

Search Engine VS AI Platforms for Digital
Generation Consumers: Shift from Traditional
Search Engines to AI Tools for Marketing and
Consumer Purchase Decisions.

**“Search Engine VS AI Platforms for Digital Generation Consumers:
Shift from Traditional Search Engines to AI Tools for Marketing and
Consumer Purchase Decisions.”**

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Date of Submission: August 1, 2025

Letter of Transmittal

August 1, 2025

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Subject: Final thesis on “Search Engine VS AI Platforms for Digital Generation Consumers: Shift from Traditional Search Engines to AI Tools for Marketing and Consumer Purchase Decisions.”

Dear Sir,

This report is based on my detailed research and work, where numerous findings are presented to complete my coursework. I have tried and worked hard to complete this report, as per your instructions. I have prepared this report with the necessary information and also worked on your suggestions in covering all the sectors of this topic, “Search Engine VS AI Platforms for Digital Generation Consumers: Shift from Traditional Search Engines to AI Tools for Marketing and Consumer Purchase Decisions,” And I am submitting this report along with this letter. It was a fantastic experience, preparing this report on the completion of my Final thesis work. I would be grateful if you were kind enough to evaluate my effort, and I hope that the report will fulfill your expectations. Thank you for teaching me about the “MIS” practical site in an organization. If you encounter any difficulties with interpreting at any point, please reach me through the email address provided below. I am thankful once again and waiting for your valuable evaluation and comments on this report.

Sincerely,

Fatin Nihal Khan (nihalkn166@gmail.com)

ID: 111201250

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Declaration of the Student

I am with my conscious mind is declaring that the project report titled “Search Engine VS AI Platforms for Digital Generation Consumers: Shift from Traditional Search Engines to AI Tools for Marketing and Consumer Purchase Decisions” is the result of my independent effort. The project was undertaken during my academic studies under the guidance and supervision of Ahmed Imran Kabir, Lecturer from United International University. I assure that all the findings and conclusions presented in this report are the result of my efforts and with the guidance and supervision of my advisor. I assure that it has not been submitted before for any other degree, diploma, or certification, either here or at any other institution. I also made sure to follow all the university’s guidelines while preparing this report. Any external material used from any other sources has been rightfully acknowledged and referenced in Apa 6th format.

X

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Acknowledgement

I would like to express my gratitude to my supervisor and mentor, Ahmed Imran Kabir, Lecturer at the School of Business and Economics, United International University, for providing me with direction, teaching me the proper methods of writing a research paper, and guiding me throughout every step of this report. His helpful critiques of this research work and willingness to give me time in this report have been very much appreciated. Then I am grateful to all the respondents of the survey for sparing their valuable time.

Finally, I am delighted to give special thanks to those sources whose ideas, research, writings, books, and related materials helped my report with rich materials and dependable logics.

Abstract

As AI is transforming every sector, consumer purchase decision are affected by it increasingly day by day. Mainly, the digital generation have already become over reliant on AI Tools. But the marketers and industry is still focusing on traditional search engine for their products and service recommendations through keyword based search and website ranking. Thus, this study explores AI's effect on digital generation consumers purchase decision over traditional search engine. The structure is created on variables like trust on AI tools, frequency of use, personalization and AI vs traditional search engine to general preferences for their queries. The survey was of 150 respondent mostly young male students and few job holders. Their responses was analyzed using SPSS and Smart PLS SEM model to see the reliability and variables relations with each other. Here, trust a mediating variable shows direct impact on purchase decisions where indirectly with the help of personalization and comparison with search engine factor. As, these 2 factors directly didn't contribute much with purchase decisions rather mainly indirectly thorough trust. Only independent variable to have significant impact besides mediating one is Frequency for purchase decision. All of them combine built a strong model to support the hypothesis passing all the attributes with different tests. Future study should focus on more variables that directly impact purchase decisions as well as different age group, gender and demographics.

Keywords: Artificial Intelligence, Search Engine, Frequency, Digital Generation, Personalization, SPSS, Structural Equation Modeling.

