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RESEARCH ARTICLE

A Study on the Intention to Use Digital Banking Services of Disadvantaged Groups in Hanoi

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ABSTRACT

This paper examined the existing state of disadvantaged groups' usage of digital banking services and examined the variables influencing their inclination to utilize these services in Hanoi. Both qualitative and quantitative research methodologies were used in this work. For the qualitative investigation, expert perspectives were sought, and interviews were conducted. In contrast, data for the quantitative study was gathered by the distribution of 300 survey questionnaires. The respondents who indicated that they intended to use digital banking services in Hanoi received the survey questionnaires immediately. The SPSS software program was used to assess the contributing elements and validate the results. Based on the investigation, six factors—usefulness, ease of use, riskiness, subjectivity norms, behavioral control, and attitude—affect disadvantaged groups' desire to use digital banking services in Hanoi. The authors suggested ways to encourage underprivileged populations to adopt digital banking services based on the findings of their study.

INTRODUCTION

The 4.0 industrial revolution is taking place strongly on a global scale and is affecting all different sectors of the economy, including the banking industry. The bank's business activities on a digital technology platform have allowed it to perform all functions like a traditional bank. The digital banking model focuses on customers in the process of creating optimal products and services that will maximize customer experience, helping banks retain current customers and attract more customers. Expanding access to banking services is one of the important solutions to implement the role of the system of credit institutions in economic growth, improve people's quality of life, and support the eradication of financial institutions. Poverty reduction and sustainable economic growth. During the development process, any country faces many social problems such as poverty, and social division, ... at the same time, within the population community, there always exist groups of people, for many main reasons. Objective and objective are different, called "weakness". In developing countries, an important part of development strategy is poverty reduction activities. Improving access to banking services is an effective solution, stimulating income-generating activities, helping people control their financial situation, and gradually overcoming poverty.

Hanoi is the capital of Vietnam with nearly 10 million people living and is the second largest city in Vietnam. In recent years, along with economic development, the development of the social security system, improvement of social welfare, and the quality of people's lives have always received special attention from the city, considering this one of its tasks. The city's attention to taking care of people's

lives, especially the poor and disadvantaged groups in society, has contributed to raising the happiness index (HPI), creating a happy, full life, warmth, and progress for each family, contributing to creating a happy, harmonious, and fair society. In addition to the results achieved, by the end of 2022, Hanoi still has 2,134 poor households, 109,275 people with disabilities, and 1,032,357 elderly people... If sustainable livelihood solutions cannot be found, no reduction will occur. With this amount, the most obvious consequence is that the economy and society are not sustainable, if not vulnerable. Promoting access to digital banking services is an important solution.

This article presents the findings of a survey conducted on 300 underprivileged individuals in Hanoi. The study aims to determine the impact of six independent variables on the intention of using digital banking services with one dependent variable. The authors derived the observed variables from the research of local and international scholars, including Christian Tugade and colleagues (2021), Nguyen Thi My Diem (2022), and Nguyen Mai Chi and colleagues (2022). Their studies revealed that factors such as usefulness, ease of use, and perceived risk affect the intention to use digital banking services. Moreover, Nguyen Mai Chi and colleagues (2022) also suggest that subjective norms and attitudes influence the intention to use digital banking services. Based on the research results, the article offers recommendations to enhance the intention to use digital banking services in Vietnam.

THEORETICAL BASIS

Overview of digital banking services for disadvantaged groups

Disadvantaged groups

The term " disadvantaged groups" is considered a legal term but there are still many inconsistent views about this group of people in society. Simply put, disadvantaged groups are people whose natural abilities are partially limited or due to social factors that cause them to be underestimated in terms of status in the economic and political fields of society in the same circumstances, conditions, and available capabilities. Thus, disadvantaged people are people who, in similar circumstances, when participating in a social relationship, labor relationship, or legal relationship, are always at a disadvantage compared to other people in the community. In other words, these subjects must act in a way that is completely unfavorable to them in that relationship. Depending on the research goals, considerations, and relationships in which they participate, one can classify certain groups of people and certain subjects as disadvantaged groups. In this study, the authors approached disadvantaged groups such as people with disabilities, the elderly, and the poor.

Digital banking services

There is now no uniform understanding of banking services, nor is there a clear separation between banking services and other financial services.

The idea of services is not included in the World Trade Organization's General Agreement on Trade (GATS) but rather grouped into 12 main categories, with specific service activities defined in each. Financial services, which include insurance and insurance-related services, banking services, and other financial services, are rated seventh.

Banking services are financial services provided by banks to customers to suit their demands for business, profit, living, and asset storage, among other things. The bank generates money from interest rate differentials. rates, exchange rates, or costs associated with those services.

