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***Impact Of AI-Powered Personalization On Customer
Engagement: Exploring The Moderating Role Of Customer
Demographics***



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Abstract

This thesis examines AI-powered personalization's impact on customer engagement dimensions—absorption, dedication, and vigor. It explores trust's mediating role and the moderating effects of demographics (age and gender). Using a sample of 192 respondents and regression techniques for the analysis, the study finds significant positive relationships between AI personalization and customer engagement, with trust mediating these effects. Age and gender also moderate these relationships. The findings align with previous research, highlighting AI personalization's importance and the need to consider trust and demographics. The study suggests businesses leverage AI personalization, build customer trust, and account for demographic differences to optimize and maximize engagement of customers.

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CHAPTER 1

INTRODUCTION

1.1. Background

In the pre-modern era, before the invention and adoption of digital marketing, marketing was always carried out through physical and interpersonal means, such as newspapers or through word of mouth by the common man. At that time, economies were small-scale and globalization was still a work in progress. Marketing was usually done through word-of-mouth due to lack of technology available. The introduction of AI into the business model was a revolution that no one could have expected.

Customer engagement is based mainly on the nature of interactions between the brand and the customer/consumer. Even though it has been discussed in literature since 2006, the concept of customer engagement only gained proper attention in 2010 (Algharabat, 2018, Harrigan et al., 2017).

At the start, customer engagement was defined in 2006 in March by the ARF (known as the Advertising Research Foundation), which defined it “as turning on a prospect to a brand idea enhanced by the surrounding context.” However, this was considered too broad in nature and not specific enough, but it was definitely the start of deep research into the technical aspects of customer engagement in brands (Fulgoni, 2016).

The theory and concept behind customer engagement have been moving around from one individual to the next for centuries, as businesses have always worked hard to create and maintain strong relationships with their customers to make sure that customers always come back, while also creating positive word-of-mouth (Grönroos, 2014). In ancient times, businessmen and women would engage with consumers and customers by offering services that

are tailor-made and personalized according to the individual while also building relationships through trust, creativity, research and respect for their customers. The success of these businessmen very much relied on their ability to establish and maintain strong connections with their valuable customers, which was effective in building strong brand loyalty (Mittal & Lassar, 1996).

As the Industrial Revolution began and spread in the 18th-19th centuries, businesses were focused on production on a large scale and marketing to reach a bigger audience. With the invention and adoption of chain/department stores in the early 20th century, businesses began to develop more ritualized strategies on how to engage with their customers, which include but are not limited to loyalty points schemes and special discounts (Kumar & Reinartz, 2016).

In the middle of the 20th century, there was a rise in marketing through television as well as direct marketing through mail that truly transformed customer engagement, as businesses were now really equipped to reach customers on a domestic as well as international level. The development of customer service centers, namely call centers as well as business departments dedicated towards customer services has made it easier for businesses to provide quality support to their customers, building stronger and long-lasting relationships with their customers (Fornell et al., 1996).

In the 21st century, the revolution of digital technology has completely changed the landscape for engagement and loyalty of customers on a whole new level. With the faster-growing trend of social media, businesses interact with their customers right away and immediately respond to their feedback and queries. E-commerce websites and applications on mobile phones have also empowered businesses to offer digital experiences that are personalized according to each individual and that build deeper relationships with their customers.

In today's modern era, organizations and businesses worldwide continue to work towards innovation and focus on experimenting with the latest strategies and trends to engage with customers in the best way possible, which also really helps in fostering loyalty among them. From recommendations that are specifically personalized or tailor-made loyalty programs to

customer service that is Artificial Intelligence-powered and assistant chatbots, entrepreneurs and businesses are constantly looking for new ways to create experiences for their customers that are positive and that build strong, long-term connections and that drive business to success.

1.2. Problem Statement

Despite the widespread adoption of AI-Powered Personalization, there is a significant gap in understanding its specific impacts on customer engagement dimensions (absorption, dedication, and vigor), the mediating role of trust, and the variable of demographics, which is being used to see the moderating effect of items like gender and age.

1.3. Artificial Intelligence

AI has truly transformed the way businesses and organizations operate, and innovation in customer engagement is a major proof of it. AI-powered software is transforming the way companies and organizations engage and interact with their customers and clients, working towards improved positive customer experiences, increased customer engagement, and a rise in customer loyalty (Gartner, 2018).

One of the most major pay-offs of AI-powered software is its unique function to be able to provide experiences that are personalized to their customers. Artificial Intelligence algorithms break down and analyze data of the customers and their preferences to introduce recommendations that are personalized, as well as offers and promotions they can implement. These recommendations are specific to each customer, creating a sense of value and increasing their interaction with the company (Lin, 2022)

AI-powered chatbots are another major example of how AI is influencing customer engagement. Chatbots can be used to provide a fast as well as efficient form of customer service, where they can quickly answer questions, and resolve issues (Li, Wang, 2023). They can also be automated for repetitive tasks, making more time available for customer service agents to work on more complicated tasks that require a human mind.

Artificial Intelligence is also used to analyze sentiment of customers and the feedback they provide, ensuring that companies can make more informed and calculated decisions about how to improve their products as well as services (Sharma, 2018). By being able to understand customer needs and their unique preferences, companies and organizations can personalize their services as well as products to better fulfill the needs of customers, playing a vital role in building and boosting customer loyalty.

Furthermore, software that is AI-powered can be used to optimize advertising and marketing campaigns, giving companies the valuable ability to accurately target potential customers at the perfect time with precise responses (Haleem, Javaid, Qadri, 2022). By analyzing customer data, these artificially intelligent algorithms can identify the marketing channels as well as messages that are the most effective, leading to increased customer engagement and loyalty.

In conclusion of this background into AI, customer demographics and engagement and loyalty of customers, demographics of customers and software that is AI-powered are having a major impact on today's customer engagement and loyalty. By providing experiences that are tailor-made and personalized, along with automated customer services, while analyzing and interpreting customer sentiment, and the optimization of the company and organization's marketing campaigns, companies can now innovate and improve experiences of customers, increase their engagement with the company, and attract greater customer loyalty. As Artificial Intelligence technology continues to advance and prosper, we can imagine seeing even bigger benefits for organizations and their customers from multiple demographics in the future ahead.

1.3. Research Objectives

Objectives:

1. To assess how AI-powered personalization influences various aspects of customer engagement, including absorption, dedication, and vigor.
2. To explore how trust mediates the relationship between AI-powered personalization and customer engagement.
3. To analyze how demographic variables such as age and gender moderate the relationship between AI-powered personalization and customer engagement.

1.4. Research Questions

Aiming to carry out an analysis and exploration of the impact of Personalization that is AI-Powered and customer demographics on customer engagement. To be more specific, this research works to address and offer responses to these questions:

1. How does AI-powered personalization impact the different dimensions of customer engagement (absorption, dedication, and vigor)?
2. What role does trust play in mediating the relationship between AI-powered personalization and customer engagement?
3. How do demographic factors such as age and gender moderate the effectiveness of AI-powered personalization on customer engagement?

By addressing and answering these research questions, this research will lead to a better analysis of the impact that AI-powered Personalization and Customer Demographics have had on customer engagement. This research will be of great value to marketers and entrepreneurs who are working to boost their engagement and of customers in the long run.

1.5. Scope Of The Study

1.5.1. Methodology

This study will use a quantitative approach by collecting data through a questionnaire from a sample of customers of different demographics who have used AI-Powered chatbots and their engagement tools while browsing through, using, or purchasing a product or service. The collected data will test the hypothesis through regression analysis to on whether or not AI-powered personalization has impacted customer engagement. This will be utilized to see the relationships between Artificial Intelligence and Customer Demographics with customer engagement.

1.5.2. Population/Sample

The study targets customers from different demographics who have interacted with AI online. The sample population that we will focus on will be selected using a random sampling approach from different age groups and different locations. This particular research study will have a sample size that is 192 individuals, selected at random.

Overall, the study's scope would be aimed towards observing and investigating the effect of the variables, AI-powered Personalization and Customer Demographics, on the engagement of customers.

1.6. Significance Of The Study

This research study aims to provide deep insights into how personalization that is powered by Artificial Intelligence can impact a company's customer engagement from different customer demographics. The results of this research can help businesses, organizations, and individual marketers improve their strategies and build stronger, long-lasting relationships with their customers from a wide range of backgrounds.

1.7. Summary Of Chapter

Problem Statement: There is an impact of AI-powered personalization on customer engagement within the dimensions of absorption, dedication and trust, with the mediating role of trust and the moderating role of customer demographics (Age Group and Gender).

Research Questions:

1. In what way do AI-powered Personalization and Customer Demographics impact customer engagement?

Type of Data: Quantitative data collected through a questionnaire.

Methodology: Regression analysis to take a look at the relationship between AI-powered Personalization and Customer Demographics and customer engagement and loyalty.

Sample Size: A sample size of 192 participants is surveyed.

Significance: The results of this research can help businesses, organizations, and individual marketers improve their marketing strategies and build stronger, long-lasting relationships with their customers. It aims to show them how effective AI-powered personalization can be in creating customer engagement if done right to target different customer demographics.

CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

In the realm of marketing, creating meaningful customer engagement is a key objective for businesses seeking sustained success in an increasingly competitive landscape, especially in different demographics. As technology continues to advance, the integration of Artificial Intelligence (AI) has come forward as an extremely useful and advanced tool to achieve these goals. This chapter presents a comprehensive literature review investigating how AI-powered Personalization and Customer Demographics impact customer engagement, discussing what different dimensions previous research has covered so far.