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Gender
150 responses

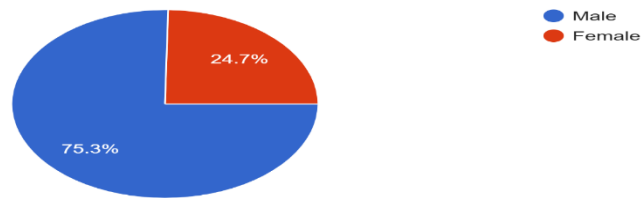


Figure 1

Age
150 responses

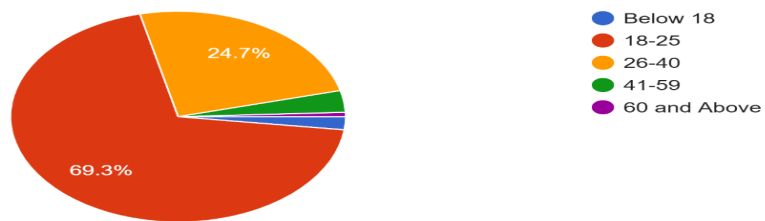


Figure 2

Profession
150 responses

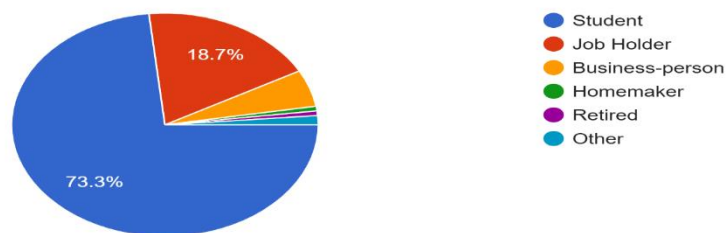


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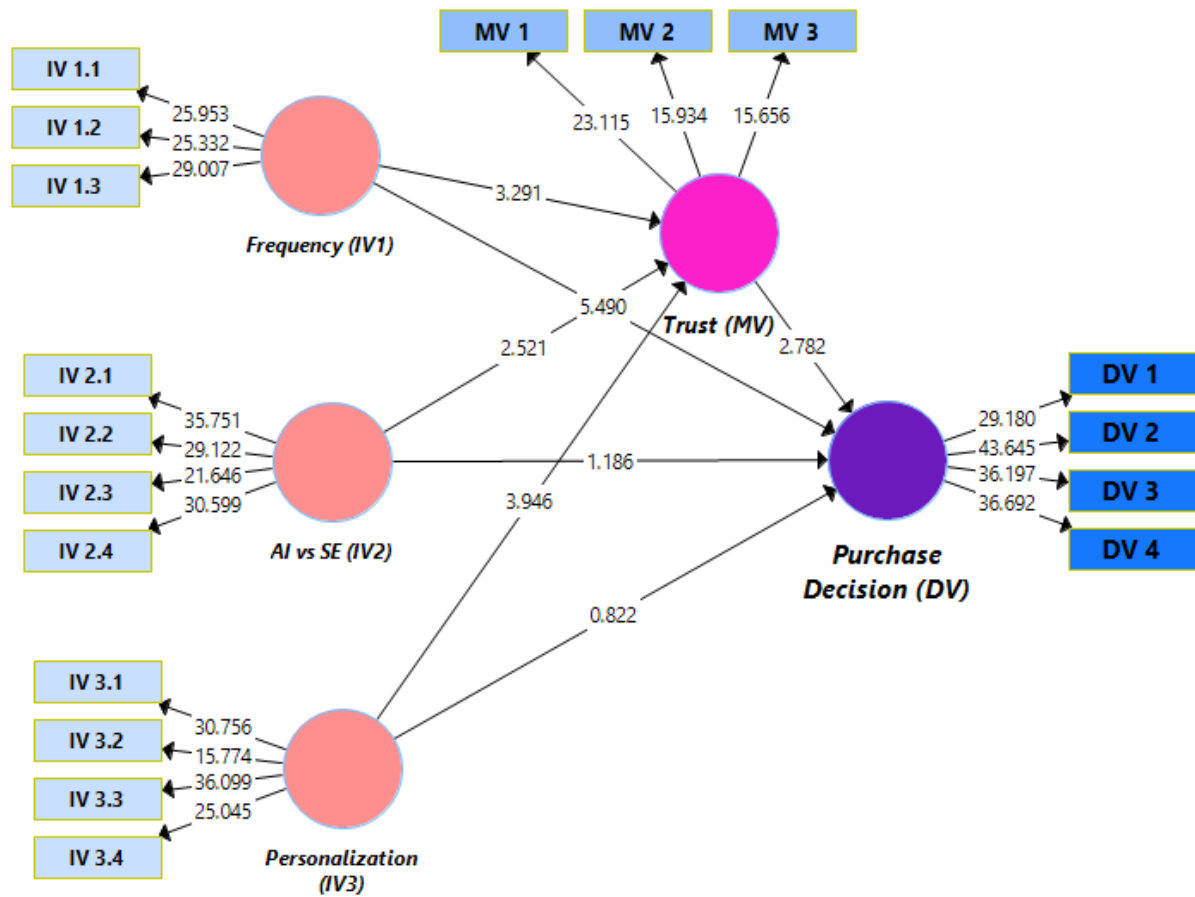


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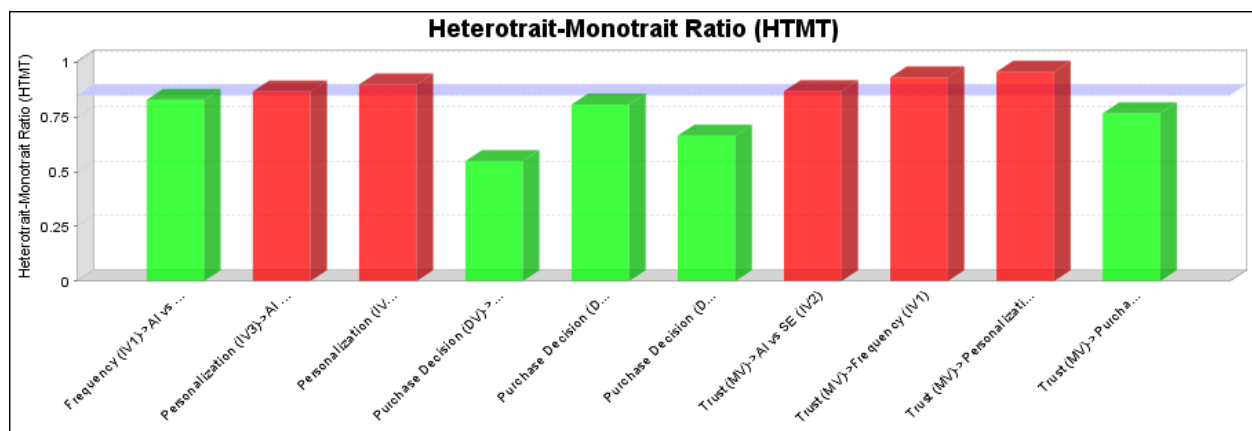


Figure 5

List of Acronyms & Abbreviation

- SEM – Structural Equation Modeling
- ML – Machine Learning
- P Value – Probability Value
- Gen Z – Generation Z
- HTMT – Heterotrait-Monotrait-Ratio
- IV – Independent Variable
- MV – Mediating Variable
- DV – Depending Variable
- AI – Artificial Intelligence
- SE – Search Engine
- GEO – Generative Engine Optimization
- SEO – Search Engine Optimization

CHAPTER I: INTRODUCTION

I.1 Background of the Study

In this AI era, consumers are increasingly relying on AI platforms to influence their purchase decisions. Especially the digital generation, also known as Gen Z. Youngsters are highly influenced by it, as the AI platforms provide concise, personalized recommendations, saving their time and achieving short attention span goals. There are still numerous platforms and marketers that focus on traditional keyword-based search and website ranking on traditional search engines (e.g., Google), but they lack targeted grouping for marketing their products and services, not being aware of the power the AI platforms hold. Also, there is gap with study focusing on the Gen Z generation and their overreliance on AI for purchase decisions and how it is shaping their choices day by day.