Currently, there are numerous approaches to addressing digital banking from various angles. PappuRajan and Saranya (2018) define digital banking as "the provision of services based on the support of digital technology, mobile applications, and the internet in a revolutionary transformation, thereby bringing new features to the customer experience that are not limited by time and transaction space." Digital banking services are delivered more quickly than traditional services.

According to Krishna, Kulin, and Trivedi (2019), digital banking is banking done through digital platforms, eliminating paperwork such as checks, payment slips, drafts, and so on. This means that all banking services are available at all times and can be completed online. Customers benefit from digital banking by having the ability to access all banking services 24/7 fully through mobile devices and technology, without having to go to a bank branch.

Shankar (2019) believed that digital banking is the digitization of all banking activities and services, making transactions without having to go to a branch but completely through digital banking applications. Digital banking services require the application of high technology and innovation in service provision with mobile, digital, artificial intelligence, and blockchain strategies... (Anh, NT (2021). Digital banking is a form of banking that digitizes all traditional banking activities and services. In other words, everything customers can do at traditional bank branches is digitized and integrated into a single digital banking application, and through this application, customers do not need to go to a bank branch but can still perform all transactions, and at the same time bank activities such as Risk management, capital resources, product development, marketing, sales management... are also digitized.

Tiong (2020) considered digital banking services to be a modern business model centered on digitizing all banking activities, as opposed to e-banking, the conventional bank which is merely an add-on service to other services.

In this study, digital banking services are defined as banking services delivered via technology applications; consumers can conduct transactions with the bank via technological devices rather than visiting the bank.

Barriers to accessing digital banking services for disadvantaged groups such as the poor, individuals with impairments, and the elderly:

For the poor

The costs associated with owning an account have become a major barrier. Many studies have shown that the higher these costs, the more people do not have an account (Demirguc-Kunt and Klapper, 2012). Some people, especially those with low incomes, will not use digital banking services because for them those services are expensive and they cannot afford them. Therefore, even though these services are available, it is still difficult for them to access them.

For persons who are disabled

There is no path for wheelchair users in the ATM system; ATM keyboards do not currently have braille and do not offer audio navigation or screen reading for the visually impaired to operate.

Furthermore, the inaccessibility and unfriendliness of mobile banking applications and bank websites is a barrier that prohibits persons with disabilities from obtaining banking services because screen reading software can only read text and cannot read graphic stuff. As a result, the requirement for authentication with a captcha code on bank websites leads to persons with disabilities using financial services passively and relying on third parties to assist them in transactions.

Not to mention that identifying or creating an account at the counter for disadvantaged groups still necessitates the presence of a guardian. This makes people more reliant on others rather than being proactive in their financial management.

For the elderly

There are quite a few elderly people who are afraid when approaching and using smart mobile phones to access the Internet, they are still confused and slow due to old age, poor eyesight, and no longer flexible hands, hearing is not clear, grasping ability and memory are reduced; Many young people easily lose patience or do not have time to give specific step-by-step instructions for using

technology to their parents; Economic conditions are uneven when many elderly people have low income and do not have the conditions to purchase smart technology devices...

Theory of intention to use digital banking services

Studies on the intention to use digital banking services are researched based on the Theory of Reasoned Action (TRA) and theory of planned behavior (TPB) (Fishbein and Ajen, 1975; Ajzen, 1991); Davis (1989) developed the Technology Acceptance Model (TAM); The theory of acceptance and use of technology (UTAUT) was built by Venkatesh and colleagues (2003); In this article, the research team focuses on analyzing the relationship between factors affecting the intention to use digital banking services with the usage theory TAM and UTAUT, Technology Acceptance Model - TAM (Technology Acceptance Model)

The TAM model (Davis,1989) describes the cause-and-effect relationship between the usefulness and ease of use of a technology and the user's attitude toward that technology. In addition, in the TAM model, "technology user perception" is influenced by environmental variables such as experience, knowledge, training level, and technological process. This theoretical model emphasizes the self-determining role of consumers in the use and consumption process.