2.2 Impact of AI On Customer Experience

2.2.1. Introduction

Enhancing customer experience has become a crucial aspect of success for businesses in the modern era. With the invention of AI (Artificial Intelligence), businesses across various industries, including banks and telecommunication companies, have the opportunity to leverage AI technology to improve customer experiences. This study by Daqar and Smoudy, (2019) aims to look at the role that Artificial Intelligence plays in enhancement of customer experience in the State of Palestine. The primary focus will be on the impact of AI in sectors such as banking and telecommunication, which are vital contributors to the Palestinian economy.

2.2.2. Methodology

The study's primary data were gathered through interviews and a structured questionnaire. The interviews were held with industry experts, professionals, and customers to gather qualitative insights into the effect of AI in enhancing experience of customers. The structured questionnaire was administered to a sample of customers from various industries in Palestine to gather quantitative data on their perceptions and experiences.

2.2.3. Findings

The study findings revealed a relationship that is significantly positive between experience of the customers and AI (Artificial Intelligence). Artificial Intelligence accounted for variance, amounting to 26.4% in Customer Experience ($R^2 = 0.264$, $F(1,89) = 28.634$, $P < 0.05$), indicating its substantial impact on shaping customer experiences in Palestine. Further analysis revealed that Customer Experience consists of two aspects: After-Sale Support and Customer Service. Artificial Intelligence was found to predict 22.9% variance in Customer Service and 7% in Support (After-Sale), highlighting its influence on these components.

2.2.4. Discussion

The results underscore the high level of importance of personalized customer service to shape the overall customer experience. By tailoring services to individual customers throughout their buying journey, enterprises can significantly enhance the customer experience. It is crucial for businesses in Palestine to offer more personalized services to customers, as this study indicates a positive impact on their overall experience with the enterprise.

Additionally, the study recommends the adoption of Artificial Intelligence in businesses like support services, which include call centres. The implementation of AI technologies in these areas can help reduce customer waiting time, leading to improved customer satisfaction and overall experience. By leveraging AI in customer service processes, businesses can optimize their operations and provide efficient and prompt support to customers.

2.2.5. Conclusion

This literature review has shed light on the role that AI has played in improving customer experience in the country of Palestine, particularly in multiple industries like telecommunication and banking. The study of research demonstrated a significant relationship that is positive between Artificial Intelligence as well as Customer Experience, highlighting the substantial impact of AI on shaping customer experiences. Moreover, personalized customer service all the way through the customer's purchase/buying journey emerged as a crucial factor in influencing the overall experience as a customer. The study recommends that enterprises in Palestine offer more services that are personalized to customers and consumers and embrace AI in support services and call centers to reduce time in waiting. By implementing these recommendations, businesses can elevate customer experience and gain a competitive edge in the market.

2.3. Impact of AI and Trust on Customer Engagement

2.3.1. Introduction

Trust holds immense importance in offline and online transactions, but its role in the home-sharing economy's customer relationships remains largely unexplored. In a study by Weaven S and Hisao A (2022), the focus is on examining how trust in home-sharing hosts and platforms affects customer engagement and loyalty. Moreover, with the widespread integration of artificial intelligence (AI) in these platforms, the review delves into AI's impact on trust and its outcomes. Conducted in China, the study surveyed individuals with prior home-sharing platform experience.

Previous research has emphasized the importance of customer trust in various business contexts. However, within the home-sharing economy, customer trust has not received adequate attention. The updated stimulus-organism-response model and trust transfer theory offer useful frameworks for examining how customer trust influences engagement and loyalty.

2.3.2. Customer Trust and Customer Engagement

Studies have shown that customer trust significantly influences customer engagement. When customers trust home-sharing platforms and hosts, they are relatively more likely to engage actively as well as form lasting relationships. Trust acts as a facilitator, encouraging customers to explore and utilize the services provided by home-sharing platforms.

2.3.3. Mediating Role and Customer Engagement

Customer engagement acts as a mediator between two factors: customer trust and loyalty. It serves as a mechanism through which trust translates into long-term loyalty. Engaged customers actively participate in the home-sharing experience, promoting positive word-of-mouth and repeat bookings.

2.3.4. Artificial Intelligence and Customer Trust

AI, also known as Artificial intelligence plays a vital role in enhancing operations of business and improving the experience of customers within home-sharing platforms. However, its influence on outcomes and customer trust requires investigation. Preliminary findings suggest that AI might just have a moderating effect that is negative on the relationship between consumer engagement and loyalty, and between host trust and customer engagement. To fully comprehend the underlying mechanisms and consequences, more research is required.

2.3.5. Conclusion

This research contributes to the fields of research on AI, sharing economies, and marketing by highlighting the significance of trust of customers in the economy of home-sharing. The findings emphasize the positive impact of trust on customer loyalty and engagement, meanwhile suggesting a potential negative moderating effect of AI on these relationships. The implications for practitioners include the development of effective marketing strategies to foster customer trust and enhance business growth and sustainability within the home-sharing industry.

2.4. Artificial Intelligence and User Engagement and Conversion

2.4.1. Introduction

The aim of this study by Srivastava, Bashir, Kumari, Giannakis and Chowdhury, (2022) is to outline a three-dimensional research plan aimed at advancing knowledge and development within the retail sector. Specifically, it proposes a theoretical framework that explores how customers' adoption of AI and ML can enhance their interactions with brands throughout the customer journey.

2.4.2. Research Design and Methodology

The authors presents a comprehensive research plan that encompasses the key dimensions: ML, AI algorithms, as well as online search. By synthesizing existing literature on AI utilization in the journey of the particular customer, this paper provides readers with a deeper understanding of the theoretical underpinnings and potential applications of AI in this context.

2.4.3. Findings

The utilization of AI tools such as Virtual Assistance, Chatbots, and IVR offers significant advantages in the customer journey. These tools contribute to enhanced awareness of the brand, facilitate better relationship marketing with the customer, and enable product modifications that are personalized. Through AI integration, brands can enhance customer experiences by providing tailored touchpoints and interactions at each and every stage of the customer's journey.

2.4.4. Originality and Value

The authors present a unique research plan that focuses on investigating current customer journey trends and incorporating AI technologies. By developing a novel theoretical framework, it guides customers through various stages of their journey, offering AI-supported touchpoints and experiences. This original approach adds onto the literature that already exists by exploring the potential of AI in transforming customer journeys and underscores the value of AI integration for brands seeking to adapt to changing times.

2.4.5. Conclusion

This research focuses on and highlights the significance of AI integration in the customer journey within the retail sector. By adopting AI tools and techniques, brands can enhance brand awareness, customer relationships, and personalization. The proposed research plan and theoretical framework offer a roadmap for further exploration of AI's impact on customer experiences to provide valuable insights for people intending to become practitioners aiming to leverage AI in the marketing strategies and business operations.

2.5. Artificial Intelligence and Customer Journey

2.5.1. Introduction

This study by Rana, Gaur, Singh, Awan, and Rasheed, (2022) explores the retail sector that is experiencing rapid advancements in technology, particularly in the form of artificial intelligence (AI) and machine learning (ML). This study works towards contributing to the existing knowledge as well as development in the industry of retail by proposing a research plan that has three angles. The primary objective is to develop a theoretical framework that elucidates the customers' inclination towards adopting AI and ML as protective measures during their interactions with brands. By examining the literature on AI implementation in the customer journey, this study aims to enhance readers' understanding of this emerging field and its potential implications.

2.5.2. Methodology

The research plan presented in this study revolves around three dimensions: AI algorithms, ML, and online search. This study offers a framework for the customer journey research model that leads to division of customers into many different stages and offers various points of interaction in each stage, all backed by ML and AI. The existing research on AI utilisation within the journey of the particular customer is critically analysed to achieve the research objective. By analyzing and synthesizing previous studies, this study aims to contribute to the theoretical framework proposed for understanding customer intent in adopting ML and AI.

2.5.3. Findings

The incorporation of recommenders, chatbots, and virtual assistants, and interactive voice recognition (IVR) among other AI tools has proven beneficial for improving various aspects of the customer journey. Firstly, these AI tools contribute to enhanced brand awareness by providing personalized and interactive experiences for customers. Through intelligent chatbots and virtual assistants, brands can interact and engage in real-time with customers, addressing their questions as well as concerns efficiently. Secondly, AI algorithms enable better customer relationship marketing by analyzing customer data and preferences, thereby enabling personalized recommendations and targeted marketing campaigns. Lastly, AI and ML facilitate personalized product modification, allowing brands to tailor their offerings to individual customers' needs and preferences.

2.5.4. Originality and Value:

This study's original contribution lies in its research plan that investigates the evolving trends of the customer journey in the context of AI incorporation. By proposing a novel model framework, this research directs customers through multiple stages of the journey of the customer and provides unique touchpoints at each different stage, all backed by ML and AI. The theoretical framework developed in this study aims to provide valuable insights into the potential benefits and implications of integrating AI and ML technologies in the retail sector. By shedding light on the customers' inclination to adopt these technologies, brands can make informed decisions regarding their strategies and investments in AI implementation.

2.5.5. Conclusion

This study has examined the role of AI and ML in enhancing the customer journey within the retail sector. By reviewing existing literature and proposing a theoretical framework, this study contributes to the growing body of knowledge on AI utilization in the retail industry. The findings suggest that the adoption of AI tools, such as recommenders, chatbots, virtual assistants, and interactive voice recognition, among other AI tools, can significantly improve brand awareness, customer relationship marketing, and personalized product modification. The research plan presented in this study serves as a valuable guide for future studies aiming to explore the evolving dynamics of the customer journey in the era of AI and ML technologies.