Thus, this study focuses on the need for AI platform-based marketing, highlighting the fact that mostly digital generation customers (Gen Z) purchase decisions are influenced by personalized AI recommendations and tools, unlike previous traditional search engine-based (not-so-narrowed/personalized) marketing. It addresses variables like trust, personalization, purchase decision, and engagement to analyze impact.

I.2 Statement of the Problem

The highlighting problem of the study is not focusing on AI platforms for marketing products and services mainly to the digital generation (Gen Z), while they are highly reliant on AI platforms for their day-to-day purchase decisions, rather investing in traditional search engine marketing.

I.3 Objectives of the Study

- To compare AI tools and traditional search engines and find out which is more acceptable to the digital generation customers for their purchase decisions.
- Analyze factors like trust, personalization, frequency, and comparison with the traditional search engine to clearly understand the impact on the final decision distinctively.
- Addressing concerning issues like over-reliance, trust, and privacy in accordance with AI tools wide range of use.

I.4 Scope and Limitations of the Study

The study is done with a survey of 150 respondents, where 75.3% are male, 69.3% are aged 18 to 25 and 73.3% are students. So, there are future study options for females focusing study, different professions, and a survey with a much larger dataset. Another interesting option could be to do a study with a specific product and service category and find out if it is suitable for that industry or not.

I.5 Definition of Key Terms

AI Platforms: Platforms like ChatGPT, Grok, Claude, and Perplexity that store individuals' data and give feedback to their query according to individual preferences.

Traditional Search Engines: Google and Microsoft Edge, which give feedback based on keywords on general queries and broader feedback.

Personalization: Tailoring products, services, and queries to meet the needs and preferences of individuals.

Digital Generation: People who have grown up with digital technology or are so used to it for their day-to-day activities. (For this paper, people who are reliant on AI and the internet for their regular activities)

Gen Z: Generation Z are usually the people born from 1997 to 2012 and are usually tech savvy. Also called digital native or digital generation.

Short Attention Span: People who can focus for a limited amount of time before they get distracted.

I.6 Organization of the Remaining Chapter

- Chapter 2 – States the relevant theories, literature review and hypothesis development from already done works.
- Chapter 3 – States the methodology plan where design, sampling, questionnaire and analysis plan are discussed
- Chapter 4 – States the research finding and analysis
- Chapter 5- States conclusion, future scope and recommendations.

CHAPTER II: LITERATURE REVIEW

2.1 Relevant Theories

Theory of planned behavior: That theory suggests that a consumer purchase decision is determined by customer attitude toward that choice, subjective norms (what others think), and perceived behavioral control (how easy or hard it is to get it).(Ajzen, 1991)

Here, AI can positively contribute by making the whole process easier and giving authority to the customers in their decision-making process. Also, personalized recommendations give a positive attitude and knowing people using the same platforms like ChatGPT supports the subjective norm having an impact on the final decision.(Ali, 2025)

S-O-R Framework: ‘Stimulus’—external impact (Like AI recommendation)—has an impact on ‘Organism, which is the internal thought process ultimately leading to ‘Responses,’ which are purchase decisions.(Mehrabian & Russell, 1974)

In a reviewed paper, functional foods for health-conscious people are suggested through an AI recommendation engine as an external stimulus, and the consumption of those foods was increased by those customers.(Wang, Chen, & Kuang, 2025)

S-D-T Theory: Self-Determination Theory explains that consumers are usually self-determined and need autonomy, competence, and relatedness. This means they feel like they are capable of controlling their choices and hope their actions result is connected to themselves and cared for by others.(Deci & Ryan, 2013)

The theory explains that AI engine algorithms let consumers feel pleasure and satisfaction in making their decision final. They feel like they are not just searching but doing something creative, resulting in greater confidence and more use of AI platforms for their conclusive choices.(Fan & Liu, 2022)

Elaboration Likelihood Model: The model indicates attitudes toward something are the result of the central route and peripheral route. One is judging through careful thought and the other one is judging by attractiveness and emotions.(Petty & Cacioppo, 2012)

One of the reviewed papers explains that those who are familiar with AI platforms do better on the central route but people who are just introduced to the platforms use them based on trust that the platform will help with their decision-making process and are drawn to their wide range of use, likely from word of mouth.(Mehta et al., 2025)

Technology Acceptance Model: It explains how technologies wide use and general acceptance let them be drawn to accept the technology in their lives.(Davis, 1989)

A paper on the German customer shopping experience states that customers found ai recommendation useful for their shopping experience and thus started using them widely, spreading them through word of mouth.(Ali, 2025) However, another study showed that functional foods for health-conscious people are better suited for the S-O-R model and the T-A-M model has drawbacks for that type of product and is not useful.(Wang et al., 2025)

Customer Journey Model: The model describes a customer journey from knowing about something to being loyal to that product or service while going through the path of awareness, consideration, decision, retention, and advocacy. It helps marketers understand the experience and pain points of the customers and helps them to interact better.(Lemon & Verhoef, 2016)

Now, all these touchpoints and experiences are revolutionized by AI recommendations by communicating with the customers through bots in every step, from introducing something to becoming a customer to being a repeated one. It is now only possible through AI based recommendation and marketing. Thus, making the customer experience delightful.(Jafari, Brusset, Frasquet, Teller, & Kotzab, 2025)

Cognitive Dissonance Theory: The theory suggests sometimes what customers actually believe doesn't do the same in their actions. There is always a contradiction, like

one knows sugary drinks are bad but still consumes them on a day-to-day basis. Same goes for wide cigarette consumption on a regular basis.(*Festinger, Leon A Theory Of Cognitive Dissonance* (1968, Stanford University Press), n.d.)