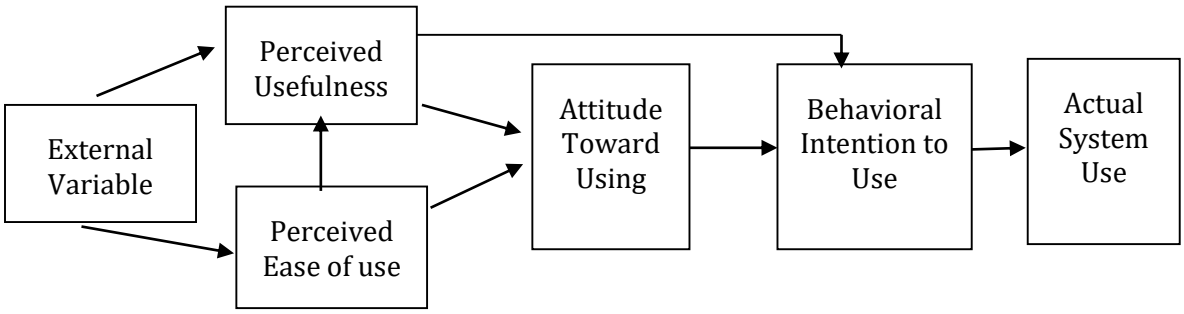


Figure 1: Technology Acceptance Model – TAM

Source**:** Davis et al. (1989)

When testing the theoretical model in practice, in 1991, Thompson proposed removing Intention - I from the research model and connecting it directly from attitude to behavior. According to Thompson's (1991) analysis, in reality, businesses are only interested in consumers' actual actions, while action intentions are only the subjective probability that users perform the behavior. Therefore, in 1993, after conducting practical testing studies as well as absorbing Thompson's 1991 research proposal, Davis proposed the TAM2 model with the exclusion of the Intention element. Davis divides the TAM2 model into 3 main components: (1) The cognitive component includes perceived usefulness and perceived ease of use, (2) The affective component is an attitude, and (3) The behavioral part is the actual action.

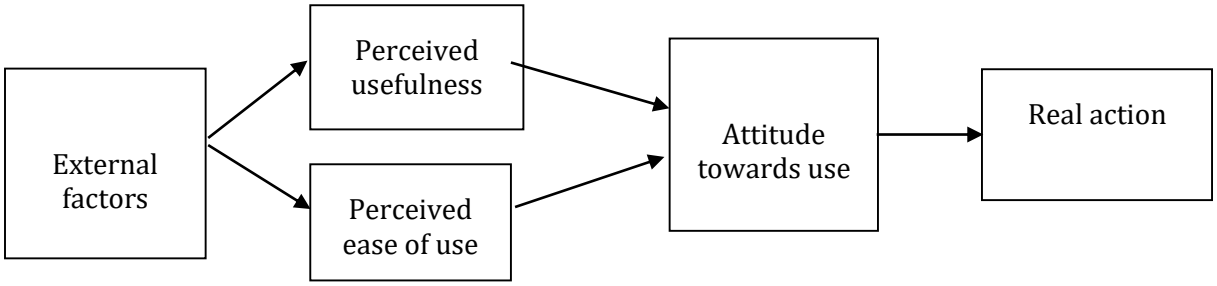


Figure 2: TAM 2 technology acceptance model

Source: Fred Davis (1993)

Unified theory of acceptance and use of technology (UTAUT)

"The unified theory of acceptance and use of technology (UTAUT) by Venkatesh and colleagues (2003), explains users' behavioral intentions and usage behavior towards information technology. The UTAUT model was developed through models such as the theory of reasoned behavior (TRA) of Fishbein and Ajzen, the theory of planned behavior (TPB) of Ajen, the technology acceptance model (TAM) of Davis and associates, integrating the theory of planned behavior (TPB) and the innovation diffusion theory (IDT) model in the research of Venkatesh et al. (1996; 2000)."

The UTAUT model focuses on studying 4 main factors: performance expectations (Performance Expectancy– PE), effort expectations (Effort Expectancy – EE), social influence (Social Influence), and physical conditions; Demographic control variables. The UTAUT model examines the influence of these factors on behavioral intention, on the basis that behavioral intention and actual behavior are very closely related to each other.

Unified theoretical model of acceptance and use of technology (UTAUT)

