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Accessibility to consumer credit by individual customers in financial companies: A case in the Mekong Delta

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ABSTRACT

Consumer credit has grown rapidly in recent years with a variety of products from banks and financial companies. However, previous studies in Vietnam only approached factors affecting consumer lending decisions and credit access at commercial banks. The aim of this study is to determine the factors affecting the accessibility of consumer loans to individual customers at financial companies in the Mekong Delta. Data were collected by directly interviewing 200 people who applied for loans at financial companies (not banks). A pre-designed questionnaire and a random sampling method were used. According to the analysis results of the binary Logit regression model, male borrowers will have more difficulty in accessing consumer credit at financial companies. This result is in contrast to the results shown in some studies conducted at commercial banks. On the other hand, the positive impact on individuals' access to consumer loans of the variables of education level, income, and form of receiving income reinforces the results of previous studies on this topic. Besides, the higher the loan amount, the lower the probability of loan approval. From there, the author has proposed recommendations to improve access to consumer loans at financial companies and improve consumer credit products in the Mekong Delta.

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1. Introduction

Consumer credit is a loan product in the form of unsecured loans or mortgages, to provide financial support for the needs of buying household goods, buying a car, studying abroad, and other essential needs in life. Consumer credit can flatten spending, improve welfare, and increase the quality of life of individuals and households (Magri et al., 2011). Especially in difficult times, when the income of individuals and households is reduced, consumer credit forms an alternative source, helping to maintain their spending levels. Since then, the economy's aggregate demand is maintained. In addition, Tufano (2009) pointed out that the main functions of consumer credit include payment, risk management, moving funds from today to tomorrow (saving/investing), and from tomorrow to today (borrowing). Therefore, consumer finance is also considered one of the effective tools to promote the development of a stagnant economy. Furthermore, while usury is a big problem in developing countries, consumer credit products could be the solution. The effective development of consumer credit products by commercial banks and financial companies increases people's access to formal credit services.

Currently, the consumer finance market in Vietnam has diversified participation from commercial banks and consumer finance companies (Luu et al., 2020). Many financial companies such as FE Credit, Home Credit, Prudential Finance, HD SAISON, and JACCS provide a variety of financial products to serve people's consumption needs. According to statistics from the State Bank of Vietnam, the total outstanding consumer credit in Vietnam has grown by an average of approximately 20% per year from 2012 to 2019. The consumer credit/GDP ratio is estimated at 6.4%, the consumer credit/total credit ratio is 5.6%, and the consumer credit balance per capita is approximately 1.5 million USD. VND/person. Consumer finance is a profitable business for credit institutions and also contributes to improving people's living standards. Besides the benefits that consumer finance brings, there are also

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limitations, especially the issue of unsecured assets. Because the loan is not secured by assets, the credit institution's ability to collect the debt will be severely affected when the borrower is unable to pay. Therefore, lending institutions will set criteria for loan approval to create barriers and filter customers, minimizing the possibility of choosing the wrong customer. This makes each customer will have a different approach when applying for a loan, depending on the individual financial situation and the risk management perspective of each lending institution.

Consumer lending by financial companies has shown rapid developments, but empirical research on it is still limited. Some factors that have an impact on access to formal credit are found as age (Kim and DeVaney, 2001), gender (Lin et al., 2019), an education level (Kết and Thoảng, 2013; Nguyen, 2020), occupation (Pattarin and Cosma, 2012), and income (Magri et al., 2011). In addition, financial literacy helps households with income make sound financial decisions (Lusardi et al., 2011). However, most of the relevant research in Vietnam is on credit access at commercial banks (Nguyen and Lien, 2019; Nguyen, 2020) or study the borrower's decision to choose consumer credit (Trinh et al., 2020; Hoang et al., 2021). Therefore, this study focused on determining the factors affecting the accessibility to consumer credit in the Mekong Delta, where the growth rate of this service is high in Vietnam. From the research results, solutions for the sustainable development of consumer credit in the region are proposed to contribute to increasing people's access to formal credit.