In the case of reviewed paper, if AI engines recommend some products from a company that is not environment conscious but the queried consumer is. Then there will be a conflict of belief and cognitive dissonance. So, an AI engine algorithm should add that in mind while recommending some product or service according to the person's character to maintain the same level of trust.(Fan & Liu, 2022) Also, in one paper it is suggested that certainty is a key factor. If the certainty is increased through explaining with actual numbers about some recommendations, cognitive dissonance can be mitigated to a greater extent.(Rahman, 2025)

Theory of Free Will: Consumers final decision is always backed by self-control, careful planning, and logical decisions.(Kane & Kane, 1999)

Here, AI engines trend analysis, predictive approach, and persuasive capability by individual recommendation choices can change the course of the outcome in the present era. All three of these attributes of free will are influenced by recommendation engines to an unbelievable extent nowadays.(Gkikas & Theodoridis, 2022)

Information Processing Approach: That theory suggests that AI can extend consumer abilities to search for something and process it to an unreal extent, giving relevant info within seconds, resulting in greater acceptance of perceived search abilities and removing limitations of human capabilities.(Pham, Pham Thi, & Duong, 2024)

The Economic Approach: This approach indicates there should be a balance between search cost and benefits. The lesser the cost in comparison to the benefit of the outcome, the better it is.(Becker, 1976)

This theory is now positively shaping the AI based recommendation, which is less costly with greater and personalized information. Eventually, deciding on the final decision of a more than satisfactory result in comparison to its cost. (Pham et al., 2024)

Query theory: It explains how search behavior and proper queries are interconnected. The better the query is, the better the recommendations, controlling satisfaction and decision-making. It also implies the platform that can do better with less criticality than others is doing better.(Johnson, Häubl, & Keinan, 2007)

Like it is found that voice-based accurate search with less commanding effort, platforms with less complex queries but better outcomes, and things like that are doing better in the AI industry, gaining more customers and satisfaction scores.(Rahman, 2025)

2.2 Literature Survey

An increasing number of researchers are highlighting how AI tools are shaping the consumer decision-making process in recent days. People are no longer solely reliant on traditional search engine/keyword-based suggestions for their product and service choices. Now they prefer personalized recommendations, which are done only through AI engines.(Mehta et al., 2025) AI platforms store customer information and, based on the query, give tailored answers to their specific needs. It was impossible before. Marketers could go to the length of grouping for their niche marketing but never could they imagine that personalized marketing could be done through AI platforms' algorithmic search and recommendations.(Mehta et al., 2025) Now, advanced algorithms can make decision-making simple by saving search costs, trade-offs, and cognitive dissonance and making the customer repetitive. However, if the AI recommendations feels like holding the power and not giving authority to consumers, then those can have a negative impact, increasing cognitive dissonance.(Fan & Liu, 2022) Trust is also an important factor in shaping customers decisions. It is usually positive for younger generations but those who are not technology accepting have trust issues and privacy concerns impacting higher dissonance; like if AI suggests something not aligning with their belief, they will be less likely to accept the recommendations.(Gantumur, 2025) Another paper explains how the intrusive nature of AI engines impacts negatively. These platforms hold all the information of a particular character and suggest considering all the factors. But sometimes

customers feel the AI is intrusive and it affects them negatively. Therefore, it is suggested to make the algorithm less forceful.(Mehta et al., 2025) On the contrary for functional food, being forceful with their recommendation tone seems to have a positive outcome. Here, health-conscious people with their food and fitness prefer transparency and brutal honesty from AI.(Wang et al., 2025) Ai algorithm help consumers to define their needs clearly, evaluate alternatives, do predictive analytics, and finally help with their choices with accurate numbers and figures, making it highly rational. Consumers dig that and prefer it over any traditional search engine.(Ali, 2025) In a recent paper Microsoft copilot outperform google search in patients query about their medical need and assistance.(Bahçeci, Elmaağaç, & Ceyhan, 2025a, 2025b) Block-chain technology increased transparency in functional food recommendations increasing trust.(Wang et al., 2025) Virtual retail shop, digital coupon recommendations, auto payment for recurring purchase, digital space for pharmacy and medicine information with factual data on patients all of these access are enriching ai recommendations system (Generative Engine Optimization) ultimately helping the customers for their consumption choices with more accuracy and repetitiveness.(Jafari et al., 2025; Lüttgenau, Colic, & Ramirez, 2025) These are far better than any traditional search engine making customers experience delightful for their purchase decision.

2.3 Hypothesis Development

- Personalization is the key factor for AI engines better performance than traditional search engines.
- Trust is crucial for understanding different generation of consumers and influencing other traits.
- Algorithmic decision autonomy has U shape relation with purchase decision.(Low to moderate positively impacts, while high negatively)
- Privacy issue must be transparent for high customer retention.

- Generative Engine Optimization (GEO) gives far better result than Search Engine Optimization (SEO).
- AI engine already revolutionized healthcare industry and will do the same for different types of product and service industry and their approach to consumers.
- Frequent users of an AI platform is more likely to listen AI recommendation for their purchase decision than traditional search engine no matter how many years the traditional one is used.

Here, the paper is ultimately indicating that AI has significant influence on digital generation purchase decision in comparison to traditional search engine. (Alternative Hypothesis: H_1) The null hypothesis is that AI doesn't impact more than traditional search engines for digital generation purchase decision (H_0). (Neyman & Pearson, 1933)

CHAPTER III: RESEARCH METHODS

3.1 Research Design

This is a quantitative research where 150 respondents were surveyed through online form. The survey was built on 1 Dependent Variable (DV): AI Tools Impact on Purchase Decisions and 3 Independent Variables (IV) which are Frequency (IV1), Traditional Search Engines vs AI Engines (IV2), Personalization (IV3) and 1 Mediating Variable Trust Factor (MV), . Each of them containing 4 questions in Likert scale to understand the sample size frequency of their preferences.

