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Unveiling the Digital Revolution: Assessing the Dynamic Impact of E-Banking Adoption among Generations Y and Z in Malaysia

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Abstract

This study investigates the influence of e- banking based on the perspective of Generations Y and Z, with a specific emphasis on their adeptness with technology. The research conducted a quantitative study with 384 Malaysian participants, which revealed that these generations exhibit a high level of familiarity with digital technology and enthusiastically use e-banking due to its convenient and time-saving advantages. Nevertheless, the implementation of the technology is impeded by issues over security, privacy, and trust. The research also evaluates the impact of age, education, and money on their viewpoints. The findings indicate that resolving these issues might improve the adoption of e-banking, which would be advantageous for banks, regulators, and academics. The study proposes the elimination of obstacles to enhance e-banking and promote financial inclusion among Generations Y and Z, providing valuable guidance for policymakers to formulate regulations that safeguard consumers. Subsequent studies may broaden the assessment of electronic banking among diverse client segments. Furthermore, the data collected from participants was analyzed using the Statistical Package for Social Sciences (SPSS). The researcher used descriptive statistics, Pearson's correlation coefficient, and multiple regression analysis to examine the hypothesis. The study found that perceived usefulness, perceived ease of use, perceived data security and privacy, and perceived technology and innovation all have a significant impact on the usage of e-banking among Generation Y and Z. Among these factors, perceived technology and innovation was found to be the most influential in driving the adoption of e-banking among Generation Y and Z. In future research, the researchers might use the suggested novel conceptual framework to conduct the investigation or incorporate other variables for examination.

Keywords: *Perspective, Digital revolution, E- banking adoption, Generation Y and Z, Malaysia.*

Introduction

The rapid evolution of technology and the widespread availability of the internet have transformed financial transactions through electronic banking (e-banking). E- banking encompasses various services, such as account management and fund transfers, delivered via digital channels like websites, mobile apps, and ATMs [13]. Malaysia, with its robust digital infrastructure, has witnessed a surge in financial institutions offering e- banking services. This study focuses on the perspectives of generations Y and Z, who are known for their digital affinity and have grown up in an era of technological advancement.

E- banking usage has grown significantly in Malaysia with concerns related to security, technical issues, environmental impact, and usability challenges. Cybersecurity threats, such as phishing and malware attacks, pose a significant risk [8]. Technical problems, like system breakdowns and network interruptions, can disrupt user experience. Energy consumption by data centers and servers contributes to environmental concerns [20]. Moreover, despite digital familiarity, Generations Y and Z may still encounter usability issues due to evolving systems [1].

In this study, we focused on the impact of e- banking usage based on the different perspectives of generations Y and Z in Malaysia. Our aim is to investigate many important aspects of e- banking adoption among generations Y and Z in Malaysia from the viewpoints and opinions of both generations. Specifically, we address the research question such as what is the impact of e- banking usage from the perspective of generation Y and Z?, what is the relationship between e- banking usage and the perspectives of generations

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Y and Z? and what are the critical impacts of e- banking usage from the perspective of generations Y and Z.

The subsequent sections offer a concise summary of the literature on e-banking usage among generations Y and Z in Malaysia. This is followed by an introduction to our main concepts, namely perceived usefulness, perceived ease of use, perceived data security and privacy, and perceived technology and innovation. Next, we provide the findings of a quantitative study that included gathering data from participants who completed the researchers' questionnaire. We analysed the consequences and factors to be taken into account based on these results in order to provide relevant perspectives and suggestions for banks, regulators, and stakeholders in Malaysia to enhance e-banking activities and fulfil the requirements and anticipations of younger generations and the future.

Literature Review

E- banking

The term "e-bank" refers to an electronic bank that offers online financial services to a single client [9]. E-banking, also known as electronic banking or online banking, is the provision of banking services and transactions over the internet and other electronic channels. It enables clients to conduct a variety of banking transactions without having to physically visit a bank branch. E-banking has acquired a substantial amount of popularity and is now an integral component of the modern banking system. According to Kbalaji [9], electronic banking is the process by which a consumer can conduct banking transactions electronically without visiting a traditional institution. He also stated that "the terms personal computer (PC) banking, Internet banking, virtual banking, online banking, home banking, remote electronic banking, and phone banking all refer to one form or another of electronic banking." E-banking typically entails a bank or financial institution's secure website or mobile application. Customers can perform a broad array of banking operations via these platforms, including: Account management, Transfers of funds, Online bill payment, Electronic statements, Remote deposits, Online applications, and Customer service.