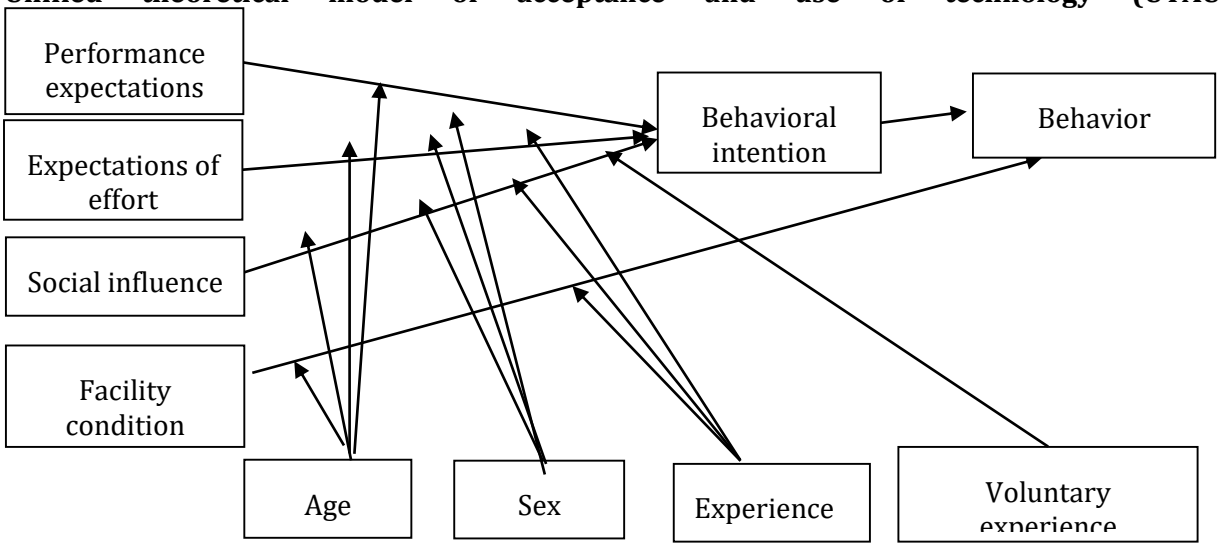


Figure 3: Unified theoretical model of acceptance and use of technology (UTAUT)

Source: Venkatesh et al (2003)

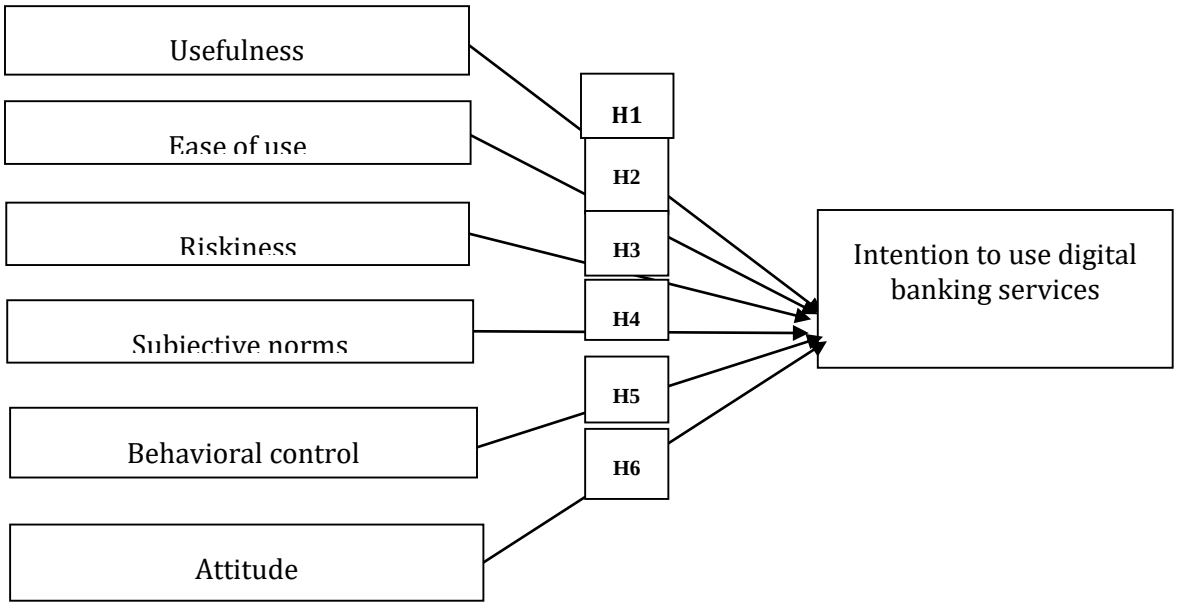
Meanwhile, the TAM model (Davis, 1989) proved that perceived usefulness and perceived ease of use form attitudes toward services, directly affecting the intention to use technology services. At the same time, perceived usefulness has a direct impact on customers' intention to use the service. Risk perception theory has been applied and researched (Tran Thi Thanh Nga, 2022; Chi & al., 2020;). Individuals' awareness of the dangers they may face and self-protective behavior represent risk awareness. These are all models widely used in many domestic and international studies. The issue of factors affecting the intention to use digital banking services has been studied by several domestic and foreign researchers. In Vietnam, some outstanding studies, such as research by Tran Thi Thanh Nga (2022), Nguyen Thi Nga & Co (2021), Ha Nam Khanh Giao, Tran Kim Chau (2020)...

Each study has a different scope, with results that do not overlap with each other. At the same time, through the review, the authors realized that there has been no research on the factors affecting the intention to use digital banking services of disadvantaged groups.