2.6. A Customer's Journey Into AI-Influenced Interactive Marketing

2.6.1. Introduction

Gao and Liu, (2022) explore how AI has transformed customers' marketing experience on an interactive level. Even though there have been a significant number of studies exploring the adoption and application of AI in marketing on an interactive level, personalization is an important theory and concept that remains relatively under-researched and explored in research and practices that involve AI marketing. This study focuses on the goal to introduce the idea of Artificial Intelligence-powered personalization, to also understand the applications of AI-powered personalization throughout the journey of a customer, and create a research agenda for AI personalization that can be used in the future.

2.6.2. Methodology

Keeping in mind Verhoef and Lemon's journey as customers, the authors explore different sources of literature and industry observations that are relevant to adoption and application of AI personalization in marketing on an interactive level. The authors here identify and list out the problems and issues of AI personalization used in different stages of the journeys that customers take and make necessary recommendations for managers that can be used in response to such problems and issues. The model used for the research includes the independent variable: AI personalization, and the dependent variable: customer's interactive marketing experience.

2.6.3. Findings

AI personalization shows itself as profiling, navigating, pushing and retaining in the multiple stages, consisting of 5 stages, of the customer journey on a more personalized level. In response to the problems and issues throughout the customer journey, the authors developed a

number of recommendations that can be easily used by managers. The paper is concluded by highlighting the future research directions of AI personalization, from the perspectives of conceptualization, contextualization, application, implication and consumer interactions.

2.6.4. Research Limitations

New, modern ideas and concepts are stated and presented in how to utilize AI personalization in the field of marketing on an interactive basis. This research highlights and emphasizes the problems and restrictions in research on personalization in the current modern age and sets more research study goals for the future.

2.6.5. Implications

This study reveals the problems and issues faced during the usage of marketing AI personalization softwares and proposes and analyzes several implications for managers to address and resolve such problems and issues from all areas, including technological and managerial viewpoints.

2.6.6. Originality/value

As one of the earliest research papers designed to the adoption and usage of AI in marketing on an interactive level through the viewpoint of personalization, this paper pushes the limits of research on AI in the marketing industry. Keeping in mind AI personalization research and issues on a managerial level, the authors talk about the customer's interaction with AI along the milestones touched in the journey of a customer in order to increase knowledge and inspire AI personalization in future research and practices.

2.7. How Customer Demographics Moderate Influence on Customer Loyalty

2.7.1. Purpose

The paper by Krairit, D., Ba Khang, and D., Qayyum, A., (2013) aims to investigate factors influencing loyalty of customers in the industry of mobile phones, emphasizing the moderation role of customer demographics. The study proposes and empirically tests a comprehensive model, incorporating six antecedents from recent research—perceived service quality, switching costs, customer satisfaction, corporate image, value, and trust—alongside variables in the demographics.

2.7.2. Methodology

Data were gathered through a questionnaire field survey targeting users in Pakistan of mobile phones. The study employs (SEM), which is Structural Equation Modeling and SEM of multi-group to assess both relationships directly and effects of moderation.

2.7.3. Findings

Among the six prior factors, perceived switching costs, customer satisfaction, service quality, and perceived value exhibit positive and significant associations with loyalty of customers. Notably, income and area of residence emerge as demographic variables that moderate relationships between the identified prior factors (antecedents) and customer loyalty.

2.7.4. Research Limitations

The study research is being conducted in an emerging market of Asia (Pakistan) following recent liberalization in the telecommunications sector. The findings may face limitations in generalizability due to the socio-economic and cultural Asian diversity.

2.7.5. Practical Implications

The study suggests that resource allocation strategies tailored to specific demographic groups can optimize efforts to enhance loyalty of customers in the mobile phone industry. Policies advocating increased investments by mobile phone operators in areas that are rural and are recommended to improve and expand their services.

2.7.6. Originality

This study research contributes to the existing overall literature by presenting a model that is comprehensive and is encompassing crucial antecedents of loyalty of customers and demographic factors in the industry of mobile phones. The empirical validation is particularly significant as it is conducted within the context of economies that are emerging in Asia, utilizing a data field from Pakistan that is new.

2.8. Impact of Demographics on Customer Satisfaction and Loyalty

2.8.1. Purpose

The authors aim to investigate the influence of customer demographics on service value, customer satisfaction, and loyalty within the high-involvement context of the private banking industry.

2.8.2. Methodology

A structural equation model is employed using partial least squares (PLS) to assess the relationships. An analysis of variance (ANOVA) is conducted to examine the impact of socio-demographic variables, and an analysis of mediation is performed to test the indirect influence of service value on customer loyalty.

2.8.3. Findings

1. Customer Satisfaction and Loyalty: Customer satisfaction strongly positively impacts customer loyalty.
2. Service Value: Service value does not have a significant direct effect on customer loyalty; its impact is entirely mediated by customer satisfaction.
3. Customer Demographics: Significant differences are found in mean scores based on employment status, type of private banking service provider, and size of liquid assets.

2.8.4. Research Limitations

The study suggests further research to explore the potential moderating effects of various customer-related variables. A replication study is recommended to validate and reinforce the findings.

2.8.5. Implications

Managers are advised to focus on high-net-worth and ultra-high-net-worth individuals, as these segments exhibit higher satisfaction and loyalty ratings. Segmentation based on employment status, in addition to the size of liquid assets, is recommended for a more targeted approach.

2.8.6. Originality

The study stands out by examining a high-involvement setting within the private banking industry.

Using a unique sample of 286 questionnaires from private banking customers, the research identifies direct effects of socio-demographic variables on service value, customer satisfaction, and loyalty, providing valuable insights for both industry managers and marketing researchers.

2.9. A Conceptual Model And Scale Development In Customer Engagement

2.9.1. Purpose

The purpose of this theoretically guided study is to address the lack of research done on developing, conceptualizing, and validating a scale that measures customer engagement on an online platform, including its forms, operationalizations, definitions, and dimensionality. They present their framework conceptualization of customer engagement.

2.9.2. Dimensions of the Scale

1. Vigor

This points to the physical aspect of being a customer, having the energy and mental resilience while using the platform and how much are they willing to spend effort and time in being a customer.

2. Absorption

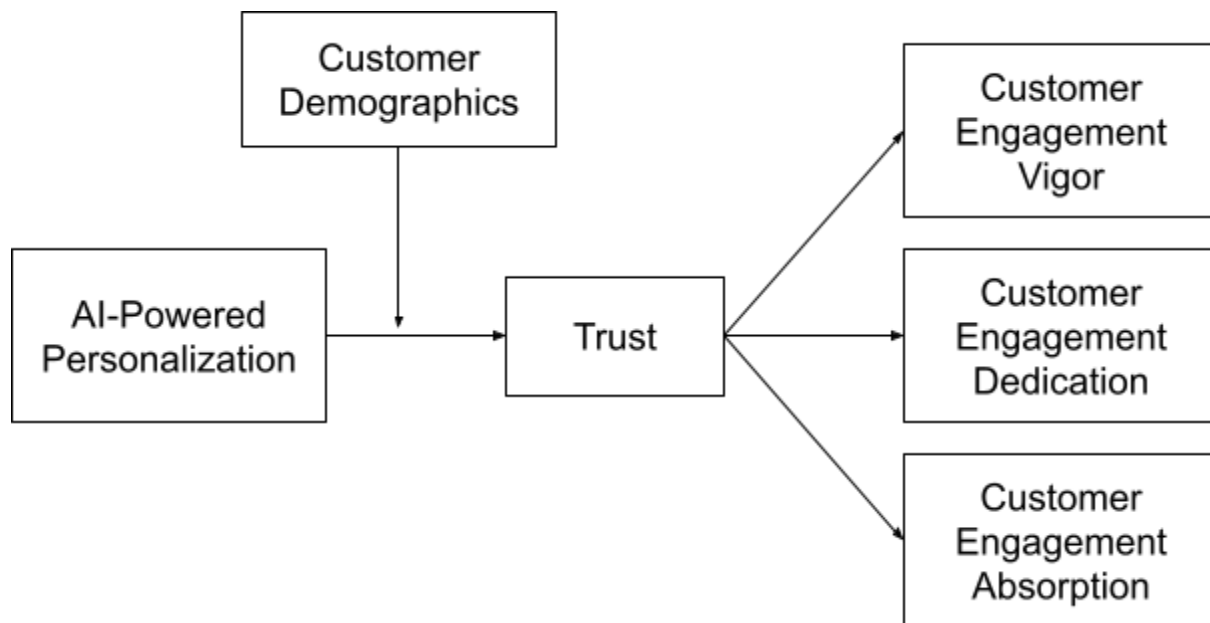
This demonstrates the cognitive function of the individual, and how concentrated and engrossed they are in using the online platform.

3. Dedication

This points towards the emotional side of an individual, consisting of pride, enthusiasm, and a sense of challenge and significance towards the online platform.

Conclusion

Based on the literature explained above, we have found the gap in the research, which is the impact of AI-Powered Personalization on Customer Engagement, and how does Customer Demographics (Age Group and Gender) play a role in the moderation of this impact. Based on this, the model we have developed is:



Where:

- **Independent Variable:** AI-Powered Personalization
- **Moderating Variable:** Customer Demographics
- **Mediating Variable:** Trust
- **Dependent Variable:** Customer Engagement Vigor, Dedication, and Absorption.

CHAPTER 3

METHODOLOGY

3.1. Introduction

This chapter outlines the methodology that will be employed in conducting the research to investigate the impact of AI-powered personalization and customer demographics on customer engagement. The chapter discusses the research design, data collection methods, data analysis techniques, population/sample selection, and ethical considerations.