3.2 Sample

The sample population is 150. From them majority is male (75.3%), students (73.3%) with the age range of 18 to 25 (69.3%). The second majority age is 26 to 40 which is 24.7%. This sums up the sample population and it is fair to say more than 70% of the sample are Generation Z including some from 26 to 40 age section.

3.3 Questionnaire Development / Model Specification

The questionnaire were developed with 1 DV, 1 MV and 3 IV each containing 4 questions and these are mostly originated with the core idea of some referenced work mentioned in the appendix. The questionnaire was answered in Likert scale where strongly disagree hold least value to strongly agree the most. Dependent variable is purchase decision, Mediating variable is trust factor, and three independent variables are personalization, frequency and AI vs Traditional Search Engine.

3.4 Data Collection

Data was collected through an online survey on Google form. To collect the response, respondents were given link of the questionnaire form through social media platforms and

was asked to fill it up according to their experiences. Only authors and supervisor holds the responses and is not publicly disclosed for ethical perspective.

3.5 Data Analysis Plan

First demographic variables is going to be explained with related charts and frequency using Google form charts and SPSS analysis. Then reliability analysis will be conducted to assess the stronghold of the variables. Finally, for deeper dive SEM model will be developed and related analysis will be conducted to measure the hypothesis actuality.

CHAPTER IV: RESEARCH FINDINGS & ANALYSIS

4.1 Describing Sample Population

The demographic analysis of the respondents is shown in Figure 1, 2, and 3. The survey is consist of 150 respondents and the demographic variables are Gender, Age, and Profession.

Figure 1 describes the Gender where it is found that majority of the participant is male which is 75.3% and only 24.7% is female.

Figure 1: Gender

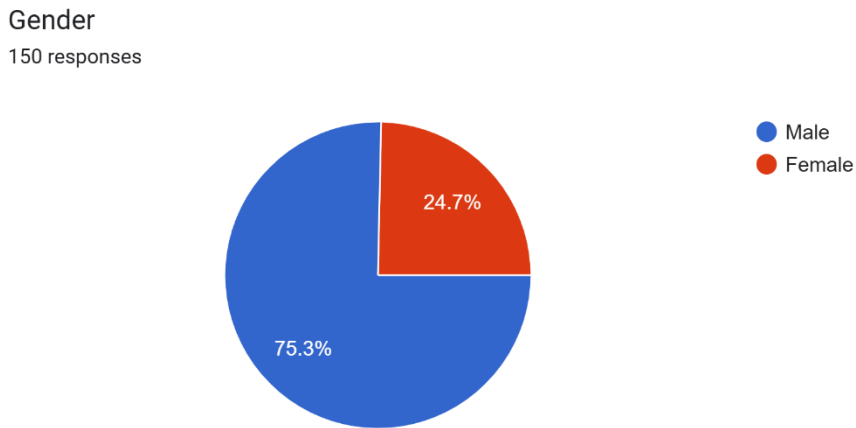


Table 1: Gender Frequency

Gender		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	113	75.3	75.3	75.3
	Female	37	24.7	24.7	100.0
	Total	150	100.0	100.0	

Figure 2 explains Age group divided into 5 categories which are below 18, 18 to 25, 26 to 40, 41 to 59, and 60 to above. Here, 69.3% respondent's age range from 18 to 25 and

24.7% age range from 26 to 40. Left 6% are from the remaining categories. So, it is fair to say that more than 70% are from Generation Z (Born in 1997 to 2012) which are the highlighting category of our research study to conduct their purchase behavior using AI and how to market these category people in this era.

Figure 2: Age

Age
150 responses

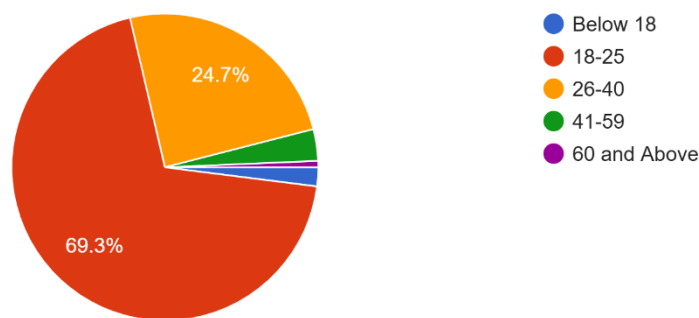


Table 2: Age Frequency

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 18	3	2.0	2.0	2.0
	18-25	104	69.3	69.3	71.3
	26-40	37	24.7	24.7	96.0
	41-59	5	3.3	3.3	99.3
	60 and Above	1	.7	.7	100.0
	Total	150	100.0	100.0	

Figure 3 explain participant's profession and from the earlier as we found that most falls under Gen Z category it is clear that most participants are students which is 73.3% and are highly dependent on modern technology tools like AI. The second majority portion consist of Job Holder which 18.7% including young ones as well.