E-banking is known as the use of electronic channels and technology to execute banking operations such as account management, transactions, and financial services. Depending on how they use e-banking, Generation Y and Generation Z (also known as Millennials and Gen Z) may have distinct perspectives. It entails the incorporation, integration, and utilisation of online banking platforms, mobile applications, and other digital channels for various banking transactions and services. According to Qawasmeh et al., [17], "e-banking refers to all systems that allow customers of financial institutions, whether individuals or organisations, to open accounts, conduct transactions, or gather information on financial products and services via a public or private network, such as the internet.

In recent years, customers have been progressively utilising electronic banking to conduct a variety of financial transactions at any time and from any location [7]. Additionally, Llanes and Pino [11], as of 2014, the use of electronic banking services and consumer adoption have increased. A fundamental instrument for both the banking industry and the consumer since it facilitates the transfer of funds. It permits greater economic profitability and a competitive edge. Indirectly, it also has an effect on contemplating the environmental impact, social responsibility, and ethical aspects of banking operations, in addition to the technological advances in the digital banking sector. Customers who are in generations Y and Z typically adopt e-banking by opening online banking accounts, registering for mobile banking apps, and actively utilising digital platforms to perform tasks such as checking account balances, transferring funds, paying bills, applying for loans, managing investments, and gaining access to additional banking services. Adoption rates can vary based on variables such as technological capability, accessibility, confidence in online security, awareness of benefits, and usability.

Therefore, financial institutions play an essential role in promoting e-banking adoption by providing convenient and secure digital platforms, educating customers on the benefits and capabilities of e-banking, and resolving any concerns or barriers customers may have. Due to technological advancements, altering consumer expectations, and the demand for more convenient and accessible banking services, e-banking

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has become more prevalent in recent years. According to Yahaya (2023), since the introduction of information technology, the operational environment of the banking industry has witnessed a significant and evident transformation due to the accelerated rate of change.

Generations Y and Z

Due to the research on millennial and digital native generations, Obal and Kunz [16] predict that Generations Y and Z will have distinct consumption patterns, particularly on digital platforms, compared to prior generations. Therefore, this study needs to be conducted to identify the differences in behavior between users from the perspective of generation Y and Z. This is because both generations may have different exposures and opinions about technology, especially e-banking system. According to Ruangkanjanases & Wongprasopchai [19], Individuals of Generation Y are well-grounded and mature for their years. They are born into an interconnected and technological environment. Transparency is increasing in a globalized society. Meanwhile, Generation Z places a high value on social acceptability because they were reared with technology and were born with access to e-books, music downloads, and websites

The factors e- banking usage that effect generation Y and Z's perspective on using e- banking.

There are few factors that influence the generation Y and Z perspectives in using e- banking. Firstly, generations Y and Z prioritize convenience and accessibility. They anticipate that e-banking platforms are user-friendly, accessible on multiple devices including smartphones and tablets, and available 24 hours a day, seven days a week. Sustainability in e-banking refers to the provision of a seamless and expedient user experience that allows users to conduct a variety of transactions and gain access to services without difficulty.

Besides, both generations place an emphasis on security and privacy. It can be one of the main factors from the perspective of e-banking usage. They expect comprehensive security measures, such as encryption, multi-factor authentication, and fraud detection systems, to protect their financial information. A guarantee in e-banking necessitates the maintenance and continual enhancement of security protocols in order to protect the personal and financial data of users. Typically, the e-banking system must address a multitude of security controls and information system factors pertaining to access control, including identification and authentication, user authorization, and system and communications protection. Security control selection refers to a tailored set of security controls that are documented in the system security plan and authorised by the system's authorising official [12].

Next, Generations Y and Z are becoming increasingly conscious of their impact on the environment. They are likely to value the ability of e-banking to reduce paper waste and carbon emissions associated with traditional banking practices. By fostering digital statements and electronic transactions, they reduce the need for physical branches, and sustainable e-banking reduces the bank's environmental impact. Not only that, banks also have the authority to provide the financial resources and investment possibilities to support long-term projects. Banks may assist programs that promote sustainability by including ESG factors into their lending and investing choices, such as renewable energy projects, green infrastructure development, and sustainable agriculture. This financial aid is critical for achieving a more sustainable economic model. According to Sangisetti & Venkata [20], in an effort to correct ecological imbalances brought about by accelerated industrialization, banks have modified their policies and procedures in response to the growing significance of environmental issues.