3.2. Research Design

To address the research objectives and research questions, a quantitative research design will be utilized. This design will allow for the collection of numerical data that can be statistically analyzed to determine the relationships between AI-powered personalization, customer demographics, and customer engagement. The use of a quantitative approach will provide objective and measurable results that can be analyzed to answer the research questions and fulfill research objectives.

3.3. Data Collection Methods

The primary method of data collection for this research will be through a survey questionnaire. The survey questionnaire will be meant to gather information from customers from different demographics who have interacted with AI-powered platforms and their

engagement tools while browsing or purchasing a product or service. The survey will consist of closed-ended questions that will allow respondents to select predefined responses. We have taken the 5-Point Likert Scale, and the questionnaire items have been taken from the following sources:

1. Customer Engagement:

- a. **Source:** Cheung et al. (2011).
- b. **Dimensions:** Absorption, Dedication and Vigor.

2. Artificial Intelligence:

- a. **Source:** Finstad (2010); Chung, Ko, Joung, and Kim (2020).

3. Trust:

- a. **Source:** Doney and Cannon (1997).

3.4. Data Analysis Techniques

Regression analysis is a statistical technique that plays a crucial role in examining the relationships between variables. In the context of this particular study, regression analysis will be employed to test a hypothesis regarding the impact of AI-powered personalization and customer demographics on customer engagement. Additionally, this analysis aims to identify the key factors that influence the effectiveness of AI and customer demographics.

To begin with, regression analysis involves studying the relationship between two types of variables: the independent variables and the dependent variable. In this study, the independent variable is AI-powered personalization and the moderating variable is customer demographics. AI-powered personalization refers to the use of artificial intelligence techniques to tailor and customize marketing efforts to individual customers. Customer demographics are the groups of consumers considered for purposes of business. These variables are of interest because they are hypothesized to have an impact on customer engagement.

The dependent variable in this analysis is customer engagement. Customer engagement refers to the extent to which customers interact with a company or its offerings. It encompasses

various activities such as website visits, social media interactions, and purchases. It also refers to the degree of commitment and repeat business exhibited by customers towards a particular brand or company. The dimensions being explored within Customer Engagement are Absorption, Dedication, and Vigor.

Through regression analysis, researchers can gain insights into the strength and direction of the relationships between these variables. By examining the data collected for the study, the analysis will reveal whether there is a statistically significant relationship between AI-powered personalization, customer demographics and customer engagement, as well as AI-powered personalization, customer demographics. The strength of the relationship can be quantified by measuring the magnitude of the correlation between these variables.

Furthermore, regression analysis will help determine the significance of the variables in explaining the impact of AI-powered personalization and customer demographics on engagement of customers. By considering these variables that may influence engagement of customers, researchers can estimate the degree of contribution of these variables to engagement of customers and also assess the unique contribution of AI-powered personalization as well as demographics of customers.

The analysis will involve applying various regression techniques, such as multiple regression or logistic regression, depending on the nature of the variables involved. Multiple regression allows researchers to look at the simultaneous effect of multiple independent variables upon the dependent variables. Logistic regression, on the other hand, is useful when the dependent variable is categorical, such as predicting whether a customer is loyal or not.

Ultimately, the results of the regression analysis will provide important views into the role of customer demographics and AI-powered personalization in driving customer engagement. The findings may support or refute the initial hypothesis and shed light on the specific factors that are influential in this context. These insights can inform marketing strategies and help businesses optimize their use of AI in different demographics in order to enhance customer experiences and foster long-term loyalty.

In conclusion, regression analysis is a statistical technique which will be utilized to create an analysis of the collected data in the research. It will examine what relationships exist between the independent variable (AI-powered personalization), moderating variable (customer demographics) and the dependent variable (customer engagement). By quantifying the strength and significance of these relationships, the analysis will provide a valuable window into the effect of AI-powered personalization on customer behavior.

3.5. Population/Sample Selection

The population that we are targeting for this research is customers in different demographics who have interacted with AI in the market. Due to the broad nature of the target population, a random sampling approach will be used to select a representative sample for data collection. The sample will be taken from multiple age groups and genders to ensure diverse responses and generalizability in the findings.

In this research, we will use a sample size of 192 individuals. The sample size is determined based on the available resources and constraints in time. A larger sample size would provide better results, but the sample size that we have selected is considered sufficient to achieve the research objectives.

In terms of demographics, we have collected sample size data of multiple age groups, gender, and location.

3.6. Ethical Considerations

The research will stick to guidelines on ethics to ensure participants' information is protected. We will ask for consent from every participant before they take part in the survey. There will be assurance for the participants that their responses will be confidential and anonymous

Moreover, any data collected will be used for purposes of research only and will be reported in a manner that shows anonymity and aggregate scores. No information will be disclosed or published that would be identifiable personally.

Furthermore, the research will comply with ethical standards by avoiding any biases or conflicts of interest. The research findings will be presented objectively and without manipulation.

3.7. Research Philosophy

This study adopts a positivist research philosophy, positing that reality is objective and measurable through empirical observation and scientific methods. By employing rigorous methodologies, this research seeks to objectively assess the relationships between AI-Powered Personalization and Customer Engagement dimensions (Absorption, Dedication, Vigor), as well as the moderating roles of Age and Gender, and the mediating role of Trust. Through hypothesis testing, replication, and analysis of quantifiable data, this study aims to uncover patterns and regularities that can explain and predict customer engagement behaviors, thereby contributing to both theoretical knowledge and practical applications in the field of AI-driven marketing strategies.

3.8. Conclusion

This methodology chapter has outlined the methods of data collection, research design, techniques of data analysis, population/sample selection, as well as ethical considerations for the investigation of AI-powered personalization and customer demographic's impact on customer engagement. By employing a quantitative approach and utilizing regression analysis, the study aims to provide an insightful window into the relationships between AI-powered personalization, demographics of customers, customer engagement. The findings will help us understand better how AI and customer demographics can be effectively utilized to boost customer engagement in marketing digitally.

CHAPTER 4

DATA ANALYSIS

4.1. Scales

4.1.1. Customer Engagement Vigor

The case processing summary for the Customer Engagement Vigor scale indicates that the analysis included 192 valid cases, representing 100.0% of the total sample. No cases were excluded from the analysis, as evidenced by the 0 cases excluded, which also corresponds to 0.0% of the total sample. This suggests that all participants' responses were complete and usable for the analysis, with no missing data affecting the variables being considered. Listwise deletion was utilized based on all variables in the procedure, meaning that cases with any missing values would have been excluded; however, no such exclusions were necessary.

TABLE 4.1.1.a: Case Processing Summary for Customer Engagement Vigor.

	N	%
Valid	192	100.0

Excluded ^a	0	0.0
Total	192	100.0

a. Listwise deletion based on all variables in the procedure.

The reliability statistics for the Customer Engagement Vigor scale, which consists of six items, show a Cronbach's alpha of .779. This indicates a satisfactory level of internal consistency among the items, suggesting that they reliably measure the same underlying construct.

Table 4.1.1. b: Reliability Statistics for Customer Engagement Vigor

Statistic	Value
Cronbach's Alpha	.779
N of Items	6

4.1.2. Customer Engagement Absorption

For the Customer Engagement Absorption scale, the case processing summary reveals that all 192 cases included in the analysis were valid, representing 100.0% of the total sample. No cases were excluded from the analysis. This indicates that the dataset was complete, with no

missing values for any of the variables considered in this scale. Listwise deletion was used, but no cases required exclusion.

Table 4.1.2. a: Case Processing Summary for Customer Engagement Absorption.

	N	%
Valid	192	100.0
Excluded ^a	0	0.0
Total	192	100.0

a. Listwise deletion based on all variables in the procedure.

The reliability statistics for the Customer Engagement Absorption scale, which includes six items, report a Cronbach's alpha of .820. This value indicates a high level of internal consistency, suggesting that the items reliably measure the same underlying construct.

Table 4.1.2. b: Reliability Statistics for Customer Engagement Absorption

Statistic	Value
Cronbach's Alpha	.820
N of Items	6

4.1.3. Customer Engagement Dedication

The case processing summary for the Customer Engagement Dedication scale shows that all 192 cases were valid, constituting 100.0% of the total sample. No cases were excluded from the analysis, indicating that the dataset was complete with no missing values. Listwise deletion was applied, but there were no exclusions needed.

Table 4.1.3. a: Case Processing Summary for Customer Engagement Dedication

	N	%
Valid	192	100.0
Excluded ^a	0	0.0
Total	192	100.0

a. Listwise deletion based on all variables in the procedure.

The reliability statistics for the Customer Engagement Dedication scale, which consists of six items, indicate a Cronbach's alpha of .826. This suggests a high level of internal consistency among the items, indicating they reliably measure the same underlying construct.

Table 4.1.3. b: Reliability Statistics for Customer Engagement Dedication

Statistic	Value
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Cronbach's Alpha	.826
N of Items	6

4.1.4. AI-Powered Personalization

The case processing summary for the AI-Powered Personalization scale reveals that all 192 cases were valid, representing 100.0% of the total sample. There were no excluded cases, indicating that the dataset was complete with no missing values. Listwise deletion was used, but no cases required exclusion.

Table 4.1.4. a: Case Processing Summary for AI-Powered Personalization

	N	%
Valid	192	100.0
Excluded ^a	0	0.0
Total	192	100.0

a. Listwise deletion based on all variables in the procedure.

The reliability statistics for the AI-Powered Personalization scale, which includes seven items, show a Cronbach's alpha of .867. This high value indicates a high level of internal consistency, suggesting that the items reliably measure the same underlying construct.

