard one cup at a time. Since its inception, Starbucks has been focusing on refinement, positioned as a "specialty coffee store". It is aimed at the market group of white-collar workers with higher spending levels by offering premium quality, freshly brewed coffee and related mechanism collection, including coffee beans, bottles, and other matching pastries. Starbucks also provided excellent service with the aim of "the greatest quality coffee to generate a distinct humanistic attitude that allows consumers to experience the scent of coffee and spiritual freedom". In contrast to the office and the third space of the family, Starbucks prioritized the establishment of a leisure-oriented atmosphere in which customers will feel elegant and comfortable.

Regarding product taste and quality, Starbucks adheres to making high-quality coffee with freshly roasted original coffee beans to make it a place in the coffee market.

Starbucks has a diversified product line, such as Frappuccino, cakes, bread, and coffee and will launch limited products related to seasons or festivals to attract the public to buy. Starbucks will also launch many related products, such as accompanying cups, which are exquisite in workmanship and have a specific collection value. In addition, in terms of promotion, Starbucks' primary measure is to sell accompanying cards, which are prepaid stored-value cards that can be registered on the website to check consumption records and available amounts. Starbucks had customized preferential reward programs in different styles to attract everyone to buy. By integrating the above factors, Starbucks' products and services have occupied a place in people's hearts.

Nevertheless, Starbucks has been impacted significantly financially and economically due to the Covid-19 pandemic starting in 2020. Many foods and beverage industry was hit by this crisis, including the famous retail coffee shop brand Starbucks (Ali, Dogan, Amin, Hussain, & Ryu, 2020). A massive negative influence related to the economy, supply chain, and consumer behavior due to the Covid-19 pandemic outbreak has been faced by Starbucks (Sinha et al., 2021). Therefore, Starbucks needs to retain customer satisfaction to survive in the market due to the burgeoning competition in the retail coffee industry since the beginning of the pandemic.

Past studies have examined Starbucks in the area of customer loyalty (Pérez-Morón et al., 2022), marketing (Nair et al., 2021), business performance during the Covid-19 pandemic (Kee et al., 2021a; Sinha et al., 2021), purchase intention (Dilip et al., 2021), brand image (Pandey et al., 2021; Azriuddin et al., 2020), organizational success (Kee et al., 2021b) and organizational culture (Goh et al., 2020). In this paper, we aim to investigate consumer satisfaction by assessing Starbucks' service quality, convenience, products, and promotions in Malaysia post-Covid 19. From the level of consumer satisfaction, we can see whether Starbucks' adjustment is effective while maintaining overall customer satisfaction. We also aim to figure out the aspect of Starbucks' adjustment that has been sacrificed and strengthened the consumers' pleasure with various indicators. In this way, we will discuss how effectively Starbucks adjusted in the face of the dilemma of the epidemic in Malaysia.

LITERATURE REVIEW
Service Quality
Service quality is one of the key attributes associated with customer satisfaction. Customers always consider the quality of service when deciding if a business, restaurant, or corporation is excellent or terrible. Kotler & Keller (1987) defines service as any intangible action or service offered by one party to another that does not result in the transfer of ownership. Moreover, service is provided in exchange for pleasure or convenience by one party to another. Today, competition among enterprises is becoming increasingly fierce, especially because of the pandemic-covid-19 that makes them face more difficulties. Anderson and Zeithmal (1984) and Phillips, Chang, and Buzzell (1983) asserted that quality influences client purchasing decisions and determines market share and return on investment. Zeithaml and Bitner (2003) point out that customers' perceptions of various qualities of service, such as reliability, responsiveness, assurance, empathy, and tangibles, are reflected in service quality. Therefore, companies need to consider the above aspects more and maintain a high level of service quality to satisfy customers and gain competitive advantages.
H1: Service quality is positively related to customer satisfaction.

Perceived Convenience
Customers view the time consumed and effort utilized in purchasing or using a service, which is perceived as convenience in a service economy (Berry, Seiders, & Grewal, 2002). Convenience can be referred to as the capability to minimize non-monetary expenditures such as time, energy, and effort when acquiring or utilizing goods and services (Berry et al., 2002, Farquhar and Rowley, 2009, Seiders et al., 2007). This factor also plays a vital role in influencing customer satisfaction. If a customer receives greater perceived convenience, they will feel more satisfied. For example, if customers can receive their products in a short time or lower their efforts to get this good under the situation of covid-19, customer satisfaction will increase. Due to the pandemic outbreak, Starbucks has successfully responded to this situation by utilizing its digital touchpoints and contactless pick-up and drive-thru services (Musonera, 2021). Our questions on this aspect are designed to evaluate the customer satisfaction of Starbucks Malaysia post-covid 19.
H2: Perceived convenience is positively related to customer satisfaction.

Product
For Starbucks, there are various products for customers to choose from based on their tastes. The product can be anything offered in the market to fulfill a customer's desire and needs (Kotler, Armstrong, Brown, & Adam, 2006). More products mean more choices for individuals, which may help raise customer satisfaction because they can choose what they want. After obtaining the goal level of customer benefit, price appropriateness may boost customer satisfaction to encourage sustained loyalty in repeat customer purchases (Friani, Igir, & Tampi, 2018). A product's price can refer to the money used or paid off to obtain a service or goods (Bei & Chiao, 2001). Price can also be an amount of the value exchanged to enjoy a product or service by purchasers, also known as the cost of paying it (Kumavat, 2012). The product's price influences consumer satisfaction because a customer always considers the price when buying something. Nobody wants to buy goods at a price that is not reasonable. To be more explicit, people may believe this good does not merit this price, influencing their perceptions and judgments. Under the pandemic, the cost can still be the vital element that affects individuals' behaviors whether they buy the products from Starbucks or not.
H3: Product is positively related to customer satisfaction.

Promotion
Promotion is defined as communication through which the product information aims to reach prospective customers. It is a fundamental consumer marketing technique that serves as a temporary monetary incentive to influence consumers' purchase decision-making (Shaddy & Lee, 2020). It can affect the purchase decision-making of a consumer, either making the purchase now or more than usual to boost sales. When the promotion is effective, it can immediately create brand loyalty among them to retain the profitable relationship (Kee et al., 2021). Promotion strategies and store ambiance help in inculcating impulse buying behavior in customers. Starbucks has reached out to consumers worldwide using digital platforms such as Instagram, Twitter, Facebook, and YouTube to enhance consumer interaction with the Starbucks brand (Silalahi, 2018). Starbucks believes in utilizing new media instead of traditional marketing to engage with customers, especially millennials. This is because the youth in this era is connected through social media and spends more time on it. Hence, the public expects an appealing sales promotions strategy while keeping a comfortable store environment to boost the purchase desire through Starbucks outlets (Ratih, 2020). In maximizing the potential opportunity in the near-post Covid-19 market situation, Starbucks must utilize this to reevaluate its distribution and promotion initiatives. It can adjust its existing strategy in

customer relationship management to adapt to the current status. For instance, a well-developed customer loyalty program offering discounts and incentives has been customized to customers in the market post-Covid 19 (Lombardi, 2021).
H4: Promotion is positively related to customer satisfaction.

Customer Satisfaction
Satisfaction from the customer is essential for customer retention and business growth. Once the customer is satisfied, he wishes to visit the store again. Also, through satisfied customers, the brand earns marketing. Therefore, retaining customers for better market standing and profitability in this competitive market is necessary. This is because brand loyalty positively corresponds to customer satisfaction (Susanty, 2015). When a brand equips with professional corporate service personnel, it can fulfill its customers' needs and desires. The brand would be able to earn a reputation from the consumers as it brings a symbolic value to them, such as social emotions, aesthetics, and prestige (Ge, Yuan, Wang, & Park, 2021). Customer satisfaction can also create long-term customer loyalty and happiness, increasing the brand's market share and growth through cost-effectiveness (Pandey et al., 2021). For example, Starbucks' strong brand recognition has been sustained through its superior product quality, empathetic, responsive customer service, and gorgeous coffee shop atmosphere (Aryani et al., 2021). Thus, it can successfully generate consumer loyalty as a competitive advantage over its competitors in surviving in the market (Tu & Chang, 2012). As a result, firms must concentrate on these parameters to develop a long-term and mutually beneficial engagement with a consumer.

Figure 1 represents our research framework. A total of four hypotheses were formulated based on the past literature review.

Figure 1. Research Framework
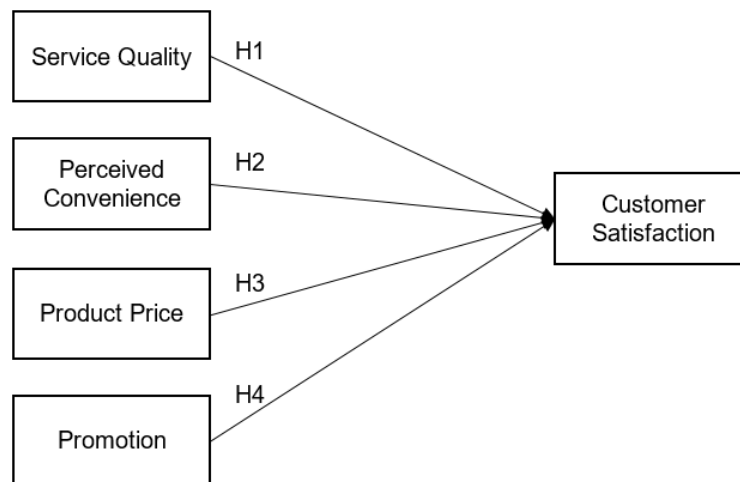
RESEARCH METHOD

Sample and Procedures

The questionnaire survey via Google Forms was conducted and distributed to the public to collect relevant information about Starbucks' customer satisfaction in Malaysia post-covid 19. In addition, the online survey has been sent out through WhatsApp, Facebook, Telegram, and other social media to reach the public. Concerning the privacy issues, all respondents who answered have been informed that the data collection is merely for research purposes and that the confidential information will not be disclosed to outsiders. Overall, all the questions in the survey are associated with customer satisfaction with Starbucks in Malaysia post-Covid 19. As a result, we are able to obtain 185 respondents in the survey.

Measurements

The questionnaire comprises six sections: respondent demographics, service quality (H1), perceived convenience (H2), product (H3), promotion (H4), and customer satisfaction. The IBM SPSS Statistics Software Version 26 was utilized to evaluate the data collected from the survey. A 5-point Likert scale with a degree ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) was employed in all measures.

Respondents' Demographics

The demographics of the respondents were collected using single-statement items, which included gender, age, ethnicity, highest education level, occupation, level of income, and visit habits.

Table 1. Variables and Measurement Items

Variables	Items
Service Quality	1. Starbucks' service is said to be prompt and friendly. 2. Professional, savvy, and always prepared for customers' requests at any time. 3. The baristas always greet the customers with a smile. 4. Starbucks staff always attend to every customer need. 5. Attitude of staff in dealing with customers' complaints is polite. 6. Starbucks continuously collects customers' reviews or feedback on service and improvement.
Perceived Convenience	1. The duration usually spends on order and pick up is short. 2. Digital transformation in the order process is very convenient (e.g. digital touchpoint). 3. I can order through the Starbucks app or other delivery app platforms. 4. The delivery mode in a drive-thru or pick-up only is very convenient. 5. The packaging of Starbucks is very convenient to use and take away. 6. Starbucks provides various payment methods.

Product	1. The food and drinks are of good quality and delicious. 2. The food and drinks are offered in various choices. 3. Starbucks always comes out with seasonal beverages and drinks. 4. The product meets expectations and values for money. 5. The food and drinks are appealing because of their visually attractive design. 6. Starbucks always introduces attractive co-branding and collection of merchandise.
Promotion	1. I can visit the official social media of Starbucks to check out the latest promotion news. 2. I can join the Starbucks Rewards program with award points to be collected (e.g. Starbucks membership cards). 3. I can enjoy a cash rebate on Starbucks food and drinks using the e-wallet (e.g. Touch n go and Shopee pay). 4. Various loyalty programs and promotional campaigns are held often. 5. The promotional and discount vouchers are very attractive. 6. Promotional cooperation between e-commerce platforms is very attractive. (e.g. Shopee, Lazada).
Customer Satisfaction	1. In general, I am satisfied with Starbucks. 2. I will continue to visit Starbucks in the future. 3. I am happy to recommend Starbucks to others. 4. I am not likely to switch to other competitors.

RESULTS

Table 2. Demographic's descriptive analysis of respondents (N=185)

Response	Frequency	Percentage (%)
Gender		
Male	118	63.8
Female	67	36.2
Age		
20 years old and below	22	11.9
21-30 years old	112	60.5
31-40 years old	23	12.4
41-50 years old	23	12.4
51 years old and above	5	2.7
Ethnicity		

Malay	40	21.6
Chinese	95	51.4
Indian	49	26.5
Others	1	0.5
Highest education level		
High school or equivalent	12	6.5
Diploma	27	14.6
Bachelor's Degree	119	64.3
Master's Degree	21	11.4
Ph.D. Degree	6	3.2
Occupation		
Self-employed	18	9.7
Employed	28	15.1
Unemployed	12	6.5
Student	117	63.2
Retired	10	5.4
Level of income		
Below RM1,500	76	41.1
RM1,500 - RM2,499	47	25.4
RM2,500 - RM3,999	41	22.2
RM4,000 and above	21	11.4
How often do you visit Starbucks		
Almost everyday	14	7.6
Few times a week	41	22.2
Once a week	46	24.9
Once or twice a month	48	25.9
Rarely (as a treat)	36	19.5

According to Table 1, 185 persons responded to the questionnaire. The majority of the respondents are male, representing 63.8%. 60.5% of the respondents are 21-30 years old, Chinese represented 51.4%, Bachelor's degree charted 64.3%, and 63.2% currently a student. 25.4% of them have an income range between RM1,500 to RM2,499. At the same time, 24.9% of 185 respondents indicated that they had visited Starbucks once a week.

Table 3. Descriptive statistics, Cronbach's Alpha coefficients, and Zero-order correlations of variables

Variables	1	2	3	4	5
Service Quality	**0.801**				
Perceived Convenience	0.687**	**0.806**			
Product	0.755**	0.777**	**0.841**		
Promotion	0.555**	0.641**	0.645**	**0.770**	
Customer Satisfaction	0.442**	0.540**	0.510**	0.747**	**0.678**
Mean	4.1468	4.1827	4.2198	4.2243	4.2270
Standard Deviation	0.56028	0.59282	0.56174	0.50058	0.52694
No. of Items	6	6	6	6	4

Note: N = 150; *p < .05, **p < .01, ***p <. 001. Diagonal entries indicate Cronbach's coefficients alpha.

Cronbach's alpha, also known as coefficient alpha, was developed by Lee Cronbach in 1951 to examine the reliability (internal consistency) that could explain how closely a group of variables is associated. Based on the generally accepted rule of thumb, a value between 0.6 to 0.7 denotes a reasonable degree of reliability, while 0.8 and above implies a great degree. Nevertheless, a value exceeding 0.95 may imply redundancy and are not always desirable (Hulin, Netemeyer, & Cudeck, 2001). According to Table 2, the survey presented five variables consisting of several items on a 5-point Likert scale. The Cronbach's alpha for service quality (α equal to 0.801), perceived convenience (α equal to 0.806), product (α equal to 0.841), promotion (α equal to 0.770) and customer satisfaction (α equal to 0.678). All variables had reliability ranging from 0.678 to 0.841.

Table 4. Summary of Multiple Regression Analysis

Variables	Customer Satisfaction
Service Quality	0.166
Perceived Convenience	0.364**
Product	-0.149
Promotion	0.375*
R^2	0.567
F Value	73.98
Durbin-Watson Statistic	1.747

Note: * p < 0.05; ** p < 0.01; *** p <0.001.

This study used multiple regression analysis to evaluate our hypothesis (H1-H4), as demonstrated in Table 5. Service quality (H1), perceived convenience (H2), product (H3), and promotion (H4) is the independent variables, whereas the dependent variable is customer satisfaction in our study. The findings indicate that perceived convenience and promotion positively relate to the satisfaction of the customers with beta (β) values of 0.364 and 0.375. Therefore, H2 and H4 were supported. Besides, the value of R^2 (0.567) revealed that 56.7% of the variation in customer satisfaction is explained by perceived convenience and promotion. We also found that perceived convenience with the beta (β) values of 0.364 is the most important element with a significant predictor of $p < 0.01$, followed by the promotion with a significant preditor $p < 0.05$ that contributed to customer satisfaction in Starbucks Malaysia post-Covid 19 pandemic. Nevertheless, the service quality and product did not significantly impact customer satisfaction. Hence, H1 and H3 were not supported.