Generation Y and Z value business ethics and corporate social responsibility (CSR). They anticipate that banks will demonstrate a commitment to ethical behavior, equitable customer treatment, and transparent fee structures. Sustainability in e-banking involves harmonizing business practices with ethical and socially responsible principles, such as promoting sustainable investments and donating a portion of proceeds to charitable causes. According to Fernández-Kranz and Santaló [5], investors and consumers pay greater attention to and put more pressure on enterprises' CSR actions in the market. Furthermore, investors' and customers' understanding of enterprises' CSR reputations may impact stock prices and profitability [6]. CSR actions contribute to the establishment of a positive reputation and trust among customers,

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stakeholders, and the general public. In the e-banking market, where customers may be worried about security, privacy, and ethical practices, demonstrating a commitment to CSR may assist banks and their e-banking services acquire trust. Trust is essential for e-banking systems' long-term success and development.

Furthermore, technological innovation influences the perspectives of Generation Y and Z on using e-banking. Gen Y and Gen Z are early adopters of technology and are the driving force behind digital innovation. These generations' adoption of e-banking drives the development and enhancement of digital banking solutions. By introducing advanced features such as biometric authentication, personalized digital experiences, and AI-powered chatbots, banks cater to the preferences and requirements of Generation Y and Generation Z. This promotes technological innovation in the banking industry, to the benefit of all consumers, including the aforementioned generations. The ability of information technology has changed the way people move and impacts everyday human existence. The increased usage of communication devices such as mobile phones and smartphones has influenced regular human activity. Significant enhancements in technology also has an influence on financial services, causing changes in how customers engage with banking companies. The internet has evolved into a crucial platform for offering financial services and products. Technological advancements force banks to adapt the services they provide. Internet innovation and expansion have altered how financial services are utilized [1].

Perceived usefulness

Perceived usefulness is a crucial concept in research, particularly in the area of technology adoption and acceptance. According to Mulyati et al.,[14], perceived usefulness is the extent to which a person believes that using a particular system will improve his ability to complete a task. In this context, generations Y and Z are known for their high usage of technology and e-banking services. Studying the impact of e-banking usage in this context could provide valuable insights into their preferences and behaviours. Generation Y (also known as Millennials) and Generation Z, which are important demographic groups in Malaysia, are specifically targeted.

H1: There is a significant relationship between perceived usefulness and e-banking usage from the perspectives of generations Y and Z in Malaysia.

Perceived ease of use

Perceived ease of use refers to a person's subjective perception of the usability of a system, product, or technology. This is a fundamental principle of user experience and human-computer interaction. Perceived ease of use focuses on the user's perceptions of intuitiveness, simplicity, and overall effectiveness. The perceived usability of e-banking services has a significant impact on generations Y and Z's perspective and use of them. If these generations perceive e-banking as simple, intuitive, and user-friendly, this reduces entry barriers and encourages them to employ and utilize e-banking platforms.

H1: There is a significant relationship between perceived ease of use and e-banking usage from the perspective of generations Y and Z in Malaysia.

Perceived data security and privacy

Data security and privacy refer to the prevention of unauthorized access, use, disclosure, or destruction of sensitive and personally identifiable information. It entails practices and procedures designed to protect data from potential threats and assure the protection of individuals' privacy rights.

H1: There is a significant relationship between perceived data security and privacy and e-banking usage from the perspective of generations Y and Z in Malaysia.

Perceived technology and innovation

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Perceived technological innovation refers to an individual's subjective impression and appraisal of a given technology or innovation's uniqueness, advances, and cutting-edge traits.

H1: There is a significant relationship between perceived technology, innovation, and e-banking usage from the perspective of generations Y and Z in Malaysia.

The following part elucidates the study approach used to evaluate our hypothesis. We examine the primary emotions that influence the utilization of e-banking and the viewpoints of distinct generations Y and Z in Malaysia. We gathered data via both online and physical surveys from participants. We next examined the quantitative replies about the frequency of e-banking use among individuals. Finally, we validated our hypothesis model by quantitative analysis.