2. Literature and hypotheses development

2.1. Literature review

Theoretical and empirical research results in other parts of the world show the crucial role of consumer credit in the economy. Viewed from a micro-perspective, the life-cycle theory initiated by Modigliani and Brumberg (1954), suggested that people rely on consumer credit to flatten their lifetime spending activity. Young people, with the expectation of more income growth in the future due to improved professional qualifications, will borrow consumer credit to meet the demand for purchasing durable assets when forming their own families. These assets are seen as their savings for the future when they earn a lower income due to no longer being able to work at the end of life. Consumer credit can help increase the quality of life and well-being of individuals and households (Magri et al., 2011). From a macro perspective, consumer credit supports individual and household expenditures, thereby contributing to economic growth. However, empirical studies also show that the positive role of consumer credit in the economy depends on many issues such as lending and payment mechanisms (Maki, 2002), and borrowers' knowledge of consumer credit (Mandell, 1973). Research by Deku et al. (2016) conducted in the UK highlights that differences in access to consumer credit by different groups of people can increase social instability and stifle economic development. Therefore, the role and development of consumer credit in improving the welfare of individuals, households, and the economy need to be specifically evaluated.

Consumer credit needs to be controlled within the framework. Research results of Maki (2002) showed that the unreasonable lending and payment mechanism of consumer credit can lead to the excessive debt burden of borrowers, reducing their ability to repay. Furthermore, consumer credit can affect social relationships and the borrowers' physical and mental health (Rona-Tas and Guseva, 2018). The borrower's financial knowledge will also influence the decision to choose consumer credit products. The results of a study by Disney and Gathergood (2013) in the United Kingdom showed a relationship between the financial literacy of individuals, households, and consumer credit portfolios. Individuals with poor financial literacy often lack confidence when negotiating credit terms with lenders, and they often confuse financial concepts, leading to the use of higher-cost consumer credit products. Limited knowledge of consumer credit is also seen as a disadvantage that reduces the welfare of the borrower and increases the risk of default for the lender (Mandell, 1973). Financial education helps households, especially low-income households, make the right financial decisions (Lusardi et al., 2011). It can be explained that individuals with high qualifications and occupations related to the economy will have easier access to consumer credit. In addition, other demographic factors also affect the use of consumer credit by individuals and households (Magri et al., 2011). Besides, using credit cards can leak customer information, which can cause financial and emotional losses (Mikhed and Vogan, 2018). A high level of education helps borrowers better understand consumer credit and boldly choose to use it (Pattarin and Cosma, 2012). Expectations of future income and occupation also have a strong impact on consumer credit behavior. Students and unemployed people are hesitant to use consumer credit because they cannot afford to pay. In addition, a positive attitude about consumer credit also positively affects the decision to choose consumer credit. Lin et al. (2019) surveyed credit card spending behavior in China in 2013. Research results show that age, gender, and income have a negative impact on an individual's card spending while debt limit and convenient payment methods have a positive effect. Furthermore, the authors suggest that the research results are the basis for credit approval for credit institutions.

As in developed countries, consumers in developing countries have changed their habits. They will borrow to meet spending needs instead of saving money in the present to meet future spending. As a result, the driving force behind the economic development of these countries is no

longer personal savings, but instead a sustained increase in consumption driven by access to consumer credit. In Vietnam, the customers of financial companies are usually middle-income people with spending needs and small businesses. The characteristics of these borrowers are often low average income, unstable income situation or low credit score, and not eligible for loans at banks. Therefore, the appearance of unsecured loan products from financial companies has opened the door to access loans for many consumers today. This is an important source of finance to help them cover their needs for housing, household appliances, vehicles, education, health care, and tourism,... before they have enough financial capacity to enjoy them. Young people have an open attitude toward consumer credit and are ready to borrow for consumption when needed (Mai et al., 2019). Hoang et al. (2021) showed that perceived usefulness mediates the impact of subjective indicators on the intention to borrow consumer credit. Factors that attract students to consumer loans come from the physical attributes of credit products such as interest, loan payment period, promotion programs, transparent product information, and a quick loan document process. Besides, Trinh et al. (2020) pointed out the factors that affect the decision to use credit cards, including perceived risk, perceived usefulness, social influence, and perceived ease of use. Regarding access to personal credit, factors such as a borrower's occupation, qualifications, collateral, income, documents, loan, business plan, and experience have a strong impact on access to credit in commercial banks (Nguyen, 2020).

Through the comprehensive review of prior studies related to the research topic, the factors such as age, sex, occupation, education, social relationship, loan term and amount, income, and form of receiving income are suggested to have an impact on an individual's access to consumer credit. However, the number of studies in developing countries by specific data is limited. Therefore, it is important to address that the proposed research model in this study expands the current literature in two aspects: (a) it identifies the factors affecting access to consumer credit, and (b) it proposes suggestions to financial companies to improve consumer credit products for individual customers.