DISCUSSION

The interrelation between service quality, perceived convenience, product, and promotion with the customers' satisfaction with the brand chain coffee shop Starbucks in Malaysia is evaluated through this research. The survey objects comprise visiting Starbucks customers in Malaysia. By using Starbucks visitors in Malaysia as survey objects, the researchers investigate the connections between service quality, perceived convenience, product, and promotion of the brand chain coffee shop. The study revealed the factors influencing Malaysian coffee buyers to visit Starbucks Cafe. This research will be insightful to Starbucks in assisting them in their marketing strategy in Malaysia especially post-Covid-19, to increase coffee-brand retention.

The applicability of current measurement frameworks and assessment methods of perceived service quality must be reviewed in countries that are not coffee addicts, like Malaysia. According to the findings, service quality has no significant influence on customer satisfaction. Although service quality may guarantee customer responsiveness, it is not necessary to determine customer satisfaction with the brand. As a result, in developing and non-traditional coffee-drinking countries, further adaptive discussions are required for current service quality and perceived-value frameworks. For instance, from Starbucks' standpoint, this study delivers management and marketing insights for service-oriented company managers regarding practical and managerial repercussions (Ge, Yuan, Wang, & Park, 2021).

Firstly, Starbucks stores have a high overall meal preparation efficiency from perceived convenience, but some customers report longer order times. Starbucks can reduce customer wait times by recruiting part-time employees and optimizing the preparation process with more coffee machines. In Starbucks' digital application (APP) and take-out services, more than 20% of consumers reported that the perceived convenience is not high enough (Sneader, & Singhal, 2020). Starbucks could move into more local takeaway platforms, offer discounts, optimize the operation of the APP to improve the ease of use and efficiency for consumers and improve the digitalization process of Starbucks Malaysia with a richer user interface (UI) and more efficient ordering system. Most consumers gave good ratings to the payment methods provided by Starbucks (Chuang, 2019).

Next, Starbucks needs to consider improving its promotion tools. Promotion can make a difference, and a good advertisement can generate massive revenue for Starbucks. Therefore, it is vital to strengthen the marketing promotion campaign. In terms of marketing, Starbucks shows a strong relevance in promotion skills. Most consumers accept Starbucks' marketing promotion tools as positive and practical. Starbucks' rewards program has brought good repeat business to Starbucks. Social media dynamics allow consumers to get the latest news on events and e-commerce platforms. The partnerships and platform offers are also well-received by consumers.

Finally, Starbucks must emphasize its services and products. The ultimate goal of emphasizing service quality is to increase customer satisfaction and purchase intention to ensure brand loyalty. When Starbucks was able to earn positive customer satisfaction and repeat purchase behavior, it was said to be successful in achieving a sustainable cycle in service production and consumption (MacKenzie, Meyer, & Noble, 2020).

The findings in this research can enrich the insight, especially regarding the customer satisfaction of Starbucks in Malaysia post-Covid 19. The results indicate that perceived convenience and promotion correspond to customer satisfaction, whereas the product and service quality reveals a negative effect. This study may be utilized as a foundation for further theoretical research to examine customer satisfaction post-Covid 19 which is still rarely investigated.

Due to the rivalry in the retail coffee industry, it is critical for all retailers to maintain good relationships and reputations with their customers. Hence, they need to establish a properly functioning ordering system (such as on-time delivery) because most customer dissatisfaction will result from the delivery delay. The lack of a sophisticated delivery system must be tackled to ensure a smooth operation flow. Promotion through the Internet is a must since online information substantially impacts the buyers' purchase

decisions (Bickart & Schindler, 2001). However, the Internet's impact on word-of-mouth marketing is more significant than the traditional marketing strategy nowadays (Tanimoto & Fuji, 2003). Therefore, it is vital to recognize the variables that may cause a substantial change in customers' satisfaction towards building long-term customer profitability relationships.

CONCLUSION

In conclusion, our data analysis indicates that perceived convenience and promotion hypotheses are related to customer satisfaction with Starbucks in Malaysia post-Covid 19. Nevertheless, as the hypothesis in this research, product and service quality is not supported by our data analysis findings. It can be concluded that customers visit Starbucks for the convenient buying process, and the promotion strategy of Starbucks stimulates customers to visit and initiate a sale.

Furthermore, Starbucks should improve its product and service quality. Starbucks is suggested to receive customer feedback to improve its product and service quality. Starbucks can also introduce more products based on customer preferences received through input and at an affordable price to retain the current customer base. This would also help acquire new customers as customer satisfaction improves, and the brand can earn marketing. Therefore, the Covid-19 pandemic is seen as a transformation point for every retail coffee shop, including Starbucks, to transform its operation mode to attain the customers' long-term profitability relationships in the market.

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The authors declared no potential conflicts of interest.

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Transforming into a Cashless World: Factors Driving Brand Loyalty of Touch 'N Go E-Wallet in Malaysia

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ARTICLE INFORMATION

ABSTRACT

In this digital era world, people can buy anything via mobile wallets instead of physical cash. A transformation of a cashless society becomes a new consumer behavior in this 21st century. Especially during the COVID-19 pandemic, people are more encouraged to use an e-Wallet to lower the virus's risk. Therefore, Touch 'n Go with millions of users, has become an important application in this cashless world. This paper aims to examine the factors driving brand loyalty to Touch 'n Go e-wallet. There are 150 Touch 'n Go users who participated in our survey and the results were analyzed using SPSS. With that, we found out that perceived usefulness, perceived ease of use, reliability, and safety affect brand loyalty. This research provides insightful results and information about Touch 'n go e-Wallet.

Keywords: Brand Loyalty, Perceived Ease of Use, Perceived Usefulness, Reliability and Safety, Touch 'n Go.

INTRODUCTION

Cashless is becoming more popular in today's era. It is a type of transaction without using physical money such as banknotes or coins. Cashless can be e-wallet, online transfer, and payment using debit or credit card. However, an e-wallet is a kind of payment method using only smartphones. As everyone has a smartphone nowadays, consumers are more prefer using e-wallets because of various reasons. First, cashless can reduce crime because there is no physical cash or money to steal. For example, e-wallets require users to fill in their PINs when purchasing goods or services. In addition, consumers tend to go cashless in the COVID-19 pandemic to minimize the virus spread as it is contactless compared to payment by money (World Economic Forum, 2020) Besides that, payment by e-wallet can also be more efficient and flexible compared to cash. Touch 'n Go e-wallet provides three e-wallet sizes: LITE, PRO, and PREMIUM, to meet the various demands of consumers (Touch 'n Go Sdn Bhd, 2021).

Touch 'n Go is a Malaysia-based e-wallet application. It ventured into the mobile payment market in 2009 and collaborated with Maxis via Fast Tap. It employed QR code technology rather than Near-Field Communication (NFC) technology for payment. Touch 'n Go would build an NFC-based online transaction in collaboration with CIMB and Maxis in July 2012 (Soyacincau, 2012). Bank Negara Malaysia has approved 47 non-bank e-money issuers including Touch 'n Go e-wallet (Bank Negara Malaysia, 2020). Hence, it steadily becomes one of the favorite e-wallet applications as the electronic payment age has progressed. It helps to facilitate various kinds of services. For instance, it facilitates us for the groceries purchase and toll payments. E-wallet is popular nowadays. We can see many hypermarkets, supermarkets, convenience stores, and restaurants receive payment via e-wallets especially Touch 'n Go. Besides, the government also give subsidies and provide help to people via various kind of e-wallet applications. This proves that people will constantly learn how to use the application and get familiar with it.

As the digital economy expands, so do the company model and customer behavior. Malaysia is also one of the emerging countries aiming to transition to a cashless society. As a result, this research helps the key stakeholders in the digital wallet business, including e-wallet developers, e-wallet users, and the Malaysian government. The outcomes of this research explain factors driving brand loyalty to Touch 'n Go e-wallet in Malaysia. It can help new e-wallet developers get a competitive advantage in the industry.

LITERATURE REVIEW

Adoption of E-Wallets in Malaysia
The evolution and advancement of technology have altered daily human life more efficiently. People can use their smartphones to make payments and transfer money with one click. An electronic wallet is a program that allows people to purchase items from anywhere with a simple and technological method (Uddin & Akhi, 2014). Research by Kee et al. (2022a; 2022b) shows that e-Wallets help people save time and money compared to traditional methods. Aryani et al. (2021) reported a rising consumer behavior shift f to online shopping during the current pandemic. Besides, the central bank aims to accelerate toward a cashless society to improve the efficiency of the national payment system (Bank Negara Malaysia, 2020). Since the WHO urged people to use digital payments to lower the risk of COVID-19 transmission, the usage of e-wallets has experienced tremendous growth. Therefore, the government introduced the COVID-19 assistance program, and attractive incentives through e-wallet disbursement have boosted the cashless trend among millennials and Gen X (Gomes, 2022). The adoption of e-wallets has become a popular payment in Malaysia as the statistic shows that the

usage of e-wallets has risen 66% in 3Q'21, nearly reaching the all-time high of 67% (Oppotus, 2021).

Brand Loyalty
Brand loyalty refers to consumer behavior in which a consumer consistently purchases and uses a particular brand over a while (MBA Skool Team, 2020). Brand loyalty is the core dimension of a company's equity since it reflects the faithfulness of a customer towards a brand. The higher brand loyalty, the lower the changes in the consumer preference brand (Aaker, 1991). Kee et al. (2021) found a link between customer satisfaction and brand loyalty. From the same view, according to Kotler and Keller (2006), a company with strong brand loyalty will increase its market shares and lead the brand to become more profitable. Brand loyalty is important to a company as it shows consumers' commitment toward a brand, and consumers are satisfied with the superior quality and outstanding product features from experience. Therefore, consumers will continue to repurchase a particular brand. According to Oliver (1997), consumers' intention to use is directly reflected in brand loyalty. It expresses the behavioral response against using and repurchasing the same brand. This shows that strong brand loyalty not only helps a company have its regular consumers but also helps a company consolidate its position in the market and positively impact the brand. Therefore, Touch 'n Go is a significant player in the e-wallets industry since it provides excellent services to satisfy consumers in various forms. It also experienced a million users and is one of the favorite e-wallets. Touch' n Go is recognized as the top 5 e-wallet application with 75% of users in 2021 (Oppotus, 2022).

Perceived Usefulness
Davis (1989) defined perceived usefulness as one's belief in a particular system job performance enhancement. It is one of the critical determinants to investigate that people tend to use the application to weigh their performance. The TAM's core assumptions are that perceived usefulness and ease of use are the two cognition factors that influence people to use technology (Jones & Kauppi, 2018). The research by Aydin and Burnaz (2016) proved that users are more inclined to the applications that are easy to accept and adopt, while the research by Renny, Guritno, and Siringoringo (2013) showed that consumers are more likely to use technology that would benefit from cost-saving, low efforts, and more convenience.

The growth of e-Wallets in Malaysia has increased by more than 80% during the COVID-19 pandemic (Birruntha, 2021). TNG Digital Sdn Bhd CEO Ignatius Ong mentioned that the 86% development of online uses case for the first half of 2021 and the transferring within Touch 'n Go e-wallet features recorded an increase of 182% compared to one year before (Birruntha, 2021). Hence, perceived usefulness positively affects brand loyalty to Touch' n Go e-wallet. Based on the discussion, we assume that:
H1: Perceived usefulness is positively related to brand loyalty.

Perceived Ease of Use
Perceived ease of use deals with the simplicity to use the invention without putting extra effort into learning the technology (Davis, 1989). This will influence customers' perception since the tendency to learn about standardized products will be easier than learning about products from different regions (Wilson, Keni, & Tan, 2021). Consumers will search and find the technology that is easy to learn and buy compared to the technology that requires time to learn (Usman, Projo, Chairy, & Haque, 2022). Some research highlighted perceived ease of use's significant relationship with electronic money, as the higher the perception of ease of use on the technology, the higher the technology utilization (Satoto & Putra, 2021). Other research findings state that utilizing e-wallets saves users time because they can scan their cards or use an e-wallet

application to pay rather than having to queue in lines to make cash payments for the self-convenience (Choo, Li, Lim, & Wong, 2020).

Consumers anticipate that using the Touch 'n Go e-wallet is more accessible and time-saving because of the straightforward registration process and simple verification steps. A study has also shown that the 'DuitNow' feature makes the transaction process more precise and improves users' experience using e-wallets (Kee et al., 2022). Consequently, perceived ease of use positively affects brand loyalty of Touch 'n Go e-wallet. Therefore, based on the discussion, we hypothesize that:
H2: Perceived ease of use is positively related to brand loyalty.

Reliability and Safety
A study has shown that reliability can be defined as the dependability or consistency of a construct's measure (Kubai, 2019). While using e-wallets is safe because it reduces the chance of losing money and the risk of others stealing users' personal information (Choo et al., 2020). Aside from that, e-Wallets become an alternative remittance chancel to lower the COVID-19 spreading risk (Aji, Berakon, & Husin, 2020). Even though e-wallets are increasingly widely used, many people avoid using them because they are confused about using them and are afraid of making transactions (Karim, Haque, Ulfy, Hossain, & Anis, 2020).

In other words, information entered in Touch 'n Go is fully secured and very confidential. For example, every user will be required to provide a unique pin code or face id scanning before making a transaction. Furthermore, every user needs to verify their identity before using it for other activities such as transactions or direct payments (Subaramaniam, Kolandaisamy, Jalil, & Kolandaisamy, 2020). Moreover, digital transactions are safer because they're easier to track, minimizing the risk of fraud (Mastor, 2021). As a result, reliability and safety positively affect the brand loyalty of Touch 'n Go. We can come to the hypothesis below:
H3: Reliability and safety are positively related to brand loyalty.

To help the researchers identify their direction by illustrating the research factor with the investigated issue, Figure 1 shows our research model. Perceived usefulness, perceived ease of use, and reliability and safety are the independent variables while brand loyalty is the dependent variable.
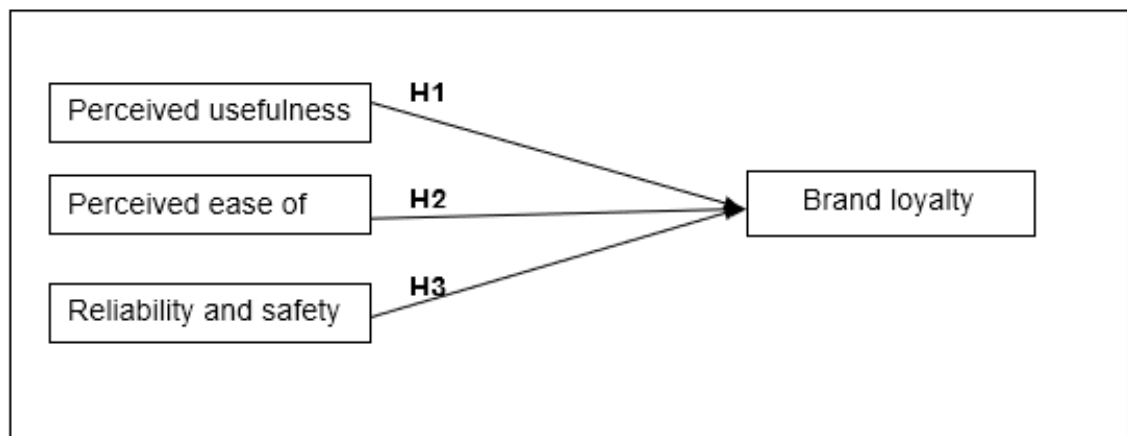

Figure 1: Research Model

RESEARCH METHOD

The data was collected through a survey using google forms distributed among Touch 'n Go e-wallet users to collect relevant information on factors driving brand loyalty to Touch 'n Go e-Wallet in Malaysia. A total of 150 users participated in this survey. From that, we used SPSS software to analyze and interpret the collected data.