Technology Acceptance Model (TAM) developed by Malhotra and Galetta, 1999 [18]

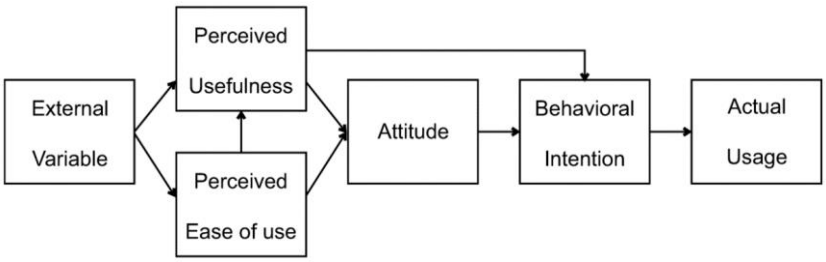

Figure 1 Technology Acceptance Model (TAM) ,Davis,1989

The study proposes a conceptual framework (Figure 2) involving independent variables which are perceived usefulness, perceived ease of use, perceived data security and privacy, and perceived technology and innovation that influence the dependent variable as below:

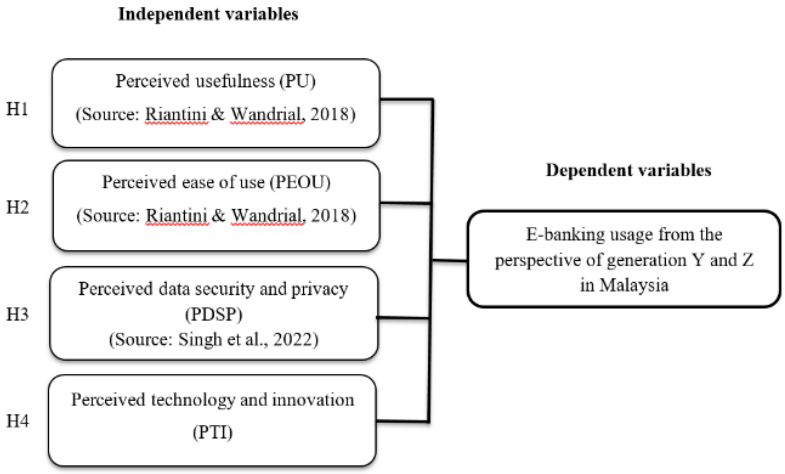

Figure 2 Conceptual Framework

Methodology

Research design

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The participants in this study were individuals who utilize the e- banking in a daily basis and provided feedback to the institutions regarding potential future enhancements. Time can be saved on this platform, which simplifies and speeds up the process of making all payments for its users. The research strategy for this study employs an experimental, quantitative methodology with the objective of manipulating variables and assessing their effects. The selected approach prioritizes objectivity and positivism, using statistical analysis to get definitive outcomes. Data gathering include the use of both primary sources, such as surveys and questionnaires targeting generations Y and Z, as well as secondary sources, such as a comprehensive assessment of existing literature. The self-administered surveys have three parts, including demographic information, the influence of e-banking on attitudes, and particular characteristics such as usefulness and data security. This comprehensive strategy guarantees a thorough investigation of the study goals.

Demographic profile of participants

The researcher estimated that there are more than one million population of generations Y and Z in Malaysia. Based on Krejcie and Morgan theory [10], the sampling size for the population over 1,000,000 is 384 respondents. Therefore, the researcher targeted 384 respondents as a selected sample size to response the questionnaire. According to Tjiptono et al., [23] and Sim et al., [22] , the greatest generational group in Malaysia with a population of 32.6 million comprises of Generation Y (26%) and Generation Z (29%). Generation Y includes 26 percent of the entire Malaysian population and is between 26 and 41 years old. This generation shows that almost 70 percent of the population. Gen Z comprises 29% of Malaysia's population and has distinct characteristics that set them apart from Millennials and Baby Boomers, particularly in how they consume content and interact with brands. The eldest member of Generation Z is currently 24 years old [15].

Scales And Measures

The research was conducted in Malaysia. According to a report from the Department of Statistics Malaysia, "Population Distribution and Basic Demographic Characteristics, Malaysia, 2020, the Generation Y and Z population in Malaysia constitutes a substantial portion of the total population. The impact of e-banking usage among these generations may be influenced by cultural, socioeconomic, and regulatory factors unique to Malaysia. Therefore, the researcher insisted on conducting research on the impact of e-banking usage from the perspective of generations Y and Z in Malaysia.

