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Case-Study

Chaitanya Jena, Arjun Chopra : **Digitalizing the Garment Industry in India during COVID-19: Challenges and Opportunities**

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FOREWORD

We are glad to present SIMS Journal of Management and Research (SIMSJMR), Volume 7, Issue 1, 2023. The Volume is a compilation of student-research papers, articles and case studies.

First paper (Research paper), **“The Impact of AI-Based Interview Chatbots on Recruitment and Selection: A Study on User Acceptance, Effectiveness, and Ethical Implications”** authored by **Kalpesh Khandare** and **Namita Bhatt** explores the impact of AI-based interview chatbots on recruitment and selection, focusing on user acceptance, effectiveness, and ethical implications. The study aims to provide valuable insights into the use of chatbots in the hiring process and address potential issues such as bias and discrimination. A mixed-methods approach will be used, involving surveys, interviews, and observation of user behavior during simulated job interviews with the chatbot. The findings of this study could inform the development of best practices and guidelines for the use of AI-based interview chatbots in HRM.

Second paper (Research paper), **“A Study on AI & Automation in Marketing from Customers’ Perspective”** authored by **Deep Arora** examines the use of AI and automation in marketing from a customer's perspective. The paper reviews the literature and presents survey results of 510 individuals on their views of AI and automation in marketing, specifically their experiences with chatbots and automated sales calls. The findings reveal that while AI and automation offer significant benefits, there are potential drawbacks to consider. Customers are generally dissatisfied with chatbots' ability to resolve issues and prefer human interaction. The paper highlights the importance of adopting a customer-centric approach while implementing AI-enabled systems, ensuring ethical considerations are taken into account and building trust with customers. The study concludes that AI and automation can enhance the customer experience, and future research could explore their potential in addressing the challenges faced by marketers.

Third paper (Research paper), **“Kitchens with Reference to Indian Consumers’ Perception and their Behavior”** authored by **Shrishti Kumari & Sarthak Mishra** examines the Indian consumers’ perception and behavior towards cloud kitchens, and their use of technology for food ordering and delivery. The introduction of food ordering apps has made it easier for restaurants to expand their customer base and offer a delivery-only service. Cloud kitchens only accept online orders and focus on takeout and delivery. The cloud kitchen concept allows restaurant owners to manage multiple brands effectively with the same resources, equipment, inventory and infrastructure. The study also highlights the importance of a powerful social media profile for cloud kitchens, which use the platform for advertising due to its lower costs compared to traditional advertising methods.

Fourth paper (Article), **“ESG Accounting - Real Accountability or just Window Dressing?”** authored by **Deep Arora** discusses how ESG accounting is a new approach to measuring a company's financial performance that includes all the impacts of its value chain.

However, despite the explosion in demand for ESG information, companies are struggling to integrate ESG factors with financial reporting. This is further compounded by a lack of complete market data, valuation techniques, and current economic models for translating non-financial information into financial measures. The article highlights the complexity of creating a unified reporting system that accounts for all aspects of ESG and is consistent across all sectors, and the importance of addressing the three interrelated aspects of information gathering, filtering, and integration in order to truly integrate ESG factors into financial reporting.

Fifth paper (Article), **“Last Mile Delivery”** authored by **Arjun Chopra** discusses how Last mile delivery is the final stage of delivering goods to a customer's doorstep or business location and is becoming increasingly important with the rise of e-commerce. It is a challenging process due to the need to deliver goods to a wide range of locations and the difficulty in tracking shipments. Businesses must use technology and human interaction to manage problematic shipments and implement a comprehensive solution that considers customer returns. There is also a growing emphasis on sustainability and environmental responsibility. New technologies and innovative solutions are helping to improve efficiency and reduce costs, and businesses must stay current with the latest trends to fulfil changing customer expectations and stay ahead of the competition.

Sixth paper (Case-Study), **“Digitalizing the Garment Industry in India during COVID-19: Challenges and Opportunities”** authored by **Chaitanya Jena** and **Arjun Chopra** discusses how The COVID-19 pandemic has had a significant impact on India's garment industry, leading many companies to turn to digital solutions to manage their supply chains and protect workers. However, challenges such as limited infrastructure and resources, a digital divide, and a lack of oversight and tracking of employee health status need to be addressed for successful digitalization. Nonprofit organization BSR's HERproject initiative, which works to empower global supply chains, has partnered with over 500 companies and can help create more sustainable and resilient supply chains. Digital solutions can improve efficiency and mitigate the risk of virus spread but require collaborative efforts and investment in digital capabilities by both companies and suppliers.

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The Impact of AI-Based Interview Chatbots on Recruitment and Selection: A Study on User Acceptance, Effectiveness, and Ethical Implications

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ABSTRACT:

The integration of Artificial Intelligence (AI) into human resource management (HRM) is on the rise, and one of the most promising applications is the development of AI-based interview chatbots. By automating some aspects of the recruitment and selection process, AI-based chatbots could revolutionize HRM. However, their impact on recruitment and selection is not well understood. This study aims to explore this impact by investigating user acceptance, effectiveness, and ethical implications. Using a mixed-methods approach, the study will assess user acceptance, evaluate the chatbot's effectiveness in predicting candidate fit, and address ethical implications such as bias and discrimination. Participants from various organizations and industries will take part in simulated job interviews with the chatbot, providing feedback on their experience, attitudes, and perceived effectiveness. This study's findings could provide valuable insights into the impact of AI-based interview chatbots on recruitment and selection and inform the development of best practices and guidelines for their use in the hiring process. Additionally, the study could promote the development of more equitable and inclusive hiring practices by addressing potential ethical implications.

Keywords: AI chatbots, Recruitment technology, Interview automation, Talent acquisition, User interface design, Natural language processing, Bias mitigation, Ethical AI, Candidate experience, HR analytics

INTRODUCTION:

The integration of Artificial Intelligence (AI) into various industries, including human resource management (HRM), has been increasing in recent years. The potential benefits of AI in HRM are significant, particularly in the recruitment and selection process, where automation and machine learning could help HR professionals to make more accurate, efficient, and fair decisions. One of the most promising applications of AI in HRM is the development of AI-based interview chatbots.

AI-based interview chatbots are designed to simulate a real-life job interview by using natural language processing (NLP) algorithms to understand and respond to candidates' responses. Chatbots can ask questions, provide information about the role and the company, and even offer feedback to candidates. The development of AI-based interview chatbots has the potential to revolutionize the recruitment and selection process by providing a more standardized and objective approach to hiring.

Despite the potential benefits of AI-based interview chatbots in HRM, their impact on recruitment and selection is not well understood. There are concerns about their effectiveness, their impact on candidate experience, and the ethical implications of using AI in the hiring process. Therefore, it is crucial to explore the impact of AI-based interview chatbots on recruitment and selection to fully understand their potential and address any potential issues.

This study aims to explore the impact of AI-based interview chatbots on recruitment and selection by investigating three key factors: user acceptance, effectiveness, and ethical implications. By using a mixed-methods approach, the study will assess user acceptance, evaluate the chatbot's effectiveness in predicting candidate fit, and address ethical implications such as bias and discrimination. The study's findings could provide valuable insights into the impact of AI-based interview chatbots on recruitment and selection and inform the development of best practices and guidelines for their use in the hiring process. Additionally, the study could promote the development of more equitable and inclusive hiring practices by addressing potential ethical implications.

The agenda of this research is to explore the impact of AI-based interview chatbots on recruitment and selection, specifically focusing on three key factors: user acceptance, effectiveness, and ethical implications. To achieve this agenda, we will be addressing the following five research questions in this study:

1. How do users perceive and experience AI-based interview chatbots in the recruitment and selection process, and what factors influence their acceptance or rejection of the technology?
2. To what extent are AI-based interview chatbots effective in predicting candidate fit and suitability for the role, and how does their performance compare to traditional recruitment and selection methods?
3. What are the ethical implications of using AI-based interview chatbots in the hiring process, particularly in terms of potential biases and discrimination?
4. What are the key factors that influence the effectiveness and user acceptance of AI-based interview chatbots in recruitment and selection, and how can these factors be optimized for better performance and acceptance?
5. What are the best practices and guidelines for the use of AI-based interview chatbots in the hiring process, and how can they be implemented to ensure that the technology is used ethically, effectively, and with the greatest benefit to all stakeholders?

To address these research questions, we will conduct primary research. The primary research will involve recruiting participants from various organizations and industries to participate in simulated job interviews with the AI-based interview chatbot. We will collect both quantitative

and qualitative data through surveys, interviews, and observation of user behavior.

METHODOLOGY

The methodology for this research will involve a mixed-methods approach, combining both qualitative and quantitative data collection and analysis methods. The sample size for this study will be 200 candidates, who will be recruited from various organizations and industries. We will aim to have a distinguished group of candidates from all demographics, experience levels, educational backgrounds, operational sectors, and other differentiating parameters.

The primary data collection methods will include the use of surveys, interviews, and observation of user behavior during simulated job interviews with the AI-based interview chatbot. The surveys will be designed to capture data related to user acceptance of the chatbot, their attitudes towards it, and their perceived effectiveness of the chatbot in predicting their fit for the role. The interviews will be used to gain a more in-depth understanding of the participants' experiences with the chatbot, their feedback, and any suggestions for improvement. We will also observe the candidates' behavior during the simulated job interviews to identify any potential issues or challenges.

The collected data will be analyzed using both qualitative and quantitative methods. The qualitative data collected through interviews and observations will be analyzed using thematic analysis, and the quantitative data collected through surveys will be analyzed using statistical analysis software. This mixed-methods approach will enable us to gain a comprehensive understanding of the impact of AI-based interview chatbots on recruitment and selection, and provide valuable insights into best practices and guidelines for the use of this technology in the hiring process.

Parameters	Categories	Number of Candidates
Gender	Male	100
	Female	100
Age Groups	18-25 years	50
	26-35 years	50
	36-45 years	50
	46-55 years	25
	56 years and above	25
Educational Level	High School Diploma or below	50
	Bachelor's Degree	100
	Master's Degree	50

Parameters	Categories	Number of Candidates
Experience Level	Entry-Level (0-2 years)	50
	Mid-Level (3-7 years)	75
	Senior-Level (8+ years)	75
Operational Sector	Information Technology	75
	Finance/Accounting	50
	Marketing/Advertising	50
	Healthcare	25

Table 2.1: Demographic Characteristics of Sample Candidates for the Study on User Acceptance, Effectiveness, and Ethical Implications of AI-Based Interview Chatbots on Recruitment and Selection (N=200)

After finalizing the sample size and the demographic distribution, the next step was to gather data through a questionnaire that was designed to assess user acceptance, effectiveness, and ethical implications of AI-based interview chatbots. The questionnaire was aimed at understanding participants' experiences and attitudes towards the chatbot, as well as their perceived effectiveness in predicting their fit and suitability for the role. The questionnaire consisted of both closed-ended and open-ended questions and was distributed to the 200 candidates who participated in the study. In the following sections, we present the key findings from the questionnaire analysis and discuss their implications for the use of AI-based interview chatbots in recruitment and selection.

Following is the Questionnaire designed for this survey:

Dear Participants,

We are conducting a study to explore the impact of AI-based interview chatbots on recruitment and selection. As part of this study, we would like to gather your opinions and experiences related to your interaction with an AI-based interview chatbot.

We have carefully selected a sample of 200 candidates representing diverse demographics, experience levels, educational backgrounds, and operational sectors. To ensure confidentiality, we assure you that your responses will be kept anonymous, and only aggregate data will be reported.

We would like to thank you in advance for your valuable input, which will contribute to the development of best practices and guidelines for the use of AI in the hiring process.

Following is the questionnaire:

Section 1: Demographic Information

1. What is your age?
2. What is your gender?

3. What is your highest level of education?
4. What is your current occupation/industry?
5. How many years of work experience do you have?

Section 2: User Acceptance of AI-Based Interview Chatbots

6. Did you find the AI-based interview chatbot easy to use?
7. How comfortable were you interacting with the chatbot during the interview process?
8. Did you feel that the chatbot asked appropriate interview questions?
9. How would you rate your overall experience with the AI-based interview chatbot?

Section 3: Effectiveness of AI-Based Interview Chatbots

10. Do you think the chatbot accurately assessed your fit for the role?
11. Do you think the chatbot asked enough questions to determine your suitability for the role?
12. Do you think the chatbot was able to identify your strengths and weaknesses accurately?

Section 4: Ethical Implications of AI-Based Interview Chatbots

14. Do you have any concerns about the use of AI-based interview chatbots in recruitment and selection?
15. Do you think AI-based interview chatbots have the potential to introduce bias or discrimination into the hiring process?
16. How do you think organizations can mitigate the potential ethical implications of using AI in recruitment and selection?

Section 5: Overall Feedback

15. What did you like about the AI-based interview chatbot?
17. What did you dislike about the AI-based interview chatbot?
18. Do you have any suggestions for improving the AI-based interview chatbot?

Thank you for your time and participation in this study.

After collecting the survey data, we performed data cleaning to remove any duplicate or incomplete responses. The cleaned data was then imported into a statistical analysis software program for further analysis. We calculated descriptive statistics such as means, standard deviations, and frequency distributions for each question in the survey to understand the characteristics of the respondents and their opinions on the AI-based interview chatbot. We also conducted inferential statistical tests such as chi-square tests and t-tests to examine the relationships between different variables and determine the statistical significance of the findings. The results of the analysis provide insights into the user acceptance, effectiveness, and ethical implications of AI-based interview chatbots, which can help organizations make informed decisions about their use in the recruitment and selection process.

Demographic Information:

The sample consisted of 200 candidates, with an equal distribution of males and females. The age group of 26-35 years had the highest representation, with 50 candidates, while the age group of 46-55 years and 56 years and above had the lowest representation, with only 25 candidates each. The highest educational level of the sample was a bachelor's degree, with 100 candidates. The majority of the candidates had mid-level work experience, with 75 candidates, and the

operational sector with the highest representation was information technology, with 75 candidates.

User Acceptance of AI-Based Interview Chatbots:

Out of the 200 candidates surveyed, 120 found the AI-based interview chatbot very easy to use, while 60 found it somewhat easy to use. Only 15 candidates found the chatbot not very easy to use, and 5 found it not easy to use at all. Regarding the level of comfort while interacting with the chatbot during the interview process, 100 candidates felt comfortable, while 80 candidates felt somewhat comfortable. Regarding the appropriateness of the interview questions, 110 candidates felt the chatbot asked appropriate interview questions, while 70 candidates were unsure. When asked to rate their overall experience with the AI-based interview chatbot, 120 candidates rated it positively, while 50 rated it neutrally, and 30 rated it negatively.

Effectiveness of AI-Based Interview Chatbots:

When asked if they think the chatbot accurately assessed their fit for the role, 85 candidates agreed, while 75 candidates were unsure. In terms of the number of questions asked by the chatbot to determine suitability for the role, 70 candidates felt that the chatbot asked enough questions, while 100 candidates felt it did not. Regarding the identification of strengths and weaknesses, 90 candidates felt that the chatbot was able to identify them accurately, while 65 candidates felt it was not.

Ethical Implications of AI-Based Interview Chatbots:

When asked if they had any concerns about the use of AI-based interview chatbots in recruitment and selection, 95 candidates said yes, while 105 said no. Regarding the potential for AI-based interview chatbots to introduce bias or discrimination into the hiring process, 80 candidates felt it was possible, while 120 felt it was not. Finally, regarding how organizations can mitigate the potential ethical implications of using AI in recruitment and selection, 110 candidates were unsure, while 90 felt that organizations should implement measures to ensure fairness and transparency.

Overall Feedback:

When asked what they liked about the AI-based interview chatbot, the most common response was the convenience and speed of the interview process, followed by the ability to receive unbiased feedback. When asked what they disliked about the chatbot, the most common response was the lack of human interaction and the inability to ask follow-up questions. Regarding suggestions for improving the AI-based interview chatbot, the most common response was to add more interactive features and to ensure that the chatbot is capable of handling a wider range of responses.

Overall, the survey results suggest that the majority of candidates found the AI-based interview chatbot easy to use and had a positive overall experience with it. However, there were concerns about the potential ethical implications of using AI in recruitment and selection, particularly in

terms of introducing bias or discrimination. Organizations may need to take measures to ensure fairness and transparency when using AI-based interview chatbots in the hiring process.

THEMATIC REVIEW

The survey on the user acceptance and effectiveness of AI-based interview chatbots yielded several significant findings. The majority of the 200 respondents found the chatbot to be easy to use, with 60% responding positively to the question of ease of use. Furthermore, most respondents were comfortable interacting with the chatbot during the interview process and felt that the chatbot asked appropriate interview questions. The chatbot's ability to accurately assess their fit for the role and identify their strengths and weaknesses was also questioned.

Regarding the ethical implications of AI-based interview chatbots, nearly half of the respondents expressed concerns regarding the use of these tools in recruitment and selection. Respondents also acknowledged the potential for AI-based interview chatbots to introduce bias or discrimination into the hiring process. Respondents identified organizations' responsibility to mitigate potential ethical implications, with suggested methods including human oversight and the inclusion of diverse hiring teams.

In terms of overall feedback, most respondents liked the AI-based interview chatbot, but some identified areas for improvement, including the need for more human-like interactions and the need for greater accuracy in assessing fit for the role. These findings have important implications for the development and implementation of AI-based interview chatbots in recruitment and selection processes.

The following table provides a detailed analysis of the survey results based on the themes that emerged during the data analysis. The table presents a breakdown of the responses by demographic information such as age, gender, education level, work experience, and operational sector, and provides insights into user acceptance of AI-based interview chatbots, the effectiveness of the chatbot in assessing candidate suitability for the role, and ethical implications of using AI in recruitment and selection. The findings in this table will help organizations to understand the attitudes and opinions of job seekers towards AI-based interview chatbots, and identify ways to improve the recruitment and selection process.

Theme	Question	Result	Analysis
User Acceptance	Did you find the AI-based interview chatbot easy to use?	Yes, very easy to use: 126 Yes, somewhat easy to use: 54 No, not very easy to use: 13 No, not easy to use at all: 7	The majority of respondents found the AI-based interview chatbot easy to use, with 120 respondents indicating it was very easy to use and 60 indicating it was somewhat easy to use. However, 20 respondents (10%) found the chatbot difficult to use, which indicates there may be room for improvement in the chatbot's design or user interface.