We prepared a questionnaire that was broken into six sections to assess all the variables, including demographic information, familiarity with using Touch 'n go e-Wallet, brand loyalty, perceived usefulness, perceived ease of use, and reliability and safety. A 5-point Likert scale with a degree ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree") was used as the measure.

Demographics of the respondents were collected using single-statement items, which included gender, age, nationality, ethnicity, education level, and occupation. We created three-item scales to determine the familiarity of the Touch' n go e-Wallet. The scale items are based on times of use Touch 'n Go per month, the purpose of use, and the satisfaction rating. Also, we develop four items to evaluate brand loyalty. Respondents were required to provide insights on how useful Touch 'n Go is for them. An example of the items includes "Touch 'n go e-Wallet makes my life effective."

We construct four items to measure brand loyalty. It helps researchers to investigate the convenience of Touch' n go e-Wallet brings to users. An example of items includes "Touch 'n go e-Wallet is user-friendly to me." We also created four items to measure brand loyalty to understand the perception of safety and security of Touch 'n Go to users. An example of items includes "I feel secured with using Touch' n go e-Wallet." We created a 5-point Likert scale to investigate brand loyalty based on the enjoyment of using Touch' n Go, the preference to use it, and willingness to promote it to friends.

RESULTS

Table 1 shows respondents' demography. The majority of the respondents (59.3%) are female while 40.7% of respondents are male. A total of 67.3% of respondents are from the age group of 10 - 25 years old. This indicates that most of our respondents are born in 1997 – 2012 which is Generation Z. Also, 90% of them are Malaysians and only 10% were non-Malaysians. By ethnicity, 50.7% of respondents are Chinese, 34% are Indian,14.7% are Malay, and only 0.7% respondent is Siamese. Based on educational level, 74% of the respondents were bachelor's degree holders, and 68.7% of the respondents are students.

Table 1. Respondent's Demography (N=150)

Response	Frequency	Percentage (%)
Gender		
Male	61	40.7
Female	89	59.3
Age		
10 – 25 years old (Gen Z: Born in 1997 – 2012)	101	67.3
26 – 41 years old (Millennials: Born in 1981 – 1996)	29	19.3
42 – 57 years old (Gen X: Born in 1965 – 1980)	16	10.7
58 – 76 years old (Boomers: Born in 1946 – 1964)	4	2.7
Nationality		
Malaysian	135	90.0
Non - Malaysian	15	10.0

Ethnicity		
Chinese	76	50.7
Indian	51	34.0
Malay	22	14.7
Siamese	1	0.7
Education level		
Secondary School	9	6.0
Diploma	14	9.3
Bachelor's Degree	111	74.0
Master's Degree	15	10.0
PhD	1	0.7
Occupation		
Student	103	68.7
Employed	41	27.3
Unemployed	5	3.3
Retired	1	0.7

Table 2. Respondent's Familiarity with Touch 'n Go e-wallet

	Frequency	Percentage (%)
How often do you use Touch 'n Go e-wallet in a month?		
1 – 3 times	40	26.7
4 – 6 times	49	32.7
7 – 10 times	37	24.7
11 times and above	40	26.7
What purpose do you use Touch 'n Go e-wallet?		
E-wallet	62	41.3
E-wallet, A+ rewards	6	4.0
E-wallet, Go+ investment	22	14.7
E-wallet, Go+ investment, A+ rewards	4	2.7
E-wallet, Go+ investment, pay utility bills	10	6.7
E-wallet, Go+ investment, pay utility bills, A+ rewards	6	4.0
E-wallet, pay prepaid bills	2	1.3
E-wallet, pay utility bills	24	16.0
E-wallet, pay utility bills, A+ rewards	7	4.7
Go+ investment	3	2.0
Go+ investment, pay utility bills	1	0.7
Pay utility bills	2	1.3
What the satisfaction do you rate for Touch 'n Go e-wallet?		
Very satisfied	78	52.0
Satisfied	58	38.7
Neutral	11	7.3
Dissatisfied	2	1.3
Very dissatisfied	1	0.7

Table 2 illustrates the respondent's familiarity with Touch 'n Go. From that, the most frequent use of Touch 'n Go in a month record is 4-6 times (32.7%), while the least frequency is 7-10 times per month, standing at 24.7%. Also, 26.7% often use Touch 'n Go at 1-3 times and 11 times and above in a month. The majority of respondents (41.3%) use Touch 'n Go for the e-wallet purpose, followed by 22% of respondents who use it for investment and e-wallet purposes, and 16% who use it for paying cash and utility bills. Based on satisfaction reviews, most respondents are satisfied with using Touch 'n Go, with 52% being very satisfied, 38.7% being satisfied, and only 0.7% of respondents very dissatisfied.

Table 3. Descriptive Analysis, Cronbach's Coefficients Alpha, and Zero-Order Correlations of All Study Variables

Variables	1	2	3	4
Perceived Usefulness (PU)	**.918**			
Perceived Ease of Use (PEU)	.840**	**.904**		
Reliability and Safety (RS)	.632**	.580**	**.872**	
Brand Loyalty (BL)	.844**	.831**	.617**	**.887**
Number of items	4			
M	4.48	4.39	4.03	4.43
SD	0.71	0.73	0.79	0.70

Note: N=150; *p<.05, **p<.01, ***p<.001; Diagonal entries in bold indicate Cronbach's coefficients alpha

Table 3 provides descriptive statistics, correlations, and Cronbach's alpha coefficient among all variables. The Cronbach alpha value falling between 0.872 to 0.918 (>0.7.) indicates that all variables are highly reliable. Nunnally (1978) offered that a Cronbach's Alpha with 0.7 or higher indicates satisfactory reliability. The perceived usefulness (α = 0.918) and perceived ease of use (α = 0.904) denote a significant relationship between the items in each variable since the higher the Alpha value, the more positively items correlated with each other. In terms of the Pearson correlation coefficient, all variables are positively correlated with each other.

Table 4. Summary of Regression Analysis

Variables	Beta
Perceived Usefulness (PU)	.396***
Perceived Ease of Use (PEU)	.445***
Reliability and Safety (RS)	.106*
R^2	.770
F Value	162.95
Durbin – Watson Statistic	1.922

Note: N=150; *p<0.05, **p<0.01, *** p<.001

Table 4 summarizes the regression analysis. We tested our hypotheses by using multiple regression. PU, PEU, and RS were independent variables, while BL was the dependent variable. The relationship between PU, PEU, and RS was positively correlated to BL. The value of R^2 is 0.770, indicating that 77% of the variance in brand loyalty can be explained by the three independent variables. The findings indicated that PU and PEU have a significant relationship with BL since the p is lower than 0.001. Moreover, PEU was the most dominant factor that influenced BL with a beta value of 0.445, followed by PU and RS with beta values of 0.396 and 0.106 respectively. Hence, all hypotheses of H1, H2, and H3 are accepted and supported.

DISCUSSION

This research revealed that perceived ease of use significantly affects brand loyalty. The major cause for the outcome could be the simple technique for using the Touch 'n Go e-Wallet. Besides, they can collect rewards from the e-wallets which makes it more interesting to use them. For example, Touch 'n Go offers a maximum of five rewards to its users, ranging from RM0.15 to RM188 in reloading pin value, which is automatically reloaded in their e-Wallet. According to most of the studies, the ability to use the QR Code features makes the payments process at shops easier and quicker. Furthermore, e-wallet solutions help both merchants and purchasers by providing efficient and effective management in the shortest of time while also indirectly highlighting the adoption of digital payment in the economy (Kasirye & Masum, 2021). Additionally, the Touch 'n Go has other usages such as prepaid reload, payment of bills, and transfer of

money to others just by using their contact number. The company has also launched DuitNow Transfer function in the application to provide consumers with more function and flexibility of use (Khalid, 2021).

Besides, perceived usefulness has a substantial effect on brand loyalty to Touch 'n Go e-wallet. Our research underlines a positive relationship between perceived usefulness and brand loyalty. Touch 'n Go can be used to pay bills, zakat, donation, and peer-to-peer money transfer. There are over 360,000 supporting merchants nationwide in Malaysia. For instance, it has been widely used and available in many places such as supermarkets, convenience stores, restaurants, and other shops. Other than that, Melaka has introduced Touch 'n Go e-wallet use for trishaw services (Malay Mail, 2022). Touch 'n Go can also be used in stores that provide DuitNow QR since it launched the DuitNow transfer features in the application in October 2021 (Khalid, 2021). On top of that, Touch 'n Go not only provides payment and money transfer services but also GO+, which is an investment feature. The interest rate for investment in the application is higher than some other financial institutions. Hence, the user will not easily change their preference of using Touch 'n Go to other e-wallet applications since it provides various services.

Moreover, the results prove that reliability and safety have a significant impact on brand loyalty to Touch' n Go. Its privacy policy clearly stated that all users' details and information will not be sold to third parties. Studies have shown one of the major reasons that users prefer e-wallets is because of their safety and reliability (Soodan & Rana, 2019). In addition, users are required to key in their password or use face ID to identify and secure their accounts before making payment. It is impossible to make an unintended payment using the e-wallet's safety measures (Dahlberg & Mallat, 2002).

Several studies also reported the usefulness of Touch 'n Go and the importance of e-wallets. In this research, we provide a broad perspective on factors driving the brand loyalty of Touch 'n Go. Our findings imply the management to improve the customer services team as most of the respondents rated 'neutral' to the question of 'prompt response to the customer services team'. A great and effective customer service team will bring reliability and a positive image to consumers. From that, the management can provide a series of training to ensure that their employees provide attentive and great service to fulfill consumers' needs. Providing satisfying customer services will increase the market share and business opportunities since consumers will recommend the application to others.

In addition, digital wallet companies enhance flexibility and convenience in their application. This research highlights that an application's usefulness and ease of use have a greater impact on the e-wallet's brand equity. Therefore, digital wallet companies should explore more functionality in their applications that are beneficial to consumers. Besides, an easily understandable and user-friendly application will increase e-wallet applications' popularity. Unfortunately, this research found that security is a challenge in the digital wallet market. There are a lot of consumers who do not use e-wallets as they lack trust and feel not secure about keeping their money. To overcome this challenge, we recommended the digital wallet market should offer better security such as the use of modern encryption technology, password protection, and high security in preventing third parties from accessing the information.

CONCLUSION

This research paper aims to study the factors driving the brand loyalty of Touch 'n Go in Malaysia. The outcomes of the findings suggest that perceived ease of use, perceived usefulness, and reliability and safety have a significant impact on brand loyalty. This indirectly indicates that Touch 'n Go has substantial brand equity. Besides, with ever-rising technology and digitalization, especially in the area of payments, we can evaluate the Touch 'n go e-Wallet as it has a good and positive opportunity to grab this sector, and it plays the role of a significant player in the industry. Thus, it must keep updating its technology with time and security for the users and focus on the strengths of its product like the ease of usage. Ultimately, this could help it acquire more customers and maintain good brand loyalty. We hope our findings would provide insight information about Touch 'n go e-Wallet to future researchers.

LIMITATION
There is a major limitation of this paper's research. Most of the respondents involved are generation Z with 67.3%. The findings are probably from generation Z as there is a lack of users in different age groups. Unfortunately, researchers are unable to know the users' feedback other than generation Z on the Touch 'n go e-Wallet to increase the reliability and relative of the study.

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DECLARATION OF CONFLICTING INTERESTS
There is no conflict of interests declared by the authors

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Research Paper for the Conference

Title: A study on imparting Quality Computer Education with reference to DKZP Govt. Higher Primary School

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Abstract

Quality education and a holistic approach are essential for the development of schools and sustainability. It has been seen that Government primary schools are lacking infrastructure facilities, academic planning and quality education planning. Due to which there is need for the involvement from the local community, NGO and students to take this responsibility and provide sufficient knowledge, resources and time to the students in such deprived schools. The study has been taken in one of such school where there is complete dearth of computer literacy as there are no sufficient faculty members to provide education though few computers are available. The paper concentrates on the planning and execution of computer literacy programme to the students at DKZP Govt. Higher Primary School. The activities planned and the outcome achieved, knowledge gained through this porgamme is explained in detail. Entrepreneurs, NGO and Higher education students can take best opportunities to capture this deficiency and impart knowledge to the students' of Government schools. .

Keywords: Computer Literacy, Primary school, Word art, Paragraph Ribbon

1.1 Introduction

Our world is one that is both driven by and facilitated by technology. In today's information age, computers are a must. A requirement is technical proficiency. However, there aren't enough facilities or programmes for computer-related careers at government schools and institutions.

India has 70% of its population living in rural areas. It is very concerning that only 38% are computer literate, despite the country's overall literacy rate being around 77.7%. Computer proficiency is a must for success in today's technologically advanced workplace. Students who want to learn the information technology skills required for many jobs are forced to pay for additional training at unreasonable rates in "computer schools." For those who are already struggling to make ends meet, these obstacles are enormous.

While studying about the computer literacy around Mangalore it was found that DKZP Govt. Higher Primary School, Jappinamogaru doesn't have any basic facility for student to learn about the computer. The student of this school doesn't even know how to switch on the computer.

Computer literacy is important because it allows students to use the online learning tools that are available on the internet. Students can use a variety of venues for learning and clearing up their doubts, and they can also contact with professionals online to learn more about the ideas they are studying.

The above mentioned reason made me to take up initiative of teach basic computer at DKZP Govt. Higher Primary school, Jappinamogaru.

1.2 Objectives of the research and data collection

Major objectives of the research:
- ✓ To promote computer literacy and awareness among government school students.
- ✓ Encourage school students to get comfortable using computers in the future.
- ✓ The importance of computer expertise should be made known to the students.

Data collection:

Data were collected by interacting with DKZP school faculties and students during the research period.

1.3 Identified issue or problem

"Lack of basic computer knowledge in higher primary students"

There is no computer facility in DKZP Govt. Higher Primary School, so committed myself to giving students a basic knowledge of computers. This fundamental education is in high demand since it gives them the necessary foundation and prepares them for success in the future.

1.4 Plan and Implementation of activity

DKZP Govt. Higher Primary School, Jappinamogaru provides a quality education to its students through curriculum and extracurricular activities such as sports and cultural activities. However, due to severe budget constraints, insufficient teacher training, and a lack of a proper space for computing in the school schedule, the computer literacy programme was a spectator sport.

As there is no computer facility at DKZP Govt. Higher Primary School, the students will be taught utilising a laptop as part of the social immersion program. It would really help the children in future days. The following is the schedule based on the dates that have been assigned to me:

| Date	Plan of activity	Topics covered
26/12/2022	Computer literacy	Introduction to computer, hardware and software component.
27/12/2022	Typing in MS Word	Typing of content in Word file.
29/12/2022	Home Tab	Typing the name in Word document and use font ribbon.
30/12/2022	Word Art and table insertion in MS Word	Typing days or months and use Word Art drawing tools for that.
03/01/2023	Short cut keys	To teach about various shortcut keys those are used in MS Word.
04/01/2023	Paragraph and style ribbon	Understanding the alignment using paragraph and style ribbon
05/01/2023	Page number and picture insertion	Inserting page number and images in Word document.
06/01/2023	Page Layout tab	Page setup in MS Word will be learned by the students
07/01/2023	Revision	Revising all the topics that are covered in this program.

1.5 Activities done at the school

As a part of the research all activities were systematically planned and participated in order to address the cause of imparting computer literacy. A two-week computer literacy event was

implemented at DKZP Govt. Higher Primary School in Jappinamogaru. Every day, students in the sixth and seventh standard attended afternoon classes for one and a half hours. Because of time constraints, it was possible to teach Microsoft Word.