Data Analysis and Results

Table 4.1: Pearson's Correlation Analysis of Generations Y and Z

Correlation

		PU	PEOU	PDSP	PTI	ST
Perceived usefulness **(FU)**	Pearson Correlation	1	.664**	.527**	.639**	.534**
	Sig. (2- tailed)		.000	.000	0.000	.000
	N	384	384	384	384	384
Perceived ease of use **(PEOU)**	Pearson Correlation	.664**	1	.589**	.685**	.562**
	Sig. (2- tailed)	.000	.000	.000	.000	.000
	N	384	384	384	384	384
Perceived data security and privacy **(PDSP)**	Pearson Correlation	.527**	.589**	1	.650**	.502**
	Sig. (2- tailed)	.000	.000	.000	.000	.000
	N	384	384	384	384	384
Perceived Technology and Innovation **(PTI)**	Pearson Correlation	.639**	.685**	.650**	1	.596**
	Sig. (2- tailed)	.000	.000	.000	.000	.000
	N	384	384	384	384	384
E- banking usage from perspective generation Y and Z **(ST)**	Pearson Correlation	.534**	.562**	.502**	.596**	1
	Sig. (2- tailed)	.000	.000	.000	.000	.000
	N	384	384	384	384	384

**. Correlation is Significant at the 0.01 level (2- tailed).

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The study examines the relationship between perceived usefulness, ease of use, data security and privacy, and technology and innovation variables with e-banking usage from perspectives Y and Z. Pearson's correlation analysis shows a strong link between these variables, with perceived technology and innovation having the greatest correlation value (r = 0.596). Perceived ease of use is the second most strongly correlated factor, with a significant positive relationship between e-banking usage among generations Y and Z. Perceived usefulness and data security and privacy also show a moderately positive relationship. The study concludes that there is a strong link between these variables and e-banking usage.

Table 4.2: Model Summary of Multiple Linear Regression based on Generation Z

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.766[a]	0.586	0.576	0.33471

a. Predictors: (Constant), Perceived Technology and Innovation, Perceived Data Security and Privacy, Perceived Ease of Use, Perceived Usefulness

b. Dependent Variable: e- banking usage from perspective of generation Z

Table 4.2 indicates the multiple linear regression analysis reveals that 58.6% of e-banking usage variation among generation Z can be explained by the independent variables of perceived usefulness, ease of use, data security, privacy, technology, and innovation. However, 41.4% of the variation remains unexplained, suggesting other significant factors affecting e-banking usage among generations Z were not included in the study.

Table 4.3: ANOVAa of Multiple Linear Regression based on Generation Z

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	24.307	4	6.077	54.240	0.000[b]
	Residual	17.141	153	0.112		
	Total	41.447	157			

a. Dependent Variable: E- banking usage from perspective generation Z

b. Predictors: (Constant), Perceived Technology and Innovation, Perceived Data Security and Privacy, Perceived Ease of Use, Perceived Usefulness

Based on the table 4.3 the significance value, p-value is 0.000 which is less than the alpha value, 0.05 is statistically significant. The F-value is 54.240 is significant because when the F-value is higher, alternative hypotheses are well fit in the model and accepted. Therefore, the significance of overall model is F (4,153) = 54.240, p< 0.05. It shows that overall multiple regression model is significant at 5% level of significant.

Table 4.4: Coefficients of Multiple Linear Regression based on Generation Z

Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	0.517	0.252		2.054	0.042
	Perceived Usefulness	0.163	0.095	0.157	1.716	0.088
	Perceived Ease of Use	0.275	0.089	0.280	3.080	0.002
	Perceived Data Security and Privacy	0.059	0.066	0.066	0.895	0.372
	Perceived Technology and Innovation	0.350	0.095	0.344	3.671	0.000

a. Dependent Variable: E- banking usage from perspective of generation Z

The research reveals (Table 4.4) that perceived technology and innovation are the strongest predictors of e-banking usage among Generation Z in Malaysia. Perceived ease of use is the second-highest factor

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influencing e-banking usage perspectives. Perceived usefulness is the third predictor, with the least impact on e-banking use attitudes among Generation Z. Data security and privacy are the least favourable independent factors, ranking as the fourth most influential factor in shaping opinions on e-banking use among Generation Z. The findings provide a meaningful forecast from the perspective of e-banking usage among Generation Z in Malaysia.