RESEARCH METHODS

Research models

Based on the research hypotheses, the research team generalized the research model as follows



Dig 4: Factors affecting the intention to use digital banking services of vulnerable subjects

Source: Authors' synthesis

In the proposed research model, there are 6 independent variables: (1) Usefulness, (2) Ease of use, (3) Riskiness, (4) Subjective norms, (5) Behavioral control, (6) Attitude; and the dependent variable is the intention to use digital banking services.

The scale used in the survey questionnaire is a 5-point Likert scale that varies from "Completely disagree" to "Completely agree".

In the proposed research model, with 6 independent variables and 1 dependent variable, the research team adjusted and revised the sentences from the observed variables accordingly. Therefore, there are a total of 30 observed variables, including:

+ The factor "**Usefulness**" includes 4 observed variables.

+ The factor "**Ease of use**" has 5 observed variables.

+ The " **Riskiness** " includes 5 observed variables.

+ The factor "**Subjective Norms**" includes 4 observed variables.

+ The factor "**Behavioral control**" has 5 observed variables.

+ The factor "**Attitude**" includes 4 observed variables.

+ The dependent variable "**Intention to use digital banking services**" includes 3 observed variables.

Coding the scale and building a survey form

The main observed variables are survey questions inherited from many domestic and foreign research projects. As follows:

Table 1: Observed variables of the research model

Factor	Observed variable – Scale	Encryption	Reference source
Usefulness	I think using digital banking services helps save costs	HI1	Davis et al (1989);

	I think that using digital banking services helps make shopping and payment transactions quick and convenient	HI2	Venkatesh et al (2003); Chaumon et al (2014);
	I think using digital banking services is suitable for financial transaction needs	HI3	
	I think using digital banking services is useful and convenient for financial transactions	HI4	
Ease of use	I found it easy to learn about digital banking services	SD1	Davis et al (1989); Mitzner et al (2010); Tsai et al (2015); Nef et al (2013).
	I think conducting financial transactions through digital banking services is clear and easy to understand	SD2	
	I think using digital banking services is quite simple	SD3	
	I find that digital banking services are very diverse	SD4	
	I think digital banking services meet my needs	SD5	
Riskiness	I think making transactions via digital banking services is not safe	RR1	Casalo, Flavian, and Guinaliu (2007); Tran Thi Thanh Nga (2022); Tran Thi Thang and colleagues (2022).
	I find providing personal information to use digital banking services risky	RR2	
	I think digital banking transaction passwords are easily stolen	RR3	
	I think subscribing to online services is risky	RR4	
	I think using digital banking services has greater risks than the benefits	RR5	
Subjective Norms	My family and friends support me in using digital banking services	CQ1	Ajzen (1991); Taylor and Todd (1995); Ahmad et al., (2020); Lai (2020)
	People who influence me think I should use digital banking services	CQ2	
	People whose opinions are valuable to me told me to use digital banking services	CQ3	
	Banks encourage me to use digital banking services	CQ4	
Behavioral control	I have the necessary abilities to control my behavior when using digital banking services	HV1	Amex Thohart et al (2021); Tran Thi Thanh Nga (2022)
	I have enough resources necessary to use digital banking services	HV2	
	I have enough documents, knowledge, and ability to use digital banking services	HV3	
	I can perform digital banking services myself without asking for help	HV4	
	I will use digital banking services shortly	HV5	
Attitude	I think using digital banking services is a good idea	TĐ1	Le Chau Phu and Dao Duy Huan (2019);

	I think using digital banking services for financial transactions would be a wise idea	TĐ2	Tran Thi Thang and colleagues (2022)
	I think using digital banking services is interesting	TĐ3	
	I want to use digital banking services	TD4	
Intention to use digital banking services	I seriously consider the idea of using digital banking services	YD1	Davis et al (1985, 1989)
	I will use digital banking services as soon as I have the chance	YD2	
	I plan to use digital banking services regularly in the future.	YD3	

Source: Authors' synthesis

Sample selection method and sample space description

In this study, data was collected by interview questionnaires, surveying the opinions of the poor, disabled groups, and the elderly using online forms on Google Forms and direct surveys. Based on request, the research team conducted a survey from the end of January 2023 to the beginning of May 2023.

During the sampling process, the research team directly contacted several agencies and associations in Hanoi city such as some Ward People's Committees; the Hanoi Department of Labor, War Invalids and Social Affairs; Hanoi Elderly Association; Hanoi Association of People with Disabilities; as well as directly approaching some research subjects, presenting the purpose of the research and asking for support, at the same time transferring the survey form via the link and sending it directly, explaining and providing instructions for filling out the information—responses to ensure the reliability of the research results.