The students attended an introduction class on 26 December 2022. The students acquired a basic understanding of computers, including their meaning, the inventors of computers, their components, their functions, and they were able to recognize the parts of the computer and their uses.
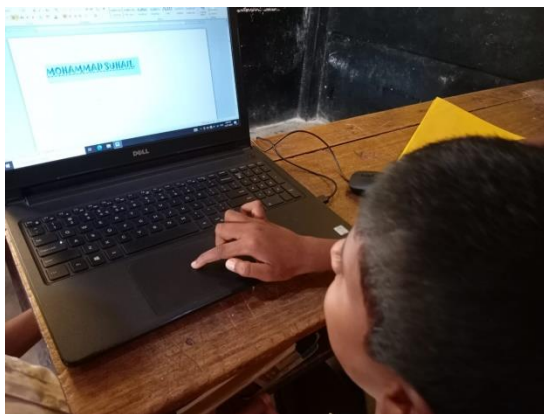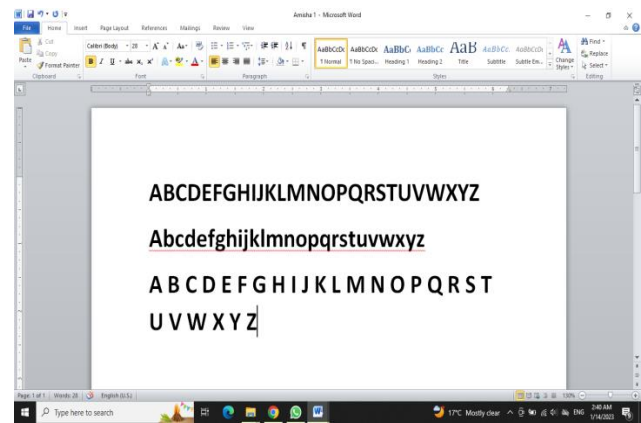
Taught them how to open the MS Word and let the students type Alphabet. Each and every student got equal opportunity. Instructed them to type both capital and small letter alphabets, after this session students were able to type in Word document and they got to know about the uses of keys like space bar, enter and shift.

Students learned to type their names and use numerous settings in the "Font Ribbon" of the "Home Tab". As the outcome of this session students were able to type their name in Word document and learned to set the font size, font style, font colour, bold, italic, underline etc.

The students were taught some shortcut keys including cut, copy, paste, undo, select all text, and save and they were given computer notes that contained information such as meaning of computer, uses of the different keys, parts of a computer, and other uses of computer and more. Students felt very happy after understanding about shortcut keys. It was like a magic for them.

Students learned about the "paragraph ribbon" and "style ribbon" of the Home Tab, and they also learned how to save a file. Students understood about alignment like adjusting the text middle, left or right side of the page. In style ribbon students learned to change the style of the text.
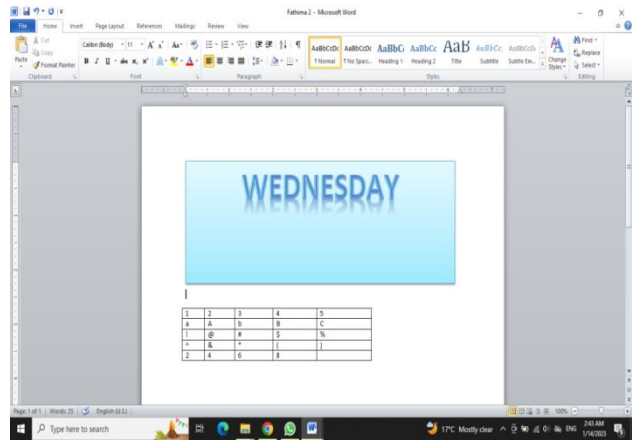
The students got the idea of how to insert

the table how to adjust the row and columns. They typed different numbers, letters, and symbols in the cells of the table. Students understood Word Art and its various formats like insert shape, shape style, WordArt styles so on. When they saw the various Word Art formats and the simple process for making a
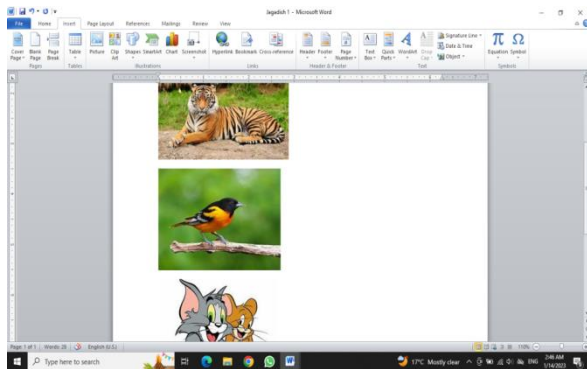
table, the students were happy and amazed.

Students were instructed on how to put page numbers and images into Word documents. They completed the assigned exercise by inserting several animal and bird images into MS Word.

Students learned about another tab that is page layout. In page layout tab students understood about page setup like orientation of the page, column and size of the page.

My last day of the research was on January 7, 2023. That day, a combined session was held for both 6th and 7th grade students to review all of the topics covered in the past
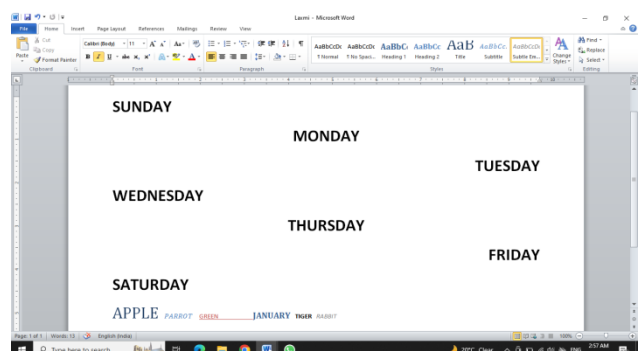
eight days. On the revision class questions were asked for the students they all gave the answer for what they learned in last 8 day.

The two-week of research at DKZP Govt. Higher Primary School students was a wonderful experience. Students were excited to learn about computers because it was a new experience for them. Classes were held for students in the higher primary grades. There were a total of 13 students present, and each student was given an equal opportunity to execute the task that they had learnt. It was tough to teach everyone how to use a computer on single laptop.

1.6 Major learning's from research

✓ This research makes us ready to create solutions and solve the problems in the society and make a positive change.

✓ Major learning from this research is to understand the importance of communication and barriers comes in communicating with higher officials while organizing the session in the school.

✓ It teaches the valuable skills such as the capacity to follow instructions, problem solving, networking, and so on.

✓ Learned different innovative way for teaching the children and engage them in various activities and make the session very interesting. It also boosts up our skills in Charting and planning of activities for taking the sessions for the students.

1.7 Conclusion

A basic understanding of computer software or hardware is required for many vocations. Making students from impoverished groups computer literate means making them proficient and more fitted for today's job market or higher education. This will also increase their chances of acquiring a better job. As a result, we can confidently conclude that a lack of basic computer abilities can surely be viewed as a barrier to an individual's development.

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A study on the Access for developing Entrepreneurship in Air conditioning amidst the rise Heat Waves in the UK

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Abstract

Heat waves have been gradually increasing and the effect is felt across the UK. There is an opportunity for the entrepreneurs to grab and enter the air conditioning market, with pre-existing big names already making a move for the market, the entrepreneurs can plan a green energy hydrogen-based model to attract the customers to not only prefer a new brand at a cost-effective price but also the one that helps the environment, the protocol to follow the sustainable development goals(SDG) and work on the pricing to see the citizens are burdened less in the time of high inflation and less growth in one of the major leading economies. From the findings we can observe a collective approach of policies and initiatives by the government can help in tackling the issue.

Keywords: Heat waves, Entrepreneurs, Air conditioning, Hydrogen, Inflation

Introduction

The UK a country known to be predominantly cold has been experiencing the effects of climate change. UK homes have been built with bricks and due to this; air permeability has been negligible over the years. The country experienced only 3 months of summer which was not very alarming to get their homes equipped with AC. With the rapid climate change, the UK has been hit with the worst heat waves since 1976 during 2022, while greenhouse gases and human activities are also to be considered for climate change and hot summers.

UK experienced high temperatures that climbed over 40 degrees Celsius (104.5 degrees Fahrenheit) for the first time on record on July 19, 2022 hitting 40.3C in the English village of Coningsby. The British government issued it's first-ever red-level extreme heat warning for several parts of England, including the capital, London. Now the country has to look at options to cool themselves in the future to make it better. This will financially impact the residents as this is a big and long-term budget that will cost them more, especially for the middle-class segment. The UK has to step up in terms of delivering policies friendly for the people and entrepreneurs to deliver the gap in the market by making it easier to set up industries, and easy tax policies; the nature of the environment also has to be looked into as it will be a great cause.

Looking for sustainable options in the air cooling like Hydrogen to help reduce global warming and also promote SDG 7(Affordable and clean energy) and SDG 13(Climate Change) while also focusing on making the other aspects better like SDG 3(Good health and well-being) which has been impacted due to the heat waves.

Literature Review

According to Johanna Wolf, W. Neil Adger, Irene Lorenzoni, Vanessa Abrahamson, and Rosalind Raine[1]:

This article argues that in the case of elderly people's vulnerability to heat waves, there is a highly complex and not necessarily constructive relationship between the presence of and involvement in bonding social networks and health outcomes. Elderly people in this study valued their independence and some expressed reluctance to ask for help. Research and policy on adaptation would be well advised to consider how social networks shape perceptions explicitly. Elderly and social contacts' perceptions of health risks are an example of barriers to adaptation.

According to Richard E Ashcroft [2]:

Heat stress causes loss of salt and water in sweat, causing haemo concentration, which in turn causes increases in coronary and cerebral thrombosis. Despite rises in mean summer temperatures of at least 1oC in southeast England and North Carolina, heat-related mortality has not risen. The likely explanation is the likely increase in air conditioning (from 57% to 72% between 1978 and 1997) that has occurred in households in the U.S.

According to Johanna Wolf, W. Neil Adger, Irene Lorenzeni[3]:

Participants did not feel personally at risk from either heat or cold risks. They perceived responding to heat and cold as matters of mere common sense and did not see preventive action as necessary. These similarities, we argue, are substantive and have implications for policy responses to climate change and extreme events in the UK.

According to Carmen E Lefevre, Wändi Bruine de Bruin, Andrea L Taylor, Suraje Dessai, Sari Kovats, Baruch Fischhoff[4]:

Heat waves are projected to become more frequent, longer lasting, and more intense as climate change unfolds. Heat protection behaviours will, therefore, become increasingly important for UK residents. Daily mortality rates tend to rise as temperatures move above the long-term local

average. Summer heat can have rapid health outcomes including heat stroke (Knowlton et al., 2009[5]; Kilbourne, 1997[6]), which can be fatal or cause neurological sequelae (Bouchama and Knochel, 2002[7]), and heat protection messages often target older people. In England, the National Health Service and the Met Office publish an annual. The prolonged heat in July 2013 reached sufficient levels to trigger health warnings from the 13th to the 23rd (Met Office, 2013[8]; Elliot et al., 2014[9]).

According to GS Leonardi, S. Hajat, RS Kovats, GE Smith, D Cooper, E Gerard [10]:

In London and the South of England, total symptomatic call rates to NHS Direct were positively related to increases in ambient temperature. The association for feverous calls was strongest for young children and the elderly. A time series analysis of emergency hospital admissions in London found a small increase in admissions in children as temperatures increase above approximately 12 °C (Kovats et al. 2004[11]) The apparent moderate effect of high temperatures on morbidity in the elderly requires further investigation.

According to Gordon Walker, Elizabeth Shove, Sam Brown [12]:

In the UK the heating, cooling and ventilation of indoor spaces are responsible for a significant proportion of aggregate energy demand. In some settings, the energy used for cooling already exceeds that used for heating and further upward trends are expected ([13],[14]) The Carbon Trust suggests "increased use of air conditioning" is likely to affect future energy demand [15]. The cost of installing mechanical cooling has not increased dramatically in the UK, but the need for air conditioning has increased dramatically.

According to Karen Lundgren and Tord Kjellstrom[16]:

Air conditioning triggers an increase in energy consumption and therefore greenhouse gas emissions.

According to Joshua Reno[17]:

The U.K. government has introduced a German-derived tariff scheme to supplement the RO as if admitting the limitations of the market-based approach. Green credits are not merely instruments that allow participants in the energy sector to calculate interests; they produce and circulate representations of those participants as self-interested, in keeping with neoliberal ideology. Green certificates may yet become something more meaningful

According to A.D. Peacock, D.P. Jenkins, and D. Kane[19]:

This would suggest that extant climate change will pass through a tipping point in the next two decades creating a domestic cooling season. Low thermal mass dwellings will be prone to overheating and will therefore be disadvantaged by climate change. This is likely to be because thermal mass will have a greater effect during the day when it is absorbing external heat gains, whereas during the night it is reradiating heat.

According to J. HE, A.N. Young, A. Pathan, T. Oreszczyn[20]:

This study has shown that post-1964 dwellings need more cooling than dwellings built before 1919, or generally, detached dwellings require more cooling energy for sitting rooms and/or

bedrooms, than semi-detached and terrace houses. If the average US air conditioning system, with an EER of 3[21] is input to the simulated models in this study, 30 and 60 kWh of electricity (1.7 and 3.2) is needed to operate the air conditioning systems in the sitting and main bedroom respectively. Assuming the ownership of air conditioning is 2.4% in the current housing stock, it is estimated that respectively 18 and 32 GWh of electricity would have been needed to cool the sitting rooms and main If a similar housing stock level, 10% ownership and installation of air conditioning in both the sitting room and the main bedroom are assumed for 2050, the cooling energy demand will amount to 210 GWh with 25 kilotonnes of carbon emissions.

According to Neil Brown, Jorge A.J. Caeiro, Harry Bruhns, Andy J. Wright, Alex J. Summerfield, and Tadj Oreszczyn[22]:

Consumption of the energy management practices observed floorspace data for the surveyed premises and modelling energy use to estimate incremental energy consumption. These early results however show the use of air-conditioning in retail. The results show the use of energy-saving measures during the cooling.

According to N.P. Brandon and Z. Kurban[23]:

The increased production and use of hydrogen can support climate change and energy security goals within future low-carbon energy systems. At the energy system level, hydrogen can enable greater penetration of renewables into the grid while carrying energy to all sectors without the need to build costly additional grids.

Research Methodology

Research Problem

With more periods of intense heat waves, the people of the UK have to choose an option of comfort as their health and environment is being more impacted now than they used to be in the past. A look into the air conditioning market will give you a picture of how less the UK has opted out of them as it has been a traditional cold country.

Research Questions

1. How will the impact of buying air conditioners impact the people?
2. How will a new additional expense impact the country's economy?
3. With the rise in inflation will the market be ready to prefer to buy the product?

Objectives

1. Look into the pricing of the air conditioners and find a custom-fit one for the homes with minimum expense.
2. The viable options of trying Hydrogen based models to reduce global warming and carbon footprint.
3. The look into the rising inflation and how it will impact the retail industry.

Research Design

It is a descriptive research design which studies the possible ill effects of heat waves and sees an opportunity for entrepreneurship with the possibility of green energy.

Data Collection Method

Primary data was collected from the Office for National Statistics and its websites. Secondary data was collected from the research papers, articles, case studies and journals.

Data Analysis

Air Conditioner and the speculative pricing:

The companies which are going to benefit from the growth of the market include Daikin Industries Ltd., Fujitsu General Ltd., LG Electronics Inc., Mitsubishi Electric Corp., Samsung Electronics Co., Ltd., Toshiba Corp., United Technologies Corp., Gree Electrical Appliances Inc., Emerson Electric Company., Midea Group Co. Ltd., Hitachi-Johnson Controls Air Conditioning Inc., and others.

There are three types of air conditioners which are freestanding units(portable, ideal for small rooms, and cost-effective), wall-mounted systems(A panel is fitted near the ceiling in a room, usually well above head height and a hose connects the unit to a fan outside, very efficient and does not take floor space) and ducted systems(This system has a fan bolted to the outside of the home, but instead of a wall-mounted unit, the outlet is ducted to the ceiling.

A split system with a wall-mounted unit:

ROOM:	WALL-MOUNTED SPLIT SYSTEM (AS PER THE PRODUCT RECOMMENDED BY THE INSTALLER)
Single system to a small office	£1750
Single system to a larger double bedroom upstairs	£2100
Two units, one in a double bedroom and one in a front living room	£3200

Ducted system:

| ROOM:	DUCTED SYSTEM
Single system to a small office	£2500
Single system to a larger double bedroom upstairs	£2750
Two units, one in a double bedroom and one in a front living room	£3800

This data was taken from https://job-prices.co.uk/air-conditioning/

Income and Expense Sheet-The average salary in the UK is 31,400 GBP for the FYE 2021.