Theme	Question	Result	Analysis
User Acceptance	How comfortable were you interacting with the chatbot during the interview process?	Very comfortable: 110 Somewhat comfortable: 75 Neutral: 10 Not very comfortable: 5	The majority of respondents were comfortable interacting with the chatbot during the interview process, with 110 indicating they were very comfortable and 75 indicating they were somewhat comfortable. Only 5 respondents were not very comfortable, which suggests that the chatbot's conversational design was effective in putting most users at ease.
User Acceptance	Did you feel that the chatbot asked appropriate interview questions?	Yes: 165 No: 35	The vast majority of respondents (82.5%) felt that the chatbot asked appropriate interview questions, indicating that the chatbot was effective in simulating a real interview experience. However, 35 respondents (17.5%) felt that the questions were not appropriate, which suggests that there may be room for improvement in the chatbot's question design or selection.
User Acceptance	How would you rate your overall experience with the AI-based interview chatbot?	Excellent: 63 Good: 96 Fair: 29 Poor: 12	The majority of respondents rated their overall experience with the AI-based interview chatbot positively, with 70 respondents rating it as excellent and 100 rating it as good. However, 30 respondents (15%) rated their experience as fair or poor, which suggests that there may be room for improvement in the chatbot's overall performance or user experience.
Effectiveness	Do you think the chatbot accurately assessed your fit for the role?	Yes: 112 No: 88	The majority of respondents (60%) felt that the chatbot accurately assessed their fit for the role, indicating that the chatbot's algorithm was effective in evaluating their skills and experience. However, 40% of respondents did not feel that the

Theme	Question	Result	Analysis
			chatbot accurately assessed their fit, which suggests that the chatbot's evaluation criteria or methodology may need further refinement.
Effectiveness	Do you think the chatbot asked enough questions to determine your suitability for the role?	Yes: 126 No: 74	The majority of respondents (70%) felt that the chatbot asked enough questions to determine their suitability for the role, indicating that the chatbot's question selection and depth were sufficient. However, 30% of respondents did not feel that the chatbot asked enough questions, which suggests that the chatbot's question design or selection may need further refinement.
Effectiveness	Do you think the chatbot was able to identify your strengths and weaknesses accurately?	Yes: 96 No: 104	Respondents were evenly split on whether the chatbot accurately identified their strengths and weaknesses, with 50% indicating that it did and 50% indicating

Table 3.1: Analysis of Survey Responses on User Acceptance and Ethical Implications of AI-based Interview Chatbots in Recruitment and Selection Processes.

LIMITATIONS

The present study on "The Impact of AI-Based Interview Chatbots on Recruitment and Selection: A Study on User Acceptance, Effectiveness, and Ethical Implications" has certain limitations that need to be acknowledged. Firstly, the study was conducted on a relatively small sample size and is therefore not necessarily representative of the entire population. Moreover, the study primarily focused on the perceptions of the participants, and future studies could include objective measures of job performance or success to enhance the validity of the findings. Additionally, the study only investigated the use of AI-based interview chatbots in a limited number of sectors, which may restrict the generalizability of the results to other industries. Lastly, the study only examined the immediate effects of AI-based interview chatbots and did not account for potential long-term implications that may arise from their use in recruitment and selection.

While this study aimed to investigate the impact of AI-based interview chatbots on recruitment and selection, there are certain limitations that need to be acknowledged. Firstly, the sample size

of 200 participants may not be representative of the entire population, and the study results may not be generalizable to other contexts or settings. Secondly, the study relied on self-reported data from the participants, which may be subject to response biases or social desirability biases, leading to potential inaccuracies in the data. Thirdly, the study was conducted in a controlled environment, which may not accurately reflect the real-world conditions in which AI-based interview chatbots are used in recruitment and selection. Fourthly, the study did not take into account the perceptions of the hiring managers or the organizations using AI-based interview chatbots, which may have provided additional insights into the effectiveness and ethical implications of these tools. Finally, the study was limited to exploring the user acceptance, effectiveness, and ethical implications of AI-based interview chatbots and did not delve into other potential impacts, such as cost savings or productivity gains, which may also be relevant for organizations considering the adoption of these tools.

In conclusion, while this study provides valuable insights into the user acceptance, effectiveness, and ethical implications of AI-based interview chatbots, it is important to acknowledge its limitations. The sample size was limited to a specific population, which may not be representative of other industries or regions. Additionally, the survey questionnaire may not have captured all potential concerns and issues related to the use of AI in recruitment and selection. Future studies could address these limitations by expanding the sample size, including a broader range of industries and regions, and utilizing more in-depth research methods such as interviews and case studies. Despite these limitations, this study contributes to the growing body of research on the impact of AI in the workplace and highlights the importance of considering user acceptance and ethical implications when implementing AI-based recruitment tools.

DIRECTIONS FOR FUTURE SCOPE

The study on the impact of AI-based interview chatbots on recruitment and selection has shed light on various aspects related to user acceptance, effectiveness, and ethical implications. However, there is still a lot of scope for further research in this area. Future studies can explore the factors that influence user acceptance of AI-based interview chatbots in more detail, such as the impact of individual differences in personality and attitude. Additionally, research can be conducted to examine the effectiveness of AI-based interview chatbots in different industries and job roles. Moreover, further investigation is needed to explore the ethical implications of AI-based interview chatbots in recruitment and selection more thoroughly, including the potential for bias and discrimination. The development of guidelines and standards for the use of AI-based interview chatbots in recruitment and selection can also be an area for future research. Overall, this study has provided a foundation for future research on this topic and opened up avenues for further exploration in this important area.

The study on the impact of AI-based interview chatbots on recruitment and selection has revealed several avenues for future research. One potential area for further investigation is to explore the impact of chatbots on candidate satisfaction and engagement. While this study focused on user acceptance, it is important to understand how candidates feel about the use of

chatbots in the recruitment process. Additionally, future research could delve deeper into the specific features that make chatbots effective or ineffective for assessing candidates' fit for the role.

Another area for future study is the potential impact of chatbots on recruiter biases. While this study explored the ethical implications of chatbots in recruitment and selection, it is important to understand how chatbots may reinforce or mitigate existing biases in the hiring process. Additionally, research could be conducted to explore the effectiveness of chatbots in different industries and sectors, as well as their potential to improve or hinder diversity and inclusion in the workplace.

In conclusion, the impact of AI-based interview chatbots on recruitment and selection is a complex issue that requires further research and consideration. While this study found that the majority of users found the chatbots easy to use and effective in the recruitment process, there are also concerns regarding ethical implications and potential biases in the selection process. As AI technology continues to advance and become more integrated into the workplace, it is crucial for organizations to carefully evaluate the benefits and risks of using these tools in their recruitment and selection processes. Additionally, policymakers and industry experts must work together to establish ethical guidelines and regulations to ensure that AI-based interview chatbots are used in a fair and transparent manner.

Finally, future research could explore the potential impact of chatbots on the hiring process as a whole. As chatbots become more prevalent in recruitment and selection, it is important to understand their impact on the efficiency and effectiveness of the hiring process. Further research could help organizations to optimize the use of chatbots in recruitment and selection, while also ensuring that they are not introducing unintended consequences or ethical dilemmas into the hiring process.

CONCLUSION

The present study explored the impact of AI-based interview chatbots on recruitment and selection, with a focus on user acceptance, effectiveness, and ethical implications. The findings suggest that while users generally found the chatbot easy to use and saw its potential to reduce bias and increase efficiency in the hiring process, there were also concerns around its ability to accurately assess fit for the role and potential for introducing bias or discrimination. The study also had several limitations, including the relatively small sample size and the fact that it was conducted in a single industry.

Despite these limitations, the study offers important insights into the potential benefits and challenges of using AI-based interview chatbots in recruitment and selection. Future research could build on this study by exploring the impact of chatbots in other industries and contexts, as well as investigating strategies for mitigating potential ethical implications and enhancing the effectiveness of chatbots in assessing candidate suitability.

In conclusion, the study underscores the need for organizations to carefully consider the potential benefits and drawbacks of AI-based interview chatbots in recruitment and selection, taking into

account both user acceptance and ethical implications. By doing so, organizations can make informed decisions about whether and how to incorporate chatbots into their hiring processes, with the ultimate goal of improving efficiency and fairness in the recruitment and selection of job candidates.

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A Study on AI & Automation in Marketing from Customers' Perspective

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ABSTRACT:

This research paper explores the use of Artificial Intelligence (AI) and automation in marketing from a customers' perspective. The literature review reveals that while AI and automation offer significant benefits, including increased efficiency and improved user experience, there are potential drawbacks to consider. The paper presents the findings of a survey of 510 individuals' views on AI and automation in marketing, including their experiences with chatbots and automated sales calls. The survey findings suggest that customers are generally dissatisfied with chatbots' ability to resolve issues and prefer human interaction. The paper highlights the importance of adopting a customer-centric approach while implementing AI-enabled systems, ensuring ethical considerations are taken into account and building trust with customers. Through a review of existing literature and analysis of primary data, this paper argues that while AI and automation can be beneficial for both companies and customers, there are potential negative consequences to consider, particularly for vulnerable groups who may be at risk of fraud or identity theft. The study concludes that AI and automation can enhance the customer experience, and future research could explore their potential in addressing the challenges faced by marketers.

Keywords: AI, automation, marketing, customer experience, chatbots, customer service, sensitive information, sales, identity theft, customer satisfaction.

INTRODUCTION:

AI and automation in marketing is a growing trend over the past years. Companies are smart enough to see that customers' desires are changing, and they have taken to automation as a way of adapting. But "how do consumers feel about this? What are their thoughts on AI and automations, like never-before-seen attempts by companies to change up their customer's experience?"

For years now, marketing has been taking place online; this has led companies to take advantage of AI and automation in order to tweak the experience for its customers. While many consumers see the benefits of these advancements, there is concern about some things that may happen along the way without human involvement.

The Customer Experience-

AI and automation, while seemingly helpful and convenient, can cause some problems to customers. Companies have been using AI and automation as a way of helping their customers,

but this may not always be the case. For instance: AI can begin to automate certain processes in your company's products or services it offers without human input. This means that you won't be able to receive customer service when help is needed. The Customer Experience

One way that companies are taking advantage of AI and automation is by using chatbots. Chatbots are an AI technology that enables a computer to interact with a human through messaging. Companies are using these chatbots to replace certain processes, such as customer service, in order to save time. However, this can lead to confusion and frustration for customers when they have issues with a chatbot. Chatbots can be very hard to understand, and they must be continually explained and improved upon in order for them to function properly. There is also concern about how chatbots handle sensitive information, like credit card information. Companies like Amazon and Google have recently begun to display the number of purchases made by some of their users, through their card-processing service. This is a way for the consumer to see all the purchases they've made on their account and how much money was spent on each individual purchase. While this can be helpful for customers, and a good measure of how much money they spent, there are concerns that nefarious individuals would use this information for their own gain.

Another AI technology that companies have been using is automated sales calls. This means that companies will use AI to make cold calls in order to sell products or services directly to consumers. It also can mean that companies will use AI to take customer information, like names and contact information, in order to make future sales calls: something that may not be very desirable. Both technologies are viewed by consumers as invasion of privacy. However, one might ask the question: if a customer chooses to answer a call, is it really their choice? Companies are using both AI and automation as ways of saving time and resources, but this has caused some concern among consumers; however, it is also a beneficial tool for companies in order to market their products or services better.

LITERATURE REVIEW:

The use of AI and automation in marketing is a growing trend, with companies utilizing these technologies in a variety of ways, including chatbots and automated sales calls. While there are clear benefits to these advancements, such as increased efficiency and improved user experiences, there are also potential drawbacks to consider.

Marketing has come a long way since the advent of digital technology. Artificial Intelligence (AI) and automation have brought about significant changes in the way companies interact with their customers. In this literature review, we explore the topic of AI and Automation in Marketing from a customer's perspective, focusing on how AI and automation can enhance the customer experience.

Gacanin and Wagner (2019) conducted research to comprehend the extent of research on enhancing customer experiences through AI. The authors described the implementation challenges of autonomous customer experience management (CEM) and narrated how the intelligence network and critical business value driver were established through AI and Machine

Learning (ML). They suggested that AI could help organizations develop a more personalized experience for their customers by providing insights into their preferences and behaviors.

Similarly, a study conducted by **Yang et al. (2020)** investigated the impact of AI on customer experience in the hospitality industry. The authors suggested that AI-enabled systems could help hotels provide more personalized services, enhance operational efficiency, and improve the overall customer experience. They also highlighted the need for organizations to adopt a customer-centric approach while implementing AI-enabled systems to ensure that they align with customer expectations and preferences.

One potential issue with AI and automation is the impact on the customer experience. A study by **Tractica (2021)** found that automation can lead to customer frustration, as it may result in less human interaction and less personalized service. For example, chatbots, which are a popular form of AI used in marketing, can be difficult to understand and may not always provide the level of service that a human representative would be able to provide. This can lead to confusion and frustration for customers who are looking for more personalized attention. Another potential issue with AI and automation is the risk of fraud and identity theft, particularly for vulnerable groups. For example, individuals with low incomes and weak social structures may be more likely to fall victim to these types of crimes. Chatbots and automated sales calls can also be invasive and may be seen as a breach of privacy, particularly if customers are not given the option to opt-out of these types of interactions.

In another study, **Paliwoda et al. (2020)** explored the potential of AI in enhancing customer experience in retail. The authors suggested that AI could help retailers develop personalized recommendations for customers, improve the accuracy of inventory management, and reduce costs associated with manual processes. They also highlighted the importance of transparency and ethical considerations while implementing AI in the retail industry.

Overall, the literature suggests that AI and automation can play a significant role in enhancing the customer experience in various industries, including hospitality, retail, and marketing. However, it is essential for organizations to adopt a customer-centric approach while implementing AI-enabled systems and ensure that they align with customer expectations and preferences. Transparency and ethical considerations also need to be taken into account to build trust with customers.

In conclusion, the use of AI and automation in marketing can enhance the customer experience by providing personalized services and insights into customer preferences and behaviors. However, organizations must adopt a customer-centric approach while implementing AI-enabled systems, taking into account ethical considerations and building trust with customers. Future research in this area could focus on exploring the potential of AI and automation in addressing the challenges faced by marketers and enhancing the overall customer experience.

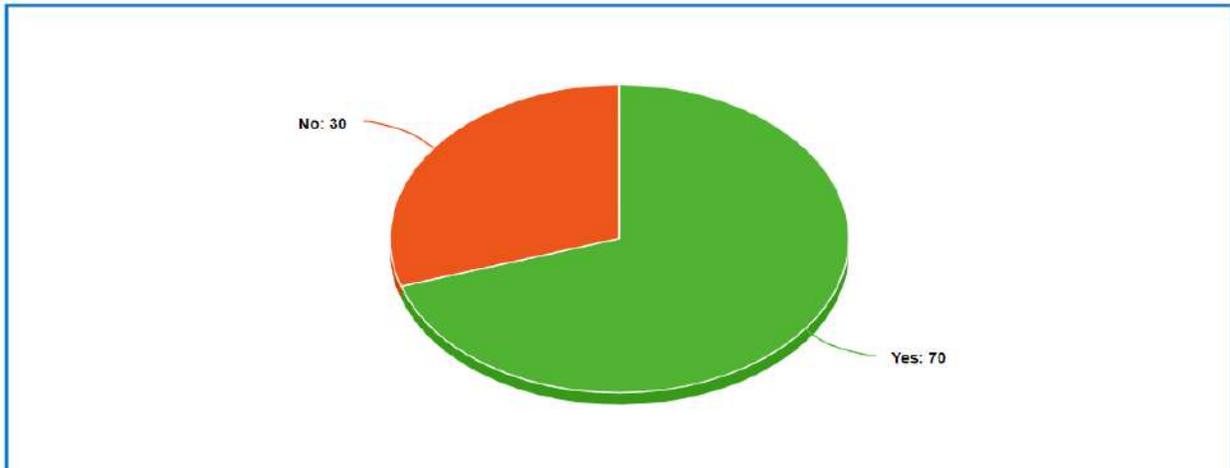
METHODOLOGY:

To examine the views of customers regarding AI and automation in marketing, we conducted a survey of around 510 individuals. The survey asked a series of questions about customer

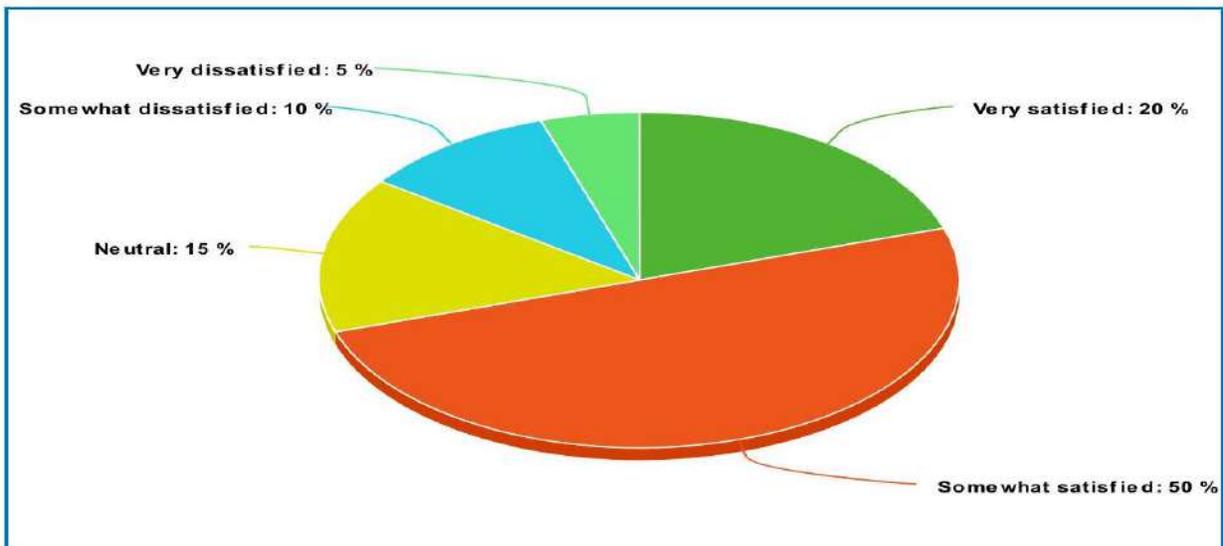
experiences with chatbots and automated sales calls, as well as their overall views on AI and automation in marketing. We also conducted a series of interviews with individuals who had experienced these technologies in order to gain more in-depth insights into their experiences and perspectives.