To conclude that, perceived technology and innovation significantly influence e-banking use among Generation Z in Malaysia. Perceived ease of use is the second most influential factor. However, usefulness and data security and privacy have the least influence. The results highlight the diverse impact of various variables on e-banking behavior. The relationship between independent and dependent variables can be determined using the equation for multiple regression:

Equation: $Y = a + bX1 + cX2$

$Y = 0.517 + 0.350X1 + 0.275X2$

4.1 Multiple Linear Regression based on Generation Y in Malaysia

Table 4.1.1 : Model Summary of Multiple Linear Regression based on Generation Y

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.478[a]	0.229	0.215	0.29678

a. Predictors: (Constant), Perceived Technology and Innovation, Perceived Usefulness, Perceived Ease of Use, Perceived Data Security and Privacy,

b. Dependent Variable: e- banking usage from perspective of generation Y

The multiple linear regression analysis reveals that 22.9% of e-banking usage variation among generations Y can be explained by the independent variables of perceived usefulness, ease of use, data security, privacy, technology, and innovation. However, 77.1% of the variation remains unexplained, suggesting other significant factors affecting e-banking usage among generations Y were not included in the study.

Table 4.1.2: ANOVAa of Multiple Linear Regression based on Generation Y

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	5.772	4	1.443	16.382	0.000[b]
	Residual	19.465	221	0.088		
	Total	25.237	225			

a. Dependent Variable: E- banking usage from perspective generation Y

b. Predictors: (Constant), Perceived Technology and Innovation, Perceived Usefulness, Perceived Ease of Use, Perceived Data Security and Privacy

Based on the Table 4.1.2, the significance value, p-value is 0.000 which is less than the alpha value, 0.05 is statistically significant. The F-value is 16.382 is significant because when the F-value is higher, alternative hypotheses are well fit in the model and accepted. Therefore, the significance of overall model is $F(4,221) = 16.382$, $p < 0.05$. It shows that overall multiple regression model is significant at 5% level of significant.

Table 4.1.3: Coefficients of Multiple Linear Regression based on Generation Y

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Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.464	0.362		4.042	0.000
	Perceived Usefulness	0.028	0.086	0.022	0.323	0.747
	Perceived Ease of Use	0.094	0.080	0.089	1.165	0.245
	Perceived Data Security and Privacy	0.266	0.080	0.256	3.325	0.001
	Perceived Technology and Innovation	0.217	0.085	0.202	2.554	0.011

a. Dependent Variable: E- banking usage from perspective generation Y

Table 4.1.3 shows that data security and privacy are the most significant factors influencing Generation Y's use of e-banking in Malaysia. Perceived technology and innovation are the second most influential, while perceived ease of use and usefulness have the least influence. These factors highlight the complex nature of influencing Generation Y's attitudes and behaviors towards e-banking usage. The relationship between independent and dependent variables can be determined using the equation for multiple regression:

Equation: Y= a + bX1 + cX2

Y= 1.464 + 0.266X1 + 0.217X2

4.2 Multiple Linear Regression based on generations Y and Z in Malaysia

Table 4.2.1: Model Summary of Multiple Linear Regression based on generations Y and and Z

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.651[a]	0.423	0.417	0.32134

a. Predictors: (Constant), Perceived Technology and Innovation, Perceived Usefulness, Perceived Data Security and Privacy, Perceived Ease of Use

b. Dependent Variable: e- banking usage from perspective of generation Y and Z

The multiple linear regression analysis reveals moderate correlation between four independent variables (perceived usefulness, ease of use, data security and privacy, perceived technology, and innovation) and 42.3% of the total variation in e-banking usage among generations Y and Z. However, 57.7% of the variation remains unexplained, suggesting other significant factors affecting e-banking usage are not included.

Table 4.2.2 : ANOVAa of Multiple Linear Regression based on generations Y and Z

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	28.723	4	7.181	69.541	0.000[b]
	Residual	39.135	379	0.103		
	Total	67.857	383			

a. Dependent Variable: E- banking usage from perspective generation Y and Z

b. Predictors: (Constant), Perceived Technology and Innovation, Perceived Usefulness, Perceived Data Security and Privacy, Perceived Ease of Use

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Based on the table, the significance value, p-value is 0.000 which is less than the alpha value, 0.05 is statistically significant. The F-value is 69.541 is significant because when the F-value is higher, alternative hypotheses are well fit in the model and accepted. Therefore, the significance of overall model is F (4,379) = 69.541, $p < 0.05$. It shows that overall multiple regression model is significant at 5% level of significant.