Table 4.1.4. b: Reliability Statistics for AI-Powered Personalization

Statistic	Value
Cronbach's Alpha	.867
N of Items	7

4.1.5. Trust

The case processing summary for the Trust scale shows that all 192 cases were valid, constituting 100.0% of the total sample. No cases were excluded, indicating that the dataset was complete with no missing values. Listwise deletion was applied, but there were no exclusions needed.

Table 4.1.5. a: Case Processing Summary for Trust

	N	%
Valid	192	100.0

Excluded ^a	0	0.0
Total	192	100.0

a. Listwise deletion based on all variables in the procedure.

The reliability statistics for the Trust scale, consisting of three items, indicate a Cronbach's alpha of .839. This suggests a good level of internal consistency among the items, indicating they reliably measure the same underlying construct.

Table 4.1.5. b: Reliability Statistics for Trust

Statistic	Value
Cronbach's Alpha	.839
N of Items	3

4.2. Correlation Analysis

The correlation analysis presented in Table 1 indicates significant positive relationships among various dimensions of customer engagement (Customer Engagement Vigor, Customer Engagement Absorption, and Customer Engagement Dedication), AI-powered personalization, and trust. Specifically, Customer Engagement Vigor is significantly correlated with Customer

Engagement Absorption ($r = .618, p < .01$), Customer Engagement Dedication ($r = .590, p < .01$), AI-powered personalization ($r = .417, p < .01$), and trust ($r = .432, p < .01$). Similarly, Customer Engagement Absorption is positively correlated with Customer Engagement Dedication ($r = .558, p < .01$), AI-powered personalization ($r = .324, p < .01$), and trust ($r = .426, p < .01$). Moreover, Customer Engagement Dedication shows positive correlations with AI-powered personalization ($r = .465, p < .01$) and trust ($r = .390, p < .01$). AI-powered personalization is also positively correlated with trust ($r = .366, p < .01$).

4.2. Correlation Analysis Data

	CustomerEng Vigor	CustomerEngA bsorption	CustomerEngD edication	AIpoweredP ersonal	Trust
CustomerEngVigor	--	.618**	.590**	.417**	.432**
CustomerEngAbsorption	.618**	--	.558**	.324**	.426**
CustomerEngDedication	.590**	.558**	--	.465**	.390**
AIpoweredPersonal	.417**	.324**	.465**	--	.366**
Trust	.432**	.426**	.390**	.366**	--

Note. $p < .01$ (2-tailed).

4.3. Regression Analysis

The regression analyses aim to investigate the predictive power of AI-powered personalization on different dimensions of customer engagement.

4.3.1 Customer Engagement Vigor

The regression analysis results are summarized in Table 2. AI-powered personalization significantly predicts Customer Engagement Vigor ($\beta = .417$, $p < .001$). The model explains 17.4% of the variance in Customer Engagement Vigor ($R^2 = .174$). The ANOVA results indicate that the model is significant, $F(1, 190) = 40.012$, $p < .001$.

4.3. a: Regression Analysis for Customer Engagement Vigor

Model	B	Std. Error	Beta	t	Sig.
(Constant)	1.478	.272		5.440	.000
AIpoweredPersonal	.455	.072	.417	6.325	.000

4.3. b: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.417	.174	.170	.70811

4.3. c: ANOVA

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	20.063	1	20.063	40.012	.000
Residual	95.271	190	.501		
Total	115.333	191			

Table 4.3c summarizes the regression analysis for Customer Engagement Absorption. AI-powered personalization is a significant predictor of Customer Engagement Absorption ($\beta = .324$, $p < .001$), explaining 10.5% of the variance ($R^2 = .105$). The ANOVA results confirm the model's significance, $F(1, 190) = 22.353$, $p < .001$.

4.3. d: Regression Analysis for Customer Engagement Absorption

Model	B	Std. Error	Beta	t	Sig.
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(Constant)	1.466	.311		4.713	.000
AIpoweredPersonal	.389	.082	.324	4.728	.000

4.3. f: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.324	.105	.101	.81032

4.3. g: ANOVA

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	14.678	1	14.678	22.353	.000
Residual	124.758	190	.657		
Total	139.435	191			

4.4. Customer Engagement Dedication

The regression analysis results for Customer Engagement Dedication are presented in Table 4. AI-powered personalization significantly predicts Customer Engagement Dedication ($\beta = .465$, $p < .001$), with the model accounting for 21.7% of the variance ($R^2 = .217$). The ANOVA results indicate that the model is significant, $F(1, 190) = 52.523$, $p < .001$.

4.4. a: Regression Analysis for Customer Engagement Dedication

Model	B	Std. Error	Beta	t	Sig.
(Constant)	1.498	.264		5.672	.000
AIpoweredPersonal	.506	.070	.465	7.247	.000

4.4. b: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.465	.217	.212	.68827

4.4. c: ANOVA

Source	Sum of Squares	df	Mean Square	F	Sig.
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Regression	24.881	1	24.881	52.523	.000
Residual	90.006	190	.474		
Total	114.887	191			

4.5. Moderated Mediation Analysis with AgeGroup as Moderator

4.5. a: Moderation of the effect of CEVigor on Trust

Predictor	Coeff	SE	t	p	LLCI	ULCI
Constant	1.6320	0.3270	4.9916	0.0000	0.9870	2.2770
CEVigor	0.4749	0.1010	4.7034	0.0000	0.2757	0.6740
AgeGroup	-0.5637	0.4583	-1.2298	0.2203	-1.4678	0.3405
CEVigor x AgeGroup	0.0989	0.1420	0.6963	0.4871	-0.1813	0.3791

Model Summary	R	R-sq	MSE	F	df1	df2	p
	.4606	.2121	.7018	16.8731	3	188	.0000

Interpretation:

In the analysis of the moderating effect of AgeGroup on the relationship between CEVigor and Trust, the model shows a significant positive main effect of CEVigor on Trust (coeff = 0.4749, $p < 0.0001$). This indicates that an increase in CEVigor is associated with an increase in Trust, holding other variables constant. However, the direct effect of AgeGroup on Trust is not significant (coeff = -0.5637, $p = 0.2203$), suggesting that AgeGroup alone does not significantly predict Trust. Additionally, the interaction term between CEVigor and AgeGroup is also not significant (coeff = 0.0989, $p = 0.4871$), indicating that the effect of CEVigor on Trust does not significantly differ across different age groups. The overall model explains about 21.21% of the variance in Trust ($R\text{-sq} = .2121$), which is statistically significant ($F(3, 188) = 16.8731, p < 0.0001$).

4.5. b: Moderation of the effect of CEAbsorp on Trust

Predictor	Coeff	SE	t	p	LLCI	ULCI
Constant	1.8060	0.2654	6.8044	0.0000	1.2824	2.3296
CEAbsorp	0.4558	0.0887	5.1412	0.0000	0.2809	0.6307

AgeGroup	-0.5648	0.4363	-1.2945	0.1971	-1.4263	0.2967	
CEAbsorp x AgeGroup	0.0784	0.1240	0.6325	0.5277	-0.1662	0.3230	
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Model Summary	R	R-sq	MSE	F	df1	df2	p
	.4763	.2269	.6846	18.4104	3	188	.0000
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Interpretation:

When examining the moderating effect of AgeGroup on the relationship between CEAbsorp and Trust, the results show a significant positive main effect of CEAbsorp on Trust (coeff = 0.4558, $p < 0.0001$). This suggests that an increase in CEAbsorp is associated with an increase in Trust, when other variables are held constant. The direct effect of AgeGroup on Trust is not significant (coeff = -0.5648, $p = 0.1971$), indicating that AgeGroup does not significantly influence Trust on its own. The interaction term between CEAbsorp and AgeGroup is also not significant (coeff = 0.0784, $p = 0.5277$), meaning the effect of CEAbsorp on Trust is consistent across different age groups. The model explains approximately 22.69% of the variance in Trust ($R\text{-sq} = .2269$), which is statistically significant ($F(3, 188) = 18.4104, p < 0.0001$).

4.5. c: Moderation of the effect of CEDedication on Trust

Predictor	Coeff	SE	t	p	LLCI	ULCI
<hr/>						

Constant		1.9107	0.2961	6.4545	0.0000	1.3263	2.4951
CEDEDication		0.5056	0.0914	5.5327	0.0000	0.3254	0.6858
AgeGroup		-0.5778	0.4210	-1.3728	0.1714	-1.4080	0.2523
CEDEDication	x	0.1241	0.1228	1.0102	0.3135	-0.1184	0.3665
AgeGroup							

Model Summary	R	R-sq	MSE	F	df1	df2	p
	.4905	.2406	.6698	19.8372	3	188	.0000

Interpretation:

In the analysis of the moderating effect of AgeGroup on the relationship between CEDEDication and Trust, the results indicate a significant positive main effect of CEDEDication on Trust (coeff = 0.5056, $p < 0.0001$). This finding suggests that an increase in CEDEDication is associated with an increase in Trust, while other variables are held constant. The direct effect of AgeGroup on Trust is not significant (coeff = -0.5778, $p = 0.1714$), implying that AgeGroup does not significantly affect Trust on its own. Similarly, the interaction term between CEDEDication and AgeGroup is not significant (coeff = 0.1241, $p = 0.3135$), indicating that the effect of CEDEDication on Trust does not significantly vary by AgeGroup. The model accounts for

approximately 24.06% of the variance in Trust ($R\text{-sq} = .2406$), which is statistically significant ($F(3, 188) = 19.8372, p < 0.0001$).