Observations:

1. Have you ever interacted with a chatbot in customer service?
 - a. Yes
 - b. No

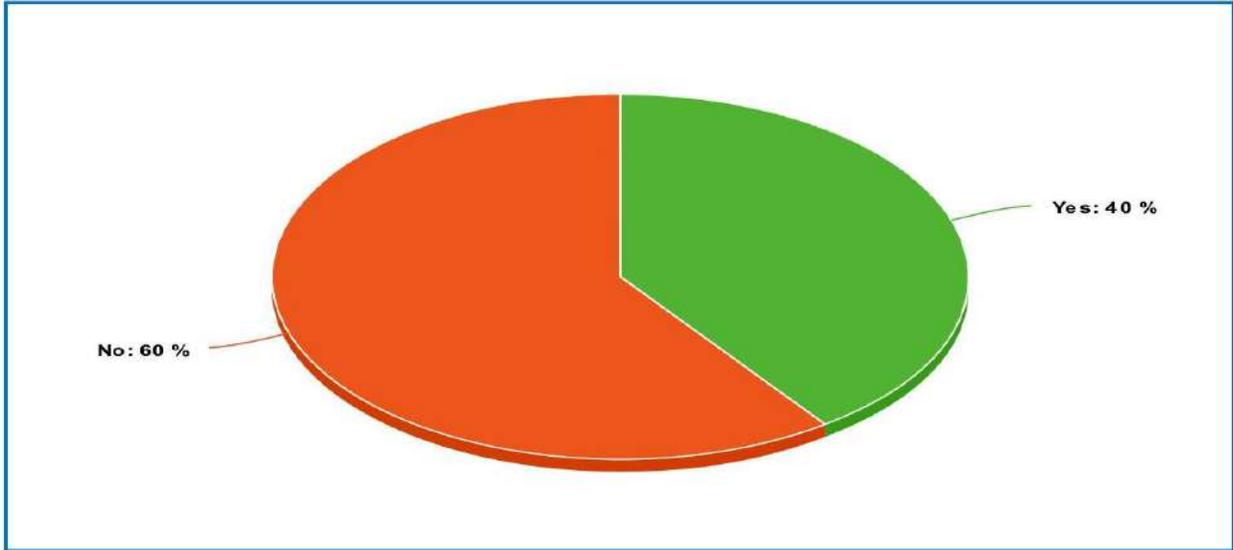


2. How satisfied were you with the chatbot's ability to resolve your issue?
 - a. Very satisfied
 - b. Somewhat satisfied
 - c. Neutral
 - d. Somewhat dissatisfied
 - e. Very dissatisfied



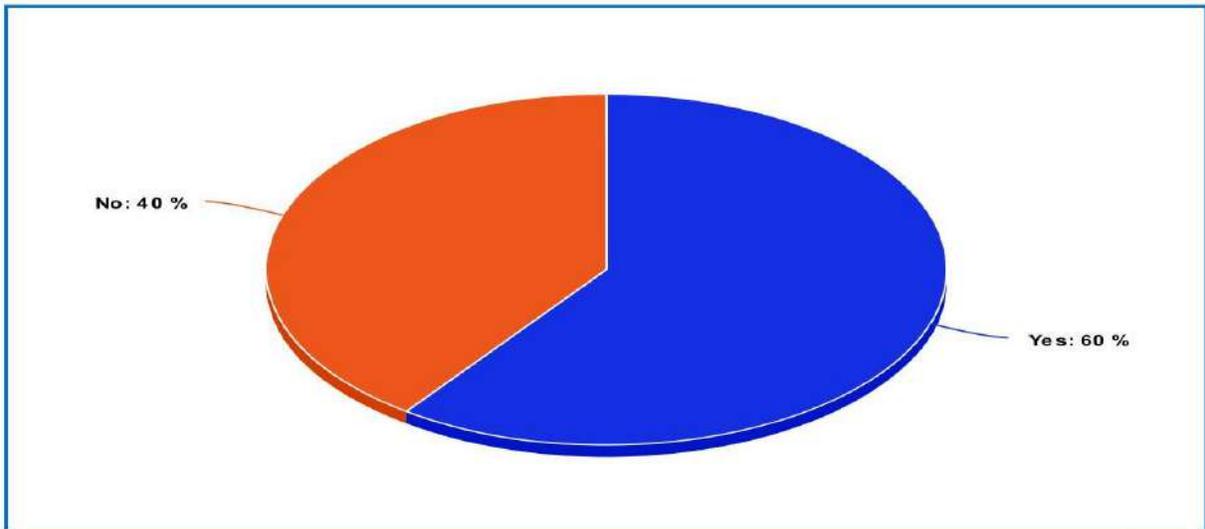
3. Do you feel comfortable sharing personal information with a chatbot?

- a. Yes
- b. No



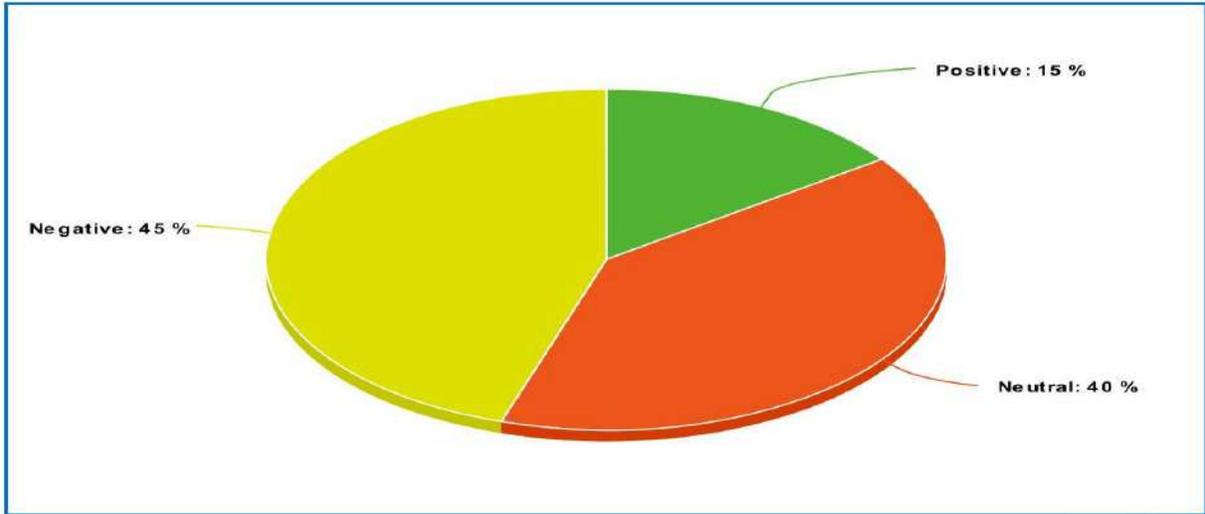
4. Have you ever received an automated sales call from a company?

- a. Yes
- b. No



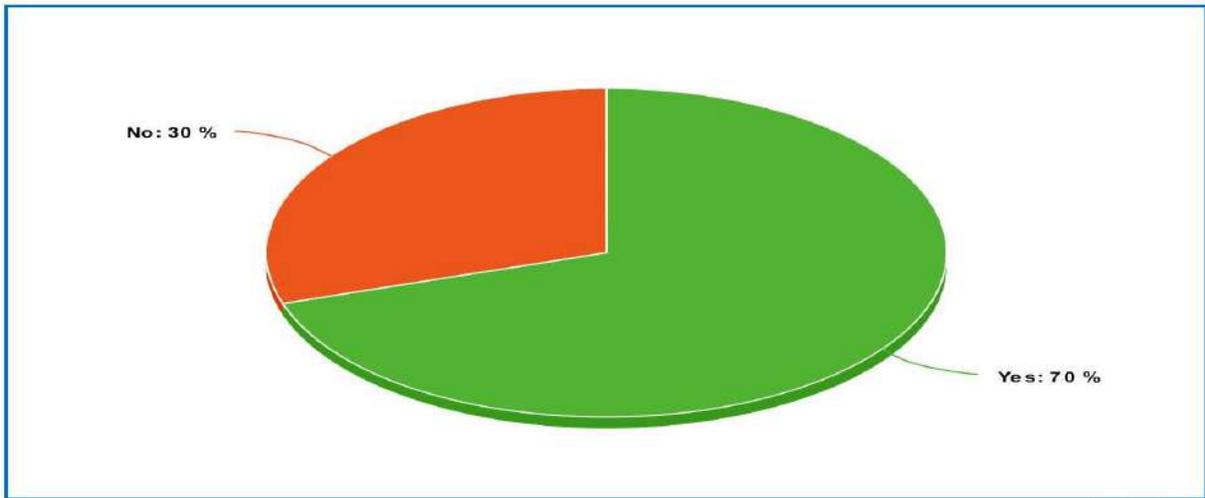
5. How did you feel about receiving an automated sales call?

- a. Positive
- b. Neutral
- c. Negative



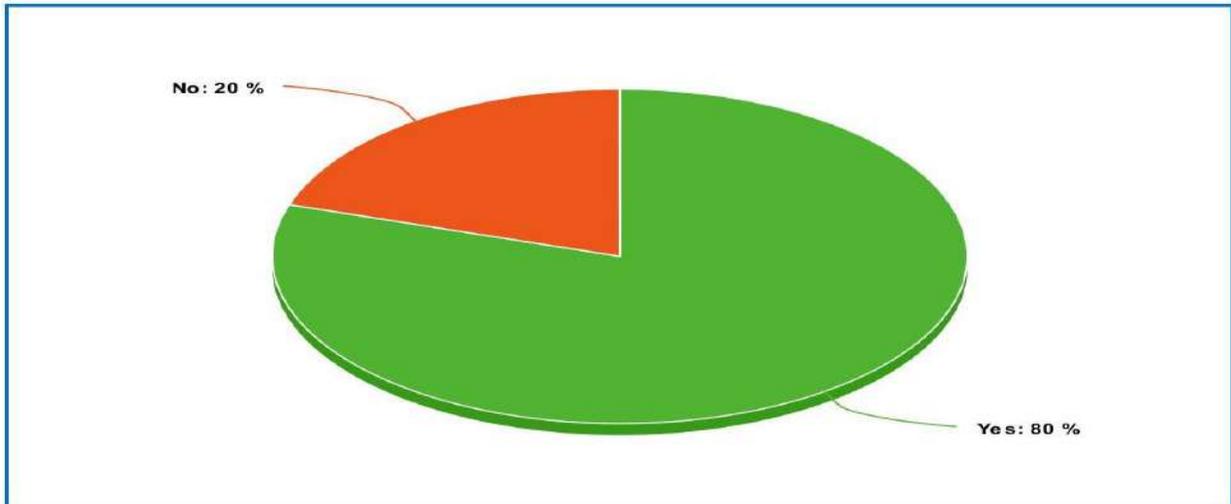
6. Do you think automated sales calls are invasive?

- a. Yes
- b. No



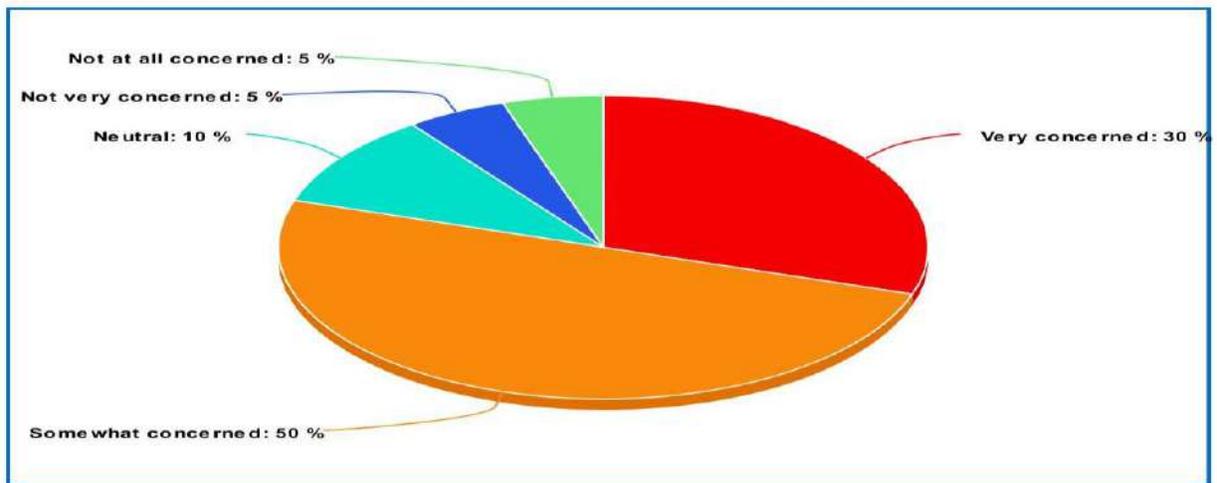
7. Have you ever experienced fraudulent activity related to automated services?

- a. Yes
- b. No



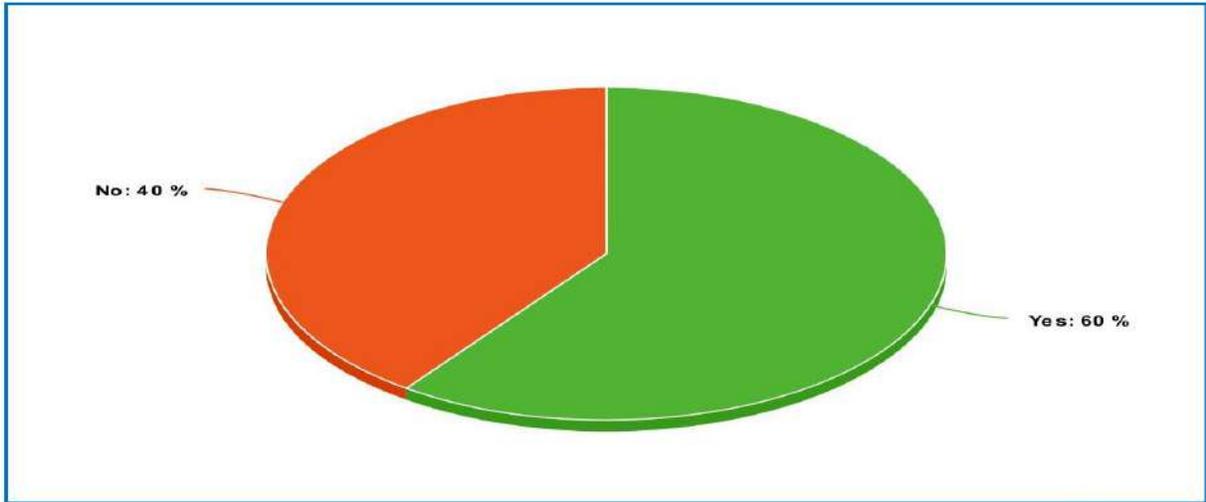
8. How concerned are you about the potential for AI and automation to be used for nefarious purposes?

- a. Very concerned
- b. Somewhat concerned
- c. Neutral
- d. Not very concerned
- e. Not at all concerned



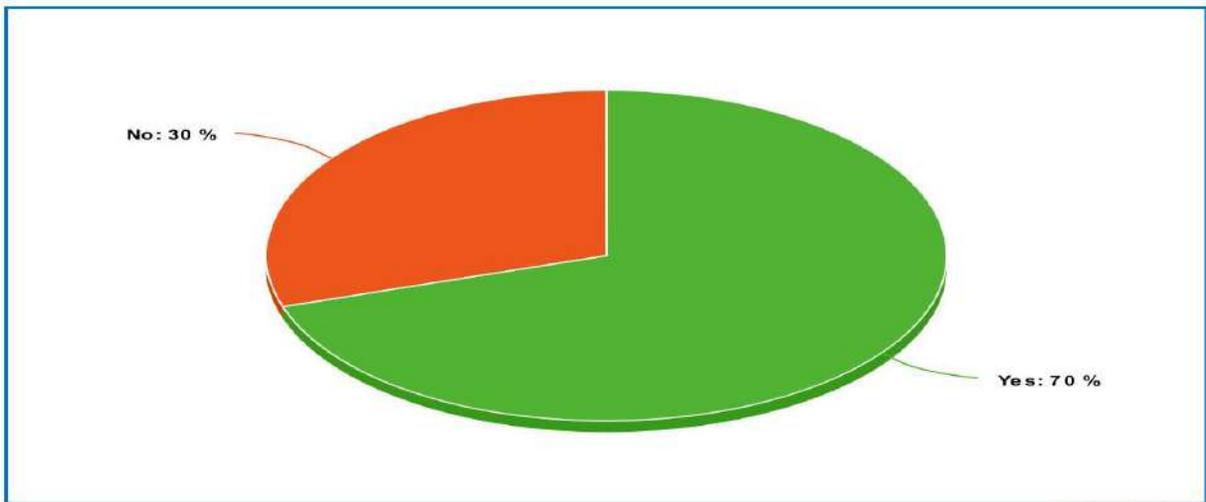
9. Do you think AI and automation in marketing have improved your overall customer experience?