The survey sample was conducted on poor people, people with disabilities, and the elderly living in Hanoi city; which focuses on people with disabilities who have jobs and income, and elderly people from 55 to 65 years old and still have a source of income.

Sample size

In studies using questionnaire data collection methods, determining the sample size is extremely important, because it helps the researcher determine the sample size that needs to be observed to be reliable. Author Hair and colleagues (2006) believe that if the study uses the Maximum Likelihood (ML) estimation method, the sample size is determined based on one of the following two ways: (i) a minimum level and (ii) the number of variables included in the analysis in the model.

(i) Minimum level Min = 50.

(ii) The ratio of the sample to an analysis variable k is 5/1 or 10/1.

In the study, the research team based on the number of questions to calculate an appropriate and reliable sample size. Thus, with a questionnaire consisting of 30 scales, the minimum number of observations will be 150 valid votes. To conduct the research, the authors distributed 300 survey forms to vulnerable groups in Hanoi.

Information processing methods

Survey results are updated, coded, and tested for the reliability of the scales before performing statistical and analytical activities. Data entry and analysis were performed through SPSS 22.0

statistical processing software. Data processing and analysis activities are carried out according to the following specific steps:

Step 1: Clean and encrypt data

After conducting the survey, the results collected from the questionnaires will be cleaned and entered into the database. Incomplete or erroneous answer sheets will be eliminated to ensure that the cleaned data is highly reliable and has complete information included in the analysis.

Step 2: Analyze the reliability coefficients of the measurement scales

The scale of the measurement factors is evaluated through reliability coefficients using Cronbach's alpha method and the results of exploratory factor analysis (EFA). From there, determine the level of convergence of the empirical indicators, the ability to link, and the degree of attachment of the indicators to the original basic concept.

Step 3: Correlation test and multivariate regression analysis

Before performing regression analysis to test the model and proposed research hypotheses, the authors analyzed correlation to test the relationship between the dependent variable and independent variables, as well as Evaluate the correlation between independent variables. The regression analysis model will describe the form of the relationship and thereby help predict the level of the dependent variable when the value of the independent variable is known. Regression analysis is used to evaluate the influence of independent variables on the intention to use digital banking services of disadvantaged people in Hanoi city. The value of the factors used for regression analysis is the average of observed variables that have been tested for scale reliability and exploratory factor analysis.

RESEARCH RESULTS

During the investigation period from late September 2022 to early May 2023, the research team sent questionnaires to 300 poor people, disabled groups, and the elderly living in Hanoi city. At the end of the investigation, the number of interview questionnaires returned was 286, of which 265 were valid, and 21 were invalid because the survey participants did not belong to the research group.

The statistical results are shown in detail in table 2 below.:

Table 2: Description of general information of the research sample

Description of the research sample		Frequency	Ratio (%)
Sex	Male	112	42.26%
	Female	153	57.74%
Age	Under 25 years old	8	3.02%
	From 25 to 35 years old	18	6.79%
	From over 35 to 45 years old	122	46.04%
	Over 45 years old	117	44.15%
Monthly income level	< 5 million VND	63	23.77%
	From 5 to 10 million VND	120	45.28%
	From over 10 to 20 million VND	65	24.53%
	> 20 million VND	17	6.42%

Academic level	Below PTTH	38	14.34%
	Graduated from high school	86	32.45%
	College	125	47.17%
	Master's degree/PhD	16	6.04%
Have used digital banking services before	Used to	186	70.19%
	Never	79	29.81%
Level of knowledge about banking	Not understand	51	19.25%
	Clearly understand	142	53.58%
	Completely understand	72	27.17%

Source: Authors' synthesis

Test the reliability of the measurement scales

Assessing the reliability of 6 independent variables has Cronbach's alpha coefficient from 0.774 to 0.813 (>0.6), variable correlation coefficient - total adjustment of 27 observed variables from 0.547 to 0.705 (>0.3). For the dependent scale: Cronbach's alpha coefficient = 0.799 (>0.6), variable correlation coefficient - the adjusted sum of observed variables from 0.605 to 0.687 (>0.3), allowing confirmation of the Good measurement scales and observed variables to ensure reliability.