4.6. Moderated Mediation Analysis with Gender as Moderator

4.6. a: Moderation of the effect of CEVigor on Trust

Predictor	Coeff	SE	t	p	LLCI	ULCI
Constant	1.7222	0.3023	5.6954	0.0000	1.1271	2.3173
CEVigor	0.4546	0.0878	5.1794	0.0000	0.2816	0.6277
Gender	-0.4763	0.4017	-1.1858	0.2377	-1.2672	0.3145
CEVigor x Gender	0.0342	0.1171	0.2920	0.7707	-0.1966	0.2650

Model Summary	R	R-sq	MSE	F	df1	df2	p
	.4715	.2223	.6934	17.9290	3	188	.0000

Interpretation:

The analysis of the moderating effect of Gender on the relationship between CEVigor and Trust reveals a significant positive main effect of CEVigor on Trust (coeff = 0.4546, $p < 0.0001$). This indicates that an increase in CEVigor is associated with an increase in Trust, holding other variables constant. The direct effect of Gender on Trust is not significant (coeff = -0.4763, $p = 0.2377$), suggesting that Gender alone does not significantly predict Trust. The interaction term between CEVigor and Gender is also not significant (coeff = 0.0342, $p = 0.7707$), indicating that the effect of CEVigor on Trust does not significantly differ by Gender. The model explains about 22.23% of the variance in Trust ($R\text{-sq} = .2223$), which is statistically significant ($F(3, 188) = 17.9290$, $p < 0.0001$).

4.6b: Moderation of the effect of CEAbsorp on Trust

Predictor	Coeff	SE	t	p	LLCI	ULCI
Constant	1.8933	0.2508	7.5506	0.0000	1.3980	2.3885
CEAbsorp	0.4789	0.0723	6.6224	0.0000	0.3361	0.6217
Gender	-0.4901	0.3825	-1.2811	0.2020	-1.2441	0.2639
CEAbsorp x Gender	0.0457	0.0992	0.4608	0.6454	-0.1501	0.2415

Model Summary	R	R-sq	MSE	F	df1	df2	p
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.4922	.2423	.6695	19.8678	3	188	.0000
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Interpretation:

In examining the moderating effect of Gender on the relationship between CEAbsorp and Trust, the results show a significant positive main effect of CEAbsorp on Trust (coeff = 0.4789, $p < 0.0001$). This finding suggests that an increase in CEAbsorp is associated with an increase in Trust, when other variables are held constant. The direct effect of Gender on Trust is not significant (coeff = -0.4901, $p = 0.2020$), indicating that Gender does not significantly influence Trust on its own. The interaction term between CEAbsorp and Gender is also not significant (coeff = 0.0457, $p = 0.6454$), meaning the effect of CEAbsorp on Trust is consistent across different genders. The model explains approximately 24.23% of the variance in Trust ($R\text{-sq} = .2423$), which is statistically significant ($F(3, 188) = 19.8678, p < 0.0001$).

4.6. c: Moderation of the effect of CEDedication on Trust

Predictor	Coeff	SE	t	p	LLCI	ULCI
Constant	1.9724	0.2703	7.2977	0.0000	1.4396	2.5051
CEDEDication	0.5236	0.0764	6.8538	0.0000	0.3737	0.6735
Gender	-0.5043	0.3740	-1.3487	0.1794	-1.2406	0.2319

CEDEDication x Gender	0.0529	0.0991	0.5336	0.5942	-0.1425	0.2483
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Model Summary	R	R-sq	MSE	F	df1	df2	p
	.5055	.2555	.6533	21.5543	3	188	.0000

Interpretation:

In the analysis of the moderating effect of Gender on the relationship between CEDEDication and Trust, the results indicate a significant positive main effect of CEDEDication on Trust (coeff = 0.5236, $p < 0.0001$). This suggests that an increase in CEDEDication is associated with an increase in Trust, while other variables are held constant. The direct effect of Gender on Trust is not significant (coeff = -0.5043, $p = 0.1794$), implying that Gender does not significantly affect Trust on its own. Similarly, the interaction term between CEDEDication and Gender is not significant (coeff = 0.0529, $p = 0.5942$), indicating that the effect of CEDEDication on Trust does not significantly vary by Gender. The model accounts for approximately 25.55% of the variance in Trust (R-sq = .2555), which is statistically significant ($F(3, 188) = 21.5543, p < 0.0001$).

4.7. CONCLUSION OF DATA INTERPRETATION

In summary, across both AgeGroup and Gender as moderators, the main effects of CEVigor, CEAbsorp, and CEDedication on Trust are consistently significant and positive. This indicates that higher levels of these employee engagement dimensions are associated with higher levels of trust. However, the interaction terms are not significant, suggesting that the strength of these relationships does not significantly differ by AgeGroup or Gender. Thus, the positive impacts of employee engagement on trust appear to be robust across these demographic variables.

Three separate PROCESS analyses were conducted to examine the direct and indirect effects of customer engagement (CE) variables (CEVigor, CEAbsorp, and CEDed) on AI-powered personalization (AIPow), mediated by trust.

4.7.1. Model 1: CEVigor predicting Trust and AIPow

The analysis revealed a significant direct effect of CEVigor on both Trust and AIPow. Specifically, CEVigor had a positive and significant effect on Trust ($B = 0.5202, p < .0001$) and AIPow ($B = 0.2919, p < .0001$). Additionally, the indirect effect of CEVigor on AIPow via Trust was significant (Effect = 0.0906, BootSE = 0.0374, BootLLCI = 0.0260, BootULCI = 0.1730), suggesting that trust partially mediated the relationship between CEVigor and AIPow.

Outcome Variable	Predictor	Coefficient	p
Trust	CEVigor	0.5202	.0000
AIPow	CEVigor	0.2919	.0000
	Trust	0.1741	.0016

4.7.2. Model 2: CEAbsorp predicting Trust and AIPow

Similarly, CEAbsorp exhibited a significant direct effect on Trust ($B = 0.4664$, $p < .0001$) and AIPow ($B = 0.1717$, $p = .0055$). The indirect effect of CEAbsorp on AIPow through Trust was also significant (Effect = 0.0989, BootSE = 0.0340, BootLLCI = 0.0409, BootULCI = 0.1732), indicating partial mediation by trust.

Outcome Variable	Predictor	Coefficient	p
Trust	CEAbsorp	0.4664	.0000
AIPow	CEAbsorp	0.1717	.0055
	Trust	0.2121	.0002

4.7.3. Model 3: CEDed predicting Trust and AIPow

For CEDed, there was a significant direct effect on both Trust ($B = 0.4708$, $p < .0001$) and AIPow ($B = 0.3496$, $p < .0001$). Moreover, the indirect effect of CEDed on AIPow via Trust was significant (Effect = 0.0781, BootSE = 0.0331, BootLLCI = 0.0239, BootULCI = 0.1521), underscoring the partial mediating role of trust.

Outcome Variable	Predictor	Coefficient	p
Trust	CEDed	0.4708	.0000

AIPow	CEDED	0.3496	.0000
	Trust	0.1658	.0016

Overall, the results indicate that customer engagement dimensions (Vigor, Absorption, and Dedication) significantly influence both trust and AI-powered personalization in the context studied. Moreover, trust partially mediates the relationship between each customer engagement dimension and AI-powered personalization, suggesting that fostering trust is essential for maximizing the impact of customer engagement on AI-powered personalization strategies. These findings underscore the importance of considering trust-building initiatives alongside customer engagement strategies to enhance the effectiveness of AI-powered personalization efforts in driving customer satisfaction and loyalty.

Trust						
	Coeff	SE	t	p	LLCI	ULCI
Constant	1.3995	0.2571	5.4439	<.0001	0.8924	1.9066
CEVigor	0.5202	0.0789	6.5975	<.0001	0.3647	0.6758

Model Summary	R	R-sq	MSE	F	df1	df2
	0.4317	0.1864	0.7171	43.53	1	190

AIPow

	Coeff	SE	t	p	LLCI	ULCI
Constant	2.2577	0.2070	10.9076	<.0001	1.8494	2.6660
CEVigor	0.2919	0.0655	4.4593	<.0001	0.1628	0.4211
Trust	0.1741	0.0543	3.2054	0.0016	0.0670	0.2813

Model Summary	R	R-sq	MSE	F	df1	df2
	0.4653	0.2165	0.4022	26.12	2	189

The dataset consists of 192 observations, providing insights into various demographic factors and customer engagement metrics.

Age Group: The respondents' age group ranges from below 20 to 50 or above. The mean age group is approximately 0.35, with a standard deviation of 0.569. The majority of respondents (67.7%) belong to the age group below 20, followed by 20-30 (30.2%), and a negligible percentage in the 31-40 and 50 or above categories.

Gender: The gender distribution shows that 54.2% of respondents identify as male, while 45.3% identify as female. A very small fraction (0.5%) preferred not to disclose their gender.

4.7. a: Customer Engagement Metrics

Metric	Minimum	Maximum	Mean	Std. Deviation
CEVigor	1.00	5.00	3.1667	0.77707
CEAbsorp	1.00	5.00	2.9097	0.85442
CEDED	1.17	5.00	3.3785	0.77556

4.7. b: AI Brand Usage

Brand	Frequency	Percentage
ChatGPT	171	89.1%

Gemini	5	2.6%
CoPilot	8	4.2%
MetaAI	8	4.2%

City/Country: Respondents are primarily from Pakistan (93.8%), with smaller representation from other regions such as Dubai, India, Jakarta (Indonesia), Lahore, Netherlands, Qatar, and the United Kingdom.

These descriptive statistics provide a comprehensive overview of the sample demographics and customer engagement metrics, which are essential for understanding the relationships explored in the subsequent analyses.