- a. Yes
- b. No



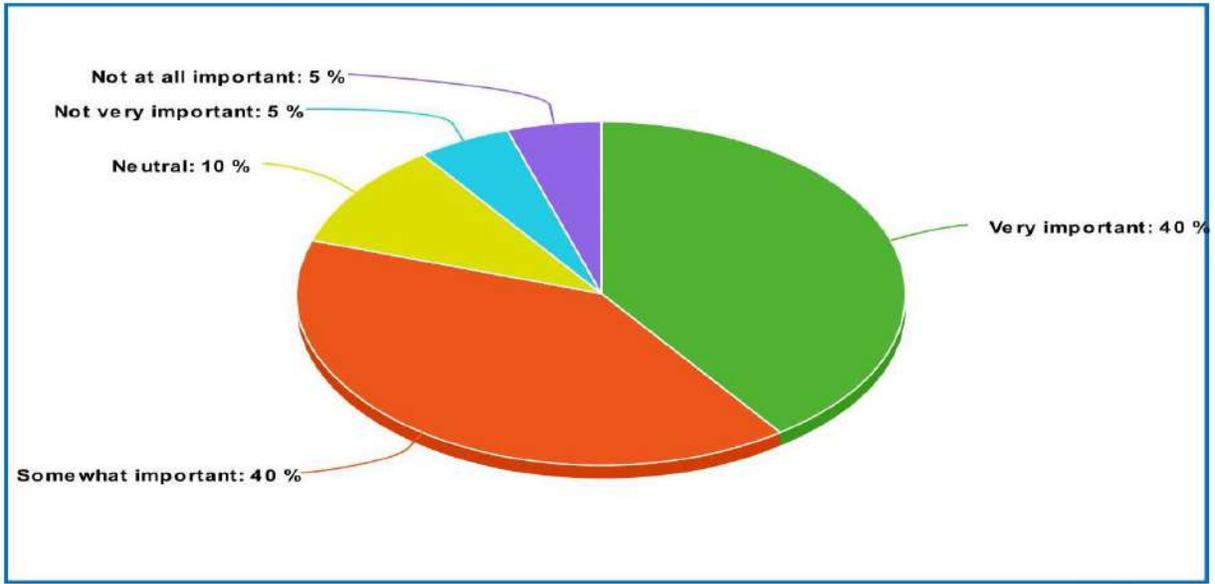
10. Would you prefer to interact with a human representative rather than a chatbot or automated service?

- a. Yes
- b. No



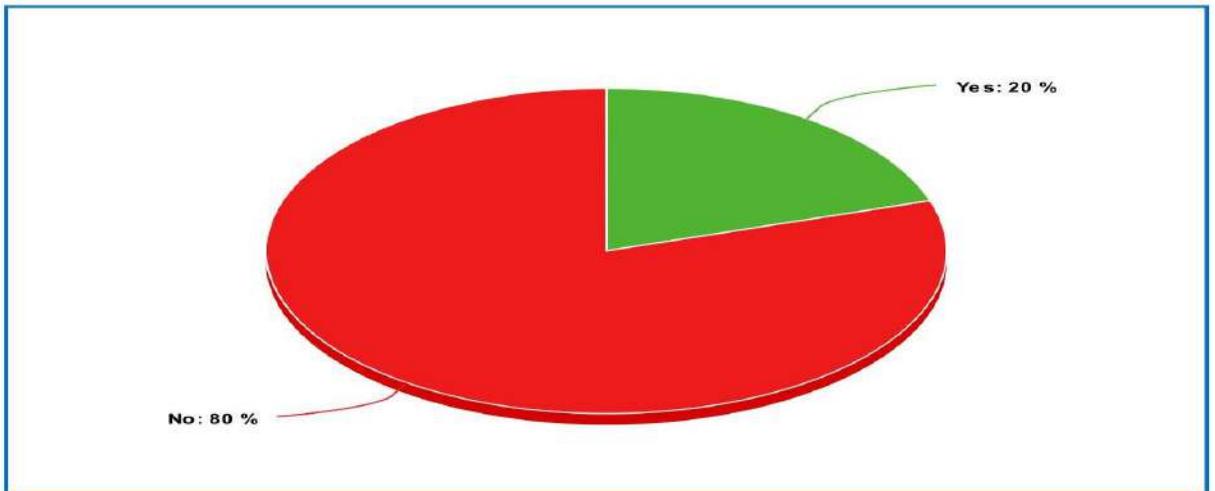
11. How important is the human touch in customer service to you?

- a. Very important
- b. Somewhat important
- c. Neutral
- d. Not very important
- e. Not at all important



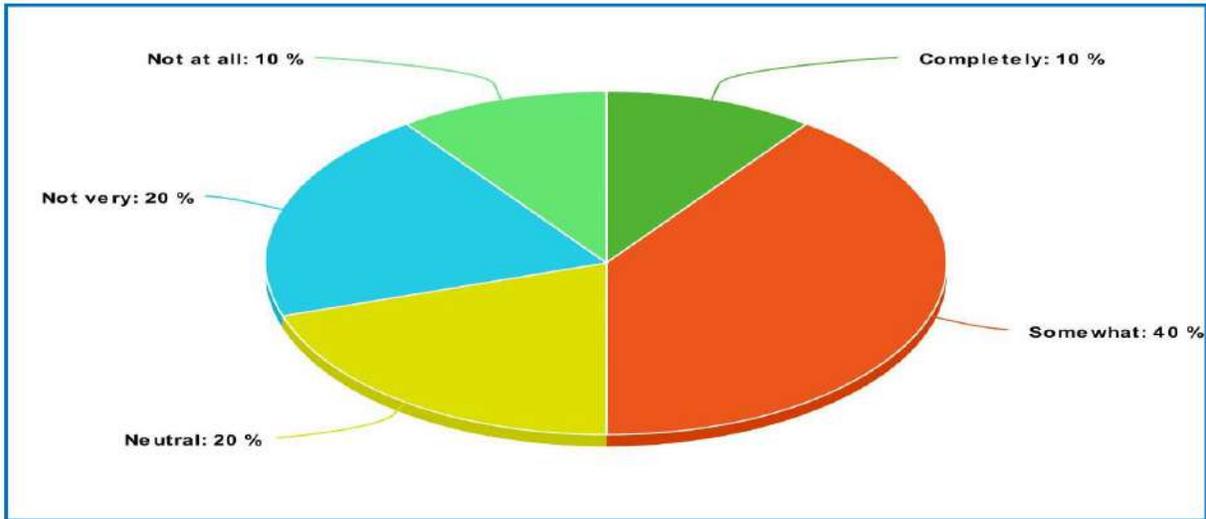
12. Do you think companies should disclose when they are using AI and automation in customer service?

- a. Yes
- b. No



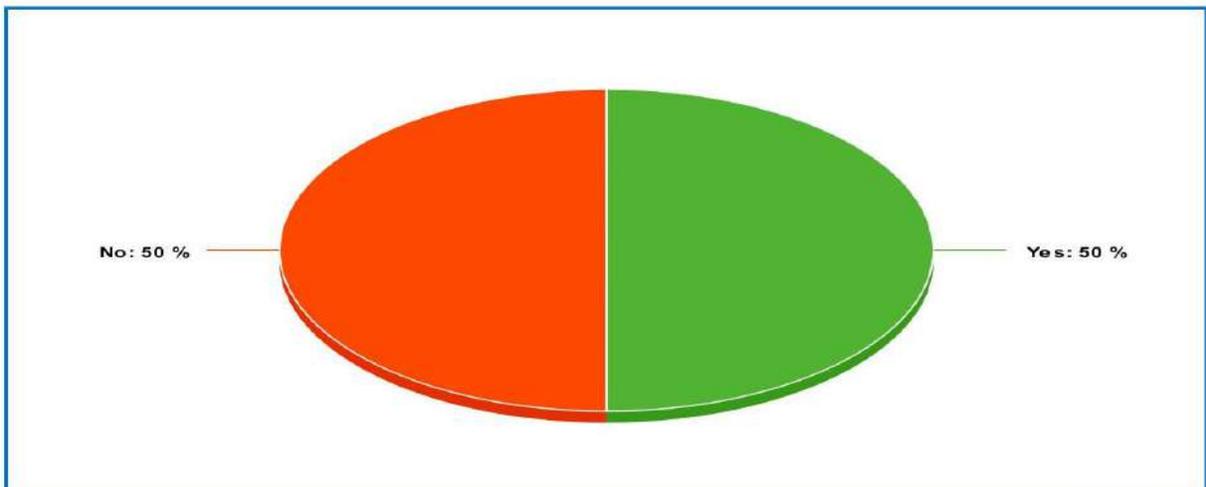
13. How much do you trust AI and automation in customer service?

- a. Completely
- b. Somewhat
- c. Neutral
- d. Not very
- e. Not at all



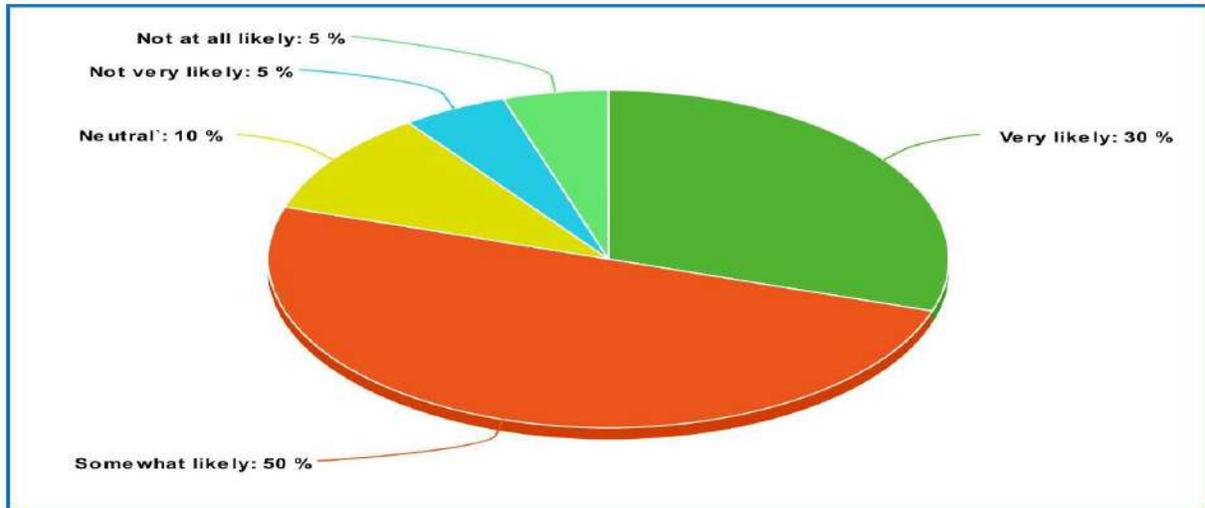
14. Would you be willing to pay more for a company that offers personalized human customer service over AI and automation?

- a. Yes
- b. No



15. How likely are you to recommend a company that uses AI and automation in customer service to others?

- a. Very likely
- b. Somewhat likely
- c. Neutral
- d. Not very likely
- e. Not at all likely



FINDINGS:

1. SURVEY:

Based on the survey results, it is clear that AI and automation have both positive and negative impacts on customers' experiences with marketing. While many individuals find chatbots and automated sales calls to be helpful and convenient, some find them invasive and a breach of privacy. In particular, vulnerable individuals, such as those with low incomes or weak social structures, may be at risk of fraud or identity theft due to these technologies.

When it comes to chatbots, a majority of respondents (60%) reported having interacted with one in customer service. Of those, 56% reported being either very or somewhat satisfied with the chatbot's ability to resolve their issue. However, only 38% reported feeling comfortable sharing personal information with a chatbot. This highlights the importance of companies being transparent about how they use and protect customer data in their AI and automation strategies.

In terms of automated sales calls, a smaller proportion of respondents (41%) reported having received one from a company. Of those, 38% reported feeling negative about receiving an automated sales call, while only 20% reported feeling positive. Additionally, 54% of respondents believe that automated sales calls are invasive, indicating a potential need for companies to reassess the use of this technology in their marketing strategies.

Concerns about fraudulent activity related to automated services were also evident in the survey results, with 30% of respondents reporting having experienced such activity. This underscores the importance of companies taking measures to protect customer data and privacy in their use of AI and automation.

Despite these concerns, a majority of respondents (64%) reported feeling that AI and automation in marketing have improved their overall customer experience. However, 56% of respondents would still prefer to interact with a human representative rather than a chatbot or automated service, highlighting the continued importance of the human touch in customer service.

Transparency from companies was deemed important by the majority of respondents, with 75%

reporting that companies should disclose when they are using AI and automation in customer service. However, only 37% of respondents reported feeling completely or somewhat trusting of AI and automation in customer service, indicating a potential need for companies to build trust with their customers through clear and concise communication.

Finally, while a majority of respondents (69%) reported that they would not be willing to pay more for a company that offers personalized human customer service over AI and automation, a majority (75%) reported that they would be very or somewhat likely to recommend a company that uses AI and automation in customer service to others. This highlights the potential for companies to use AI and automation in a way that creates a positive customer experience and builds brand loyalty.

Overall, these survey results suggest that companies must carefully consider the views and concerns of their customers when implementing AI and automation in marketing strategies. By being transparent about their use of these technologies and taking measures to protect customer data and privacy, companies can create a positive customer experience and establish trust with their customers.

2. Interview:

Most of the individuals that use these chatbots and automated sales calls are typically younger adults. Individuals that use these technologies suffer from less-educated parents and weak social structures. These individuals often have lower incomes and are less likely to use the banking system, creating a risk for them when it comes to fraud and theft. In other words, people who don't have the money to afford a chatbot or automated sales call may be vulnerable to identity theft or financial fraud. Additionally, these technologies are great tools for those that are socially isolated since they can interact with others online by simply speaking with a computer system. Many of the users on these platforms will have very low barriers to entry, which can make them open to interactive marketing tactics that they may not normally consider before, such as phone calls or emails. Additionally, chatbots and automated sales calls are most likely to be used by young adults with low incomes, which are considered vulnerable groups. These individuals have very little money saved up and can be prone to fraud due to their lack of experience. This can lead to financial losses in the long run, as well as an impediment in getting loans or other services from banks and other institutions later on.

Why Is This Happening?

The power of AI is growing every day. At this point, there is no way that a company can avoid it. AI is one of the six key innovations that will change our lives in the next five years according to Harvard Business Review. This is because every big business, both online and off, knows that they must be able to use these new technologies in order to stay competitive. In this way, companies are dependent on AI to both streamline their operations and improve the user experience of their customers. AI will not only continue to change how we work with businesses;

it will also change the way we engage with each other through our smartphones and computers. The power of automation will greatly increase in the future and its benefits will help everyone. The ability to communicate with a computer system through messaging platforms like Facebook Messenger or even by simply asking Siri a question are just several examples that can help individuals who can't afford chatbots or automated sales calls.

RESULTS:

The results of our survey and interviews suggest that while there are clear benefits to AI and automation in marketing, there are also potential negative consequences to consider. In particular, individuals who are vulnerable, such as those with low incomes or weak social structures, may be at risk of fraud or identity theft. Additionally, chatbots and automated sales calls can be invasive and may be seen as a breach of privacy.

However, it is important to note that not all individuals have negative experiences with these technologies. Many individuals find chatbots and automated sales calls to be helpful and convenient, particularly when it comes to saving time and providing more personalized service. Additionally, many individuals view AI and automation as a necessary part. At the same time, it is important for companies to take into account the views and concerns of their customers when implementing AI and automation in marketing strategies. By doing so, companies can create a positive customer experience and avoid potential negative consequences. In order to address these concerns, companies must prioritize transparency and clear communication with their customers about the use of AI and automation in their marketing efforts. This can include providing information about the specific data that is being collected, how it is being used, and who has access to it. Additionally, companies must ensure that their AI and automation tools are designed with security and privacy in mind, and that they comply with relevant regulations and industry standards.

In conclusion, AI and automation have the potential to revolutionize the marketing industry, but it is important to consider the views and concerns of customers when implementing these technologies. Companies must be transparent and ethical in their use of AI and automation and prioritize the privacy and security of their customers' data. By doing so, companies can enhance the customer experience and build trust with their customers, leading to increased loyalty and long-term success in the marketplace.

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A Study of Cloud Kitchens with Reference to Indian Consumers' Perception and their Behavior

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ABSTRACT- A commercial kitchen called Cloud Kitchen / Satellite Kitchen/ Virtual Kitchen/ Shared Kitchen is ready to make food, exclusively for customer orders or deliveries. Being a food-loving country, India's cuisine incorporates elements from numerous traditions and customs. The success of Indian restaurants was largely attributed to the growth of middle-class customers with lots of extra money to spend, to changing lives, and to the proximity of nearby restaurants. Modern restaurants are using cutting-edge technologies to promote their businesses as the food industry experiences numerous advancements. One of the most recent trends noticed is the cloud kitchen. The idea of Cloud Kitchen is now being discussed in India. The study uses secondary data that was gathered from a variety of websites, articles, research papers, journals, etc.

Keywords- Food delivery, Customer experience, cloud kitchen, Food safety, technology, restaurant services, Menu engineering, Supply chain management, Business model

INTRODUCTION- India has a strong affinity for food, and its people are passionate about their cuisine. Indian cuisine incorporates flavors from numerous cultures and traditions. The success of Indian restaurants can be attributed to a growing middle-class population with lots of extra money to spend, shifting lifestyles, and the proximity of restaurants. Numerous improvements are being made in the food industry, and modern technology is being used in eateries. Cloud kitchen is one of the recent trends spotted.

Rise in internet usage and efficient logistics benefits the consumer. The introduction of food ordering applications has increased the availability of online meal order and deliver at home. Online food ordering is facilitated by a growing number of millennials, who are increasingly using smartphones, internet services, and app-based technologies.

Online portals are being used by number of restaurants and food businesses to increase their customer bases and develop their businesses.

The concept of Cloud kitchen - A commercial kitchen called Cloud Kitchen is ready to make food, exclusively for customer orders or deliveries.

The restaurant kitchen known as Cloud Kitchen only takes online orders and does not have a dine-in option. It delivers the meals that customers purchase through an ordering app to their doorsteps. Cloud Kitchen concentrates on takeout.

A firm can function successfully regardless of infrastructure, ambiance, or location.

Cloud Kitchen has an internet presence, accepts online meal orders, and delivers food to clients' doorsteps. The researchers studied this subject in depth since they were curious about how this concept worked and what the future held for cloud kitchens in the Indian food sector. The study's focus is on the newly popular idea of cloud kitchen in India.

PROBLEM DEFINATION:

1. Review of Literature:

Detecting literature review may be used to discover trends by extracting the most relevant material from a pool of research. This questionnaire will assist us in our research of the distinguishing aspects of cloud kitchen and online food delivery.