Figure 3: Profession

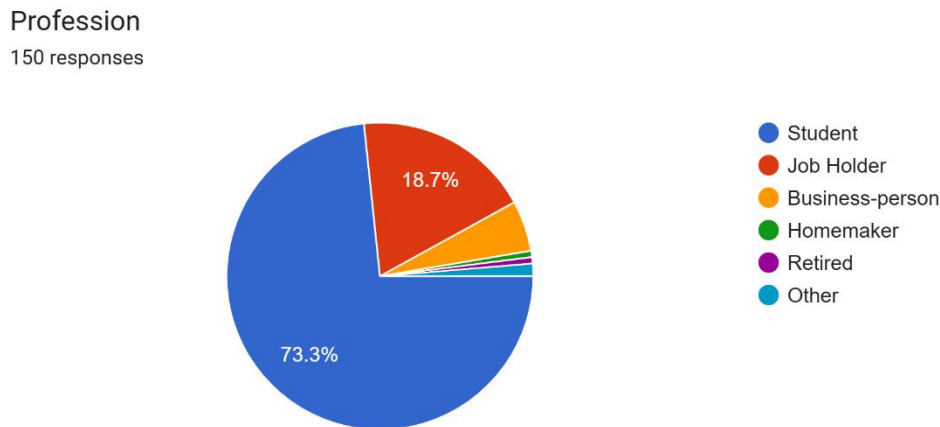


Table 3: Profession Frequency

Profession

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Student	110	73.3	73.3	73.3
	Job Holder	28	18.7	18.7	92.0
	Business-person	8	5.3	5.3	97.3
	Homemaker	2	1.3	1.3	98.7
	Retired	2	1.3	1.3	100.0
	Total	150	100.0	100.0	

4.2 Reliability Analysis

Using Statistical Package for Social Science (SPSS) the Reliability Analysis was done. Here, 20% of the total populations were analyzed where all the value of chronbach's

Alpha is much more than 0.7 indicating that all the variables pass the alternative hypothesis testing strongly rejecting null hypothesis and is ready for further analysis.

Table: Chronbach's Alpha of DV

Reliability Statistics	
Cronbach's	
Alpha	N of Items
.898	4

Table: Chronbach's Alpha of MV

Reliability Statistics	
Cronbach's	
Alpha	N of Items
.825	4

Table: Chronbach's Alpha of IV1

Reliability Statistics	
Cronbach's	
Alpha	N of Items
.858	4

Table: Chronbach's Alpha of IV 2

Reliability Statistics	
Cronbach's	
Alpha	N of Items
.906	4

Table: Chronbach's Alpha of IV3

Reliability Statistics

Cronbach's Alpha	N of Items
.912	4

Table: Chronbach's Alpha of Total Variables

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.924	.927	5

Table: After computation reliability

Item-Total Statistics

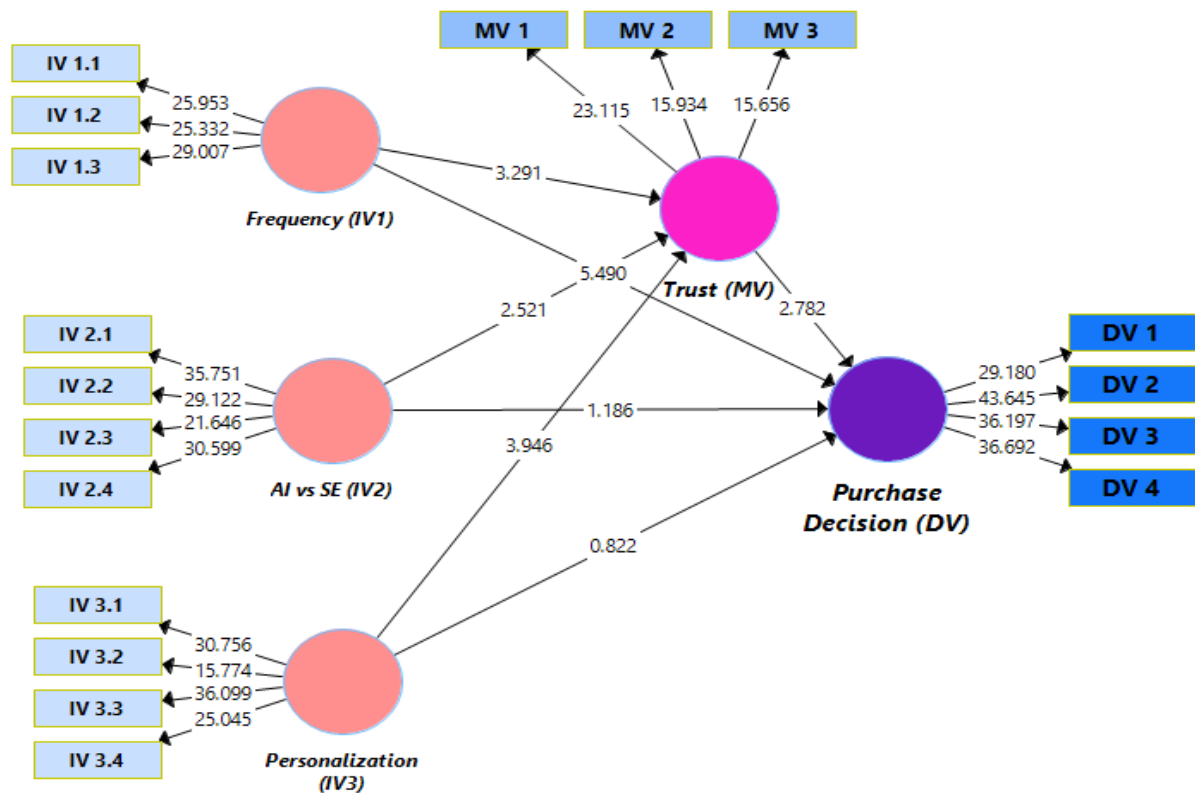
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Purchase_Decision	57.1000	268.507	.602	.504	.948
Turst_MV	57.0000	245.448	.887	.788	.890
Frequency_IV1	56.4000	247.490	.907	.862	.887
AI_VS_SE_IV2	56.1000	245.955	.820	.807	.903
Personalization_IV3	56.4667	259.361	.827	.738	.902

4.3 Validation and Deeper Analysis

This analysis is done using Smart PLS 3: An analysis tools specially used for Structural Equation Modeling. It helps to define relationship among variables on a deeper level rather than just explaining established theories and formulas. Also as the data is not normally distributed Smart PLS is the best choice for that analysis.(Ramayah, Cheah, Chuah, Ting, & Memon, 2017)

After checking the data on the given model, IV 1.4 and MV 4 was needed to exclude from the model as they didn't meet not only outer loading requirement but also collinearity test. After model result and analysis are given below accordingly with updates bootstrap and PLS algorithm result.

