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## FACTORS AFFECTING THE INDIVIDUAL USERS' ACCESSIBILITY TO PEER-TO-PEER LENDING IN TRANSITIONAL COUNTRY: EMPIRICAL RESEARCH IN VIETNAM

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### ABSTRACT

*Peer-to-peer lending is considered one of the most successful yet risky inventions of the Fintech wave in recent years. The trend of peer-to-peer lending service boom has an impressive impact on developing countries, including Vietnam - a country with nearly 60% of the working-age population, shopping and spending needs are skyrocketing in the last five years. Additional downfalls of recent peer-to-peer markets have brought up more concerns and arguments to the subject. Therefore, this research aims to investigate the approachability of peer-to-peer lending in transitional economies with the case of Vietnam. Primary data is based upon questionnaire surveys with a quantitative method to test data. The results show that the demography and finance factors do not have an impact or have a low impact on the accessibility of users to peer-to-peer lending. In contrast, the social capital factor plays a leading role of indicating determinants of the accessibility of individuals users to peer-to-peer lending in the emerging market context. Based on these findings, recommendations were proposed to enhance the accessibility of individual users to peer-to-peer lending.*

**Keywords:** *Peer-to-peer lending, Accessibility, Individual users, Transitional country, Finance, Social Capital.*

### INTRODUCTION

Peer-to-peer lending (P2P) represents a model, in which individuals lending money to other individuals, without the intermediation of a financial institution. Hence, P2P can be considered as an example of financial disintermediation. Traditionally, in a developing country such as Vietnam, if someone needs money and is unable to borrow from friends, families, or elsewhere, he or she may apply for a loan at the bank and wait for a usually long application process. The bank always requires some forms of collaterals, yet never guarantees loan approval. Vietnam has a population of 96 million people. 2005 was the establishment of Zopa in the United Kingdom, the first P2P platform in Europe. Zopa reports that it has supported a cumulative total of 5 billion Euros worth of loans (Zopa, 2020). In Vietnam, Vaymuon.vn is the first and largest P2P lending platform. After 2 years of official operation, the company has become profitable and successfully connected more than 2 million borrowers to 400,000+ individual lenders in Vietnam, Myanmar, and Cambodia with a sustainable monthly growth rate of 20%; in which the retention rate remains stable at 70% (Yahoo Finance, 2020).

It is questionable whether the “peer-to-peer” nature of P2P lending is important, in the same way, that it is in platforms such as Airbnb or Uber. The diversification of loans means that there is never a personal relationship between borrower and lender in the same way that is created by an Airbnb booking. While some individual P2P lending platforms may promote their personal or community orientation, this is not a fundamental feature of the business model. The arise questions about credit risk and online trust are the concerns and challenges to investors, lenders, and the P2P platform providers. Although there are many risks in this lending model, the number of users has been increasing every year. The development of P2P lending is inevitable in emerging countries. Therefore, this paper aims at investigating determinants of the accessibility of individual users to P2P lending in Vietnam.

### *Literature Review*

#### *Definition of peer-to-peer lending and platform*

According to Zhao *et al.* (2017), peer-to-peer lending (P2P) is the practice of lending money to individuals or businesses through online services that match lenders directly with borrowers. In this kind of lending model, the mediation of financial institutions is not required. The decision process of loan origination is given into the hand of private lenders and borrowers, and websites like Prosper.com offer them a platform to engage with each other (Wen *et al.*, 2017) defined that the P2P lending target is small, microloan, and short-term. In general, P2P lending is an online service provided by P2P companies through a platform, where individual borrowers and lenders are connected without a financial intermediary such as commercial banks or financial companies.