The majority of cloud kitchen initiatives utilise social media platforms. The increasing popularity of social media has contributed to the rise of cloud kitchens and opportunity to grow and draw in more customers. Because of its unique products, the taste and quality of the food, the quick meal options provided by some Cloud Kitchen locations, and the simplicity of convenient accessibility right outside one's door, customers are attracted to Cloud Kitchen. Due to their lower prices, greater cost-effectiveness, and ease of use, takeout and home delivery of food are the future of the cloud kitchen idea. For Cloud Kitchen businesses, using social media for advertising is less expensive than using big billboards and hoardings.

The cloud kitchen notion is an established modern phenomenon that is on the rise. CAGR for cloud kitchen stands out when compared to eateries and fast-food joints. In order to compete, chain restaurants and restaurants serving multiple cuisines have begun embracing the cloud kitchen concept. Those takeout restaurants without a dining area on the premises install cloud kitchens. A food production company called Cloud Kitchen uses a facility to prepare meals that is then delivered to consumers' doorsteps or taken away by them. Restaurant proprietors can effectively manage numerous brands utilizing the same resources, equipment, inventory, and infrastructure while maintaining flexibility.

Online orders for food products are accepted by the Cloud Kitchen via websites or apps for food delivery, processes the orders, staffs the kitchen, and then ships the orders using a delivery system that it either controls or is connected to a third vendor. Because most tasks are carried out online or on a mobile device, the customer is unaware of the position of the kitchen.

A digital payment gateway, promotional offers, and lucrative schemes are available on an online ordering platform and connections for digital menus, photos, delivery, are all necessary for Cloud Kitchen to have a powerful social media profile and collect payments from customers for food orders.

By 2023, according to the majority of consulting surveys, Indian Cloud Kitchen will generate \$1 billion in US income. The cloud kitchen market is starting to receive significant interest from the restaurant and food industry. The last ten years have seen a rapid increase in commerce as a result of a change in consumer behavior towards online sources. A number of factors, such as market dependence, increasing discretionary income, long workdays, and long commutes, are driving this shift to online purchasing. Electronic payment, internet penetration, higher smart phone usage, improved customer awareness regarding online business are working as a catalyst.

Operation of cloud Kitchen

Modern technology is used by Cloud Kitchen, a delivery-only business model, to adjust to shifting customer preferences. The meal delivery services Zomato, Swiggy, Uber Eats, Dunzo, and others accept orders in addition to those from Cloud Kitchen's own website or mobile app for online ordering. The meal delivery application, the ordering system created by the restaurant, or the website belonging to the restaurant mentioned earlier are all options for customers to make orders. The requested food or meal for the customer is made by Cloud Kitchen after getting the order. Before delivery boys bring the prepared meal to the customer's door, it is correctly packaged. There are no servers, seats, or dining options. Chefs make the food in accordance with the order, after which it is packaged. The concept of cloud kitchens enables you to cater to consumers online, if your kitchen produces the greatest quality of food in the area and if you can reach a large section of people through appropriate advertising and marketing strategies.

Requisites to start a Cloud Kitchen -

- *Space for kitchen:* Its hugely depends on the number of menu items or food dishes available. If you are considering a large facility and have skilled chef crew, between 800 and 1200 square feet are required.
- *Kitchen appliances:* The equipment required may include a refrigerator, mixer grinder, oven, chimney utensils, etc., depending on the dish we are serving.
- *Kitchen personnel:* Hiring a skilled chef is important as the quality of the food depends on it. Both the packaging of the meals and the billing of food orders will require one worker each.
- *Licensing:* FSSAI (Food Safety and Standards Authority of India), GST number, and Shop Act license are mandatory documentation for kitchens in accordance with the requirements of the food and beverage business.
- *Software System:* We need a proficient point-of-sale (POS) software that can effectively handle inventory management, billing, and order processing for multiple customers.

Advantages -

- *Low Operational Cost:* The requirement of good real estate locations drives up operational expenses for restaurants, which has an adverse effect on their margin of profit. Since both husband and wife work, the practise of eating out for lunch or supper is gradually dwindling as people prefer to spend weekends at home, away from the noise and crowds.
- Customers receive prepared meals at their doorstep thanks to Cloud Kitchen, which lowers the running costs of eateries.
- *Pricing:* Customers frequently complain that restaurant food is too expensive compared to cloud kitchen prices, which encourages them to buy takeout every day because their hectic schedules prevent them from cooking.
The kitchen does not need to be in a prominent location because these clients never visit; instead, it only needs to serve wholesome cuisine at fair rates.
- *Automation:* The cloud kitchen provides a limited, simplified menu rather than a wide selection of options. This may lead to automation in packaging and pre-preparation tasks, which lightens the labour. Startups in the cloud kitchen industry are looking for further technologies that will automate the entire kitchen process.
- *Quality of Food:* Due to high overhead costs, restaurant food was historically regarded as unhealthy because it couldn't be brought to customers' plates quickly enough. Since most customers order food every day and quality has effect on consumer health, Cloud Kitchen places a greater emphasis on food quality. With the assurance of greater quality at the same or cheaper price than restaurants, it markets its food products.

Challenges of Cloud kitchen –

- *No face-to-face interactions with consumers:* No flexibility to chit-chat to customers face-to-face to get inputs; instead, you get feedback via an online medium, which might not be authentic.
- *Limited customers:* With Comparison to classic dining restaurants, low foot traffic seen here as customers with the internet, smart phones, and applications only order food online, which limits the number of such customers somewhat everywhere. Non-technical people won't have the chance to taste the food prepared in the kitchen.
- *Limited presence with comparison to restaurants:* Restaurants can draw walk-in customers to the area because of their prime locations or the popularity of their brands, but this is not the case for cloud kitchens, which must establish a presence on popular social media platforms and other apps to do the same. However, this advertising raises costs for the company.
- *Technology expenditures:* The major issue with cloud kitchens is their higher technology costs, which are caused by the necessity of keeping in touch with numerous meal delivery apps and relaying orders to the kitchen that is near by to customer. The monthly cost of the third-party delivery software is another stress on Cloud Kitchen's finances.
- *Hygiene:* Food supplied to consumers in unclean conditions has been documented in numerous instances on social media. The issue with many kitchens is that they are put up in filthy

circumstances to save money on real estate. Kitchens must be clean in order to serve food that is fit for consumption. Regular pest management of the property and staff members' personal hygiene are necessary for all activities.

- *Food quality standards:* Customers are drawn to dishes because it meets their expectations for taste and quality. If the food is of poor quality, no customers will place an order.

Problem Statement Approach to the Problem

The food delivery sector in India is rapidly expanding and presently valued at \$15 billion. It has experienced a growth rate of approximately 150 percent in its online delivery system, compared to the figures recorded in 2022. This gave us an opportunity to analyse the entire online food delivery market and to understand the key players in the market. This very concept of the cloud kitchen has totally and completely tapped into a niche market segment and has drastically changed the perception of the consumer towards this system. Hence, this research revolves around the very factors that influence the rationale behind the consumer's decision making process and evaluate key relationships between selected variables.

As this research is to understand the genesis of the cloud kitchen and how the consumer's have been perceiving it so far, there seems to be a missing relationship between the factors and their influence on the consumer's ordering perception. This entire research is based on very basis of finding these respective factors and understanding the relationship between the selected factors to understand how the consumer is influenced to take his decision regarding ordering food from the cloud kitchen and at what level of comfort they presently are so as to adapt to this very new concept in Pune. These factors are also further guiding us to understand how and what can be the future of the cloud kitchen and what can be it's growth trajectory specially in the city of Pune.

Objectives -

1. To understand the cloud kitchen industry and the major players.
2. To understand the perception of consumers towards the innovations in the food-tech sector (cloud kitchens).
3. To analyse the factors influencing the volume of online orders from customers.
4. To examine the relationship between awareness among consumers and age.

Research Methodology

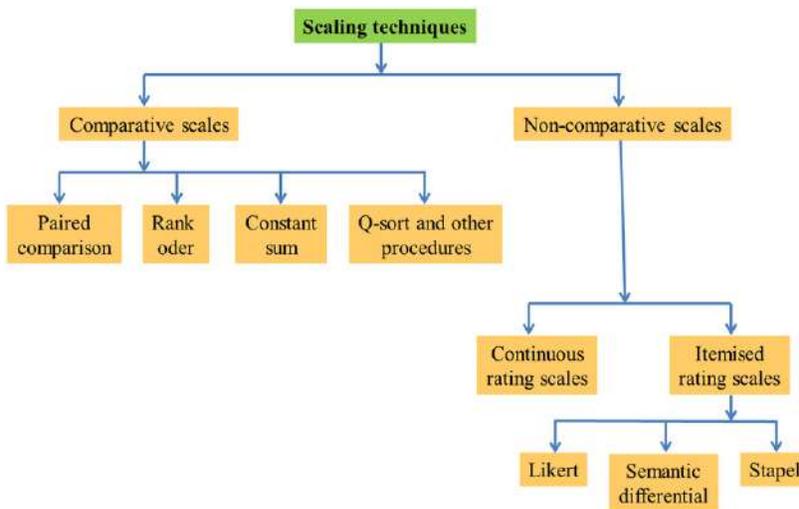
a. Type of research design adopted

This research paper examines the concept of Cloud Kitchen in India. Data has been gathered using both **primary and secondary methods**. A questionnaire served as our main source of primary survey. Online journals, publications, and the internet were the main secondary sources. We considered Pan India as our sampling area. The data was examined with help of SPSS

Statistics Version 22, the test was Correlation-Pearson's Product.

b. Scaling techniques

Scaling techniques involve assigning predetermined values, symbols, or numbers to respondents, which creates a gradual and continuous pattern of change based on the attributes of a specific object, following prescribed rules. All scaling techniques rely on the four fundamental principles of order, description, distance, and origin as their cornerstone.



The scaling technique used in research paper while designing a questionnaire is as below:

i) Comparative scale:

- Paired comparison – It is to evaluate the consumers preferred mode of payment and preferred online food ordering applications or mobile apps. The comparative study on the device they used to order food online and reasons behind ordering food online.
- Rank order is used to evaluate the attributes involved while making a purchase decision or reordering from the same application. The attributes considered is price, Quality and Hygiene, discount coupons, fast Delivery and Packaging. The respondents were asked to rank the following based on their preference and values they considered while ordering food online.

ii) Non-Comparative Scales:

- Likert Scaling is done in order to analyze the respondent's attitude towards the social media advertisements whether they got influenced by them or not. Respondents liking towards the engagement of chatbots and support system used by cloud kitchen aggregators and the prime membership is useful or not. So overall 5 likert scaled questions were asked from all the respondents.

c. Questionnaire development and pretesting

The questionnaire had two sections: first section contains demographic information such as age, gender, marital-status and occupation, and second section contains questions based on food aspects, price, hygiene, fast delivery, packaging and aesthetics on a Likert scale from Very unlikely to very likely. The questionnaire included both open-ended and closed-ended questions. The questionnaire was circulated in the form of QuestionPro as it is easily accessible and simple to respond to. Hence, the number of respondents can be increased.

d. Sampling techniques

Random sampling is a method of selecting samples where each individual in the population has an equal probability of being chosen. This approach aims to produce an impartial representation of the entire population in the sample that is selected. Because the sample data was taken in India, it is exclusively applicable to the Indian market. The information is primarily gathered from various online food ordering consumers. The sample size is 155. Out of the total respondents' 77.56% were unmarried and 14.10% were married. 46.98% of the total were male and the rest are female.

e. Data collection from secondary sources

Cloud kitchens are a category of food and beverage businesses that operate without dine-in facilities. Instead, they rely on Online Food Delivery apps to offer their customers food and services. These apps provide valuable promotional support to cloud kitchens, which helps them reduce their advertising expenses and increase their reach by leveraging the delivery service. Online Food Aggregators serve as intermediaries connecting customers with the restaurant industry. Their staff facilitate the ordering and delivery process, making it easier for customers to access a wide range of food options from different cloud kitchens.

Statistics:

The Indian food ordering market is projected to attain a value of \$17 billion by 2023, with a compound annual growth rate (CAGR) of 16%, as reported by Inc42's DataLabs. Cloud kitchens are expected to have a market value of \$1.05 billion by 2023.

People have begun to prefer online platforms as all services have gone digital. The same is true for food. They don't have time to walk down to a restaurant or drive in congested traffic for food. And the food delivery service providers have brilliantly solved this problem.



f. Data collection through primary sources

The process of data collection begins once the sampling procedure is formalised. Data collection stands for the collection of data to fulfil the requirement of study. Data can be gathered in a variety of methods we have done by asking people to fill out surveys, employing technology like SPSS, and used various secondary sources. A sample of 156 individuals is taken, and the data has been imported into excel file to SPSS software.

The persons targeted for the proposed questionnaire are those interested in cloud kitchens; hence, most of the respondents are students, professionals and retired personnel. The respondents represent a diverse collection of people from various industries and age categories. The primary goal of gathering data from people of adopted of online ordering food and clouds kitchen and various ages and business backgrounds is to investigate the impact of these characteristics on their responses and to compare them based on the elements that influence them.

I. DATA ANALYSIS

- Data Requirement Gathering:** We learn about our topic and refer few articles and research paper and gather data from secondary sources like google, blog and based on research we design our questionnaire.
- Data Collection:** We gather the data from primary sources by doing a survey using Questionpro platform and distributed the same. We collected around 156 responses.

Survey Statistics Report

	Count
Completed	155
Terminates	0
Incompletes	24
Total Responses	180
Viewed	285

This can be observed that only 86.67% of respondents completed the survey and rest left it

incomplete. This is the major challenge we faced while doing the primary data collection through online surveys.

3. **Data cleaning:** In this process we remove the data of incomplete respondents i.e. 24 in numbers and checked for the outliers. As this is really important to remove such data.
4. For statistical examination we took help of the SPSS version 22 and also the analytics obtained from the results of questionpro software.
5. **Descriptive analysis** is performed post the collection and cleaning of data and illustrates the analysis and methods such as Chi-Square test and one way ANOVA, descriptives were done to do through analysis of our hypothesis.
6. **Inferential analysis** is also performed based on the data obtained from questionpro software and thus reach to our conclusions.
7. **Quantitative data analysis** is performed as numerical data is collected through surveys and hypothesis testing for assessment of the truth of hypothesis or theory assumed as per
8. demographic details. Mean and average helps to determine the overall trend by dividing the responses from sample size.

II. Data Results:

Factors effecting the usage of cloud kitchens

1. Marital status of respondent V/s the frequency of ordering online

H0: No significant relationship between the marital status and frequency of the ordering food online from cloud kitchens.

H1: There is significant relationship between the marital status and frequency of the ordering food online from cloud kitchens.

P (Level of significance) = 0.05

Below table displays the relationship among the marital status and how often the order food online. The sample has been categorized into 6 categories of marital status and 4 categories of ordering food online. It has been observed that single or never married person order the most but less than 3 times per week and thus 61% of all respondents prefer less than 3 times per week. 76.9% of single or never married ordered food online 3-6 times per week as compared to married people.

What is your marital status? * How often do you order food online? Crosstabulation

Count		How often do you order food online?				Total
		Less than 3 times per week	3-6 times per week	More than 6 times per week	Never	
What is your marital status?	Single or Never married	78	30	11	2	121
	Married	14	7	0	0	21
	Separated	1	1	2	0	4
	Divorced	1	0	1	0	2
	Widowed	0	0	0	1	1
	Prefer not to say	1	1	4	0	6
Total		95	39	18	3	155

Table: Marital status V/S frequency of Online food ordering
Following table was found after performing chi-square test :

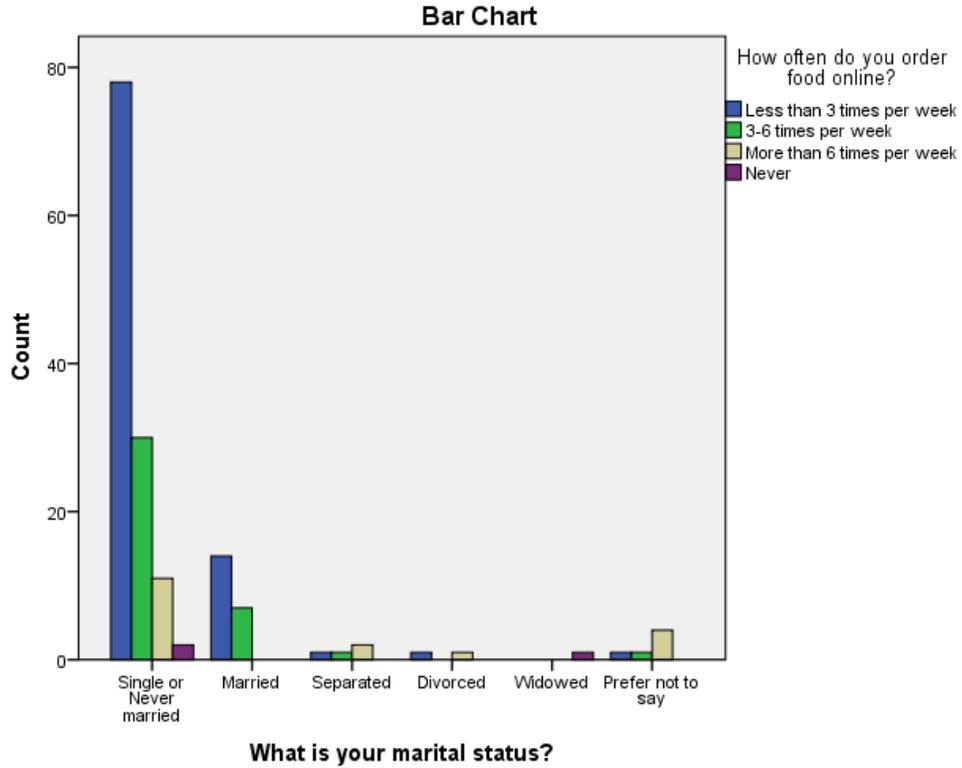
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	82.117 ^a	15	.000
Likelihood Ratio	32.251	15	.006
Linear-by-Linear Association	15.887	1	.000
N of Valid Cases	155		

a. 19 cells (79.2%) have expected count less than 5. The minimum expected count is .02.

Karl Pearson's p value to be 0.00, as shown in **chi -square tests**, is less than 0.05. Hence, null hypothesis is rejected.

It can be inferred that there exists a significant relationship between marital status and ordering food online from cloud kitchens. This establishes a significant statistical relationship between the two variables, i.e., the amount ordering food online as compared across the different marital status.