Figure 4: SEM Model



Outer Loadings

Matrix					
	AI vs SE (IV2)	Frequency (IV1)	Personalizatio...	Purchase Decis...	Trust (MV)
DV 1				0.851	
DV 2				0.874	
DV 3				0.859	
DV 4				0.874	
IV 1.1		0.830			
IV 1.2		0.851			
IV 1.3		0.843			
IV 2.1	0.852				
IV 2.2	0.869				
IV 2.3	0.832				
IV 2.4	0.844				
IV 3.1			0.842		
IV 3.2			0.809		
IV 3.3			0.897		
IV 3.4			0.818		
MV 1					0.830
MV 2					0.797
MV 3					0.754

All value of outer loading is 0.7 meaning passing the test for all the related questions of the variables.

R Square

Matrix		
	R Square	R Square Adjusted
Purchase Decis...	0.514	0.500
Trust (MV)	0.634	0.626

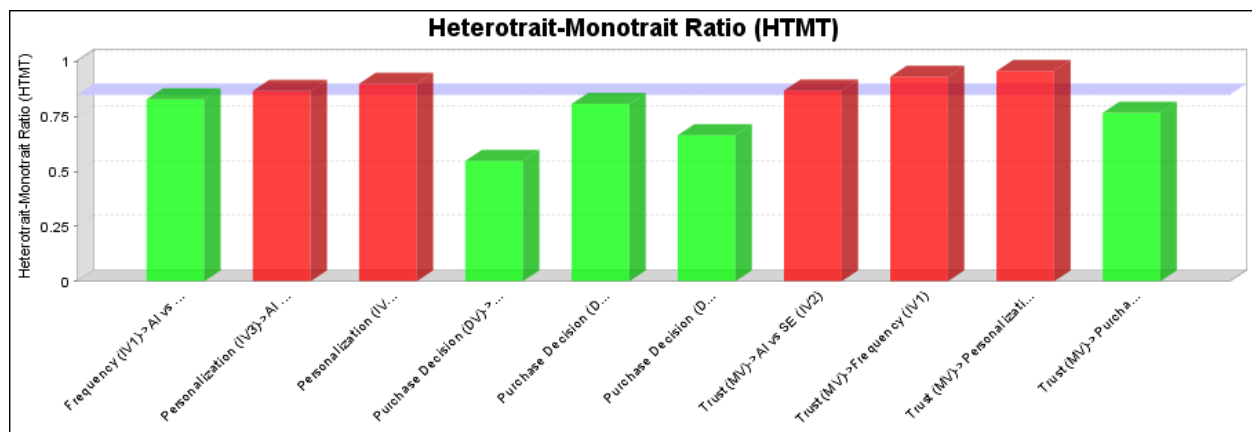
R and Adjusted R is good for trust. Purchase decision is close to the perfect range 0.6 where more than 0.6 is good and 0.3 is acceptable. From that sense it's quite good indicating their relationship strength.

Discriminant Validity

	Fornell-Larcker Criteri...	Cross Loadings	Heterotrait-Monotrait R...	Heterotrait-Monotrait R...	C
	AI vs SE (IV2)	Frequency (IV1)	Personalizatio...	Purchase Decis...	Trust (MV)
AI vs SE (IV2)	0.849				
Frequency (IV1)	0.690	0.841			
Personalization...	0.749	0.750	0.842		
Purchase Decis...	0.489	0.685	0.592	0.865	
Trust (MV)	0.693	0.708	0.754	0.624	0.794

Discriminant validity passed the test by holding the relevant row and column result the largest.

Figure: HTMT



The red bar shows HTMT value over 0.85 showing the variables of red bar have similarities while the green one can have individuality which is better for variable constructions. (Ramayah et al., 2017)

Collinearity Statistics (VIF)

Outer VIF Values		Inner VIF Values	
			VIF
DV 1			2.278
DV 2			2.342
DV 3			2.193
DV 4			2.634
IV 1.1			1.531
IV 1.2			1.851
IV 1.3			1.763
IV 2.1			2.116
IV 2.2			2.564
IV 2.3			2.100
IV 2.4			1.943
IV 3.1			1.920
IV 3.2			2.172
IV 3.3			2.946
IV 3.4			1.914
MV 1			1.389
MV 2			1.450
MV 3			1.339

All the collinearity values are below 3 indicating not much relationship and similarity between independent variables which is actually good.

Path Coefficients

Mean, STDEV, T-Values, P-Val...	Confidence Intervals	Confidence Intervals Bias Co...	Samples	Copy to Clipboard:	Excel F
	Original Sampl...	Sample Mean (...)	Standard Devia...	T Statistics (O/...	P Values
AI vs SE (IV2) -> Purchase Decision (DV)	-0.123	-0.120	0.103	1.186	0.236
AI vs SE (IV2) -> Trust (MV)	0.214	0.215	0.085	2.521	0.012
Frequency (IV1) -> Purchase Decision (DV)	0.493	0.490	0.090	5.490	0.000
Frequency (IV1) -> Trust (MV)	0.263	0.260	0.080	3.291	0.001
Personalization (IV3) -> Purchase Decision (DV)	0.100	0.096	0.121	0.822	0.411
Personalization (IV3) -> Trust (MV)	0.397	0.398	0.101	3.946	0.000
Trust (MV) -> Purchase Decision (DV)	0.284	0.295	0.102	2.782	0.005

Total Indirect Effects

Mean, STDEV, T-Values, P-Val...	Confidence Intervals	Confidence Intervals Bias Co...	Samples	Copy to Clipboard:	Excel F
	Original Sampl...	Sample Mean (...)	Standard Devia...	T Statistics (O/...	P Values
AI vs SE (IV2) -> Purchase Decision (DV)	0.061	0.064	0.036	1.695	0.090
AI vs SE (IV2) -> Trust (MV)					
Frequency (IV1) -> Purchase Decision (DV)	0.075	0.076	0.034	2.186	0.029
Frequency (IV1) -> Trust (MV)					
Personalization (IV3) -> Purchase Decision (DV)	0.113	0.118	0.052	2.149	0.032
Personalization (IV3) -> Trust (MV)					
Trust (MV) -> Purchase Decision (DV)					

Here, in path co-efficient 2 P values were out of range which is >0.05 . But in indirect effect driven by mediator variable the result changes and became more positive and closer to 0.05 indicating mediator variable positive effect on the other variables.