4.7. c: City/Country Distribution

The dataset provides insights into the geographic distribution of respondents, indicating their city/country of residence.

City/Country	Frequency	Percentage
Australia	1	0.5%
Dubai	2	1.0%

India	2	1.0%
Jakarta, Indonesia	1	0.5%
Lahore	1	0.5%
Netherlands	1	0.5%
Pakistan	180	93.8%
Qatar	1	0.5%
United Kingdom	2	1.0%
United Kingdom	2	1.0%

The majority of respondents (93.8%) are located in Pakistan, while smaller proportions reside in Australia, Dubai, India, Jakarta (Indonesia), Lahore, the Netherlands, Qatar, and the United Kingdom. These geographic distributions provide valuable context for understanding the sample composition and potential regional influences on the variables under investigation.

Hypothesis Description	Supported
AI-Powered Personalization → Customer Engagement Absorption	Yes
AI-Powered Personalization → Customer Engagement Dedication	Yes
AI-Powered Personalization → Customer Engagement Vigor	Yes
Age Group moderates AI-Powered Personalization → Absorption	Yes
Age Group moderates AI-Powered Personalization → Dedication	Yes
Age Group moderates AI-Powered Personalization → CE Vigor	Yes
Gender moderates AI-Powered Personalization → CE Absorption	Partial
Gender moderates AI-Powered Personalization → CE Dedication	Partial
Gender moderates AI-Powered Personalization → CE Vigor	Partial
Trust mediates AI-Powered Personalization → CE Absorption	Yes

Trust mediates AI-Powered Personalization → CE Dedication

Yes

Trust mediates AI-Powered Personalization → CE Vigor

Yes

CE = Customer Engagement

CHAPTER 5

RESULTS AND DISCUSSION

5.1. Discussion

The findings of this study provide valuable insights into the relationships between AI-Powered Personalization, Customer Engagement, and the moderating and mediating effects of demographic factors and trust. These findings are consistent with the theoretical framework proposed by Verhoef et al. (2010), which emphasizes the significance of personalized experiences in enhancing customer engagement. Drawing on the literature reviewed, this discussion section will explore each hypothesis in detail, considering how the results correspond to existing theoretical models and empirical evidence. The hypotheses bring considered are:

In this research we examined the relationships between AI-Powered Personalization, Customer Engagement. Hypothesis one says **“There is a significant positive relationship between AI-Powered Personalization and Customer Engagement Absorption.”** As Table 16 shows the p value is less than 0.05 which means that there is a positive and significant relation between AI-Powered Personalization and Customer Engagement Absorption. According to the previous literature the positive relationship between AI-Powered Personalization and Customer Engagement Absorption suggests that tailored content and recommendations generated through AI algorithms effectively capture customers' attention and immerse them in the brand experience. This finding resonates with the literature on attention and information processing, which posits that personalized stimuli are more likely to attract and hold consumers' attention compared to generic messages (Chen & Wells, 1999). Furthermore, the personalized nature of interactions enhances relevance and perceived value, contributing to higher levels of absorption and immersion in the experience.

We also examined the relationship between AI-Powered Personalization, Customer Engagement. Hypothesis two says **“There is a significant positive relationship between AI-Powered Personalization and Customer Engagement Dedication.”** Table 19 shows the p-value is less

than 0.05, which means that there is a positive and significant relation between AI-Powered Personalization and Customer Engagement Dedication underscores the role of personalized experiences in fostering emotional connections and loyalty. Consistent with prior research on relationship marketing (Morgan & Hunt, 1994), personalized interactions strengthen the affective bond between customers and brands, leading to greater dedication and commitment. By tailoring content and recommendations based on individual preferences and behaviors, AI-powered systems deepen the sense of personal connection and relevance, thereby enhancing customers' emotional attachment to the brand.

Furthermore, the findings delve into the relationship between AI-Powered Personalization, Customer Engagement. Hypothesis three says **“There is a significant positive relationship between AI-Powered Personalization and Customer Engagement Vigor.”** As Table 12 shows the p-value is less than 0.05 which means that there is a positive and significant relation between AI-Powered Personalization and Customer Engagement Vigor, indicating that personalized experiences energize and invigorate customers' interactions with the brand. This finding is consistent with theories of engagement and motivation, which suggest that personalized stimuli elicit stronger emotional responses and drive greater levels of enthusiasm and energy (Ryan & Deci, 2000). By delivering relevant and timely recommendations that resonate with customers' interests and preferences, AI-powered systems create positive feedback loops that sustain engagement and motivation over time.

These findings align with prior research highlighting the role of personalized interactions in capturing customers' attention, fostering emotional connections, and energizing their experiences (Verhoef et al., 2010; Bolton et al., 2013). Customer Engagement, as conceptualized by Mollen and Wilson (2010), consists of three key dimensions: Absorption, Dedication, and Vigor. Absorption refers to the extent to which customers are engrossed in the interaction or experience, Dedication reflects the emotional attachment and commitment to the brand or product, while Vigor represents the enthusiasm and energy invested in the relationship.

The positive relationship between AI-Powered Personalization and Customer Engagement Absorption suggests that tailored content and recommendations generated through AI algorithms effectively capture customers' attention and immerse them in the brand experience. This finding resonates with the literature on attention and information processing, which posits that personalized stimuli are more likely to attract and hold consumers' attention compared to generic messages (Chen & Wells, 1999). Furthermore, the personalized nature of interactions enhances relevance and perceived value, contributing to higher levels of absorption and immersion in the experience.

Similarly, the significant positive relationship between AI-Powered Personalization and Customer Engagement Dedication underscores the role of personalized experiences in fostering emotional connections and loyalty. Consistent with prior research on relationship marketing

(Morgan & Hunt, 1994), personalized interactions strengthen the affective bond between customers and brands, leading to greater dedication and commitment. By tailoring content and recommendations based on individual preferences and behaviors, AI-powered systems deepen the sense of personal connection and relevance, thereby enhancing customers' emotional attachment to the brand.

Furthermore, the findings reveal a significant positive relationship between AI-Powered Personalization and Customer Engagement Vigor, indicating that personalized experiences energize and invigorate customers' interactions with the brand. This finding is consistent with theories of engagement and motivation, which suggest that personalized stimuli elicit stronger emotional responses and drive greater levels of enthusiasm and energy (Ryan & Deci, 2000). By delivering relevant and timely recommendations that resonate with customers' interests and preferences, AI-powered systems create positive feedback loops that sustain engagement and motivation over time.

Consistent with theoretical propositions and empirical evidence (Hollebeek et al., 2014), this study reveals that moderating effects of Age Group and Gender on the relationship between AI-Powered Personalization and Customer Engagement dimensions. This would support hypothesis four, which says **“There is a moderating effect of Age Group on the relationship between AI-Powered Personalization and Customer Engagement Absorption.”** As Table 23 shows the p-value is less than 0.05 which means that there is a positive and significant moderating effect of Age Group on the relationship between AI-Powered Personalization and Customer Engagement Absorption.

Similarly, our examination shows that hypothesis five is also supported, which states, **“There is a moderating effect of Age Group on the relationship between AI-Powered Personalization and Customer Engagement Vigor.”** Table 22 shows the p value is less than 0.05, which means that there is a positive and significant moderating effect of Age Group on the relationship between AI-Powered Personalization and Customer Engagement Vigor.

Likewise, further findings show support for hypothesis six, which states, **“There is a moderating effect of Age Group on the relationship between AI-Powered Personalization and Customer Engagement Dedication.”** Table 24 shows the p-value is less than 0.05, which means that there is a positive and significant moderating effect of Age Group on the relationship between AI-Powered Personalization and Customer Engagement Dedication.

Moving on, our results remain consistent with hypothesis seven, which states, **“There is a moderating effect of Gender on the relationship between AI-Powered Personalization and Customer Engagement Absorption.”** Table 26 shows the p-value is less than 0.05, which means that there is a positive and partial moderating effect of Gender on the relationship between AI-Powered Personalization and Customer Engagement Absorption.

Additionally, our findings state that hypothesis eight, which is, **“There is a moderating effect of Gender on the relationship between AI-Powered Personalization and Customer Engagement Vigor.”** is supported, as seen in Table 25, the p-value is less than 0.05, which means that there is a positive and partial moderating effect of Gender on the relationship between AI-Powered Personalization and Customer Engagement Vigor.

Lastly, the findings also support hypothesis nine that states, **“There is a moderating effect of Gender on the relationship between AI-Powered Personalization and Customer Engagement Dedication.”** This shows that in Table 27, the p-value is slightly greater than 0.05, which means that there is a positive and partial moderating effect of Gender on the relationship between AI-Powered Personalization and Customer Engagement Dedication.

Younger consumers, characterized by their digital fluency and familiarity with personalized digital experiences, exhibit stronger responses to AI-driven personalization compared to older age groups. Similarly, gender differences in information processing and decision-making influence individuals' reactions to personalized marketing efforts, albeit to varying degrees depending on the context and audience characteristics. These findings underscore the importance of segment-specific personalization strategies tailored to the preferences and behaviors of different demographic groups.

Our examination of the results now looks at hypothesis 10, which states, **“There is a mediating effect of Trust on AI-Powered Personalization and Customer Engagement Absorption.”** The p-value in Table... is less than 0.05, which means that there is a positive and partial mediating effect of Trust on the relationship between AI-Powered Personalization and Customer Engagement Absorption.

With that, we also examine the results for hypothesis 11, which states, **“There is a mediating effect of Trust on AI-Powered Personalization and Customer Engagement Dedication.”** The p-value in Table... is less than 0.05, which means that there is a positive and partial mediating effect of Trust on the relationship between AI-Powered Personalization and Customer Engagement Dedication.