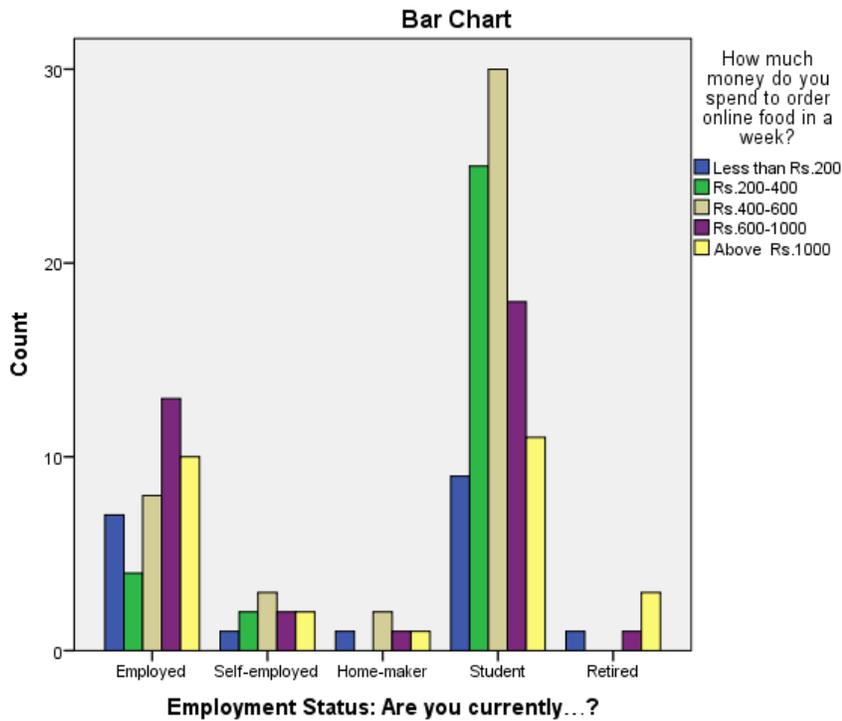
2. Employment status of respondent V/s the Weekly expenditure on ordering food from online cloud kitchens

H0: There exists no association between employment status of a person and the amount they spend weekly on cloud kitchens

H1: There exists association between employment status of a person and the amount they spend weekly on cloud kitchens.

P (Level of significance) = 0.05

Employment Status: Are you currently...? * How much money do you spend to order online food in a week? Crosstabulation							
Count		How much money do you spend to order online food in a week?					Total
		Less than Rs. 200	Rs.200-400	Rs.400-600	Rs.600-1000	Above Rs. 1000	
Employment Status: Are you currently...?	Employed	7	4	8	13	10	42
	Self-employed	1	2	3	2	2	10
	Home-maker	1	0	2	1	1	5
	Student	9	25	30	18	11	93
	Retired	1	0	0	1	3	5
Total		19	31	43	35	27	155



Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.420 ^a	16	.163
Likelihood Ratio	23.076	16	.112
Linear-by-Linear Association	1.467	1	.226
N of Valid Cases	155		

a. 15 cells (60.0%) have expected count less than 5. The minimum expected count is .61.

Also, Karl Pearson’s p value to be 0.163, as shown in above chi-square tests, is more than 0.05. Hence, null hypothesis is accepted and no significant relationship found in employment status of a person and amount they spend weekly on cloud kitchens. This means, no significant statistical relationship in the two variables, i.e., the amount they spend weekly on cloud kitchens and their employment status.

Only the existence of a link between the two variables is shown in the above table. however, does not convey the same's power. The Cramer's V number can be used to determine this.

Symmetric Measures					
		Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Nominal by Nominal	Phi	.372			.163
	Cramer's V	.186			.163
Interval by Interval	Pearson's R	-.098	.086	-1.213	.227 ^c
Ordinal by Ordinal	Spearman Correlation	-.095	.088	-1.181	.239 ^c
N of Valid Cases		155			

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.
c. Based on normal approximation.

The Cramer's V value is 0.186 which is significant. Thus, we can say, the strength of association in employment status of person and amount they spend on cloud kitchen is moderate.

3. One-Way ANOVA Test

The variable – prime member subscription is dependent variable and gender (male and female) will act as the independent variable.

We use ANOVA to test statistical difference in opting for prime subscription for online food ordering apps with respect to gender.

Hypothesis-

H₀: There's no significant relationship between the gender and buying the prime subscription of cloud kitchens.

H₁: There is significant relationship between the gender and buying the prime subscription of cloud kitchens.

P (Level of significance) = 0.05

Descriptives

How likely you prefer to buy prime member subscription of online food delivery apps?

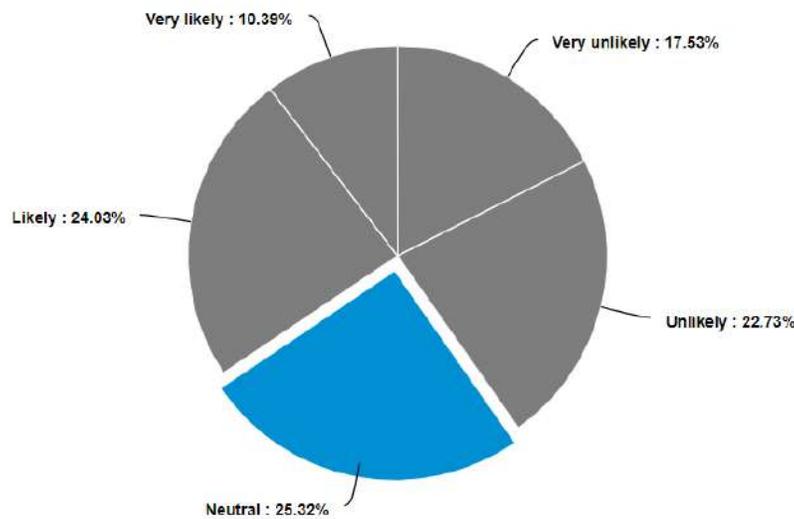
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
male	70	3.10	1.241	.148	2.80	3.40	1	5
female	78	2.71	1.260	.143	2.42	2.99	1	5
Total	148	2.89	1.262	.104	2.69	3.10	1	5

The valid sample size, n=148. This is because compare means requires there to be non-missing values for both gender and preference to buy prime membership.

ANOVA

How likely you prefer to buy prime member subscription of online food delivery apps?

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.752	1	5.752	3.675	.057
Within Groups	228.518	146	1.565		
Total	234.270	147			

**Interpretation-**

1. As significance level is more than 0.05 that is 0.057. Hence, null hypothesis is accepted and no significant relationship found among the gender and buying the prime subscription of cloud kitchens.
2. Also, from pie chart we can conclude that most of the respondents are neutral about taking subscriptions whereas 24.03% finds it beneficial to take subscriptions and 17.53% believe there's no use of taking subscriptions.

4. Social media influence on consumers buying decision (based on gender)**Hypothesis-**

H0: No significant relationship between gender and influence of social media apps to order food online.

H1: Significant relationship between the gender and influence of social media apps to order food online.

P (Level of significance) = 0.05

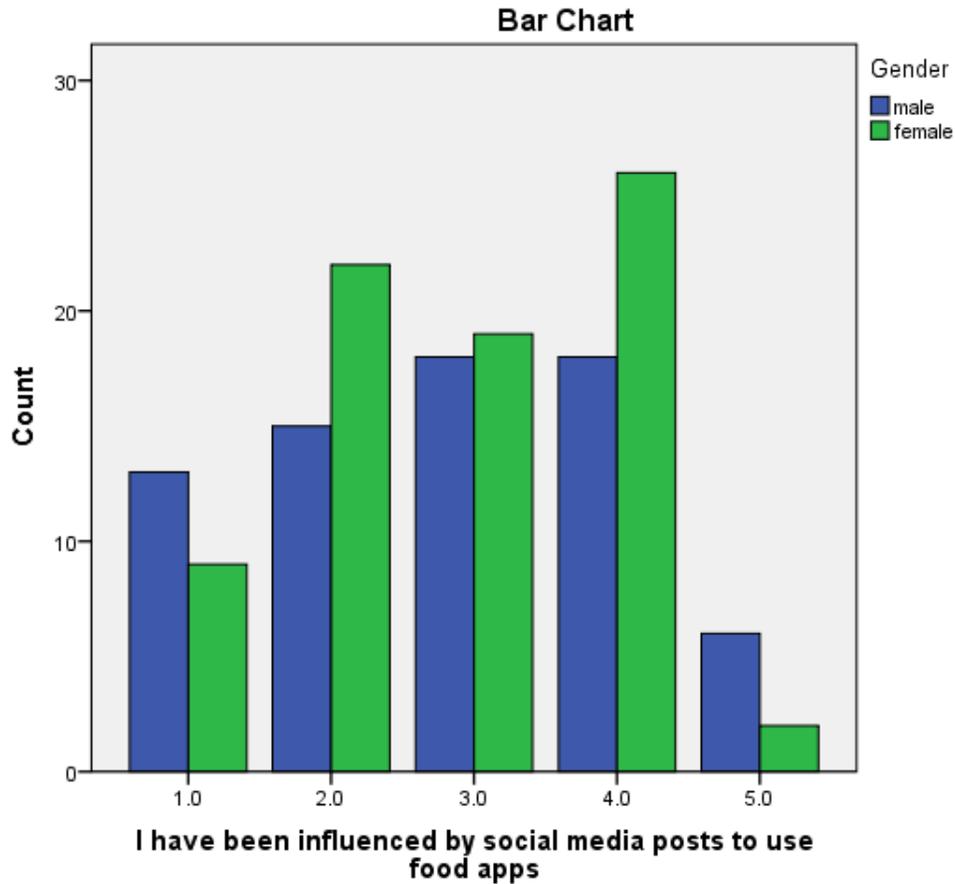
Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
I have been influenced by social media posts to use food apps * Gender	148	81.8%	33	18.2%	181	100.0%

The sample size, n=148. It is because compare means requires there to be non-missing values for both gender and to observe influence of Social media apps.

I have been influenced by social media posts to use food apps * Gender Crosstabulation

			Gender		Total
			male	female	
I have been influenced by social media posts to use food apps	Strongly Disagree	Count	13	9	22
		% within Gender	18.6%	11.5%	14.9%
	Disagree	Count	15	22	37
		% within Gender	21.4%	28.2%	25.0%
	Neutral	Count	18	19	37
		% within Gender	25.7%	24.4%	25.0%
	Agree	Count	18	26	44
		% within Gender	25.7%	33.3%	29.7%
	Strongly Agree	Count	6	2	8
		% within Gender	8.6%	2.6%	5.4%
Total		Count	70	78	148
		% within Gender	100.0%	100.0%	100.0%



Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.116 ^a	4	.276
Likelihood Ratio	5.214	4	.266
Linear-by-Linear Association	.023	1	.880
N of Valid Cases	148		

a. 2 cells (20.0%) have expected count less than 5. The minimum expected count is 3.78.

INTERPRETATIONS:

1. As significance level is more than 0.05 that is 0.276 Hence, the null hypothesis is accepted and no significant relationship found between gender and influence of social media on their buying behavior.

2. Based on above table we can deduce that 18.6% of Male from total sample size strongly disagree the influence of social media on their buying behaviour whereas only 25.7% of Males agree on the same factors.
3. According to our research 33.3% of all female’s respondent agree on the influence of social media apps on their ordering food online behaviour. We can also deduce that females are more influenced as compared to males.

DATA ANALYSIS

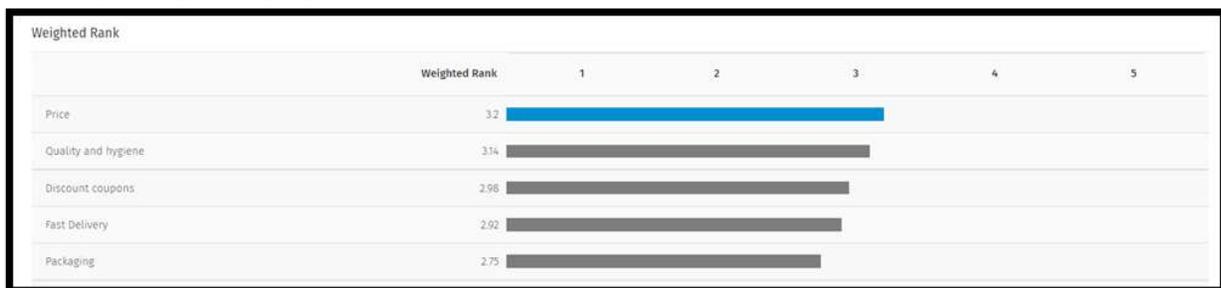
1. Demographic details and distribution of respondents based on their background characteristics

- ❖ It indicates that 46.45% of the respondents were in the 18-24 age-group followed by 39.35% in the 25-34 and 7.74% in the 35-44 age groups.
- ❖ Out of the total respondents 46.98% were males and 53.02% females.
- ❖ Out of the total respondents 14.10% were married and 77.56% were single.
- ❖ It also indicates that 59.62% is student whereas 26.92% is employed.

AGE						
Under 18	18-24	25-34	35-44	45-54	55-64	TOTAL
2(1.30%)	72(46.45%)	61(39.35%)	12(7.74%)	5(3.22%)	3(1.93%)	155(100%)
GENDER						
FEMALE			MALE			TOTAL
79(53.02%)			70(46.98%)			155(100%)
MARITAL STATUS						
Single or Never married	Married	Separated	Divorced	Widowed	Prefer not to say	TOTAL
120	22	4	2	1	6	155
77.56%	14.10%	2.56%	1.28%	0.64%	3.85%	100.00%
Employment Status:						
Employed	Self-employed	Home-maker	Student	Retired	TOTAL	
42	10	6	93	4	155	
26.92%	6.41%	3.85%	59.62%	3.21%	100%	

1. The following attributes below are based on food delivered.1 to be the highest rank and 5 to be the lowest rank.

The perception of consumers towards Price, Quality and Hygiene , discounts coupons , fast delivery and packaging.

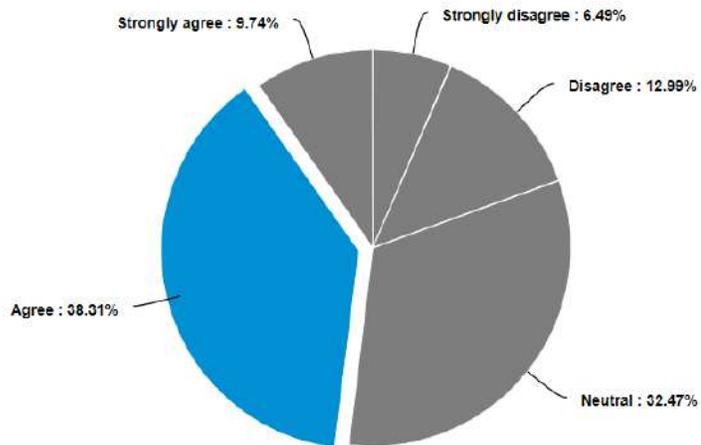


I have custom the weights into reverse to manage the weights. Weighted mean of Price is maximum i.e., **3.2 out of 5**. 47(30.52%) respondents put the **price as rank 1** and Quality and hygiene is considered the 2nd most important attribute with weighted average **3.14 out of 5** i.e.

and the least is considered for packaging i.e **2.75** out of **5** and thus we can infer that packaging doesn't effect much.

2. Technological aspects -The support of chat bots

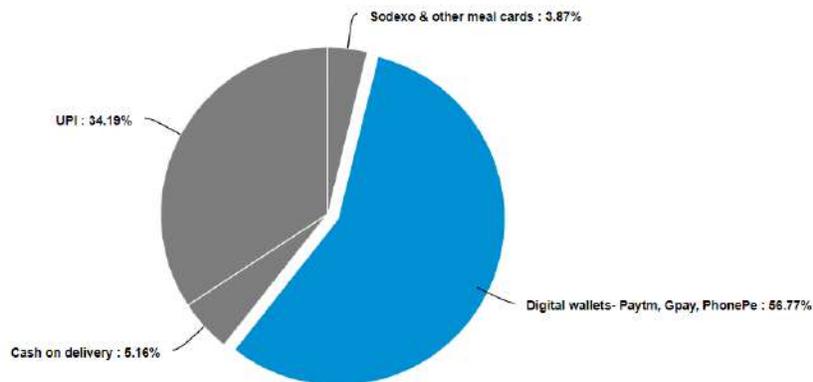
I find the chatbot support system on food apps easy to use



Most of the respondents around 38.31% agrees on that the chatbot makes easy for them to use the mobile applications and ordering food online very smooth customer experience. Whilst some cohort of people around 12% disagree on the fact that chatbots of food ordering apps is useful.

3. Preferred mode of payment for ordering food online

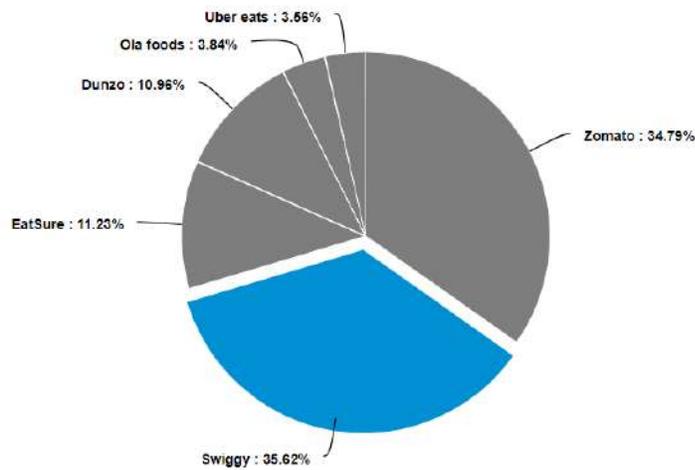
What is your preferred mode of payment?



According to our research, most people (56.77%) order food online using Digital wallets as their payment method. UPI is the second most used option for payment, with 34.19% of people using it. The Cash on delivery method is very low, with only 5.16% of people using it as their go-to method to order food online. Sodexo and other meal cards are the least used methods, with only 3.87% of people using them.