Figure 2: Median income of the poorest fifth of people fell by an average of 2.0%, while the richest fifth of people fell by 1.0%

Median equivalised household disposable income of individuals by quintile group, financial year ending (FYE) 2020 and 2021, UK.
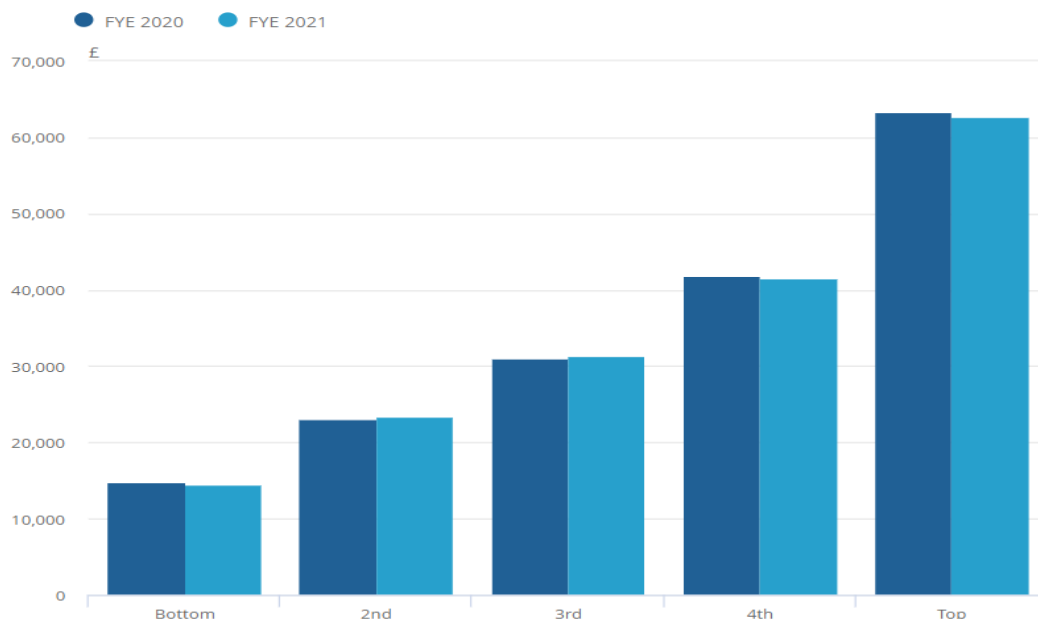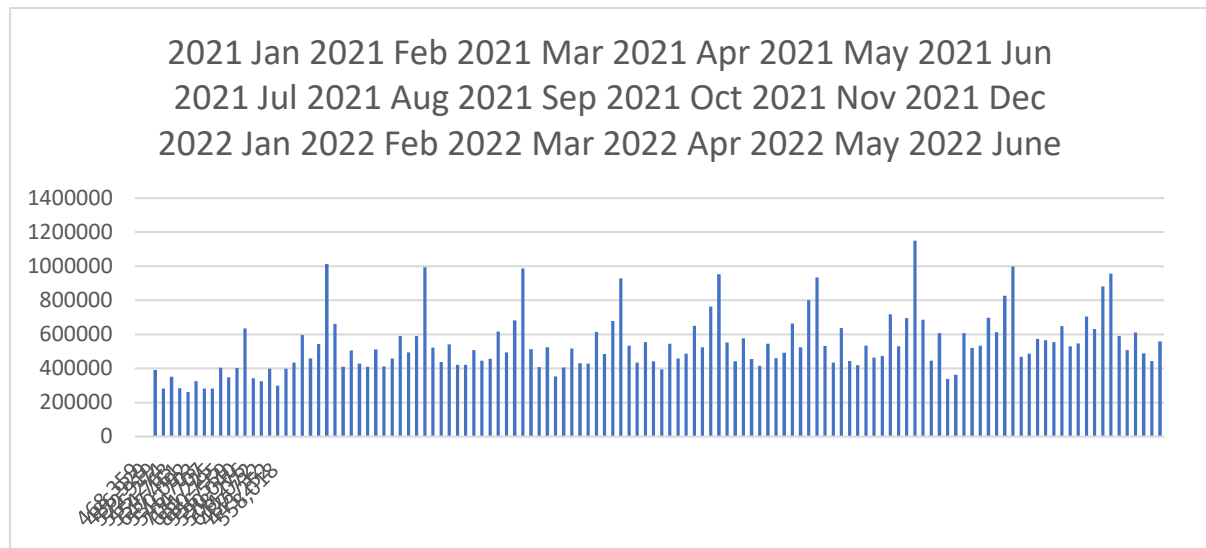

The above data was taken from the Office for National Statistics (Household Finance Survey) The average spending on Housing (Fuel and Power) has been huge in the UK among all classes. And this does not even include the Air Conditioner yet. It majorly goes into central heating repairs and installation.

	Average weekly expenditure all house-holds (£)	Total weekly expenditure (£ million)	Recording house-holds in sample	Percentage standard error (full method)
4 Housing(net)1, fuel & power	**84.60**	**2,386**	**5,390**	*1.9*
4.1 Actual rentals for housing	51.20	1,443	1,350	*3.2*
4.1.1 Gross rent	51.00	1,439	1,340	*3.2*
4.1.2 less housing benefit, rebates and allowances received	9.70	274	750	*6.6*
4.1.3 Net rent2	41.30	1,165	1,210	*3.7*
4.1.4 Second dwelling - rent	0.10	3	10	*41.5*
4.2 Maintenance and repair of dwelling	10.00	283	2,230	*6.0*
4.2.1 Central heating repairs	1.20	34	1,040	*11.5*
4.2.2 House maintenance etc.	5.60	157	1,000	*9.9*
4.2.3 Paint, wallpaper, timber	1.90	53	550	*7.9*
4.2.4 Equipment hire, small materials	1.40	39	480	*12.3*
4.3 Water supply and miscellaneous services relating to the dwelling	9.90	280	5,170	*2.0*
4.3.1 Water charges	7.80	221	5,100	*1.0*
4.3.2 Other regular housing payments including service charge for rent	1.90	52	570	*9.2*
4.3.3 Refuse collection, including skip hire	0.30	7	50	*32.3*
4.4 Electricity, gas and other fuels	23.20	654	5,360	*0.9*
4.4.1 Electricity	12.40	350	5,360	*1.2*
4.4.2 Gas	9.60	271	4,500	*1.3*
4.4.3 Other fuels	1.20	33	440	*7.4*
4.4.3.1 Coal and coke	0.20	5	120	*14.0*
4.4.3.2 Oil for central heating	0.80	23	250	*8.7*
4.4.3.3 Paraffin, wood, peat, hot water etc.	0.20	5	110	*18.6*

The above graph is tabulated from the data provided by the Office of National Statistics, Components of household expenditure, for the financial year 2021.This shows how much of the brunt the people will have to make for the addition of the expense of air conditioners. Hence the heat waves have not impacted their lives physically but also financially.

The Total Retail Sales of Electrical Household Appliances for 2021-2022

2021 Jan 2021 Feb 2021 Mar 2021 Apr 2021 May 2021 Jun 2021 Jul 2021 Aug 2021 Sep 2021 Oct 2021 Nov 2021 Dec 2022 Jan 2022 Feb 2022 Mar 2022 Apr 2022 May 2022 June

Source: Office for National Statistics

This graph will increase as the panic buying of Air Conditioners take place. The UK air conditioning market is forecast to show a modest growth rate at a CAGR of 1% during the forecast period. Several regulations and enforcement related to fan refrigerants used in AC for the sake of environmental concern had been witnessed in the country. Chlorodifluoromethane or R22 gas is HCFC which is mostly used in air conditioning equipment and industrial refrigeration. Since 2004, it is banned to use R22 gas in new equipment in the UK, as they are ozone-depleting substances. By 2030, more F-Gas regulations are coming into force in Europe, and these regulations will also have a major impact in the UK. These include R422A, R404A, R422D, and R507, which will be involved in reducing emissions. These regulations aim to shift towards environment-friendly technology. Due to the adverse effect of R22 and other ozone-depleting substances on the environment, modern refrigerants, such as the industry-standard R-410A, are now being used in place of conventional ones.
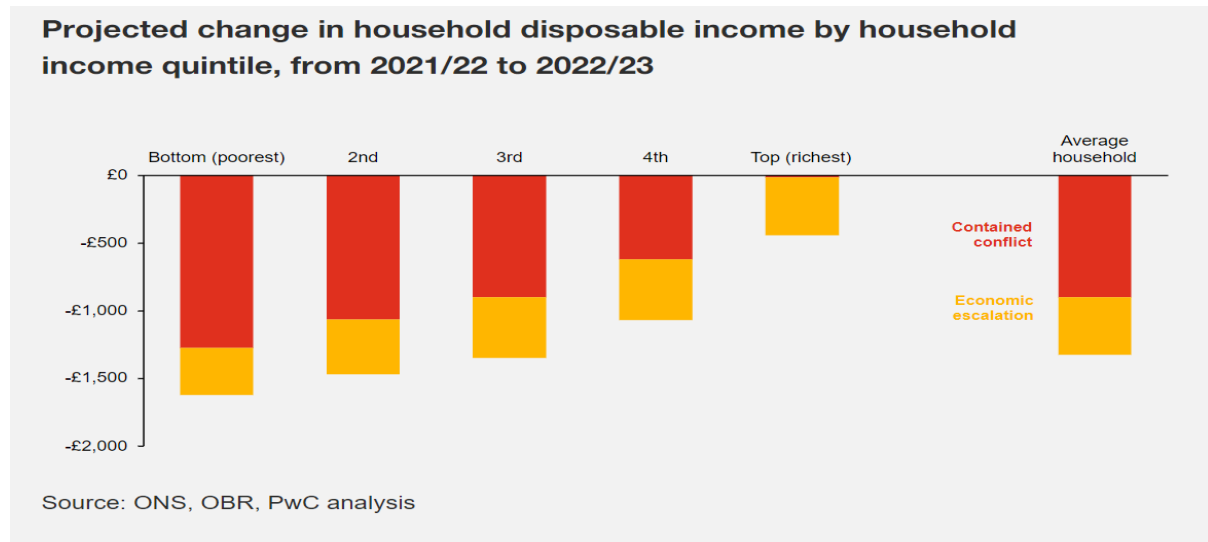
By refrigerant type, the market is segmented into HCFC, HFC, HFO, and Natural Refrigerant. HCFC and HFC will have a declining market during the forecast period whereas HFO and natural refrigerants will find a significant growth rate which will overall offer a positive market to the country. By application, the market is segmented into residential, commercial, industrial, healthcare, institution, automotive, and others. The automotive segment is expected to have a significant market growth rate during the forecast period.

This was cited from https://www.omrglobal.com/industry-reports/uk-air-conditioning-market#:~:text=UK%20air%20conditioning%20market%20is%20forecast%20to%20show,enviro nmental%20concern%20had%20been%20witnessed%20in%20the%20country.
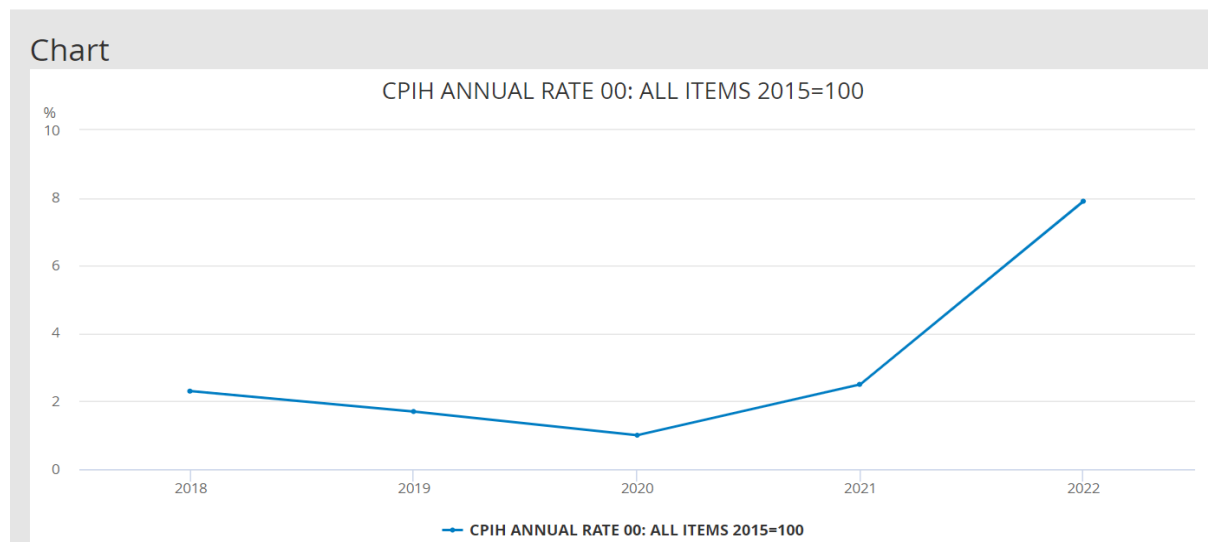
Hence the CAGR will increase now with the change in weather, considering moderately 3000 households even buy a small AC worth 120 GBP (360,000 GBP) which will accumulate maintenance as well will be a new addition to the sheet of household expenses in the Office of National Statistics and also better efficient alternatives will be used to not only help people but also protect the planet.

National Worry of Inflation

The UK will also be experiencing huge inflation at an 8-11% potential peak. UK GDP growth is to average between 2.8% - 3.8% this year, compared to a previous consensus GDP growth of 4.5%. The main driver of our revision is slower household consumption which is, in turn, driven by higher commodity prices. Real earnings are already contracting in the UK and are expected to continue to do so until at least the end of this year, with lower-income households being disproportionately impacted. This will also cater for the buyers and burden the lower-income group.

Source for chart https://www.pwc.co.uk/services/economics/insights/uk-economic-outlook.html

Source: Office for National Statistics

https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/l55o/mm23

The graph above shows the rise in inflation which will impact households and businesses and will require better policies from the government to tackle to make it easier for people as it is already facing a fore coming global recession.

GDP

Source: Office for National Statistics

https://www.ons.gov.uk/economy/grossdomesticproductgdp/timeseries/ihyq/pn2
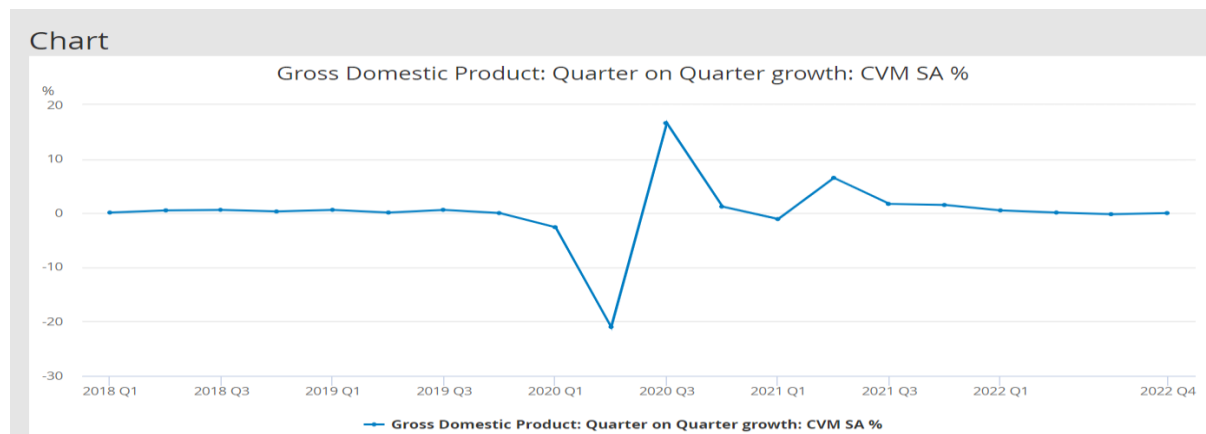
The above graph shows the GDP is 0, this requires some policies which can help uplift a major economy like the UK. The policies from the new government will be crucial in the coming quarters to help with this issue.

Greenhouse gas emissions

Total greenhouse gas (GHG) emissions on a residence base for the UK in 2020 were over 478 million tonnes of carbon dioxide equivalent (Mt Co2e). This is a 13% decline from 2019 and is the biggest single-year drop since these statistics began in 1990. The four sectors contributing the most GHG to UK emissions remain the same as in previous years: consumer expenditure, energy, manufacturing and transport. These sectors contribute over 71% of total UK GHG emissions.