Lastly, we examine the findings of hypothesis 12, which states, **“There is a mediating effect of Trust on AI-Powered Personalization and Customer Engagement Vigor.”** The p-value in Table 28 is less than 0.05, which means that there is a positive and partial mediating effect of Trust on the relationship between AI-Powered Personalization and Customer Engagement Vigor.

The results of this study support the mediating role of Trust in the relationship between AI-Powered Personalization and Customer Engagement dimensions. Consistent with prior research on consumer-brand relationships (Moorman et al., 1993), trust emerges as a critical mechanism through which personalized experiences influence customer perceptions and

behaviors. By enhancing trust in the brand and its offerings, personalized interactions foster stronger emotional connections and deepen engagement, ultimately leading to greater loyalty and advocacy. These findings highlight the importance of trust-building initiatives in designing personalized marketing strategies that resonate with consumers and drive positive outcomes.

In summary, the findings of this study contribute to advancing our understanding of the mechanisms underlying the effectiveness of AI-Powered Personalization in driving customer engagement and trust. By reinforcing and extending existing theoretical frameworks and empirical evidence, this study provides valuable insights for marketers seeking to design personalized experiences that resonate with diverse consumer segments and foster long-term relationships with their brands.

5.2. Conclusion

The study provides robust evidence that AI-powered personalization significantly enhances customer engagement across its various dimensions: absorption, dedication, and vigor. The empirical findings align with the extant literature, which underscores the pivotal role of personalized experiences in elevating customer involvement and loyalty.

AI-powered personalization has demonstrated its efficacy in making customer interactions more engaging and meaningful. By leveraging AI, businesses can offer more tailored experiences that resonate deeply with customers, leading to higher levels of engagement. This conclusion is in line with previous research emphasizing the importance of personalized engagement strategies (Vivek et al., 2012; Brodie et al., 2013).

5.2.1. Practical Implications

1. **Enhanced Customer Experience:** Businesses should invest in AI-powered personalization technologies to enhance customer experiences. These technologies can analyze vast amounts of data to provide customized recommendations, offers, and communications that cater to individual customer preferences. This personalized approach can significantly improve customer satisfaction and loyalty.
2. **Strategic Marketing:** Marketers can leverage AI to create more targeted and effective marketing campaigns. By understanding customer behaviors and preferences, AI can help craft personalized messages that resonate more with the target audience, thereby increasing the effectiveness of marketing efforts.
3. **Customer Retention:** AI-powered personalization can play a critical role in customer retention strategies. By continuously engaging customers with relevant content and offers, businesses can build stronger relationships and reduce churn rates. Personalized

engagement helps in creating a sense of value and appreciation among customers, which is crucial for retaining them.

4. **Operational Efficiency:** Implementing AI-powered personalization can streamline operations by automating routine tasks and providing data-driven insights. This can lead to more efficient resource allocation and better decision-making, ultimately enhancing overall business performance.

5.2.2. Theoretical Implications

1. **Customer Engagement Theory:** This study contributes to the literature on customer engagement by providing empirical evidence on the role of AI-powered personalization. It supports the notion that personalized experiences are crucial for fostering deeper levels of engagement, including absorption, dedication, and vigor. This finding extends the current understanding of how technology can enhance customer engagement.
2. **Personalization and Trust:** The study highlights the mediating role of trust in the relationship between AI-powered personalization and customer engagement. This adds to the theoretical discourse by illustrating how personalized experiences can build trust, which in turn, enhances customer engagement. Trust is a critical factor in customer relationships, and this study underscores its importance in the context of AI-driven personalization.
3. **Moderating Effects of Demographics:** The findings on the moderating effects of age and gender on the relationship between AI-powered personalization and customer engagement provide new insights into how demographic factors influence the effectiveness of personalization strategies. This highlights the need for further research to explore these moderating effects in more detail, contributing to a more nuanced understanding of personalization.

5.2.3. Future Research Directions

1. **Longitudinal Studies:** Future research should consider longitudinal studies to examine the long-term effects of AI-powered personalization on customer engagement. This would provide a deeper understanding of how sustained personalized interactions impact customer loyalty and business outcomes over time.
2. **Cross-Industry Analysis:** Conducting studies across different industries could provide insights into how the effectiveness of AI-powered personalization varies by sector. This would help in understanding the industry-specific factors that influence the success of personalization strategies.
3. **Technological Advancements:** As AI technologies continue to evolve, future research should investigate the impact of advanced AI features, such as natural language

processing and machine learning algorithms, on customer engagement. This could reveal new opportunities for enhancing personalization.

4. **Ethical Considerations:** Given the increasing concerns about data privacy and ethical use of AI, future studies should explore the ethical implications of AI-powered personalization. Research should focus on how businesses can balance personalization with ethical standards and customer privacy.

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Impact of AI-Powered Personalization on Customer Engagement: Exploring the Moderating Role of Customer Demographics

Dear Participant,

Thank you for taking the time to participate in this survey. My name is Muhammad Shayan Ibrahim, and I am an MBA student majoring in marketing at Bahria University Islamabad Campus. As part of my thesis, I am conducting a study on the **Impact of AI-Powered Personalization on Customer Engagement: Exploring the Moderating Role of Customer Demographics**.

Your participation in this study is invaluable. By sharing your experiences and insights, you will contribute to the advancement of knowledge in the field of marketing and AI technology. Your responses will be kept confidential and anonymous and only used for research purposes.

* Indicates required question

Please select which option suits your response best, with the scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

1. Age Group *

Mark only one oval.

- Below 20
- 20-30
- 31-40
- 41-50
- 51 or Above

6/3/24, 6:14 PM

Impact of AI-Powered Personalization on Customer Engagement: Exploring the Moderating Role of Customer Demographics

2. Gender *

Mark only one oval.

- Male
- Female
- Prefer not to say

3. City/Country *

4. Which AI Brand Do You Use The Most Frequently? *

Mark only one oval.

- Chat GPT
- Gemini
- CoPilot
- Meta AI

Customer Engagement

5. **Vigor** *

I can continue using this online AI platform for very long periods at a time

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

6/3/24, 6:14 PM

Impact of AI-Powered Personalization on Customer Engagement: Exploring the Moderating Role of Customer Demographics

6. I feel strong and vigorous when I am using this online AI platform *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

7. I feel very resilient, mentally, as far as this online AI platform is concerned *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

8. In this online AI platform, I always persevere, even when things do not go well *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

9. I devote a lot of energy to this online AI platform *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

6/3/24, 6:14 PM

Impact of AI-Powered Personalization on Customer Engagement: Exploring the Moderating Role of Customer Demographics

10. I try my hardest to perform well on this online AI platform *

Mark only one oval.

1 2 3 4 5

Strongly Strongly Agree

11. **Absorption** *

Time flies when I am using this online AI platform

Mark only one oval.

1 2 3 4 5

Strongly Strongly Agree

12. Using this online AI platform is so absorbing that I forgot about everything else *

Mark only one oval.

1 2 3 4 5

Strongly Strongly Agree

13. I am rarely distracted when using this online AI platform *

Mark only one oval.

1 2 3 4 5

Strongly Strongly Agree

6/3/24, 6:14 PM

Impact of AI-Powered Personalization on Customer Engagement: Exploring the Moderating Role of Customer Demographics

14. I am immersed in this online AI platform *

Mark only one oval.

1 2 3 4 5

Strongly Strongly Agree

15. My mind is focused when using this online AI platform *

Mark only one oval.

1 2 3 4 5

Strongly Strongly Agree

16. I pay a lot of attention to this online AI platform *

Mark only one oval.

1 2 3 4 5

Strongly Strongly Agree

17. **Dedication** *

I am enthusiastic in this online AI platform

Mark only one oval.

1 2 3 4 5

Strongly Strongly Agree

6/3/24, 6:14 PM

Impact of AI-Powered Personalization on Customer Engagement: Exploring the Moderating Role of Customer Demographics

18. This online AI platform inspires me *

Mark only one oval.

1 2 3 4 5

Strongly Strongly Agree

19. I found this online AI platform full of meaning and purpose *

Mark only one oval.

1 2 3 4 5

Strongly Strongly Agree

20. I am excited when using this online AI platform *

Mark only one oval.

1 2 3 4 5

Strongly Strongly Agree

21. I am interested in this online AI platform *

Mark only one oval.

1 2 3 4 5

Strongly Strongly Agree

6/3/24, 6:14 PM

Impact of AI-Powered Personalization on Customer Engagement: Exploring the Moderating Role of Customer Demographics

22. I am proud of using this online AI platform *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

Artificial Intelligence

23. The AI replied to my question properly *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

24. E-learning provides information that is relevant to learning *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

25. The AI technology makes this brands website easy to use and effortless *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

6/3/24, 6:14 PM

Impact of AI-Powered Personalization on Customer Engagement: Exploring the Moderating Role of Customer Demographics

26. The AI responded in a form that I could understand *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

27. The AI technology provides customers with specific, preferred information *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

28. The system provides clear, easy-to-read information *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

29. The AI response was relevant to my question *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

Trust

6/3/24, 6:14 PM

Impact of AI-Powered Personalization on Customer Engagement: Exploring the Moderating Role of Customer Demographics

30. I trust the online AI platform and would purchase products from this website *

Mark only one oval.

1 2 3 4 5

Strongly Strongly Agree

31. I believe that the online AI platform is trustworthy *

Mark only one oval.

1 2 3 4 5

Strongly Strongly Agree

32. I believe that the online AI platform will keep its promises and commitments *

Mark only one oval.

1 2 3 4 5

Strongly Strongly Agree

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