EFA exploratory factor analysis for the independent variable

The first exploratory factor analysis of the independent variables showed that the variable RR5 was eliminated from the model because it lies on two different factors and has a difference in factor loadings < 0.3, not ensuring discriminant value in exploratory factor analysis. After eliminating variables, the authors conducted a second exploratory factor analysis for the independent variables. The results received are as follows:

Table 3: EFA exploratory factor analysis results for independent variables

	Component					
	1	**2**	**3**	**4**	**5**	**6**
HV1	.744					
HV2	.738					
HV5	.731					
HV3	.703					
HV4	.692					
SD4		.747				
SD3		.733				
SD5		.733				
SD1		.708				
SD2		.703				

HI3			.794			
HI2			.780			
HI4			.745			
HI1			.699			
TĐ1				.761		
TĐ4				.750		
TĐ3				.748		
TĐ2				.726		
CQ1					.782	
CQ3					.730	
CQ4					.727	
CQ2					.671	
RR4						.765
RR1						.761
RR2						.723
RR3						.695
KMO			.845			
Sig.			.000			
Eigenvalue			1.404			
Cumulative %			60.355			

Source: Authors' synthesis

Results of data testing with KMO = 0.845 (> 0.5), Sig. = 0.000 (< 0.05), which satisfied the conditions for exploratory factor analysis. The factor loading coefficients of the observed variables are all > 0.5, the total variance extracted is 60.355% (> 50%), and the Eigenvalue coefficient = 1.404 (> 1). These tests were warranted for exploratory factor analysis. So 6 factors influence the intention to use digital banking services of disadvantaged groups. In principle, variables with loading factors greater than or equal to 0.5 according to the column will belong to that factor. Factors include:

(1) The Usefulness (HI) includes 4 observed variables: HI1, HI2, HI3, HI4

(2) The Ease of Use (SD) includes 5 observed variables: SD1, SD2, SD3, SD4, SD5

(3) The Riskiness (RR) includes 4 observed variables: RR1, RR2, RR3, RR4

(4) The Subjective Norm (CQ) includes 4 observed variables: CQ1, CQ2, CQ3, CQ4

(5) The Behavioral Control (HV) includes 5 observed variables: HV1, HV2, HV3, HV4, HV5

(6) Attitude (TĐ) includes 4 observed variables: TĐ1, TĐ2, TĐ3, TĐ4

EFA exploratory factor analysis for the dependent variable

Table 4: EFA exploratory factor analysis results for the dependent variable

Variable	Component
	1
YD3	.871
YD1	.843
YD2	.820
KMO	0,701
Sig.	.000
Eigenvalue	2.142
Cumulative %	71.394

Source: Authors' synthesis

Data testing results with KMO = 0.701 (> 0.5), Sig. = 0.000 (< 0.05), which satisfied the conditions for exploratory factor analysis. The factor loading coefficients of the observed variables are all > 0.3, the total variance extracted is 71.394% (> 50%), and the Eigenvalue coefficient = 2.142 (> 1). These tests were warranted for exploratory factor analysis. So there is a dependent variable with 1-factor Intention to use (YD) including 3 observed variables: YD1, YD2, and YD3. The official research model remains unchanged from the initially proposed research model.

Test the model and research hypotheses

Regression analysis

Regression analysis is used to evaluate the influence of independent variables: (1) Usefulness, (2) Ease of use, (3) Riskiness, (4) Subjective norms, (5) Behavioral control, (6) Attitude to intention to use digital banking services of disadvantaged groups in Hanoi city. The value of the factors used for regression analysis is the average of observed variables that have been tested for scale reliability and exploratory factor analysis.

Table 5: Results of regression analysis

Model		Coefficients are not standardized		Normalization coefficient	t	Sig.	Multicollinearity statistics	
		B	Standard deviation	Beta			Acceptability (Tolerance)	Variance Inflation Factor (VIF)
first	(Constant)	.057	.425		.135	.893		
	HI	.120	.053	.109	2.275	.024	.835	1.198
	SD	.250	.057	.220	4.415	.000	.774	1.291
	RR	-.169	.053	-.157	-3.182	.002	.790	1.265

	CQ	.265	.055	.243	4.775	.000	.744	1.344
	HV	.208	.058	.182	3.611	.000	.762	1.312
	TD	.310	.054	.283	5.761	.000	.799	1.251
R		0.774						
R^2		0.599						
R^2 correction		0.587						
Durbin-Watson		1.932						
F		Sig. = 0.000						

Source: Authors' synthesis

The results of regression analysis show that the R coefficient has a value of 0.774, showing that the relationship between variables in the model is strongly correlated. The regression results report of the model shows that the value R2 = 0.599, which means that the model's suitability is 59.9%, or in other words 59.9% of the variation in intention to use the service. Digital banking services of disadvantaged groups are explained by 6 factors in the model. The adjusted R2 value (Adjusted R Square) more accurately reflects the fit of the model compared to the overall population, we have an adjusted R2 value of 0.587 (or 58.7%) with the F test, Sig = 0.000 (< 0.05) means there is a linear regression model between the intention to use digital banking services and 6 influencing factors.