#### *Accessibility to credit and interest rates through P2P lending*

In general, the accessibility of P2P lending comes from the approach of loan packages and user reactions. The social effects of receiving press information on mobile phones depend very much on the quality and smart features of the type of phone used to access press information, and on the cognitive capacity of the public (Samir *et al.*, 2019; Sangi *et al.*, 2020). Before that, it depends on the interest of social institutions that a communication channel is a tool. The perception of users depends very much on how P2P companies communicate with the public. Azjan (1991) said in the theory of planned behavior that behavior is a function of compatible intentions and perceptions of behavior control, in which controlling perceived behavior will lessen the impact of intent on behavior. Thus, favorable intention only creates behavior when controlling cognitive behavior is strong. It is understandable that if customers can see the advantages, high reliability, satisfaction with the services, businesses will easily create a resonance approach and expand the company's influence on the community (Fauziah *et al.*, 2019; Teymouri and Sadeghi, 2020).

#### *Factors affecting the accessibility of individuals to P2P lending*

P2P lending platform is a two-way investment. While the lender wants to get as much legit information about the borrower as possible, the borrower is trying to get the interest rate as low as possible. The following factors will have an impact on individuals' accessibility to P2P lending.

#### *Financial determinants*

The overview of the financial characteristics of the borrowers will be provided to the lender as the main indicator of creditworthiness on every P2P transaction. It includes credit ratings, detailed



information on monthly income and expenses, house-ownership, or the debt-to-income ratio. External rating agencies will determine the data and aggregate it into an automated credit-score. Michal and Tobias (2018) confirm that financial characteristics of the borrowers also help lenders to evaluate the expected risk, because the risk that investors are facing is greater than that of the borrowers. If the borrowers cannot return the loan, the lender will lose their excess funds. The repayment is not guaranteed, and no insurance coverage available for the lender, therefore, the lender needs to bear the entire risk and expect the possible losses they may get. So before deciding on the desired interest rate, the lender will make a comprehensive analysis of the market situation as well as borrower's characteristics by assessing credit rating, the loan purpose, loan amount, loan period, repayment ability, and repayment history of the borrowers. Furthermore, for lenders, the biggest question when investing in this platform is the profit in terms of the interest rate. P2P lending platform can meet the demand of people who want to incur a gain from their idle funds. These savers can disperse their funds into small loans and lend out at a higher interest rate rather than keeping in their traditional deposits at the bank, which earns a much lower interest rate. Investors get to select the risk level and the number of notes to make a purchase. Over time, the principal and interest payments will roll in, minus losses and fees, which will make total investment shrunk as loans with relatively short maturities are paid down, and the investor's liquidity will grow. Investors can choose to manage their investment account manually or automatically.

#### *Demographic characteristics determinants*

Many studies investigated demographic characteristics including age, race, gender, occupation, culture, physical distance, hardworking and economic hardship, etc. that affect loan performance or accessibility to credit and interest rates through P2P lending.

Age: Lenders intend to judge the applicant's credibility based on their age, although it is subjective, lack fundamental analysis, experience, and does not consider creditworthiness. If lenders recognize borrowers that look younger in photographs, they are less likely to offer loans or offer lower loan amounts to those applicants. In another research, Dongyu, Li and Lai (2016) said that in most cases, older people tend to receive a higher interest rate than other age groups because they hold a higher default risk.

Gender: Dongyu, Li and Lai (2016) believed that male and female borrowers pay different interests and also receive a different return on loans as lenders. He concluded that females are more likely to receive funds than males, pay fewer interests than males; yet, their turnover is less than men. Dongyu, Li and Lai (2016) also investigated to find out whether gender is relevant to the return and risk of the loan. She said females are not risk-averse; they are willing to make loans to borrowers at the lower interest rate and with a lower credit score.