Source: Office for National Statistics

https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/ukenvironmentalaccounts/latest

Energy use and emissions

Most greenhouse gas emissions are directly related to energy use, particularly energy use from fossil fuels. The UK used a total of almost 170 million tonnes of oil equivalent (Mtoe) of energy in 2020, with the majority of this (78%) coming from fossil fuels.

Households and the energy, manufacturing, and transport sectors are the biggest users of energy from fossil fuels. In 2020, these sectors accounted for 82% of all fossil fuel energy use in the UK. These are the same four sectors that accounted for the most GHG emissions in 2020.Energy use from fossil fuels has been falling for the energy and manufacturing sectors, largely because of a switch from the use of coal to other fuels such as natural gas, which generate lower emissions. More recently, an increasing amount of energy use is from renewable sources. In 2020, energy

from renewable sources accounted for 14% of all energy use in the UK, compared with 0.7% in 1990.

Figure 2: The same four sectors that contribute the most air emissions also use the most energy from fossil fuels

Fossil fuel energy use for the four highest users in the UK, 1990 to 2020

Source: Ricardo Energy and Environment, Office for National Statistics

Source: Office for National Statistics

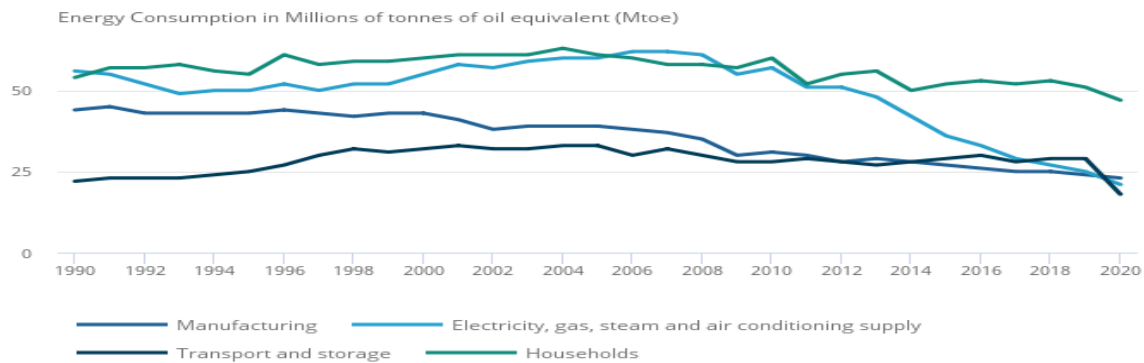https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/ukenvironmentalaccounts/latest

Environment tax

Levels of revenues from environmental taxes do not necessarily indicate the relative importance or the success of the environmental policy. High environmental tax revenues can result either from high rates of taxes or from high levels of environmental problems (for example, pollution), leading to a large tax base. The broad measure of revenues can also fail to capture the effect of the differential rates that encourage a shift away from higher-impact behaviour (such as the use of leaded petrol). For this new and modified environmental laws have been made to protect the future interests of the people. Currently, Climate change levies and Emissions Trading are some of the lucrative policies offered by the UK government.

Findings

- The situation has been experienced in the past but has gradually grown to a point where air conditioning is a necessity for the upkeep of health and wellness.
- It will be a new cost for the government in the allowance bracket to the people who could not afford the household expense and will be a burn for their annual income.
- The government is working on numerous policies to bring down inflation and backtrack the economy post-Brexit and COVID-19.
- Many studies show that the impact on the health of people (kids, young and old) has been drastic and hence better measures to be taken in the interest of the public.

Suggestions

- The old housing system in the UK calls for a change or renovation in terms of cooling, older houses can opt for remote air conditioners and make an outlet from the traditional chimneys without changing the building demography.
- Work on launching a carbon-free or hydrogen-based AC to help tackle the carbon footprint and also reduce global warming.
- Work with affiliation with construction firms initially to have a built-in process of the cooling system primarily and with the government to help people locally at a reduced rate.
- To get them installed at the hospital, schools, metro stations and major public places with the help of the government to cover for the people as the country is going through a minuscule growth.
- Government to come up with beneficial regulatory methods to attract new entrepreneurs by giving tax benefits and other affiliations.

Conclusions

As progress is being made on all fronts from the public, industry and government to find a solution to the increasing heat waves, a very unique option of one with keeps the health of the citizens and also doesn't add to the existing global warming to the environment, a common solution with new alternatives can be used in the upcoming industries and more favourable policies to be developed to attract the investors and entrepreneurs to the UK.

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Research paper for Conference

A case study on Quality Education imparted at the Government Primary Schools in Hosapete, Karnataka

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Abstract

Education is a basic need and necessity in this century. In Karnataka currently has over 77000 schools with around 1.03 crore students availing education with over 3 lakh teachers. NGO like Cognition Social Innovation and Research Centre are currently situated in Hosapete working towards empowering youth to solve problems related to sustainable development. In Government Primary schools quality and holistic education is not being imparted and hence it is obvious that children do not perform better. Students who are studying especially in government schools at lower primary and primary levels lacked this holistic approach in their education thus having an impact on the quality of education these students received as compared with their peers. The current paper aims to work towards quality education, where in when the volunteers tried to find the reasons for this lack of quality, and the impact that it would bring in on the future of the student. The study also analyses the type of teaching methods and activities that can be brought forth in order to bring in remarkable changes with-in the educations system. Few activities were designed which impacted on the curriculum and on the minds of the student.

Keywords: *Activity learning, interactive, teaching aids, Worksheets*

1.0 Introduction

Lower primary education in Karnataka considers very important for a child's development. The study mainly focused on the classes from 1 to 5. Upon assessments, it was found that not all government schools were at par with the quality of education they imparted. There may be various challenges to this problem some of which include high difference in teacher to student ratio, lack of proper infrastructure, no holistic approach towards the student, covid and lockdowns etc. Among the above causes some of them are studied and possible solutions are also implemented to assess the impact.

Cognition Social Innovation and Research Centre is an NGO which is associated with various Government schools in Hosapet. It was started as a volunteer group that was working towards global sustainable development goals. The work is being carried out for 6 years and went to register as an NGO in 2021. It focuses mainly on following 5 sustainable goals like Zero Hunger, Quality Education, Rural and Skill development, Health and wellbeing and Partnership for goals

The Activities and Programmes initiated include

- Regular classroom teaching by volunteers at Government schools: Cognition currently has students pursuing degree, engineering, management etc., as their full-time volunteers. These volunteers attend and take regular classes at various government schools within the district. The volunteers use modern methods of teaching along with various teaching aids.
- Preparation and donation of teaching aids to Government schools: In order to make teaching better the volunteers of cognition prepare various teaching aids. These are well-researched and prepared to encourage students. The teaching aids include in form of charts, pictures, crafts, etc.
- Setting up libraries: Libraries are a vital and important aspect of any educational institution. Thus, having a good and robust library plays a very important role in a student's educational journey.
- School beautification projects: A student learns a lot from his classroom as well as his surroundings. Thus, maintaining good and proper surroundings is a must to enhance the learning of children. Hence, the school buildings and classroom walls are painted with famous cartoon characters explaining the learning aspects like days, months, numbers, etc. making learning more engaging and interactive.

- Project Neev: As a team, the volunteers are engaged in enhancing the fundamental teaching at a few rural government schools to improve the quality of education and to equip the students with an integrated approach to understanding the structure of elementary education.
- Food drives: Cognition collects good and hygienic excess food from functions and gatherings and distributes it to the community where people are short of quality meals on daily basis.

1.2 Objectives of research and data collection:

- To understand the nature of education imparted in lower primary government schools in Hosapete.
- To analyze the types of problems faced while imparting knowledge by the school teachers/students.
- To provide suitable suggestions and bring in possible solutions by conducting trial activities.

Data collection: Method used for data collection- Interview with various stake holders like the teachers, students and NGO mentor

Interview with NGO mentor

Question 1: Hello mam, Quality education is one of the causes that Cognition is working towards what is the reason behind choosing this cause?

Answer: Education has become an important and basic necessity in this 21st century and plays a very important role in the development of society and the nation as a whole thus were are working towards bringing quality in this field.

Question 2: Why did Cognition choose to concentrate on education at a lower primary level?

Answer: There are many problems faced especially at the lower primary level and moreover it forms a basis like a basement. When the basement is strong then the building would sustain thus, we decided to start working from the lower primary level.

Question 3: You are currently working as a principal in a private school, what differences do you find between the quality in private and government schools at lower primary level?

Answer: There is indeed a difference in the quality at government schools when compared with their peers. There are many reasons for this disparity. The major reasons include the direct admissions to 1st STD or sometimes to higher levels whereas in private schools, students start their education with

kindergarten levels possessing and aware with already the 3 years of formal education. Also Covid and Lockdowns had a huge impact on the students as they did not have any online classes thus; they have been sitting in homes for nearly 2 years. This also had a great impact on their psychology.

Question 4: What are the steps Cognition is taking towards this cause?

Answer: We have at present collaborated with some of the Government schools across the district and thank them for their active involvement. The following are some steps we have taken

- Preparing and distributing teaching aids to these schools.
- Regular classroom teaching by the volunteers where they focus on teaching the basics to the students.
- Shala vinyasa and school beautification projects.
- Preparing worksheets and making students solve them so that they can practice at home also.

School teacher - Vivekananda Government higher primary school, Hosapete

Question 1: What are some of the problems faced by students in the lower primary classes in this school?

Answer: there are many problems faced by students but some of the problems faced by the majority of the students include lack of proper Family Background, Long Absenteeism, Slow learners and language barrier.

Question 2: What are steps taken by the school towards solving these problems?

Answer: Some of the steps we have implemented are Kalika chetarike (workbook), Activity-based learning, learn with fun.

Question 3: What are the problems faced by teachers?

Answer: Medium transition of students, especially from Kannada medium to English medium. Also we see there is disparity among the students' level of learning.

1.3 Issues identified: Lack of holistic and quality education at lower primary level in government schools.

Impact of the cause: Lack of quality education has the following impact on the student. This would in turn bring in Poor learning outcomes and Push children out of the education system. Also make them vulnerable to abuse, child labor, etc. Without quality basics in education students cannot build

upon this basis in future education. The students will also be not able to perform up to the required mark. Sometimes kids cannot withstand the current level of competition in society. Nevertheless Improper learning of mathematics and science subjects can have an effect on their cognitive and scientific development.

1.4 Activities planned and Implementation

Preparation and usage of teaching aids: Teaching aids are very useful and also are supportive for teachers while teaching. They tend to attract the student's attention and increase their concentration. As the saying goes "A picture is worth a thousand words" thus usage of pictures, colorful images, interactive toys, etc., play a very effective role in enhancing the quality of teaching and also thus enhancing the quality of learning of the child

Pic: *Charts and drawings by kids*

Regular classroom teaching by interns and volunteers: Cognition has partnered with many lower primary and primary schools within the Vijayanagar district. The volunteers take regular classroom teaching to the students of the schools where there is a shortage of teachers or in schools where teachers are sent for training etc. The volunteers in these times tend to teach the students of these government schools include English spelling and grammar, general knowledge like fruits, vegetables, domestic animals, wild animals, and mathematics which included teaching numbers, tables basic addition, subtraction and multiplication, identification of shapes, and naming them.

Preparation of worksheets:

Cognition develops and prepares worksheets based on the topic being taught by the volunteers for that day. These worksheets aim to help students practice the lessons taught daily by the volunteers in regular classrooms. These worksheets are made either for classroom practice of the students or given to them as homework practice. This has helped students practice the aspects taught to them regularly.
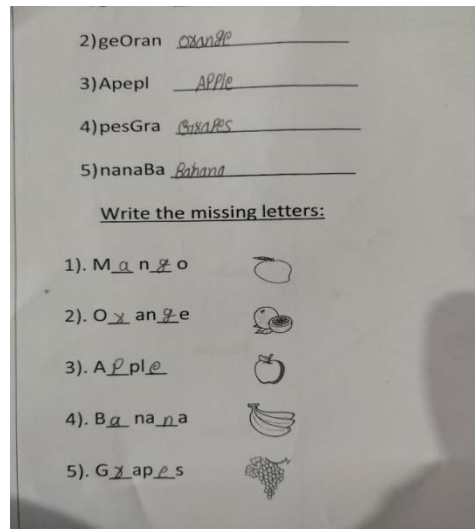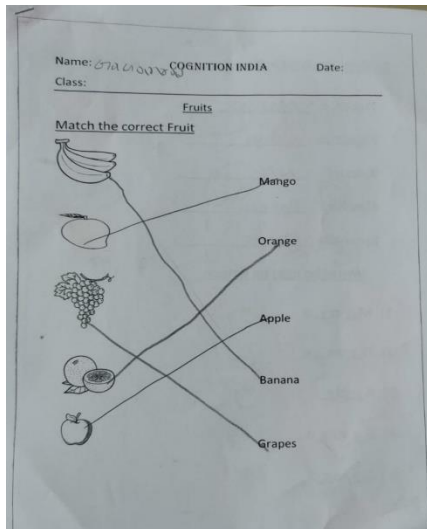
Conducting assessments: These assessments usually happened once a week. These assessments helped the volunteers understand the efficacy of their teachings, and the level of knowledge the student possesses, identify the slow learners so that they can be given extra care, and identify and analyze the common mistakes the students made.
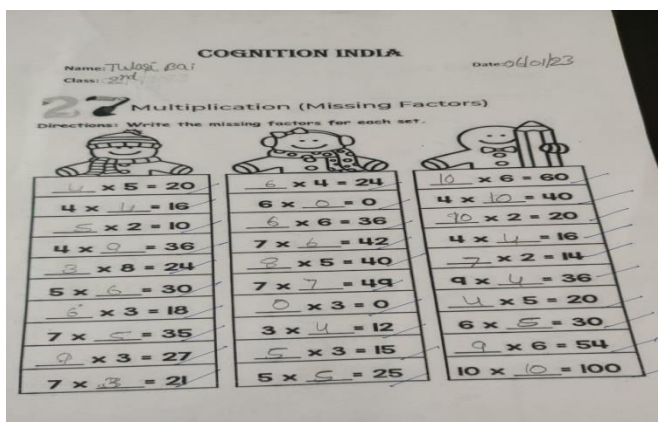
Shala Vinyasa: The project Shala Vinyasa aimed at the beatification of schools. Cognition partnered with donors and other organizations and took up this initiative. The project aims at painting the school and classroom walls with cartoons and other common fictional characters.

1.5 Major Learning's:

Through he study there was good opportunity to visit some government lower primary schools. It was surprising that there was a huge difference in the quality of education. The level of understanding and level of knowledge the students had vastly differed when compared to their peers. Interaction with teachers of these government schools also helped us understand the problems faced by these students. it is always essential to understand the Background of the student if not there can be Long Absenteeism and irregularity. Also language barrier, difficulty with phonetics and pronunciations are some issues faced by students. Transitions from Kannada medium into English medium affected some students. Covid and lockdowns are other reasons where students suffered quality education.

1.6 Suggestions and conclusion:

Holistic approach- A curriculum which is based on the holistic approach that focuses on both the physical and mental well-being of the student must be adopted.

More focus on basics- The teachers should ensure that every student is good with basics thus allocate certain time in a week that clearly focuses on the basics.

Encourage questioning- The students must be encouraged to ask questions this way the cognitive levels and also the curiosity within the students.

Build upon the importance of basic education to students as well as parents. Regular parent-teacher meetings should be held to assess the student's performance and ways the parents can also focus on their child's education.

Focus on activity-based learning- More focus must be emphasized on activity-based learning where students must be taught to apply the theoretical aspects they were taught in classrooms.

Identify and encourage the inbuilt skills within students -Every child possesses a skill of interest that he/she enjoys thus be it sports, singing or dance, etc., and teachers should try to identify and thus bring out these hidden talents of students.

Experiential learning with the use of teaching aids and activities- Teachers should make use of the teaching aids more which would make the learning more experiential, thus helping the student to understand the concept better and also remember and retain them easily.