The F-test used in the analysis of variance is a hypothesis test about the appropriateness of the general linear regression model to consider that the dependent variable is linearly related to the entire set of independent variables. create. Looking at Table 5, we see that the F statistic value is calculated from the full R2 value other than 0, with the value Sig. = 0.000 (< 0.05) is very small, showing that the model used is suitable for the data set and the variables all meet acceptance standards (Tolerance acceptability > 0.0001). The coefficient D of the Durbin-Watson test in the model is 1.932 < 2, which is within the allowable range, so there is no autocorrelation phenomenon.

Regression

About Sig coefficient. (regression coefficients of the independent variables) are all smaller than 0.05, so these independent variables are all meaningful in explaining the dependent variable, no variables are eliminated.

Regarding the standardized regression coefficient Beta, the independent variables TD and CQ have the largest Beta (0.283 and 0.243) and, therefore have the most influence on the change of the dependent variable. The larger the independent variable has Beta, the more influence it has on the change of the dependent variable.

Thus, the standardized regression equation is:

YD = 0.109*HI + 0.220*SD - 0.157*RR + 0.243*CQ + 0.182*HV + 0.283*TD

Which: YD is the dependent variable - intention to use digital banking services of disadvantaged groups in Hanoi city

The independent variables HI (Usefulness), SD (Ease of Use), RR (Riskiness), CQ (Subjective Norms), HV (Behavioral Control), and TD (Attitude) all have an influence. to the dependent variable to different degrees.

Results of testing the research hypothesis

From the results of regression analysis and standardized regression equation, we see:

- Usefulness (HI) has a Beta coefficient = 0.109 and has a positive relationship with the intention to use digital banking services of disadvantaged groups in Hanoi city.

- Ease of use (SD) has a Beta coefficient = 0.220, which has a positive relationship with the intention to use digital banking services of disadvantaged groups in Hanoi city.

- Riskiness (RR) has a Beta coefficient = - 0.157, which has a negative relationship with the intention to use digital banking services of disadvantaged groups in Hanoi city.

- Subjective norms (CQ) have a Beta coefficient = 0.243 and have a positive relationship with the intention to use digital banking services of disadvantaged groups in Hanoi city.

- Behavioral control (HV) has a Beta coefficient = 0.182 and has a positive relationship with the intention to use digital banking services of disadvantaged people in Hanoi city.

- Attitude has a Beta coefficient = 0.283 and has a positive relationship with the intention to use digital banking services of disadvantaged groups in Hanoi city.

DISCUSSION AND CONCLUSION

Digital transformation in the finance and banking sector is considered one of the priority directions of the Vietnamese Government. Developing digital banking and becoming a leading digital bank is the main goal of many banks in Hanoi city today. In the context of the COVID-19 pandemic, banks are increasingly promoting the development of digital banking services, while people also prioritize choosing digital channels and are aware of the many benefits digital banking brings. With the efforts of banks as well as the support of the State Bank and authorities in recent times, digital banking services for vulnerable groups in Hanoi city have had some achievements. certain development steps. Many vulnerable people have had access to digital banking services, many vulnerable people have used digital banking services, and many vulnerable people intend to use digital banking services shortly. Authorities and digital banking service providers are constantly looking for solutions to increase the intention to use digital banking services of customers in general and disadvantaged groups in particular. The article tested the model and pointed out 6 factors: *(1) Usefulness, (2) Ease* of use, (3) Riskiness, (4) Subjective norms, (5) Behavioral control, and (6) Attitudes all affect the dependent variable to different degrees.

Based on the research results, the authors proposed several solutions to increase the intention to use digital banking services of disadvantaged groups:

(1) Increase the usefulness and ease of use of digital banking services:

- Providing easy-to-use products and services. Designing digital banking service applications with a friendly, easy-to-see, and easy-to-understand interface will make disadvantaged people feel that performing transaction operations becomes easier. Providing diverse products and services, integrated into digital banking service applications.

- The application aims to help vulnerable people handle financial transactions most conveniently and safely. Regularly improve and upgrade applications to suit the times, especially for vulnerable groups.

- Banks need to actively connect with third parties in banking applications such as payment intermediaries, service providers, and e-commerce websites... to bring many incentives and utilities to customers.

(2) Control risks to ensure security: (i) Complete investment in technology, with modern digital applications, ensuring safety and confidentiality of customer information. (ii) Cooperate with digital technology companies to ensure professionalism, and high security, and reduce investment costs. (iii) The Bank commits to take responsibility and comply with commitments when risks occur, to ensure customers can have complete peace of mind when using the service.

(3) Technology development

(4) Improve human resources to meet digital transformation requirements;

(5) Support solutions: increase bank marketing activities and recommendations for disadvantaged people.

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