2.2. Hypotheses development

2.2.1. Age

Older people will be more cautious when deciding to take out a loan (Lin et al., 2019). Moreover, mature customers have more work experience and secure income, so they have a high ability to access formal credit (Nguyen, 2020). On the other hand, according to research by Kết and Thoảng (2013), the elderly often have more savings and the need for consumer loans is small, so they are easier to be approved. These results support the following hypothesis:

H1: Customer age has a positive effect on individual customers' accessibility to consumer credit.

2.2.2. Sex

The borrower's gender variable is expressed through two values: Equal to 1 if the borrower is male and 0 if the borrower is female. Men often easily grasp information about credit programs, more convenient in the loan application process more, so the application is more likely to be approved. Karanja et al. (2014) indicated that female borrowers will find it difficult to access credit in the form of unsecured. Therefore, the following hypothesis is proposed:

H2: Male customers have higher access to consumer credit than female customers.

2.2.3. Job

This is a dummy variable, representing the borrower's occupation, which takes the value of 1 if the borrower is a public employee, and takes the value of 0 otherwise. When borrowers are government employees, they have wide relationships and more understanding so they can easier access loans (Kết and Thoảng, 2013). In Vietnam, working at state agencies is the most stable job, so the guarantee of debt repayment is also higher. Thus, the third hypothesis is suggested as follows:

H3: Customer occupation has a positive impact on individual customers' accessibility to consumer credit.

2.2.4. Education level

The level of education determines the working environment and the borrower's ability to perceive risks. Kết and Thoảng (2013) showed that customers' ability to access loans is strongly influenced by education level. Besides, a high level of education also helps borrowers have enough financial knowledge to better understand consumer loan products (Pattarin and Cosma, 2012). Therefore, this study puts forward the hypothesis as follows:

H4: Customer's education level has a positive effect on individual customers' accessibility to consumer credit.

2.2.5. Social relationship

Customers who have relatives working at credit institutions are expected to have more opportunities to access formal credit than others (Phan, 2013). This can be explained that people with relatives working at credit institutions will be guided in detail on loan procedures, so the loan application will be

more likely to meet the requirements. Therefore, the proposed hypothesis about this relationship is positive:

H5: Social relationships have a positive impact on individual customers' accessibility to consumer credit.

2.2.6. Loan term

According to Kim and DeVaney (2001), loan maturity has a negative impact on borrowers' access to credit. The loan term in line with the borrower's income cycle is an important factor in ensuring timely loan repayment. The longer the loan term, the higher the risk of the loan. A too long-term loan will reduce the possibility of being approved by a financial institution (Kết and Thoảng, 2013). From the above arguments, the hypothesis is proposed as follows:

H6: Loan term has a negative impact on individual customers' accessibility to consumer credit.

2.2.7. Loan amount

According to Kim and DeVaney (2001), loan amount affects credit limits, if the borrower has a loan demand over the specified amount, the loan request will not be approved. On the contrary, if the borrower has a demand for a loan amount lower than the prescribed loan amount, there will be no credit limit. Nguyen (2020) conducted a study in Vietnam with similar results. Therefore, this study puts forward the hypothesis as follows:

H7: Loan amount has a negative effect on individual customers' accessibility to consumer credit.

2.2.8. Income

Income is the main factor to consider when approving loan applications in credit institutions. The higher the income, the greater the ability to recover the principal and interest of the loan (Nguyen, 2020). It also basically assesses the financial situation of borrowers (Kết and Thoảng, 2013). Hence, this study suggests the eighth hypothesis as follows:

H8: Income has a positive effect on individual customers' accessibility to consumer credit.

2.2.9. Form of receiving income

This variable considers that the borrower's income is received mainly through a bank account or by cash. According to Phan (2013), when borrowers receive income through a bank account, they will receive a higher credit score than receiving income by cash. A high credit score increases an individual's access to credit. When receiving income by bank account, the lending institution will easily verify the amount of income declared by the customer as well as be more convenient in deducting the monthly salary to deduct the loan. Thus, the last hypothesis is proposed as follows:

H9: Form of receiving income has a positive effect on individual customers' accessibility to consumer credit.

From the above arguments and based on the results of prior studies, the research model is generalized through Fig. 1.