#### *Social capital determinants*

Besides demographic factors like age, gender, and race, other soft factors influence the lending process and are less measurable. These soft factors can be friends, peers, groups, or circumstances, Chen, Lina Zhou and Wan (2016). Social capital has a positive impact on the ability to get a fully funded loan, lower the interest rate that borrowers have to pay; and has a positive influence in lowering the role of credit-ratings. Trust building is an extremely important factor in the lending process. The trustor comes across the other party's trustworthiness, either directly through



relational experience, or indirectly via reputation; as a consumer may find out about a brand's competence through direct usage or word-of-mouth communication. Trust has a cognitive basis: knowledge, impression, or inference that the partner has the ability and intention to perform according to expectations, and to refrain from opportunistic behavior.

Group and group intermediation: At most P2P lending platforms, members are offered to be in special societies. The group could clarify some information of members if the group is built with the right motivations Chen, Lina Zhou and Wan (2016). On another hand, Dongyu, Li and Lai (2016) found that there is no correlation between the group leader's bidding and the default rate of the loans they assessed.

Photos: Wen *et al.* (2017) identified that the interest rate offered to those with the photo attached or unattached to the loan application is likely the same. The photo might affect the funding decision but does not affect the interest rate determination. In contrast, investigated that borrowers with attractive appearance have a 1.41% higher chance to get the loan and pay lower interests. Chen, Lina Zhou and Wan (2016) also identified that according to the Prosper lending platform, people do not include a picture or appear unhappy on their profile will leave a negative impression on lenders.

Friends: P2P membership is usually referred by family members, friendship, or previous successful transactions; loans endorsed and bided by friends are usually paid on time and with higher interest rates Dongyu, Li and Lai (2016). The borrowers' friends are better at examining risks and the real situation of the borrowers, because they may have the additional information from the personal relationship that others do not have. Accordingly, friends can use an indirect trust to motivate lenders to believe in borrowers who have a well-performing social network.

## MATERIALS AND METHODS

### *Data collection*

The study uses a quantitative method to process data. Primary data were collected from survey-questionnaires that were designed to answer three research questions and performed in both online and hard copy. The questionnaire was based on observation variables and was designed using a Likert scale with a 5-point rating system from strongly disagree (1) to strongly agree (5). The hard copy was launched in Hanoi – Capital of Vietnam and the online survey was implemented national wide via many different channels such as via email, Facebook. Surveyors were people who live in Vietnam; have or have not used P2P lending; both desire to use P2P service or not. 600 surveys were collected from October to December of 2019. After the selection process, 99 questionnaires were rejected due to the lack of important information; 501 respondents were used for data analysis.

### *Data analysis*

The research uses SPSS 20 software to test the model and hypotheses of the study. Cronbach Alpha coefficient was used to measure the reliability of each scale, and Exploratory Factor Analysis (EFA) was used to evaluate the convergence value and discriminant value of the variables. Analysis results show that all variables meet the requirements of reliability and value.

The characteristics of borrowers and lenders may affect the likelihood of funding and interest rates in P2P lending. Therefore, this research will examine factors that may impact the accessibility (accessibility factor) of both borrowers and lenders to credit and interest rates through P2P lending



in Vietnam. Independent variables including demography, finance, social capital factors are used to examine the determinants of accessibility to P2P lending of individual lenders and borrowers in Vietnam. Therefore, the hypotheses were designed as below:

*H1: The demography factor is statistically significant and positively related to the accessibility factor.*

*H2: The finance factor is statistically significant and positively related to the accessibility factor.*

*H3: Social capital factor is statistically significant and positively related to the accessibility factor.*