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Research Paper for the Conference

Title: Quality Education in primary schools special reference to Government Schools in Bengaluru- A case study

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Abstract

In India, poor educational performance results in children being forced out of the educational system. Learning evaluations reveal that a large portion of students who are enrolled in school are not learning the fundamentals of reading and numeracy or the additional information and abilities required for their overall development as outlined by the Right to Education Act. There is still much to be done to ensure that all children have access to gender-sensitive and inclusive classrooms, better water, sanitation, and hygiene facilities, as well as midday meal practices and a child-friendly learning environment. Beyond standard literacy and numeracy skills, a wide range of talents, attitudes, and socio-emotional competencies enable successful performance in school. Life skills greatly contribute to learning and are a component of quality education. Youth for Seva (YFS), an organization that encourages youth to volunteer and gives them worthwhile opportunities to give back to their community, was established in April 2007. YFS aims to change society for the better by promoting a culture of volunteerism. Among the 4 major focus areas of Youth for Seva, as a part of the study the cause for **"Quality education"** was found as a basic need. The main reason to select this cause was the standard of education given to children is declining. The Indian government has vowed to ensure that all citizens have access to education to create the most highly qualified workforce in the world. 97% of children in the nation attend school; however, the standard of teaching in these institutions is much below average. Through this paper the study is made to find out present scenario of Government schools and the teaching learning process involved with reference to quality education. During the study certain activities were planned to enhance the learning process and quite a positive feedback has been received from students and

teachers.

Keywords: *Scientific Knowledge, Positive feedback, mid-day meals, Activities*

1.1 Introduction:

Governments have made an effort to ensure that students continue to learn when they are at home during this time of school closure. Digital tools were widely employed, including web-based high-tech tools applications and online learning courses, social media platforms, television, and radio.

India is presently looking at ways to provide education programs more quickly and differently in order to use strategies that increase the impact of interventions for children and adolescents and attain scalability. In Bangalore there are many NGO's which offer quality education through their activities during the schools hours.

Youth for Seva is such NGO which is managing lot more activites of government schools. Through volunteers who may assist organizations in addressing some of their limitations and issues, YFS seeks to support schools, homeless shelters, public hospitals, and other organizations in the social sector. The process of volunteering is made simple and tailored to each person's interests, time constraints, and skill sets. A person can volunteer with YFS in a variety of ways, whether it is for a few hours on the weekend or six months throughout a career pause. YFS seeks to encourage a volunteering movement among young, accomplished students who can significantly contribute to bringing about constructive social change. College students are urged by YFS to volunteer not just while they are still enrolled in school but also after they have graduated. They are given several possibilities to volunteer in various projects and activities, based on their schedule and interests, to help them achieve this.

The Sustainable Development Goals (SDGs), also known as the Global Goals, are a set of 17 interrelated goals that are meant to act as a "Shared blueprint for peace and prosperity for people and the planet, now and into the future." No Poverty, Zero Hunger, Good Health and Well-Being, Quality Education, Gender Equality, Clean Water and Sanitation. By placing sustainability at their core, the SDGs highlight how the environmental, social, and economic facets of sustainable development are interconnected.

1.2 Objectives of the research and data collection

The major objectives of the research include the following,

- To educate the school students about modern technology and science.
- To provide hands on laboratory experience to students of Government schools.
- To upskills students thinking ability and enhance innovativeness among the students.

Data collected: Data was collected through Interactions and observations among the schools children and teachers during the study period**.** Accordingly certain activities were planned to enhance teaching learning process like STEM, lab on wheel etc.

1.3 Type of issues identified in Government schools

i. *"Lack of Scientific knowledge and hands-on lab experience"*

Most of the students at government schools lack basic science and mathematics knowledge. Thus, identified this as a cause at Youth for Seva and thought of collaborating with them to address this cause and increase students' standard of study. YFS was having specific programs namely STEM and Lab on Wheels programs to help teachers of government schools to assist them in teaching.

ii. *"Lack of innovation and research ability"*

Since many students are not having the ability to innovate something new and contribute to society this was identified as the second specific cause. It is at this age (12-15 years) a student must use his ability to think and innovate more. YFS was having a program under Chotte Scientist to have a science exhibition and inspire them to do so.

1.4 Activities planned and implementation

The NGO and its volunteers identified two strong issues among the government schools which need proper planning and implementation strategies. The NGO Youth for Seva has devoted itself to seva of the society. Youth for Seva has various programs under education as a cause namely,

1. STEM
2. Lab on Wheels
3. Chotte Scientist
4. Training students for NMMS and NTSE
5. Chiguru
6. School kit drive
7. Give paper-back
8. Vidyachetana and many more.

The study mainly deals of activities planned during the visit to various Government schools in Bangalore. Following is the list of programmes conducted.

STEM (Science, Technology, Engineering, and Mathematics)

According to the POA under the STEM program there was a plan to teach and build robotic models, program for the robotic model, and conduct pre-and post-assessments to check students' understanding of the concepts. The students from 6th, $7^{th,}$ and 8th standards were taught from 10-30am to 12-50 pm. In the first week, students learnt to build street light models using the robotics concept.

The schedule of schools for STEM is given below

Date	Venue
26-12-2022, Monday	GMPS Bannerghatta
27-12-2022, Tuesday	GMPS Bannerghatta
28-12-2022, Wednesday	HPS Kattriguppe, HPS Kumaraswamy Layout
29-12-2022, Thursday	HPS Chunchakatta
30-12-2022, Friday	HPS Jambusavaridinne
31-12-2022, Saturday	Assessment analysis and database updating at YFS Office

The programming of street lights project using studio software was done in the following schools

Date	Venue
02-01-2023, Monday	GMPS Bannerghatta
05-01-2023, Thursday	HPS Kattriguppe, HPS Kumaraswamy Layout
07-01-2023, Saturday	Assessment analysis and database updating at YFS Office

Lab on Wheels

Under LoW program, a plan was made to provide hands-on experience with science experiments to students. The students from 5th, 6th. and 7th standards were given information's on space, electricity, circuits, electric current, and magnetic field. The schedule of sessions was as follows

Date	Venue
03-01-2023, Tuesday	Sri Rajarajeshwari Vidya Mandira, BSK 2nd Stage
04-01-2023, Wednesday	HPS Doddakallasandra

Chotte scientist

To enhance innovation among school children, science exhibition was conducted. 8th standard students from GHS Kaggalipura were requested to prepare scientific models based on the following concepts,

- Air pressure
- Chemistry
- Light
- Water
- Biology

Activities and students at each of the Government schools

STEM

The above pictures were taken at HPS Kumaraswamy layout and HPS Kattriguppe, where the topics were under the theoretical part of a street light. During the first week, the theory was concluded using blackboard teaching, and building the model was shown using the apparatus.

Robotics teaching with programmed model

Lab on Wheels

Since most school students in India are devoid of laboratory experience, a deeper understanding and application of concepts is not possible. The above pictures were taken at Sri Rajarajeshwari Vidyamandira and HPS Doddakallasandra where

topics of body muscles and movements, electricity, electric current, and magnetic fields were taught. The hands-on experience was provided to students through lab equipment. Interaction and involvement are two faces of the same coin to learn and understand science. Thus, YFS is enhancing quality education.

Chotte Scientist

This is a program that was introduced by Youth for Seva to enhance innovative skills and thinking capability. Chotte Scientist was an initiative developed keeping the vision of science and research. This program was specially designed for high school students. Under this program, YFS made me visit GHS Kaggalipura as a jury and distributed prices to the winning students. Students were asked to perform science experiments based on Air pressure, Chemistry, Light, Water, and Biology.

The major outcome of any project or work mainly depends on how actually one implements his or her plans. The reliability of a project can be obtained through continuous evaluations and correcting of faults on a timely basis.

Youth for Seva after providing field experiences also provided an opportunity to conduct assessments for students. The assessments for students helped to learn and comprehend the teaching and other skills.

1.5 Assessment of students in Government school:

Evaluation of students was done as a part of the research to find the effectiveness of the programmes organized for the Government schools kids. Pre-test was conducted for the students about their basic knowledge of Robotics. After the commencement of the pretest, papers were evaluated. A total of 198 papers were evaluated which were collected from different government schools across Bengaluru. The result data was tabulated using MS Excel. The concepts in which

students lacking knowledge were found using charts and more stress was provided to teach those concepts.
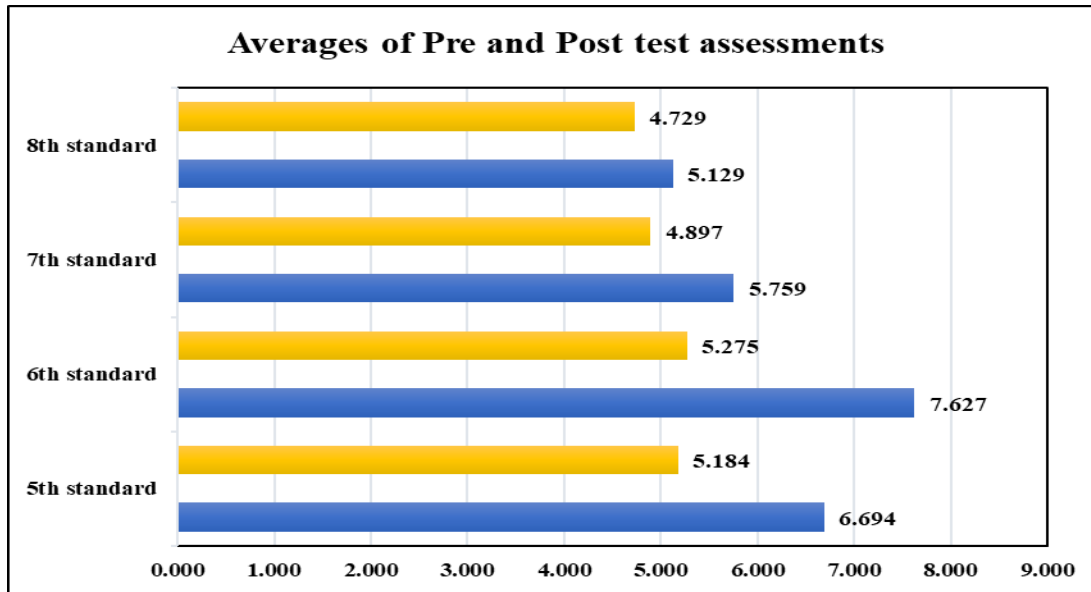
Chart: Average Pre and Post assessment

Note: The yellow-colored bar graph explains the average of pretest assessment results and Blue post assessments.

1.6 Major Learning's

A beautiful quote says, **"In the world, there may be given and taken. But in Seva, it is given, given, and given. For a sevak giving is receiving…"**

All the sessions on Robotics and Lab on wheels were very interactive and interesting. Seeing students come up with their ideas urged me to get completely involved in learning and teaching. Basic and advanced science concepts were delivered which was amazing and satisfying experience.

Ability to explain the applications with the scientific principles behind it was enhanced. "Youth not only get inspired, but they can also inspire others". The coordinators of Youth for Seva deserve a huge appreciation and credit for their unconditional and amazing coordination.

1.7 Conclusion

Quality of education for the under privileged, government schools children is essential. Creativity surges. Concentration power and motivation to do better increased. It is essential to build up bnewer programmes which are changing the life's of children should be initiated. Youth and volunteers should take responsibility to serve the nation. As the famous saying goes **"ONLY A LIFE LIVED FOR OTHERS IS WORTH LIVING".**

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Research paper for the Conference

Title:

Holistic Education in primary education sector with reference to Government Higher Primary School, Mallepura in Bengaluru- A case study

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Abstract:

The Department of Primary and Secondary Education, which oversees more than 77,000 schools, has launched a number of efforts to provide quality education in the state of Karnataka. The quality measures taken will raise the standard of education in the state. The combined efforts of the educators, professionals, members of civil society organizations, and other stakeholders like NGO's, corporates, NRI etc have made these efforts possible. The goals of each effort are to increase access, promote equity, and guarantee that all students are learning effectively. In Government Higher Primary Mallepura was founded it was found that there were 2 teachers to manage entire student strength from1-7 Standard. Moreover, it was noticed that in one class room had 3 different standard children that is 5th, 6th and 7th standard studying collectively. Moreover, managing the students and completing the curriculum was the major task. However, through this case study a Holistic approach towards Kids development can also be managed by the institution and importance need to be given for the same. The study period was December last Two weeks 2023; the sample size was 25 children and 2 teachers. Various holistic development approaches were planned and implement. This paper is how a government school can change the overall behavior of a student and the positive approach to life has being stated.

1.1 Introduction:

The Government Schools provide free education for those who can't afford fee. Also Free mid-day meals are given to the school kids. Along with that they also provide free uniform to children. The basic objectives of Education in Government schools of rural areas is basically to prepare and equip students with the necessary skills to function as professionals and to assist them in becoming responsible adults who will continue their progeny by serving as honorable parents. Also develop a right attitude for facing the social, economic and other problems of society not only the well-developed bodies and fair developed minds of the students. The Department of Education has cooperated with numerous NGOs in Karnataka like:

a. Odu Karnataka (READ KARNATAKA): a learning enhancement initiative runs in 13 districts in collaboration with Pratham that benefits nearly 5.2 lac kids.

b. Ganitha Kalika Andolana and the Akshara Foundation: to support math learning through an activity-based method. In 20 districts, the initiative has been put into practice, affecting 11744 schools and around 7.5 million children.

c. Prerana in partnership with Shikshana Foundation for the motivational model program to all the 43,897 Government Primary Schools impacting approximately 23 Lac children. An in-house Mobile App has also been developed for the program.

1.2 Case study of GHPS Mallepura

GHPS MALLEPURA was founded in 1981, and the Department of Education is in charge of its administration. It is situated in a rural setting. It is situated in the Karnataka state's DEVANAHALLI block of the BENGALURU RURAL district. Grades one through seven is offered at the school. The coeducational school does not have a separate pre-primary division.

Established	1981
Legal Name	Government Higher Primary School, Mallepura
Area	Devanahalli Taluk
Number of Teachers	2
Head Teacher	S R Bhagyalakshmi
Teaching Medium	Kannada
Type of the school	Co-Education
Classes conducted	From 1st standard to 3rd standard (Lower primary) & 4th standard to 7th standard (Higher Primary)

| Management | Government of Karnataka (Dept. of Education) |

1.3 Major Activities of the Institution

Education:

Lower primary (1st to 3rd standard): Also called as Nali-Kali, which is a creative learning strategy used in all government schools offering instruction in Kannada and Urdu from Grades 1-3. It is activity-based, multilevel, and self-paced.

Higher Primary (4th to 7th standard): They provide education in the form of different subjects such as Science, Mathematics, Social, Kannada and English.

Health & Hygiene

Mid-day Meal Scheme: A healthy lunch is served to kids in government schools at noon as part of the government's Mid-Day Meal or MDM scheme. The purpose of the midday food programme is to keep pupils from being hungry in class, Boost enrolment and reduce malnutrition among young children.

Toilet facilities: For both Boys and Girls separately.

1.4 Objectives of the Research

- To provide quality education to underprivileged children in rural areas of Karnataka
- To provide opportunities towards Holistic development/Personality development of students.

Data collection

Pupil-Teacher Ratio: The number of pupils attending a school divided by the number of teachers working there is known as the student-teacher ratio or student-faculty ratio. In every primary school, there should be one teacher working with a total of 30 kids, or a pupil-teacher ratio of 30:1 as per the norms of Government. In GHPS Mallepura, the strength of students is 25 and the number of teachers available is two as per the details provided by the school.

Pupil-Classroom Ratio: The student-to-classroom ratio displays the typical enrollment per classroom at elementary, middle, and secondary schools during a given academic year.

In GHPS Mallepura, there are 3 classrooms for 25 students. Data collection is mainly through observation and interview method

1.5 Issue identified

Through the various observation and interview it was noticed that there are less opportunities towards Holistic development/Personality development of students.