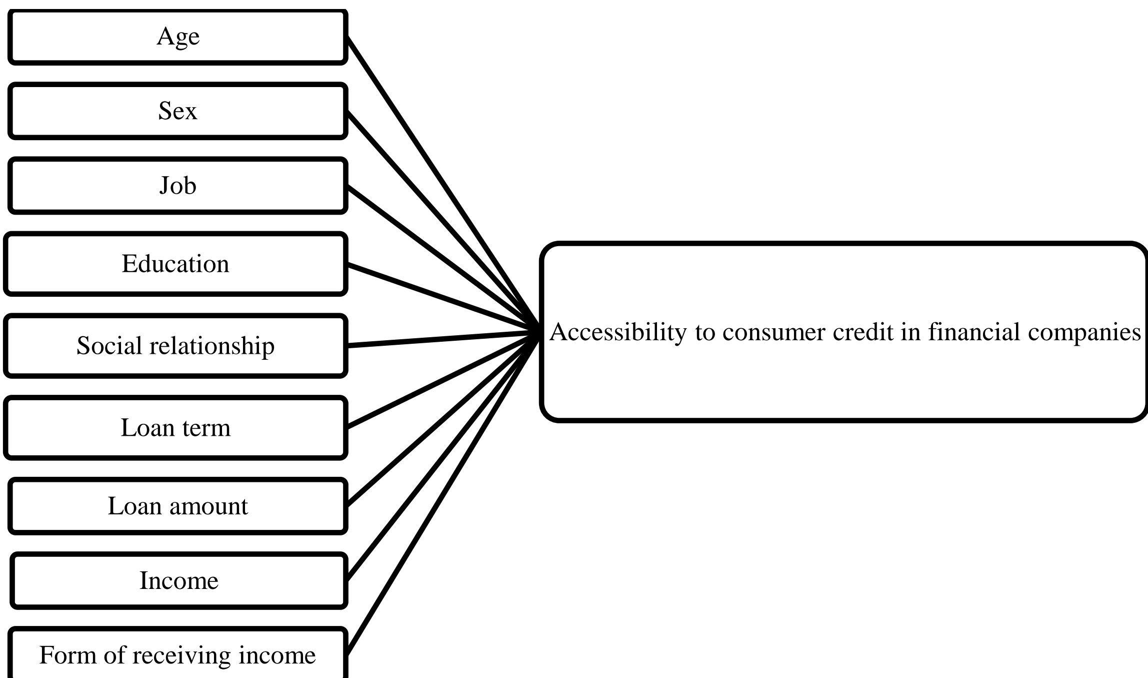

Fig. 1: Theoretical model

3. Research methods

3.1. Sample selection

This article uses primary data from 200 people who have applied for consumer credit loans at financial companies in Can Tho city, which is the center of the Mekong Delta in Vietnam. The research sample was selected using the non-probability sampling method according to the conventional method. Individuals were directly interviewed based on the designed questionnaire. In addition, this study only focuses on three product groups including cash loans, loans for family living (loans to buy household appliances), and loans to buy vehicles (motorcycles). machine) because of its popularity in the survey area. The study also collects secondary data from reports on lending activities at financial companies, documents, statistical yearbooks, scientific journals, and articles on the websites of relevant departments and sectors.

3.2. Estimation method

According to the review of relevant documents and the practice in the study area, the Binary logit regression model is used to determine the factors affecting the accessibility of consumer credit for individual customers. The research model is proposed as follows:

$$\ln\left[\frac{P(Y=1)}{P(Y=0)}\right] = \beta_0 + \beta_1 AGE + \beta_2 SEX + \beta_3 JOB + \beta_4 EDU + \beta_5 REL + \beta_6 TERM + \beta_7 AMT + \beta_8 INC + \beta_9 FORM + \varepsilon \quad (1)$$

where, $P(Y=1)=P_0$ is the probability of an event occurring, that is, the probability that an individual customer has access to credit; $P(Y=0)=1-P_0$ is the probability that the event not occur, that is, the probability that an individual customer has no access to credit; Y is individual customers' access to consumer credit; AGE, SEX, and JOB are the age, gender, and occupation of the borrower, respectively; EDU and REL represent the borrower's education level, relationship with the financial company; TERM and AMT show the term and amount of the loan; INC and FORM are the income and form of salary of the borrower, respectively; β are the estimated coefficients of the regression model.

Table 1 summarizes the characteristics of the variables in the research model and the expected signs about the impact of the independent on the dependent variable.