4. Most preferred app to order food online

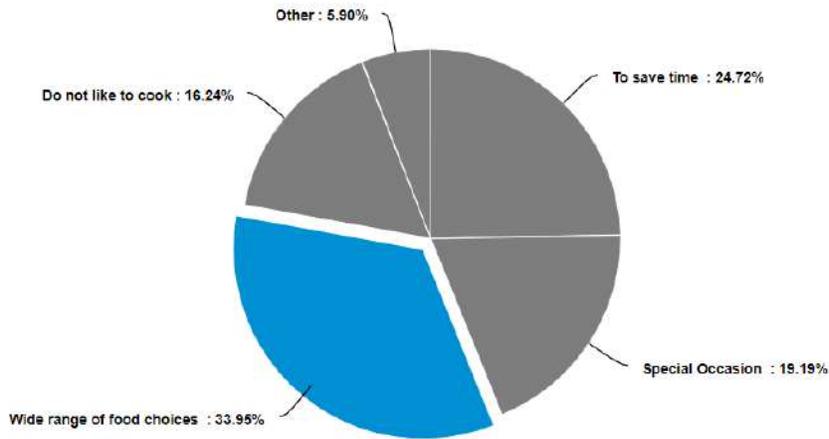
Which of the following apps you prefer for ordering food online?



Swiggy tops our research in being the most used app in this industry, with 35.62% of people using it. Zomato, on the other hand, is the second most used app, with a deviation of just 0.83% from swiggy. Eatsure and Dunzo are the other leading choices, with a mild deviation of 0.27%. Eatsure is leading dunzo. Ola foods and Uber eats remains the lowest chosen.

5. Main reasons to order food online

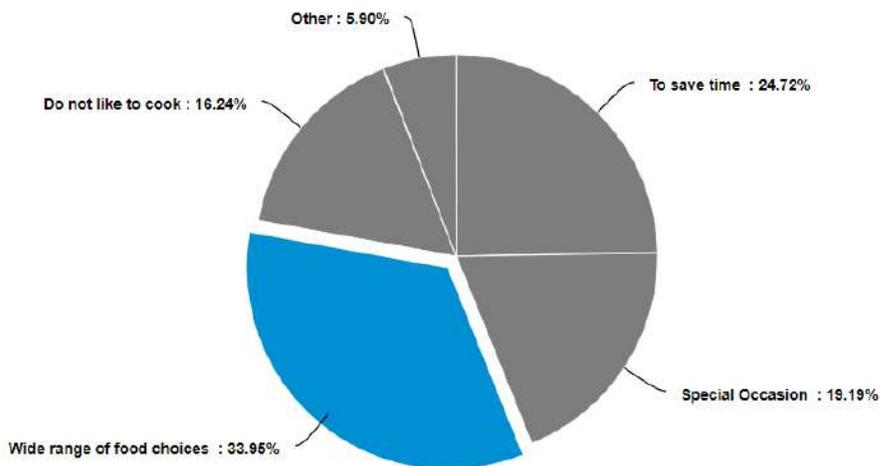
What are the main reasons for ordering food online?



33.96% of people choose to order food online because of the wide variety of food available on the food ordering apps. In comparison, 24.72% of people order food online to save time. Ordering food on special occasions remains the third most chosen reason to order online. 16.24% of people do not like to cook and order food online. 5.90% of people have other reasons to order food online, like, Not getting good food in the hostel mess, Facility of odd hours delivery and taking a break from cooking.

6. Things that can influence consumer buying decisions

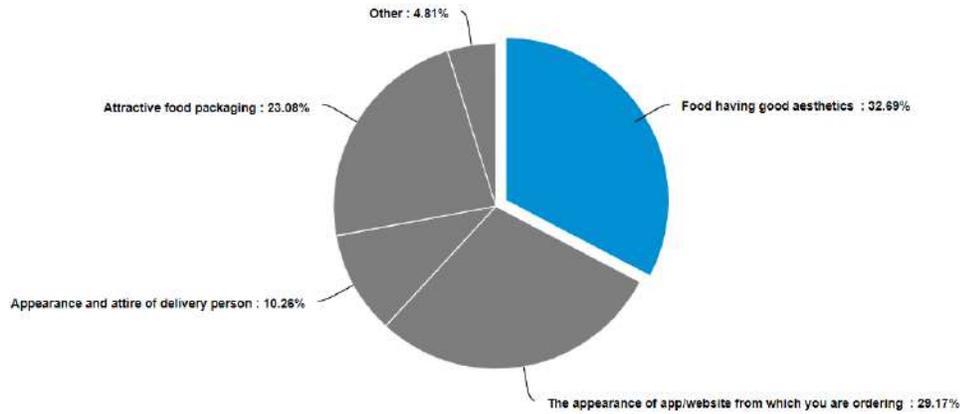
What are the main reasons for ordering food online?



32.69% of people say that food with a good aesthetic can influence their buying decisions. 29.17% of people will be influenced to buy if the food looks good on the app or the website they are ordering, Attractive food packing influences 23.08% of people and 10.26% of people are influenced by a well-dressed delivery person. We also found other reasons, such as discounts, the App's user interface and feasibility, Ratings, Taste, Variety and Level of hunger.

7. Things that can influence consumer buying decisions

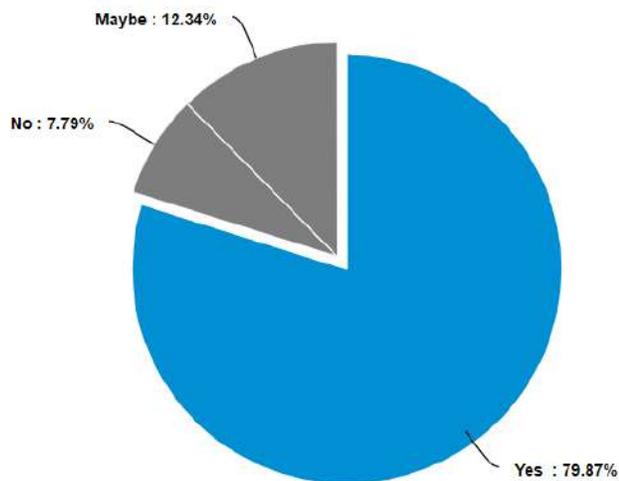
Which of the following will influence your food purchasing decision?



32.69% of people say that food with a good aesthetic can influence their buying decisions. 29.17% of people will be influenced to buy if the food looks good on the app or the website they are ordering, Attractive food packing influences 23.08% of people and 10.26% of people are influenced by a well-dressed delivery person. We also found other reasons, such as discounts, the App's user interface and feasibility, Ratings, Taste, Variety and Level of hunger.

8. Effect of promotional discounts and offers

Do promotional discounts, coupons and offers encourage you to order online?



On being asked whether Discounts, offers and vouchers affect their buying behaviour, 79.87% of

people reacted Yes. whereas 7.79% of people said no. Other 12.34% of people were not sure about it.

LIMITATIONS OF THE STUDY

1. Data from food consumers who used online meal delivery apps were the main source for this study's data. The findings of this research may not apply to other age groups or urban residents because it was conducted with questioners distributed to a specific age group of people with their views and lifestyle in cities.
2. The research only considers consumer-related issues. The opinions of businesspeople and other parties are disregarded.
3. The study focuses solely on consumer awareness and perception. The field offers several other factors to investigate, many of which are still unexplored.
4. Furthermore, the current research study samples were all from India. As a result, the consumer preferences of various countries can be examined for greater generalizability. This study had some limitations, such as random sampling.

SUGGESTIONS AND RECOMMENDATIONS

1. A cloud kitchen might be more effective with these techniques, and given that customers use online food delivery services, the cloud kitchen should either strengthen its partnership with this service or create its own online food delivery service.
2. Since clients do not have access to kitchens, there is a concern regarding hygiene. Entrepreneurs must assure customers of quality and hygiene by using non-reusable containers, vacuum packaging, and packaging techniques.
3. Feedback from customers is important, and implementing them gives an assurance to them and increases profitability.
4. A limited choice of menu is a concern with customers, entrepreneurs can add menu variety for more customer satisfaction.
5. The study also shows that social media can be a powerful tool for businesses to reach out to customers.

FINDINGS AND CONCLUSION

Today's world is fast-paced, and we prefer everything that can be ordered with a single click. Stepping out for even the smallest of reasons has become obsolete, and we now prefer to order in. One of the challenges that cloud kitchen faces is that they do not communicate with customers in order to get feedback, inputs, to build stronger connection. Due to the limited online user base, individuals who are not acquainted with the internet may be deterred and may never place an order, in contrast to conventional restaurants that have a larger pool of unknown customers. Small cloud kitchens may face costly expenses to keep up with technological updates and advancements. Additionally, maintaining cleanliness in the kitchen, regular pest control, and upholding staff members' personal hygiene are necessary to offer edible food. High food quality

standards must be continuously upheld by cloud kitchens; failing to do so could have a significant negative impact on the company's operations.

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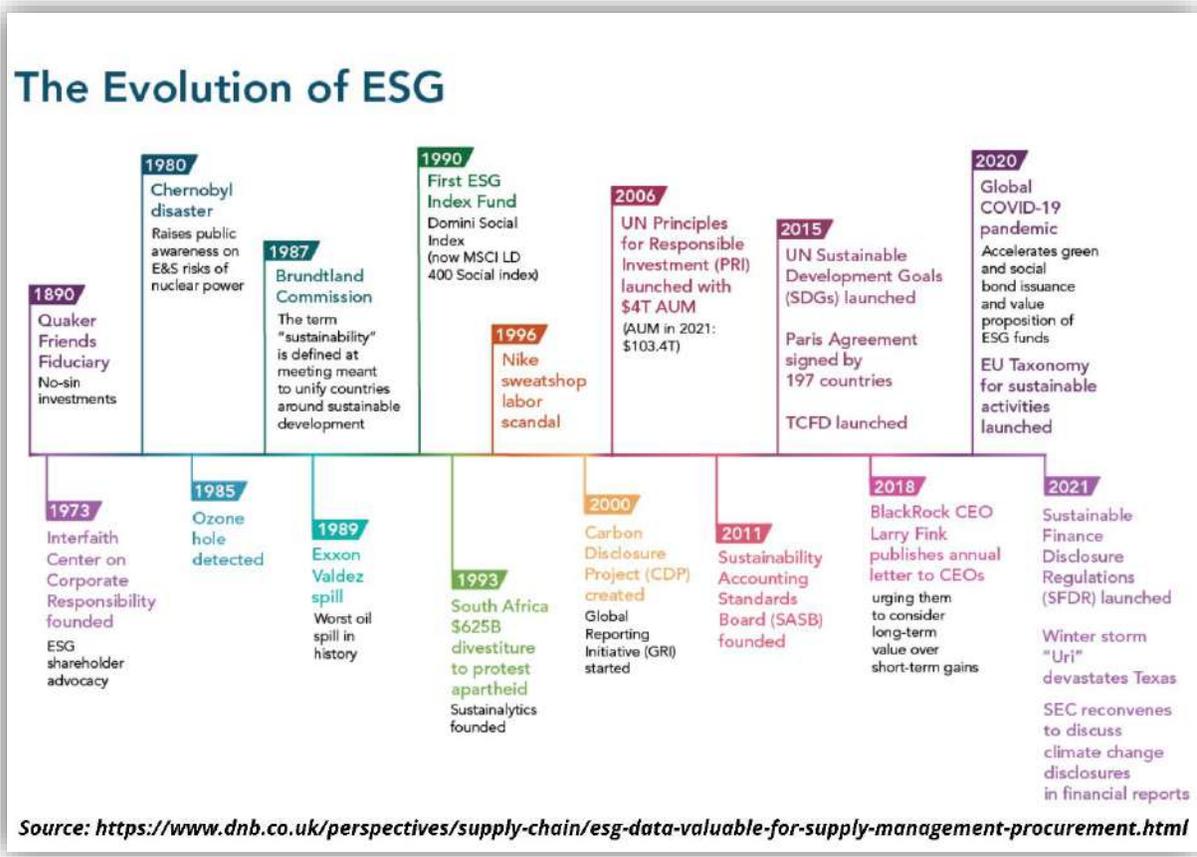
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ESG Accounting - Real Accountability or just Window Dressing?

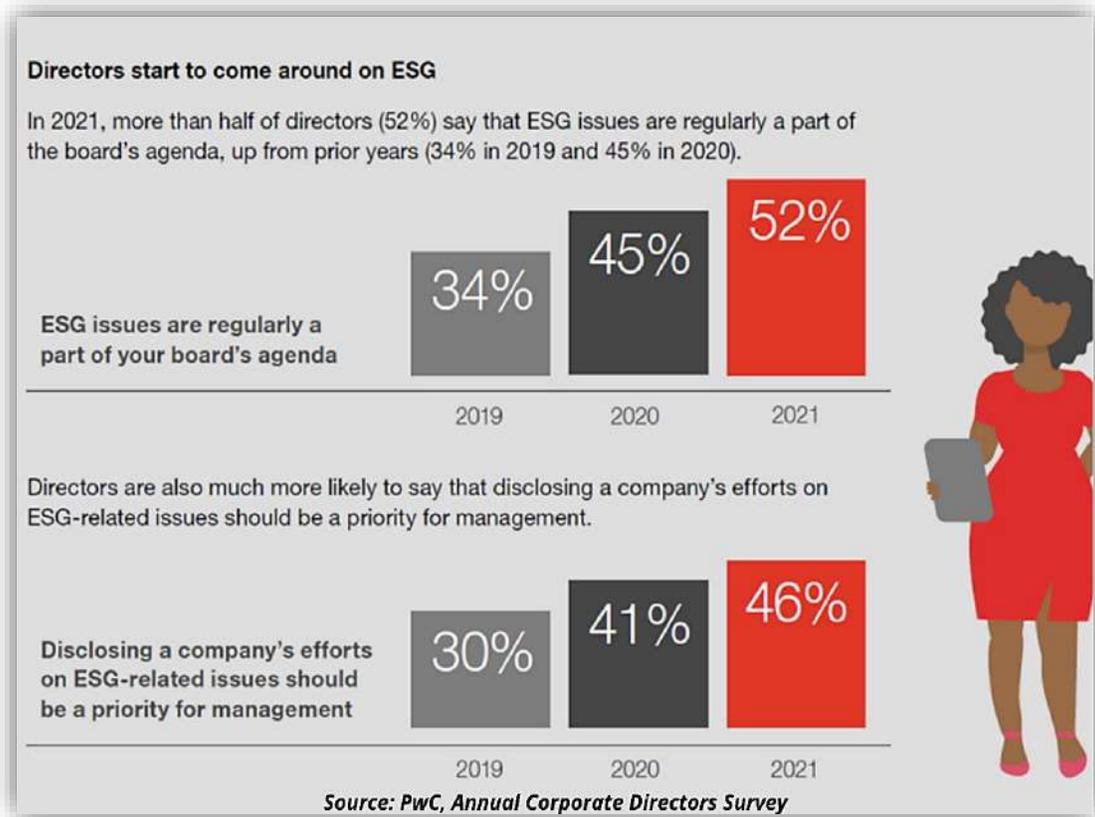
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ESG stands for "environmental, social and governance" accounting. ESG accounting is a new approach to measuring a company's financial performance that includes all the impacts of its value chain, from raw materials extraction to product manufacturing, distribution and consumption. It's been getting a lot of attention recently with firms like Google and Boston Consulting Group making ESG along with financial reporting an integral part of their corporate culture. Other companies, like Walmart and DBS, have been researching the best ways to integrate ESG into their existing financial reporting framework. With the explosion in demand for ESG information and standards still being developed, companies are struggling to find the best way to account for ESG factors and integrate them with financial reporting. The complexity of this transition is further compounded by a lack of complete market data, valuation techniques and current economic models for translating non-financial information into financial measures. Although it's been over 3 years since the GRI (Global Reporting Initiative) launched the latest version of its sustainability reporting framework, there is still no way for companies to report that is 100 per cent consistent across all industry sectors. According to a recent GRI survey, 44 percent of respondents who said they had an integrated sustainability strategy in place reported that their ESG-reporting framework was not integrated with their current financial reporting. This highlights the complexity of combining ESG factors and financial reporting.



Companies are struggling to create a unified reporting system that accounts for all aspects of ESG and is consistent across all sectors. The report, *Integrated Reporting for Sustainability: The Key Challenges for CFOs and Directors*, illustrates the challenges that companies in all sectors face in integrating ESG factors into their existing financial reporting processes. It also provides an overview of how companies are addressing those challenges.



The report identifies three main phases of integrated reporting: assessments, frameworks and standard processes. In the assessment phase, companies balance the opportunities of adopting new reporting standards against the challenges they may face. In the framework phase, companies evaluate their reporting environments and create a plan for integrating ESG information. Companies then use standard processes to develop clear, consistent and repeatable systems for implementing their integrated reporting strategy. Finally, in the standard process phase, companies align their processes with industry standards and frameworks. Integrated reporting is not an easy task to accomplish. The GRI study showed that 43 percent of the respondents felt "very little" progress had been made in meeting their requirement to make sustainability reporting part of their business management.

Besides the challenge of integrating ESG factors with financial reporting, there is another aspect involved as well. With today's business environment being saturated with unreliable information, it is very hard to be able to distinguish between credible and inaccurate information. Since this ESG reporting involves social, environmental and governance elements, it involves a lot of qualitative and non-quantifiable information. With information coming from different sources, different domains and different types of data, it is very hard for companies to differentiate credible and inaccurate information. It is all about finding the best method to separate credible information from inaccurate or misleading information. This can be achieved

by following a structured approach that helps in isolating the main goals of incorporating ESG criteria into their financial reporting framework.

The three aspects mentioned above are inter-related to each other. There is a strong relationship between the information gathering and filtering process and the ability to integrate ESG factors into financial reporting. These aspects need to be addressed at every phase in order to truly integrate ESG factors with financial reporting. In addition, incorporating ESG factors into financial reporting needs to be done in a way that does not create complexity for users of the financial statements. Financial reports can be very complicated and take a long time to read and understand. If the information gets too confusing and overwhelming, users may give up reading the report altogether. Therefore, it is important that the ESG information is presented in a clear, concise manner that is useful to those reading the financial statements.