Table 4.2.3 : Coefficientsa of Multiple Linear Regression based on generations Y and Z

Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	0.740	0.205		3.614	0.000
	Perceived Usefulness	0.182	0.062	0.164	2.944	0.003
	Perceived Ease of Use	0.189	0.060	0.187	3.136	0.002
	Perceived Data Security and Privacy	0.114	0.051	0.120	2.240	0.026
	Perceived Technology and Innovation	0.299	0.064	0.286	4.654	0.000

a. Dependent Variable: E- banking usage from perspective generation Y and Z

The research reveals that perceived technology and innovation are the strongest predictors of e-banking usage among generations Y and Z. Perceived ease of use is the second-highest factor, followed by perceived usefulness. Perceived usefulness is the third-highest factor, followed by perceived data security and privacy. These independent variables all contribute significantly to the dependent variable, providing a significant prediction from an e-banking usage perspective. The study highlights the importance of understanding and addressing these factors to improve e-banking usage among generations Y and Z. The relationship between dependent variables and independent variables can be determined by the multiple regression equation:

Equation: $Y = a + bX_1 + cX_2 + dX_3 + eX_4$

$Y = 0.740 + 0.182X_1 + 0.189X_2 + 0.114X_3 + 0.299X_4$

4.3 Hypothesis Testing based on Generation Z

Table 4.3.1: Hypothesis Testing Result Generation Z

Independent Variables	P-Value	Result
Perceived Usefulness	0.000	Rejected H1
Perceived Ease of Use	0.000	Accepted H2
Perceived Data Security and Privacy	0.000	Rejected H3
Perceived Technology and Innovation	0.000	Accepted H4

From table 4.3.1, the hypothesis result illustrates that there is significant relationship between two independent variables and the dependent variable. The result shows that the significance values of perceived ease of use and perceived technology and innovation are below than 0.05, where $p < 0.05$. As a result, null hypothesis (H0) of another two independent variables (perceived usefulness, and perceived data security and privacy) is rejected, while the alternative hypothesis of perceived ease of use, and perceived technology and innovation of independent variables is accepted.

4.9.2 Hypothesis Testing based on Generation Y

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Table 4.9.2.1: Hypothesis Testing Result Generation Y

Independent Variables	P-Value	Result
Perceived Usefulness	0.000	Rejected H1
Perceived Ease of Use	0.000	Rejected H2
Perceived Data Security and Privacy	0.000	Accepted H3
Perceived Technology and Innovation	0.000	Accepted H4

The hypothesis results show a significant relationship between two independent variables and the dependent variable, with the significance values of perceived data security and privacy and perceived technology and innovation below 0.05, rejecting the null hypothesis.

4.9.3 Hypothesis Testing based on generation Y and Z

Table 4.9.3.1: Hypothesis Testing Result based on Generation Y and Z

Independent Variables	P-Value	Result
Perceived Usefulness	0.000	Accepted H1
Perceived Ease of Use	0.000	Accepted H2
Perceived Data Security and Privacy	0.000	Accepted H3
Perceived Technology and Innovation	0.000	Accepted H4

(Source: Developed for research)

Table 4.9.3.51 reveals significant relationships between independent variables and dependent variable, rejecting null hypothesis (H0) and accepting alternative hypothesis (H1).

Conclusions

During the pilot test, a reliability study was performed to assess the internal consistency of the questionnaire using Cronbach's alpha. The respondents' profiles are represented using pie charts, tallied in a table, and shown in figures. Researcher use the study of Pearson's correlation coefficient reveals a robust positive association between the independent factors and dependent variables in the research. Additionally, the researcher also utilized linear regression analysis to establish that all alternative hypotheses were accepted, while the null hypotheses were rejected. This indicates a significant correlation between the independent variables (perceived usefulness, perceived ease of use, perceived data security and privacy, and perceived technology and innovation) and e-banking usage among generations Y and Z in Malaysia. Lastly, research used multiple regression analysis to distinguish the disparities in perspective between generation Y and generation Z over the utilization of e-banking in their everyday lives. The researcher's objective is to conduct a thorough and precise analysis of the data pertaining to those factors.