Table 1: Description of variables in the binary logit regression model

Variable	Measurement	Expected signs
Age of borrower (AGE)	Age number	+
Sex of borrower (SEX)	Dummy variable, 1= male, 0 = female	+
Job of borrower (JOB)	Dummy variable, 1= if working in administrative and non-business units, 0= if doing other jobs.	+
Education level of borrower (EDU)	Dummy variable, 1 = higher education, 0 = high school or less than high school	+
Social relationship (REL)	Dummy variable, 1= if relatives or friends work at local credit unions, 0 = otherwise.	+
Loan term (TERM)	Number of months	-
Loan amount (AMT)	Million VND	-
Income (INC)	Monthly income, Million VND	+
Form of receiving income (FORM)	Dummy variable, 1= if receive income mainly through a bank account, 0 = if receive income mainly by cash.	+
Accessibility to consumer credit by individual customers (Y)	Dummy variable, 1 = approved for a loan and 0 = in need but not approved for a loan	

4. Results and discussion

4.1. Empirical results

Table 2 illustrates the descriptive statistics of the variables used in the regression model.

Based on the results of the correlation matrix in Table 3 it can be seen that all the pairs of correlation coefficients among the variables in the model are less than 0.8 (Farrar and Glauber, 1967), except for the correlation between the economic distance and the institutional distance which has a correlation coefficient of 0.85. Hence, it can be concluded that there is no serious multicollinearity phenomenon.

Table 4 illustrates the variance inflation factor (VIF) and Breusch and Pagan Lagrangian multiplier test results. The VIF values for all independent variables noted in the model are below 10.0. Breusch and Pagan Lagrangian multiplier test results show that prob>chi2=0.008<5%. Thereby, it can be concluded that multicollinearity is considered as not serious but heteroskedasticity is a serious issue in our current models when these variables are included in our research models.

To resolve the problem of heteroskedasticity, the study uses the Robust standard errors method which is extremely useful to ensure a consistent and efficient estimation of results (White, 1980). Table 5 presents the estimation results by using the Robust standard errors method.

4.2. Discussions

The results from Table 5 show that the Likelihood Ratio (LR) test has a p-value of 0.0000, which is less than the significance level α (0.01). Based on the LR test results, independent variables simultaneously have a significant effect on the accessibility to consumer credit by individual customers significance at the level of 1%.

Table 2: Descriptive statistics

Panel A: Quantitative variables				
Variable	Mean	Maximum	Minimum	Standard deviation
AGE (year)	36.265	67	20	12.379
INC (million VND)	6.145	20	3	2.831
AMT (million VND)	26.395	130	10	19.267
TERM (month)	3.535	6	1	1.472

Panel B: Dummy variables			
Variable	**Value**	**Number of observations**	**Proportion (%)**
SEX	1= male	115	57.50
	0= female	85	42.50
JOB	1= working in administrative and non-business units	48	24.00
	0= doing other jobs	152	76.00
EDU	1 = higher education	96	48.00
	0 = high school or less than high school	104	52.00
REL	1= relatives or friends work at local credit unions	68	34.00
	0 = otherwise.	132	66.00
FORM	1= receiving income mainly through a bank account	83	41.50
	0 = receiving income mainly by cash	117	58.50
Y	1 = approved for a loan	130	65.00
	0 = in need but not approved for a loan	70	35.00

Table 3: Pearson's correlation matrix

	Y	AGE	SEX	JOB	EDU	REL	TERM	AMT	INC	FORM
Y	1.000									
AGE	-0.478	1.000								
SEX	-0.355	0.170	1.000							
JOB	0.138	-0.090	-0.041	1.000						
EDU	-0.054	0.279	0.004	0.024	1.000					
REL	0.150	-0.028	0.019	0.094	-0.049	1.000				
TERM	-0.203	0.254	0.058	-0.058	0.077	-0.017	1.000			
AMT	-0.372	0.313	0.025	-0.202	-0.019	-0.064	0.192	1.000		
INC	0.186	0.048	-0.084	0.067	0.212	-0.003	0.000	0.121	1.000	
FORM	0.405	-0.136	-0.322	0.090	-0.084	0.016	0.052	-0.087	0.086	1.000

Table 4: Results of the VIF test and Breusch and Pagan Lagrangian multiplier test

Variable	VIF	Breusch and Pagan Lagrangian multiplier test
AGE	1.31	
SEX	1.15	
JOB	1.07	
EDU	1.17	
REL	1.01	chi2(1)= 11.14
TERM	1.10	
AMT	1.22	
INC	1.09	
FORM	1.16	
Mean VIF	1.14	Prob>chi2= 0.0008

Table 5: Estimated results of the Probit regression model and the Tobit regression model