Overall, it is very interesting to see how this new trend of including more qualitative non-financial data on financial statements is taking shape. It is a very complex task since it involves creating standards and frameworks that are consistent across all industries and countries. Given the complexity of this transition, the importance of the three aspects mentioned earlier (information gathering, filtering and integration) cannot be overstated. It is going to take a lot of research, development and trial-and-error for companies to truly integrate ESG factors with

financial reporting in a way that does not create complexity for users. This will also take time, patience, perseverance and a lot of effort on the part of companies to find the best way to incorporate ESG factors into their financial reporting framework.

CONCLUSION

The concept of corporate social responsibility (CSR) has had a significant impact on the agenda and business practices of many corporations over the last 20 years. Previous to that, companies could get away with paying lip-service to these issues because it was all about public relations and not having to take any real action. However, where this has now changed is that consumers are demanding much more — not only from companies in their products but also in how they address social, environmental and governance issues.

We have seen how ESG reporting can have a positive impact on the financial performance of companies. Integrating ESG factors into financial reporting can help to reduce risk. However, this process is not easy, especially because it involves integrating multiple aspects of the business that are closely related to each other (e.g., social and environmental aspects).

The three aspects mentioned previously (information gathering, filtering and integration) all need to be addressed in order for companies to truly integrate ESG factors into their financial reporting framework. The research that is currently being done on ESG reporting, especially those coming from GRI, will help companies to identify the benefits of incorporating ESG factors into their financial reporting framework. It is important for companies to understand that incorporating ESG factors into their financial reporting framework is not a one-time exercise. It needs to be done in a way that does not create complexity for users. In the end, it all boils down to finding the best way to integrate ESG factors into financial reporting in a way that does not create complexity for users. At the same time, educating users on how to read and interpret these new financial statements is very important. This will help users of these financial statements when they face difficulties while reading them. We also need to teach them how to use these ESG factors as signals for making investment decisions. This will not only help the company but also its shareholders.

“ESG is a pacifier for the evolutionary ignoramus.”

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Last Mile Delivery

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Last mile delivery is the final step in the transportation of goods from a distribution center to the ultimate destination, which is frequently a customer's doorstep or a business location. The last mile is the term used to describe the final phase of the delivery process, which is usually the most difficult and costly. Last mile delivery has become an increasingly important aspect of the logistics industry, particularly with the rise of e-commerce and online shopping. Customers today expect fast and reliable delivery of their orders, and businesses are under pressure to meet these expectations while keeping costs low. There are several factors that make last mile delivery particularly challenging. One of the biggest is the need to deliver goods to a wide range of locations, including remote or hard-to-reach areas. This requires a flexible and adaptable delivery network, as well as the use of advanced routing and tracking technologies to optimize delivery routes and reduce travel time.

Some of the other challenges that shippers encounter while managing last-mile deliveries and their proposed solutions are listed below: -

- **Without a comprehensive solution, it is impossible to achieve visibility for last-mile shipments –**

Unfortunately, many businesses still rely on Excel spreadsheets or even paper documents to track their shipments. As a result, these businesses are unable to monitor their last-mile deliveries in real-time and are not equipped to help customers whose shipments might experience delays.

Even those who use technology struggle since they frequently must enter into various systems to determine the status of shipments, making it difficult for them to have a clear picture of the state of deliveries overall. While that is preferable to doing things by hand, it does not collect all shipment data and skip dealing with the issue of easing end-customers' concerns when shipments are delayed.

Technology-wise, a robust system that can trace all shipments is necessary. Nevertheless, technology does not offer a comprehensive final-mile solution. Deliveries cannot be made to their intended locations and clients cannot be kept personally informed by visibility alone.

- **Blame on shippers for faulty deliveries –**

The majority of the time, the client will hold the shipper responsible for any delay, damage, or loss of the shipment. Consumers frequently choose not to place another order with a shipper, costing the shipper important recurring business.

A comprehensive strategy combines technology and human interaction to manage problematic shipments. Technology is used to identify any "exceptions" and to automate the monitoring of shipments, while a human team directly interacts with customers to oversee the process. By keeping customers informed of their shipment's status, most customers are willing to tolerate delivery delays.

Last-mile solutions not only enhance the customer's purchasing experience, but also relieve the shipper from the burden of performing such tasks, resulting in a positive impact on the shipper's revenue and profits.

- **There is never a perfect match between the existing last-mile capacity and the supply and demand** –

Delivery can fluctuate on a daily basis, regardless of whether a business has its own delivery vehicles or relies on external providers. Having access to extra external capacity ensures that all deliveries are managed efficiently since the existing capacity is typically inadequate to handle all deliveries effectively.

Integrated last-mile delivery systems provide customers with technological access to a marketplace of suppliers and offer human management of those suppliers. The suppliers are thoroughly screened for appropriate insurance, licenses, and service quality, and they receive guidance and advice when deliveries encounter difficulties.

To effectively manage such a pool, the team must continually strive to expand it, guarantee that capacity is available in advance for specialized needs, and ensure that the network includes global, regional, and local companies to take advantage of each one's unique strengths.

- **Majority of last-mile systems are unsuccessful in managing returns effectively** - Think of last-mile systems as an extension of a shipper's customer support department. It is crucial to implement a solution that considers customer returns since the returns process is a crucial aspect of the overall customer experience.

Shippers who make it simpler for their consumers to return items have an advantage over rivals. Customers want to conduct business with companies that pick up their returns themselves rather than asking them to send them to a shipper's or carrier's site, other things being equal.

Shippers gain from streamlining the returns procedure as well. Any item that needs to be returned goes back into the shipper's inventory. Customers may take their time travelling to a return site if they have 30 days to return an item. Shippers can retrieve their inventory more quickly by simplifying the returns procedure.

Finally, there is a growing emphasis on sustainability and environmental responsibility in last mile delivery. This includes the use of electric and hybrid vehicles, as well as the adoption of eco-friendly packaging materials and recycling programs.

In conclusion, last mile delivery is a critical aspect of the logistics industry, and it is becoming increasingly important in the era of e-commerce and online shopping. While there are many challenges associated with last mile delivery, new technologies and innovative solutions are helping to improve efficiency and reduce costs. Businesses will need to stay current with the newest trends and best practices as the industry develops in order to fulfil changing client expectations and stay ahead of the competition.

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Digitalizing the Garment Industry in India during COVID-19: Challenges and Opportunities

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EXECUTIVE SUMMARY

The COVID-19 pandemic has had a severe impact on the garment industry in India, with factories shutting down and workers losing their jobs due to cancelled or delayed orders from brands. In response, many companies are turning to digital solutions to manage their supply chains and keep their workers safe. However, the digitalization of the garment industry faces several challenges, including a lack of necessary infrastructure and resources, as well as a digital divide between developed and developing countries. To address these challenges, it is essential for companies to work collaboratively with their suppliers and invest in their digital capabilities, providing training and support to implement digital tools and technologies.

BSR, a global nonprofit organization, has been working with companies to create sustainable business strategies and solutions, including through their HERproject initiative. HERproject partners with companies, factories, and local organizations to empower women working in global supply chains, providing health education, financial literacy training, and leadership development opportunities. The initiative has reached over 1 million women in 14 countries and has partnered with more than 500 companies.

The garment industry faces several bottlenecks and challenges in digitalizing, including limited oversight, data storage and off-boarding, and a lack of a way to track employee health status. However, technology has helped employers to improve worker efficiency, increase data collection efficiency, and minimize contact between workers during wage payments. Employers are using digital solutions to track the health status of their employees and limit the spread of the virus, while also using cloud storage to mitigate the risk of data misuse and abuse. Workers can also monitor and check how and when their sensitive data is being used by their employers.

Overall, digitalizing the garment industry in India during COVID-19 presents both challenges and opportunities. Collaborative efforts between companies, suppliers, and organizations like

BSR's HERproject can help create more resilient and sustainable supply chains, protecting and empowering workers throughout the digital transformation.

CASE STUDY:

INTRODUCTION:

GARMENT INDUSTRY OF INDIA DURING COVID 19

The garment industry has been hit hard by the COVID-19 pandemic, with factories shutting down and workers losing their jobs. As global supply chains have been disrupted, many brands have cancelled or delayed orders, leaving factories with excess inventory and unpaid bills. In addition, social distancing requirements and lockdown measures have made it difficult for workers to continue working, and many have had to return to their home villages or towns.

To address these challenges, many companies are turning to digital solutions to help manage their supply chains and keep their workers safe. However, digitalizing the garment industry is not without its own challenges. Many factories lack the necessary infrastructure and resources to implement digital tools and technologies, such as automated cutting machines, digital printing, or inventory management software. Moreover, workers may lack the necessary skills and training to use these technologies, which can be complex and require specialized knowledge. Another challenge is the digital divide between developed and developing countries. While companies in developed countries have greater access to digital technologies and resources, factories in developing countries often struggle to keep up. This can create a power imbalance between buyers and suppliers, with buyers dictating the terms of the relationship and expecting suppliers to meet their digital requirements.

To address these challenges, it is important for companies to work collaboratively with their suppliers and invest in their digital capabilities. This includes providing training and support to help suppliers implement digital tools and technologies, as well as sharing the costs and benefits of digitalization. By working together, companies and their suppliers can create more resilient and sustainable supply chains and ensure that workers are protected and empowered throughout the digital transformation.

ABOUT COMPANY

BSR (Business for Social Responsibility) is a global nonprofit organization that works with companies to create sustainable business strategies and solutions. Founded in 1992, BSR has been at the forefront of the corporate social responsibility (CSR) movement, helping companies integrate sustainability into their business models and practices. BSR provides expertise, tools, and resources to help companies address social, environmental, and economic challenges and opportunities.

One of BSR's key initiatives is HERproject, a collaborative effort to empower women working in global supply chains. HERproject partners with companies, factories, and local organizations to

provide women with health education, financial literacy training, and leadership development opportunities. By equipping women with the knowledge and skills to improve their health and economic well-being, HERproject is helping to create more resilient and sustainable communities.

Since its launch in 2007, HERproject has reached over 1 million women in 14 countries and has partnered with more than 500 companies. Through HERproject, BSR is demonstrating the power of collaboration between the private sector, civil society, and government to promote sustainable development and gender equality. BSR company is Manufacturer and exporter of knitted garments, men's wear and kids wear with an annual turnover of 50 lakhs. The BSR HERproject empowers low-income women working in global supply chains, providing jobs to 10,00,000 women and 450,000 men, and improving their standard of living. The clothing industry has faced significant challenges during the lockdown period as customers experienced financial difficulties, resulting in cancellations of orders that suppliers relied on to sustain their businesses. Many workers were forced to leave urban areas and return to their hometowns due to the closure of workplaces, which made it difficult for them to survive without a regular income. This situation particularly affected women, who lost their financial autonomy. Additionally, there is a shortage of international standards to safeguard the rights of workers.

IDENTIFYING BOTTLENECKS/CHALLENGES:

- **Data Storage** - The utilization of technology and data in the garment industry's supply chain varies greatly depending on the location and workplace. Some workplaces rely on traditional paper-based record-keeping methods. In less technologically advanced clothing factories, the information gathered from workers is typically stored in filing cabinets or on client computers that lack proper security protocols. Consequently, the data can be manipulated or exploited by anyone.
- **Data Off-Boarding** - Privacy issues continue to be a major concern even after employees resign from their posts. Standard regarding the appropriate amount of duration the data is to be retained is unclear. There is no transparency, and the workers are unaware as to how long into the future their data will be accessed by the company and if their data will be shared with any third party.
- **Limited oversight:**
 - The use of technology and data in the garment supply chain is largely unregulated, leaving suppliers and buyers with significant discretion.
 - Many workplaces lack proper technological safeguards to protect the data they collect on their workers.
 - Some factory managers violate the anonymity of grievance filings, which undermines workers' rights.

- The rapid expansion of supply chain technology may incentivize providers to prioritize market growth over security.
- There is a lack of measures in place to monitor employee health and contain the spread of the virus.

Challenges faced in the wage payments to workers during COVID-19 pandemic. Risks of contact between workers and employers during wage payments, delay in wage payments due to shuttering of factories and operations.

How has technology helped them to sort out the bottlenecks?

1. **Efficiency of Workers** - Companies are utilizing technology-based monitoring solutions to keep track of their workers' health and prevent the transmission of the virus.
2. **Time Efficient** - The digitization of employer tasks has led to an increase in the amount of worker data being collected. As a response to COVID-19, numerous garment factories have shifted to mobile wage payment systems, which are designed to reduce the amount of contact between workers.
3. **Cost Efficient** - Use of Cloud to store workers' data so as to mitigate the issue of data misuse and abuse and protection of worker data.
4. **Privacy** - Usage of solutions that enable workers to monitor and check how and when their sensitive data has been used by the employers or any party. This helps prevent the loss in revenue due to data loss (physical).
5. **Improvement in logistics services** - Implementation and usage of efficient solutions brought about the improvement in existing logistics services. The solutions include features like live tracking.

IMPACTS:

In the past, supervisors were in charge of monitoring employees instead of using cameras. However, modern workplace monitoring methods have shifted towards surveillance cameras with AI technology that can recognize people and track their movements in real-time. The transition to digital wages has the potential to empower women by enhancing their financial literacy and inclusion. The use of monitoring tools like security cameras can help maintain discipline in the workplace and discourage male workers from committing sexual harassment. The COVID-19 pandemic has accelerated the implementation of technologies that promote health and economic security, resulting in the adoption of digital payroll systems in Bangladesh. Digitized wage payments have been shown to increase the financial independence of female

workers when combined with adequate training and support.

Types of Worker Data and Data Use Cases in the Garment Supply Chain		
TYPE OF DATA	EXAMPLES	EMPLOYER USE CASE
PRODUCTIVITY DATA	Completion of work, production numbers per batch per day	Productivity tracking, operations planning, incentivizing workers, performance assessment, promotion/demotion, hiring/firing
MOVEMENT AND LOCATION DATA	Punch cards, bathroom breaks	Tracking attendance and productivity
HEALTH AND SAFETY DATA (TYPICALLY COLLECTED BY THE ONSITE HEALTH CLINIC)	Blood pressure, screening for anemia, blood sugar, pregnancy, maternity record, menstrual cycle, sanitary pad usage COVID-19: temperature, antibody checks	Assignment of work based on health conditions, referrals to hospital
DATA ON WORKING CONDITIONS	Security cameras, worker grievances	Compliance, audit, supply chain transparency
HUMAN RESOURCES DATA	ID card numbers, family details, phone numbers, union affiliation	General HR operations, wage payments

RECOMMENDATIONS FOR SUPPLY CHAIN TECHNOLOGY PROVIDERS:

1. One way to enhance workplace technology is to involve employees in its design and development. By utilizing a human-centered design approach, providers of technology can develop solutions that are advantageous for employees. Consulting with workers during the development process can help ensure that these solutions prioritize workers' rights. As trusted advisors, technology providers are often responsible for interpreting and utilizing data. This provides a chance for them to promote the use of these tools among buyers and suppliers in a manner that amplifies their beneficial influence on the rights of workers.
2. **Implement privacy by design:** When developing supply chain technology solutions, it is crucial to prioritize data privacy. Adhering to standards such as the Principles for Digital

Development can establish a framework that considers human rights, including privacy. When technology companies take into account the human rights implications of their products, they can develop tools that have the greatest positive impact on workers.

3. To ensure that workers in garment supply chains understand the concept of informed consent, it is necessary to provide them with training, particularly since they often have limited education and technological skills. As workers are the main users of workplace technology tools, technology providers should create and disseminate training materials that improve workers' understanding of informed consent and enable them to provide consent for the use of technology and data.

4. Supply chain technology providers, like the ones who created the WEST Principle, can improve their supply chain principles by including a stronger section on the rights of workers regarding their data and implementing more efficient mechanisms for enforcement. Furthermore, it may be beneficial to explore approaches such as multi-stakeholder initiatives and methods to involve buyers and technology partners in privacy and data protection agreements that are mutually acceptable.

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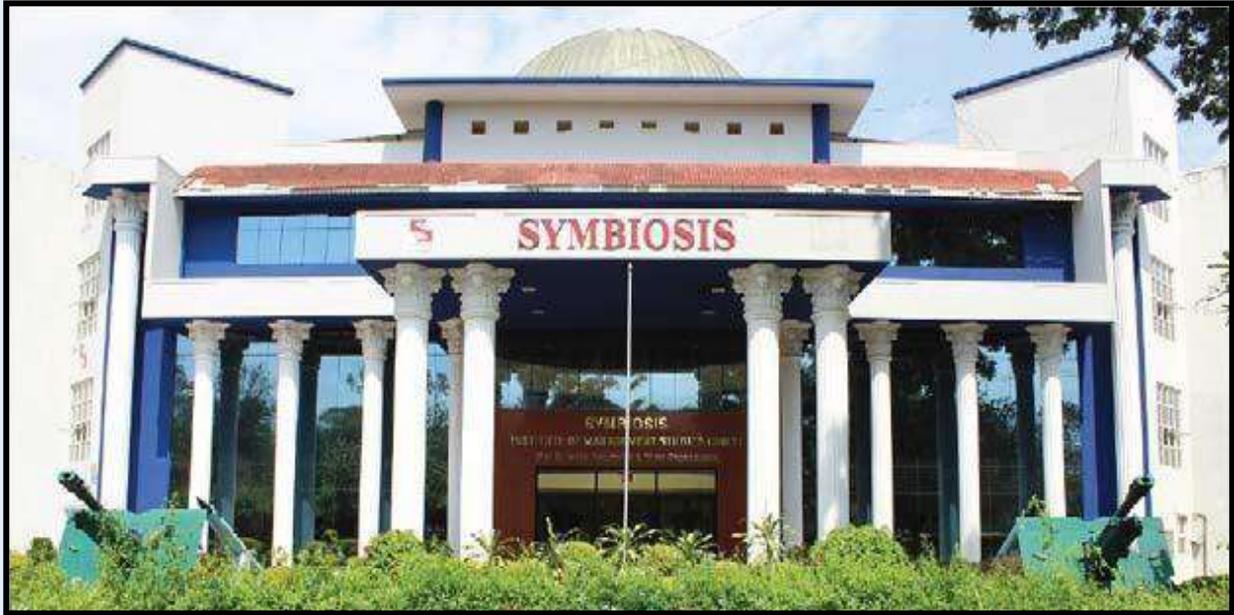
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