Holistic Development and its importance

A child's social, emotional, physical, mental, and intellectual development is referred to as their holistic development. Focusing on a child's development holistically entails paying attention to more than just their academic progress. It is very crucial to determine the child's general welfare.
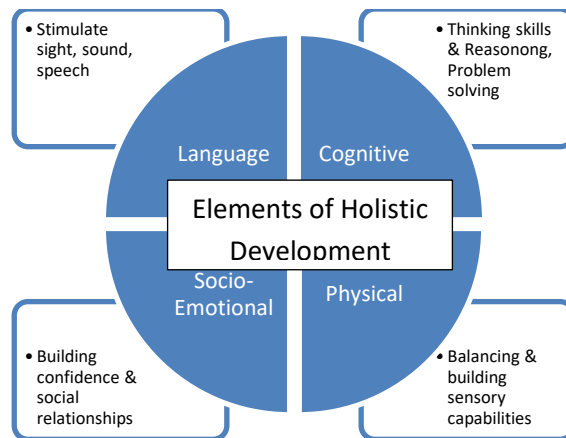
Specific problem identified:

Lack of programmes to enhance the critical thinking/cognitive skills among students in Government schools of rural areas. Critical thinking is a process of actively and successfully conceiving, applying, analyzing and synthesizing. Hence, certain amount of activities planned and implemented to solve the Issue

1.6 Methods adopted to solve specific problems

Critical thinking or to build cognitive skills among students which further results in Holistic development of students

Metacognition: The act of reflecting on one's own learning and thought processes is known as metacognition. The process followed to develop metacognitive skills among students is as follows:

PLANNING → MONITORING → EVALUATING

Planning: Using Past Information

Monitoring: Assessing Learning Progress

Evaluating: Examine the Metacognition Skills they have learned.

Picture: Newspaper reading

Pic: Planting Saplings

Activities conducted to enhance metacognitive skills among students are

- Painting & Drawing: **Theme "Nature"** was given to them to draw a picture.
- Conducted quizzes & tests with detailed feedback: Quizzes on General knowledge.
- Puzzles: Crossword and number puzzles.

2. **Social Persuasion:** Whether we are actively following someone's instructions or passively observing their behaviour, other people have an impact on our ideas and behaviours..

3. **Continuous learning:** It is impossible to establish a personality in a single day because it is a gradual process. There are different phases to it. A child first begins to learn to trust others when they are a baby. The toddler stage follows, during which they develop self-confidence. The

following stage is preschool and school, where a child starts to use creative problem-solving skills and engage with other students as well as improve cognitive skills. Activities conducted to implement continuous learning among students are:

- Implemented disciplinary measures such as Newspaper reading during Morning Prayer every day.
- Taught them Yoga and Meditation and asked them to practice on a regular basis.
- Conducted Indoor games such as Chess and carom board every day to build their thinking ability.

1.7 Major Learning's from Research

Enhancement of interactive skills: To be a part of a community, make friends, develop and sustain connections, maintain a social life, comprehend the world and the perspectives of others, and be a part of this global community, social skills are crucial, which learnt through this Research Programme.

Responsibility towards society: It showed us the major problems prevailing in our community or society & taught us to engage in those in an effective manner.

Practical exposure to real problems in rural areas: Children have little to no access to common educational resources, like well-stocked classrooms, computers, labs, and playgrounds, among others. The teachers frequently lack credentials or fail to show up, which results in a lackluster level of instruction.

Humility & Modesty: We relate to ourselves, to our own goodness and limitations, in modesty and humility. It includes locating ourselves within the social and global context. Among other things, modest people exaggerate their sense of who they are, what they have accomplished, and where they fit in the world.

1.8 Suggestions & Conclusion

The school should focus more towards Holistic development/Personality development of students rather than their academic advancements. More and more access, though NGO or local government access to Digital skills to enhance their capabilities. Also teachers, teaching trainees have to conduct programs related to critical thinking for the benefit of students to boost their cognitive skills.

Student's coming across to various many activities which develop mental aptitude, physical strength, cognitive skills are very essential for the kids. This study helped in identifying the same which can be adopted for the future plans in the school.

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Title of the study:

An Analytical study of impact of Merger & Acquisition on financial performance of Corporate Sector in India

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Abstract

The best method for hastening the execution of a company's growth strategy is analysing the merger and acquisitions. M&A has been used as an aggressive expansion strategy across all industries.

The idea of merger and acquisition is not new, but the recent boom in M&A has given it more attention. For their expansion, market coverage, or any other strategic objective, businesses should seek integration. The purpose of the current research paper is to examine how mergers and acquisitions affect the steel industry's financial performance. Three companies' data lists have been taken into consideration for the analysis. The outcome indicated that there has been little change in the steel industry's financial performance in India since the merger.

Keywords**:** *Working Capital, Financial Tools, Ratio Analysis*

Introduction

The phrase "mergers and acquisitions" (abbreviated "M&A") refers to a broad range of financial transactions, such as mergers, acquisitions, consolidations, tender offers, asset purchases, and management acquisitions, that result in the consolidation of businesses or assets.

A company that has been bought by another company wilfully transfers its assets and liabilities to the acquiring company. Many businesses choose for integration with another organisation to protect their

operations against failure. A winning strategy is to move forward with an M&A with a successful similar firm. The need of the market and its stakeholders is best met by the combined M&A synergy of two enterprises. Shareholders may experience either a positive or negative impact. M&A offer businesses fantastic chances to expand and increase stakeholder wealth. M&A boost value and effectiveness, which boosts holders' worth. M&A is a catch-all phrase for a variety of corporate restructuring initiatives. Corporate executives predict that the merger and acquisition market will pick up in 2018. Digital and technological strategy being considered as an important

factor for deals being pursued

Difference between Mergers and Acquisitions

In this process, two or more separate businesses come together to form a new company entity. Through contrast, only one corporation fully takes over the activities of another in an acquisition. New shares are sold by the combined business. However, no additional shares are issued during a purchase. There is a power imbalance between the corporations involved in mergers. The acquiring business controls the acquired business completely.

Literature reviews

Sl.No	Topic Name	Author/ Author's Name	Outline of the Paper
1	An analytical study of impact of merger & acquisition on financial performance of corporate sector in India	Md Alam Ansari & M.Mustafa	Use of Research tool: T test, Present paper covers 06 companies, Ratio Analysis is used to know the financial performance of the company
2	Cross Border Mergers & Acquisitions and Its Effect on Shareholders Wealth in India	Jayant Kalghagi & Dr. Ravindranath V. Bad	Use of the Research Tools: AAR, CAAR, T test
3	Shareholders wealth effects of Mergers & Acquisitions in different deal activity periods in India	Smita Kashiramka & N.V.Muralidhar Rao	Last ten years ITeS Sector Knowledge gain for shareholders wealth
4	Impact of Merger & Acquisition Announcement on Share Price – A Case of	Dr.S.Poornima and V.Chitra	Selected the scripts from Jan. 2012 to Dec. 2012 and see the impact in Impact has been analyzed between +7 days from the date of merger and acquisition

			announcement
5	Mergers and Acquisitions in Banking Sector	Prof. Anil K. Saini, Dr. Sambhavna, Dr. Mohender Kumar Gupta, Dr. Shivakumar Deene	Through this paper we will try to find out reasons of merger and acquisition from the experience of Indian banking sector but they show some futuristic prediction of India Banking Industry and its outcome
6	Effectiveness of Banks after M & A banks	Brajesh Kumar Tiwari	Author had compared the defend India and gives his opinion statement regarding effectiveness of Banks after M&A shows in merger of Bank of Karad Ltd. (BOK) with Bank of India (BOI) was more effective in it.
7	Impact of Mergers & Acquisitions on Firms' Long-Term Performance: A Pre & Post Analysis of the Indian Telecom Industry	Neha Verma & Dr. Rahul Sharma	The Paper gives a healthy idea about the financial tools to be chosen at the time of pre and post-merger analysis apart from telecom industry as a whole.
8	Effect of Mergers and Acquisitions on Financial Performance: A study of selected Tata group companies in India	Dr. B M Kanahalli & Siddalingya Jayaram	The financial data has been collected for six years from 2004-10. Pre-merger and post-merger financial ratios have been examined using paired sample t tests. The results of the analysis reveal that there is no significant difference between the financial performance of the companies before and after the merger.
9	Recent Development in Takeover Process in India	Ambika Sangwan	Author talked about different Act affected takeover deals in India such as Industrial Development and Regulation Act 1951, MRTP Act, FERA Act etc. made hostile takeover almost impossible. There have been consistent new legal developments such as- The Competition Act 2002 and New Companies Act 2013

Objectives of study

1. To examine and evaluate the impact of mergers and acquisitions on the profitability position of the selected companies
2. To examine and evaluate the impact of mergers and acquisitions on the liquidity and leverage position of the companies
3. To suggest appropriate strategy for merger and acquisition of Indian industry.

Research methodology and Source of Data

The current study mostly relies on secondary data. The information was gathered from company websites and publicly available annual reports of companies. Additionally, we have provided links to websites like Capital line database and Money control.

Scope of the Study

As it was not feasible for the researcher to consider all companies for study because the amount of data would be enormous, a convenient sampling method and the availability of the required data have been considered as being fundamental for the selection of these companies. The current paper covers three companies.

Data Analysis and Tools Used

Concerning Monnet ispat & Energy Ltd. - JSW

Monnet Ispat & Energy Limited (MIEL), which was founded in 1994, has a de-risked business portfolio that includes the production and sale of sponge iron, steel, and ferro alloys.

JSWL Ltd. The JSW Group's flagship company, JSW Steel Ltd, is an integrated steel producer in India with an installed capacity of 18 million tonnes of steel per annum (MTPA). Jindal Vijayanagar Steel Ltd was the initial name under which JSW Steel Ltd was founded on March 15, 1994.

With effect from September 23, 2020, the Company's name has been changed to JSW Ispat Special Products Limited.

About Vedanta Ltd - Electrosteel steels Ltd

In the Bokaro region of Jharkhand, ESL Steel Limited is a 2.51 MTPA Greenfield Integrated Steel Plant. Pig Irons, Billets, TMT Bars, Wire Rods, and Ductile Iron Pipes are among the company's products. The plant uses the most up-to-date technology while running in accordance with the strictest ecological standards. Women's Empowerment, Health, Education, Environment, Sustainable Livelihoods, Agriculture, and Sports are the main focuses of ESL's CSR initiatives.

One of the top diversified natural resource businesses in the world, Vedanta Limited, a division of Vedanta Resources Limited, conducts business in India, South Africa, Namibia, and Australia. Oil and gas, zinc, lead; silver, copper, iron ore, steel, aluminium, and power are all major products that Vedanta produces.

About Tata Steel – BSL

Through a wholly owned subsidiary, Tata Steel bought Tata Steel BSL Limited in 2018 (formerly known as Bhushan Steel Limited). One of the major companies in the Indian steel sector is Tata Steel BSL Ltd. We have more than 27 years of experience and are currently India's third-largest secondary steel producing company with a 5.6 million tonne annual steel production capacity.

Cold Rolled Close Annealed, Galvanized Coil and Sheet, High Tensile Steel Strapping, Color Coated Coils, Galume Sheets and Coils, Hardened & Tempered Steel Strips, Billets, Sponge Iron, Precision Tubes, and Wire Rod are just a few examples of the wide range of products available from Bhushan Steel (BSL).

Tools of Analysis

Ratio Analysis

Ratios are among the well-known and most widely used tools of financial analysis. Ratio is the relationship between one item to another expressed in simple mathematical form.

1. Gross Profit Ratio
2. Operating Profit Ratio / PBIT Margin (%)
3. Net Profit Margin (%)
4. Return on Capital Employed (%)
5. Return on Assets (%)
6. Current Ratio
7. Quick Ratio or Acid test Ratio
8. Inventory Turnover Ratio
9. Debt Equity Ratio
10. Interest Coverage Ratios (%)

Statistical Techniques

Standard deviation:

Standard Deviation is also known as root mean square deviation for the reason that it is the square root of the mean of the squared deviation from arithmetic mean.

Student t-test:

T – test is based on T – Distribution and is considering an appropriate test for judging the significance of a sample mean.

Hypothesis

Null Hypothesis (H0): There is no Significant impact on financial performance between Pre and Post Merger of Steel companies. ($\mu = 0.05$)

Alternative Hypothesis (H1) : There is Significant impact on financial performance between Pre and Post Merger of Steel companies ($\mu \neq 0.05$)

Level of Significant

5% or $\mu = 0.05$

Calculation of Financial Ratios

Tools	Pre-Merger		Post-Merger		t-value	P value
	Mean	SD	Mean	SD		
Gross Profit Ratio	5.83	21.60	9.95	14.09	-0.85	0.42
Operating Profit Ratio / PBIT Margin (%)	-0.44	23.71	9.09	13.46	-2.23	0.06
Net Profit Margin (%)	-63.06	66.49	-18.56	63.05	-1.66	0.14
Return on Capital Employed (%)	-7.90	30.67	6.68	8.80	-1.58	0.15
Return on Assets (%)	-11.64	23.31	-7.94	25.56	-0.33	0.75
Current Ratio.	0.51	0.43	1.29	0.40	-3.11	0.01
Quick Ratio or Acid test Ratio.	0.41	0.40	0.61	0.16	-3.11	0.13
Inventory Turnover Ratio	5.50	1.78	5.22	2.08	8.54	0.00
Debt Equity Ratio	-0.87	15.03	8.69	15.68	-1.01	0.34
Interest Coverage Ratios (%)	1.12	1.60	1.50	1.84	-0.94	0.37

Analysis's & conclusion:

1. **Gross Profit Ratio:**

   Except for Tata BSL LTD, selected units' financial performance increased following mergers and acquisitions. The outcome of the paired t' test indicates that the variation in the gross profit ratio in the chosen units is **not significant.**

2. **Operating Profit Ratio / PBIT Margin (%):**

   Following mergers and acquisitions, selected units' financial performance improved across all chosen organisations. The difference in Operating Profit Ratio / PBIT Margin (%) is **not Significant** in the selected units, according to the paired t' test result.

3. **Net Profit Margin (%):**

   Following mergers and acquisitions, the financial performance of particular units in all chosen organisations increased. However, the outcome of the paired t' test indicates that the variation in net profit margin (%) in the chosen units is **not statistically significant**.

4. **Return on Capital Employed (%):**

   Post mergers and acquisitions, all of the selected companies' selected units' financial performance improved with the exception of Vedanta Ltd. The difference in Return on Capital Employed (%), according to the paired t' test's results, is **not Significant.**

5. **Return on Assets (%):**

   Following mergers and acquisitions, the financial performance of chosen units in all chosen companies increased on average. The difference in Return on Assets (%), however, is **not Significant**, according to the paired t' test result.

6. **Current Ratio:**

   Following mergers and acquisitions, the financial performance of the chosen units increased across all of the chosen organisations on average.

   But the paired t test result indicates that the difference in current ratio is **significant.**

7. **Quick Ratio or Acid Test Ratio:**

   With the exception of Vedanta Ltd., all of the selected firms' financial performance of the selected units has increased on average following mergers and acquisitions. But the paired t' test result shows that the difference in the quick ratio or acid test ratio is **not statistically significant**.

8. **Inventory Turnover Ratio:**

   Post the mergers and acquisitions, the financial performance of chosen units in all chosen organisations increases on average.

   But the paired t' test result indicates that the difference in the inventory turnover ratio is **significant**.

9. **Debt Equity Ratio:**

   With the exception of Vedanta Ltd., all of the selected companies' financial performance of the selected units increased on average following mergers and acquisitions. However, the paired t' test result shows that the difference in the debt equity ratio is **not statistically significant**.

10. **Interest Coverage Ratios (%):**

    Post the mergers and acquisitions, the financial performance of chosen units in all chosen organisations increases on average. Also the paired t' test result shows that the difference in interest coverage ratios (%) which is **not statistically significant.**

Suggestion

Vedanta Ltd.'s profitability was low before the merger and acquisition, but it was high compared to after the acquisition. Therefore, these units demand greater concentration, which raises profit.

By lowering their current obligations, Vedanta Ltd, Tata Steel BSL Ltd, and JSW Ispat Special Products Ltd can increase their working capital. Additionally, it will strengthen their liquidity situation. Vedanta Ltd. and Tata Steel BSL Ltd.'s net profits somewhat decreased, necessitating a review of its expense-cutting options.

To enable creditors to consider the ratio when determining whether to lend to the company, JSW Ispat Special Products Ltd. must monitor its interest payments and work to enhance the ratio.

Conclusion

It is clear from the findings and analysis of the major financial ratios both before and after the merger—as well as from the discussion above—that there was no appreciable impact on the company's operations. That means H_0 is accepted, meaning **that there was no discernible difference in the financial performance of steel businesses before and after their merger.**

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