Variable	Coefficient	Standard error	Z	dY/dX
AGE	-0.1018***	0.023	-3.83	-0.017
SEX	-1.7141***	0.543	-2.33	-0.266
JOB	0.0760	0.238	1.15	0.017
EDU	0.1452	0.437	2.13	0.024
REL	0.9370*	0.510	1.53	0.143
TERM	-0.1196	0.148	0.67	-0.020
AMT	-0.0577***	0.012	-2.29	-0.010
INC	0.3679***	0.095	3.68	0.061
FORM	2.2399***	0.612	2.15	0.337
Constant	4.0261	1.335	-0.73	
Number of observations		200		
Prob> χ^2		0.000		
LR chi2(9)		52.75		
Pseudo R2		0.5010		
Percentage of correct prediction of the model		86.05%		

Notes: The values in parentheses are adjusted standard errors; *, ** and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively

Moreover, the model's Pseudo-R2 coefficient is 0.501, indicating that the explanatory level of the variables in the model is relatively good. The correct prediction rate of the whole model is quite high, at 86.05%. The results from Table 5 show that age (AGE), sex (SEX), social relationship (REL), loan amount (AMT), income (INC), and form of receiving income (FORM) have a significant effect on the likelihood of access to consumer credit. The specific effects of variables on consumer credit access can be explained as follows.

Contrary to initial expectations, the age of the borrower variable is statistically significant at the 1% level and has a negative impact on access to

consumer credit (β1=-0.1018). Thus, in the absence of other factors, if the borrower's age increases by 1 year, the ability to access loans at financial companies decreases by 1.7% (with a marginal impact factor of 0.017). This shows that financial companies are more hesitant to accept consumer loans to the elderly. This result is in contrast with the study of Kim and DeVaney (2001).

According to the results in Table 5, the gender of the re-borrower has a negative influence on the ability to access credit at financial companies in the study area at a 1% significance level (β2=-1, 7141). Thus, in the absence of other factors unchanged, if the borrower is female, it is easier to access loans at a financial company. This result is contrary to the study of Karanja et al. (2014). In fact, women will pay more attention to household spending than men, so consumer purchasing decisions have been carefully considered. Therefore, they have been expected to pay correctly and in full interest and principal, without incurring bad debts.

From the estimated results in Table 5, the social relationship is a factor that has a positive relationship with the dependent variable as hypothesized. The regression coefficient is 0.9370, which is statistically significant at the 10% level. People who have relationships with financial companies, which means they know credit officers, leaders, or their relatives know financial companies, will easily be approved for consumer loans. This result shows that people who have relationships with credit institutions will increase their ability to get loans higher than others. This empirical finding is in line with Phan (2013).

According to the results of the regression model, the regression coefficient is β6=-0.0577 at the 1% statistical significance level, proving the negative relationship between the loan amount and the ability to access consumer loans of individual customers. Consumer loans are usually unsecured loans, without collateral. In case the customer does not pay the debt on time, or the worst case is that the customer is unable to pay, the bank will have bad debt, and even be unable to recover the principal. On the other hand, litigation or finding customers to repay the debt will incur many costs. The higher the loan amount, the higher the credit risk, so banks will limit consumer loans with large amounts. The results are consistent with the results of Kim and DeVaney (2001) and Nguyen (2020).

Based on the regression results in Table 5, income has a positive effect on access to personal loans with the estimated coefficient β7=0.3679 at the significance level of 1 percent. That is, if other factors are constant, when income increases by 1 million, people's ability to get unsecured loans at financial companies increases by 6.1% (marginal impact coefficient 0.061). This result is consistent with the hypothesis and previous studies of Kết and Thoảng (2013) and Nguyen (2020). High income allows borrowers to have a monthly balance to repay loans to financial companies. This reduces risk and increases the on-time recovery of consumer loans. Moreover, according to interview data in this study, the reason for being denied credit is usually not having a reasonable repayment plan and not having a stable income.

It can be seen from the results in Table 5 that the form of receiving income factor has a strongly positive correlation with access to consumer loans with the estimated coefficient β9=2.2399 at the significance level of 1%. This shows that customers receive income by bank account, and they will have easier access to unsecured loans. Because when the borrowers have bank accounts, the financial company can verify their income, and manage the borrower profile and credit history. Furthermore, the finance company can ask the borrower to repay the loan by deducting the monthly salary directly from the bank account. In particular, for the type of consumer loan with salary, receiving salary by bank account is an advantage for borrowers to enjoy more incentives. Phan (2013) also found similar results, customers who receive salary via bank account are easier to get loan approval than those receiving salary in cash.