Construct Reliability and Validity

Matrix	Cronbach's Alpha	rho_A	Composite Reliability	Average Vari
	Cronbach's Al...	rho_A	Composite Rel...	Average Vari...
AI vs SE (IV2)	0.872	0.878	0.912	0.721
Frequency (IV1)	0.793	0.795	0.879	0.707
Personalization...	0.863	0.870	0.907	0.709
Purchase Decis...	0.888	0.891	0.922	0.748
Trust (MV)	0.710	0.722	0.837	0.631

Here, Cronbach's Alpha and composite reliability still shows all of the result above 0.7 which indicates reliability of the variables and supporting alternative hypothesis that purchase decision of young generation is affected by AI recommendations. It is to be mentioned that sometimes more than 0.9 indicates similarity in variable context although it is within good acceptance percentage. Also, rho should be > 0.7 and avg variance > 0.5 and result just passed all the test with mentionable result.(Kabir, Ahmed, Begum, & Gomes, 2025; Ramayah et al., 2017)

FINDINGS

All the variables showed consistency for reliability for all the indicators and testing. However, personalization and AI vs SE didn't directly impact much on purchase decisions. Instead, they strengthen trust the mediating variable which ultimately lead to greater influence on purchase. The only independent variable that impacted largely in decision influence is frequency. So, it is obvious to say the more the user get used to AI engines the more their decision is impacted. Nonetheless, as all the variables passes through all the test (except for 2 questions from frequency and trust) , it is understandable that combination of all these factor play key role in young generations purchase decision over traditional search engine which was at first clear from google form response analysis chart. Now, just validating it through SPSS and Smart PLS analysis.

CHAPTER V: DISCUSSIONS

5.1 Conclusion

Finally, it is clear that our digital generation enjoys AI based recommendation and purchase for their regular marketing activities. Factors from the study like frequency, trust and purchase were meaningful and provided impactful result. While the other 2 factor directly didn't impact much in decision they played their role with the mediating variable helping the decision making process indirectly but noticeably. The constructed model has significance based on the validity measures. Also, respondents are supporting the idea and thus businesses should look this into more considerations. The study could be of help here for the researchers and marketers.

5.2 Future Scope

Bangladesh as a developing country is far behind In AI innovation. However, consumers of that region is showing interest to such topics implying based on the respondents of the survey and the industry is growing rapidly. So, the future scope is vast to analyze more and play with more varieties of niches in ai sector. Personalization didn't have direct impact so researcher could explore more variables for the study conduct that directly impact purchase decisions.

5.3 Recommendations

Businesses and marketers should focus on AI based marketing for their product mainly to attract vast Generation Z customers instead of expending on traditional search engine based traditional marketing. In days ahead people will just ask on AI recommendation engines to recommend products and services for them and just will go with it, as it saves time, give personalized content and moreover understand individual personality. Also, AI platforms should focus on building trust with data privacy, giving high authority and less controlling, understanding norms by enriching their engine with rightful information's for all age group consumers.

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APPENDIX: A

Survey Questionnaire

Dependent Variable (DV): AI Tools Impact on Purchase Decisions

1. "I have made purchase based on suggestions from AI tools (ChatGPT/Smart Assistant)"
2. "Product recommendations from AI platforms have affected my shopping choices."
3. "I feel more positive on making a purchase when it is suggested by AI."
4. "My day to day shopping habit is now a part of AI based suggestions."

Mediating Variable (MV): AI Recommendations and Trust Factor

(Ali, 2025; Pham et al., 2024; Wang et al., 2025)

1. "I have faith in product suggestions by AI."
2. "I believe AI tools provide unbiased and helpful recommendations."
3. "I would be interested in an AI tool's advice if it suggested a new product I hadn't heard of."
4. "I rarely double-check AI-generated recommendations before considering a purchase."

Independent Variables (IV1): Frequency of AI Tools Usage

(Ali, 2025; Pagala, Asir, Mere, Lestari, & Siddiqa, 2024; Tyagi, 2025)

1. "I use AI tools (ChatGPT, Alexa, Grok) at least once a week for suggestions or information."
2. "I often rely on AI suggestions when deciding what to buy or not."

3. "I use AI more often than traditional search engines for product research and recommendations."
4. "I have started using AI-based recommendations more frequently over the past year."

Independent Variables (IV2): Traditional Search Engine vs AI Engines

(Bahçeci et al., 2025b; Lüttgenau et al., 2025)

1. "I prefer using AI tools (ChatGPT) over Google when I'm looking for any sorts of recommendations."
2. "I prefer using AI tools (ChatGPT) over Google when I'm looking for any sorts of recommendations."
3. "Search engines show too many options where AI tools suggest more concisely."
4. "I feel AI saves me more time than traditional search methods."

Independent Variables (IV3): Personalization by AI

(Gkikas & Theodoridis, 2022; Madhuri, Reddy, Kumar, & Manchem, 2024)

1. "AI tools recommend products that match my preferences more accurately than ads or search results."
2. "It seems like AI systems understand me better the more I use them."
3. "I like how AI tools personalize their suggestions just for me."
4. "I've noticed that AI recommendations are aware of my health need and recommend product consciously."

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