This study accomplishes its research objectives by conducting a literature review and employing statistical analyses such as Pearson's correlation coefficient and multiple linear regression. The study also tests the hypothesis regarding the impact of independent variables (perceived usefulness, perceived ease of use, perceived data security and privacy, perceived technology, and innovation) on e-banking usage among individuals from generations Y and Z. Perceived usefulness, perceived ease of use, perceived data security and privacy, and perceived technology and innovation are factors that influence the usage of e-banking among Generations Y and Z. Perceived technology and innovation are seen as the main factors that influence the use of e-banking among both Generation Y and Generation Z in Malaysia. Nevertheless, financial institutions must also consider aspects such as data security, privacy, and the user-friendliness of the application in order to fully shape their views on the use of e-banking.

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This study provides a thorough examination of the unique viewpoints of Generation Y and Generation Z in Malaysia when it comes to the use of e-banking services. The results demonstrate a significant positive relationship between many independent variables, including perceived utility, perceived ease of use, perceived data security and privacy, and perceived technology and innovation, and the adoption of e-banking across different generational cohorts

Based on the analysis, the researcher found that there are different perspectives for generations Y and Z. This is because, according to the research, the researcher found that most of generation Z utilizes e-banking based on the technology and innovation, and ease of use of the apps, while generation Y really prioritizes data security and privacy when using e-banking, and they are also interested in the technology and innovation of the apps. However, both generations Y and Z have the same interest in perceived technology and innovation, and these have been identified as the primary characteristics that strongly influence the adoption of e-banking among generations Y and Z in Malaysia, according to the last findings of the multiple regression analysis for the overall result.

Both Generation Y and Generation Z exhibit a significant inclination towards technology and innovation, which greatly impacts their use of e-banking services. Furthermore, the consideration of data security and privacy also plays a crucial role in influencing the use of e-banking across both age groups. These results indicate that in order to promote the use of e-banking, financial institutions should prioritize resolving concerns about data security and privacy. Additionally, they should use technical advancements to cater to the interests of both Generation Y and Generation Z. Generation Z, a demographic generation that has been greatly influenced by technology and innovation, considers the user-friendliness of e-banking apps to be crucial. Their propensity for adopting digital innovations and effortless user experiences highlights the significance of user-friendly interfaces and state-of-the-art technology in attracting and maintaining Generation Z clients in the e-banking sector.

Conversely, Generation Y puts great emphasis on data security and privacy while participating in e-banking activities. This underscores the need for financial institutions to allocate resources towards implementing strong security measures and clear data protection rules in order to earn the trust and confidence of Generation Y customers. The concurrent fascination with technology and innovation across both generations suggests a mutual recognition of progress in the digital realm. The evident conclusion for financial institutions is that in order to successfully attract and retain the allegiance of both Generation Y and Generation Z, it is necessary to adopt a balanced strategy. Institutions should give priority to improving data security and privacy safeguards while also concentrating on integrating cutting-edge technology and user-friendly interfaces in their e-banking services. The key to the successful adoption of e-banking among Generation Y and Generation Z in Malaysia lies in aligning with the distinct tastes and goals of each generation. Financial institutions may establish themselves as reliable and forward-thinking collaborators in the changing realm of digital banking by directly addressing the unique data security concerns of Generation Y and embracing technology improvements for Generation Z.

Recommendations For Future Study

Priority should be devoted to ensuring a more inclusive demographic representation in future research recommendations. Researchers are advised to deliberately choose participants from a wide range of geographical, socioeconomic, and educational backgrounds in order to accurately study the complexities of e-banking habits that are impacted by cultural and regional differences. Utilizing a longitudinal research design is crucial for monitoring the changing e-banking patterns. Additionally, supplementing quantitative data with qualitative studies into psychological factors will provide a more comprehensive knowledge of the reasons for adoption.

Furthermore, it is essential for future studies to investigate subtle elements such as technological proficiency, financial acumen, and cultural influences in order to comprehend the intricacies of how these aspects interplay with e-banking trends. Incorporating behavioral intention as a moderator in the research provides an important perspective, emphasizing the impact of attitudes and perceptions on actual e-banking activity. This strategy takes into account variations in age groups, facilitating the creation of focused

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strategies that correspond with the distinct tastes and objectives of Generation Y and Z in the ever-changing electronic banking industry. The results have significant practical consequences for regulators and business leaders who want to customize their strategies to adapt to the changing digital banking environment.

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