However, in this estimation model, there are three variables, namely the qualification variable, occupation variable, and loan term which are not statistically significant. This study result is in contrast to the previous studies such as Kim and DeVaney (2001), Pattarin and Cosma (2012), Phan (2013), and Nguyen (2020).

5. Conclusions

Based on interview data from 200 customers who have demand for consumer loans in Can Tho city in 2022, the study uses a binary logit regression model to determine the factors affecting the individuals' accessibility to consumer loans in Vietnam. The study contributes empirical results in the field of research on consumer lending activities of financial companies. The research results show that the relationship with financial companies and the form of income receipt are two variables that have a positive effect on individuals' access to consumer credit. At the same time, the positive relationship between the borrower's monthly income and the probability of being approved for a consumer loan is also found with a high level of statistical significance. In contrast, the older male borrowers and the larger the loan amount, the lower the access to consumer credit. Furthermore, the survey data also shows that a significant portion of consumers borrows from financial companies to serve the purpose of repaying other loans. This is a dangerous situation because it is the equivalent of a loan reversal, increasing the risk of insolvency for the customer.

Based on the empirical findings, some recommendations to improve the individual's access to consumer credit at financial companies are proposed. On the supply side, financial companies need to diversify consumer loan packages for different types of customers by age, gender, and income. For older customers, financial companies

should extend the loanable age, but add some additional requirements such as a guarantor or limit the loan term to reduce risks. Besides, consumer loan services should have some programs that prioritize women for loan purposes related to household purchases or women's holidays. Although women are more careful in their expenditures than men, men act as the main earners of the family income in some cases. Therefore, it is necessary to consider this factor when considering consumer loans for male borrowers. At the same time, there should be consumer loan services for low-income individuals. Financial companies may be limited on the purpose and amount of the loan, but this still allows them to access consumer loans instead of usury. In addition, incomplete and confusing information about payment methods or products will be a barrier for consumers when deciding to buy products using consumer loans (Estelami, 2001). Therefore, financial companies should provide complete information to potential customers in a simple, understandable way.

On the contrary, customers also need to consider several issues to increase access to consumer credit at financial companies. Customers need to actively research financial companies and their services to understand the application conditions as well as choose a safe credit institution. Shopping needs and consumer loans should be carefully considered, the loan amount must match the individual's monthly income and ability to pay. Moreover, individuals may consider switching to receiving salaries and other incomes via bank accounts to increase access to consumer loans without collateral at financial companies.

Although the study has provided empirical evidence of the determinant factors of an individual's ability to access consumer loans, it still has some limitations that may provide further development opportunities for more in-depth research in Vietnam. Specifically, although the study surveyed customers for loan needs in the central city of the Mekong Delta, the number of observations of the study is still limited and does not include rural areas. Therefore, studies with larger sample sizes are needed. In addition, this study has studied the current popular consumer credit, but cannot consider online consumer loans due to limited access to information by financial companies. Last but not least, this study only focuses on individuals' access to consumer loans at financial companies. Therefore, further studies can investigate the impact of these factors on consumer credit services of banks and Fintech companies for many other customers.

Compliance with ethical standards

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

References

Deku SY, Kara A, and Molyneux P (2016). Access to consumer credit in the UK. The European Journal of Finance, 22(10): 941-964. https://doi.org/10.1080/1351847X.2015.1019641

Disney R and Gathergood J (2013). Financial literacy and consumer credit portfolios. Journal of Banking and Finance, 37(7): 2246-2254. https://doi.org/10.1016/j.jbankfin.2013.01.013

Estelami H (2001). Determinants of discount rates in consumer credit decisions. Journal of Marketing Theory and Practice, 9(1): 63-73. https://doi.org/10.1080/10696679.2001.11501886

Farrar DE and Glauber RR (1967). Multicollinearity in regression analysis: The problem revisited. The Review of Economics and Statistics, 49(1): 92-107. https://doi.org/10.2307/1937887

Hoang VH, Nguyen PM, Luu TMN, and Vu TMH (2021). Determinants of intention to borrow consumer credit in Vietnam: Application and extension of technology acceptance model. The Journal of Asian Finance, Economics and Business, 8(4): 885-895.

Karanja J, Mwangi A, and Nyakarimi S (2014). Analysis of factors influencing access to credit services by women entrepreneurs in Kenya. Research Journal of Finance and Accounting, 5(11) 34-41.

Kết TÁ and Thoảng TT (2013). Nghiên cứu các yếu tố ảnh hưởng tới tiếp cận tín dụng tiêu dùng ở ngân hàng thương mại của hộ gia đình trên địa bàn thành phố cần thơ (Research on factors that affect consumer access to credit at commercial banks of households in the province of Can Tho City). Tạp chí Khoa học Trường Đại học Cần Thơ, 28: 26-32.

Kim H and DeVaney SA (2001). The determinants of outstanding balances among credit card revolvers. Financial Counseling and Planning, 12(1): 67-77.

Lin L, Revindo MD, Gan C, and Cohen DA (2019). Determinants of credit card spending and debt of Chinese consumers. The International Journal of Bank Marketing, 37(2): 545-564. https://doi.org/10.1108/IJBM-01-2018-0010

Lusardi A, Schneider DJ, and Tufano P (2011). Financially fragile households: Evidence and implications. NBER Working Paper No. w17072, National Bureau of Economic Research, Cambridge, USA. https://doi.org/10.3386/w17072

Luu HN, Nguyen LQ, Vu QH, and Tuan LQ (2020). Income diversification and financial performance of commercial banks in Vietnam: Do experience and ownership structure matter? Review of Behavioral Finance, 12(3): 185-199. https://doi.org/10.1108/RBF-05-2019-0066

Magri S, Pico R, and Rampazzi C (2011). Which households use consumer credit in Europe? Bank of Italy Occasional Paper No. 100, Bank of Italy, Rome, Italy. https://doi.org/10.2139/ssrn.1998749

Mai NP, Ngoc LTM, and Dzung TH (2019). Factors affecting students's intention of borrowing consumer credit in Hanoi. VNU Journal of Science: Economics and Business, 35(1): 97-111.

Maki DM (2002). The growth of consumer credit and the household debt service burden. In: Durkin TA and Staten ME (Eds.), The impact of public policy on consumer credit: 43-68. Springer, Boston, USA. https://doi.org/10.1007/978-1-4615-1415-2_3

Mandell L (1973). Consumer knowledge and understanding of consumer credit. Journal of Consumer Affairs, 7(1): 23-36. https://doi.org/10.1111/j.1745-6606.1973.tb00518.x

Mikhed V and Vogan M (2018). How data breaches affect consumer credit. Journal of Banking and Finance, 88: 192-207. https://doi.org/10.1016/j.jbankfin.2017.12.002

Modigliani F and Brumberg R (1954). Utility analysis and the consumption function: An interpretation of cross-section data. Franco Modigliani, 1(1): 388-436.

Nguyen HH (2020). Individual customers' access to credits at commercial banks in Viet Nam: The case of Tra Vinh province. The Journal of Asian Finance, Economics and Business, 7(9): 371-376. https://doi.org/10.13106/jafeb.2020.vol7.no9.371

Nguyen HH and lien TT (2019). Factors influencing family business decision for borrowing credit from commercial banks: Evidence in Tra Vinh province, Viet Nam. The Journal of Asian Finance, Economics and Business, 6(2): 119-122. https://doi.org/10.13106/jafeb.2019.vol6.no2.119

Pattarin F and Cosma S (2012). Psychological determinants of consumer credit: The role of attitudes. Review of Behavioral Finance, 4(2): 113-129. https://doi.org/10.1108/19405971211284899

Phan DK (2013). Các nhân tố ảnh hưởng đến tiếp cận tín dụng chính thức và phi chính thức của nông hộ ở Đồng bằng sông Cửu Long (Determinants of accessibility to formal and informal credit in the Mekong River Delta). Tạp chí Khoa học Trường Đại học Cần Thơ, 28: 38-53.

Rona-Tas A and Guseva A (2018). Consumer credit in comparative perspective. Annual Review of Sociology, 44: 55-75. https://doi.org/10.1146/annurev-soc-060116-053653

Tufano P (2009). Consumer finance. Annual Review of Financial Economics, 1(1): 227-247. https://doi.org/10.1146/annurev.financial.050808.114457

Trinh HN, Tran HH, and Vuong DHQ (2020). Determinants of consumers' intention to use credit card: A perspective of multifaceted perceived risk. Asian Journal of Economics and Banking, 4(3): 105-120. https://doi.org/10.1108/AJEB-06-2020-0018

White H (1980). A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. Econometrica: Journal of the Econometric Society, 48(4): 817-838. https://doi.org/10.2307/1912934