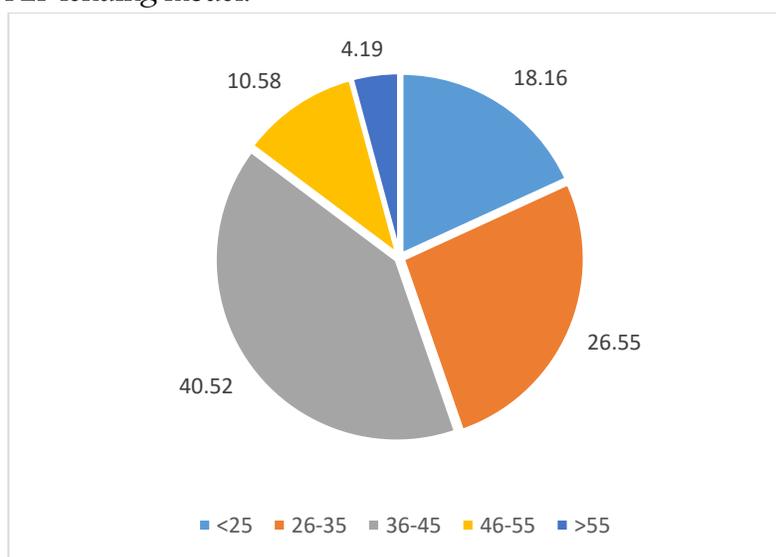
In which, accessibility factor is understood as the accessibility of individual users to peer-to-peer lending.

## RESULTS AND DISCUSSION

### *Statistical description*

According to surveys, up to 73% of participants stated that they know about the P2P lending model. However, 64.1% of participants stated that they had never used P2P lending before. This may be due to the risk of the model and the concept of financial technology (Fintech) is not common enough in Vietnam. The World Bank (2017) stated that 79% of Vietnamese are not approached by official financial services. Moreover, when searched for the term “peer-to-peer” in any online searching tool, there are a series of articles relating to credit risks, insolvency, negative effects regarding this model. This is one of the main reasons why people may know about P2P lending, but only a small number has tried it.

Among 501 surveyors (**Figure 1**), people from the age group of 37-45 years old take the biggest portion (40.52%), whereas people who are older than 55 take the smallest portion (4.19%). The age group of 37-45 stands at only 10.58% whilst the 26-35 age group takes up to 26.55%, and <25 age group is 18.16%. As above, people age 36-45 are the reason why the number of married people accounts for such a large percentage among the participants. The major ages also bring higher reliability to the survey results, because middle-age people have a stable income and idle money to invest. Regardless of marital status, ones having free money will become potential customers of the P2P lending model.



**Figure 1.** Participant's Age Group



Source: Authors' survey data, 2020

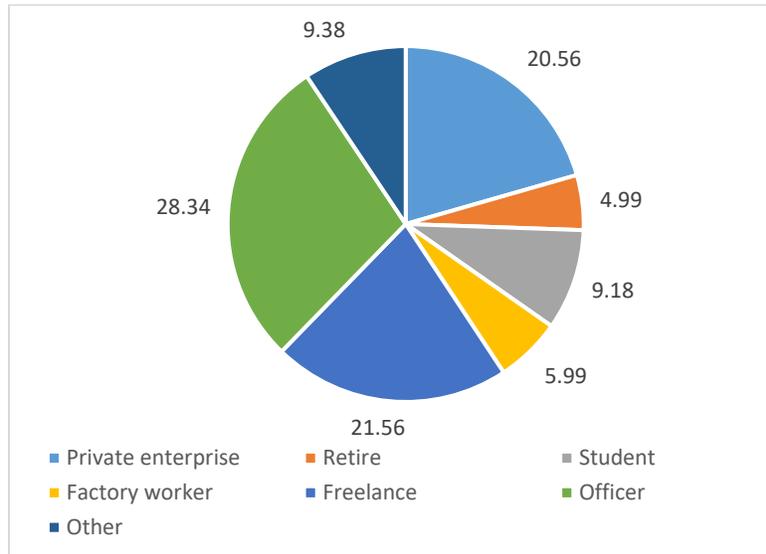


Figure 2. Participant's Jobs

Source: Authors' survey data, 2020

There are 7 featured occupations of the participants (**Figure 2**). It can be seen that general office workers accounted for 28.34%, which is the highest number among the people surveyed. Freelancers and private enterprises came in 2nd and 3rd place with 21.56% and 20.56%, respectively. Then come students and other occupations; retirees and factory workers, which equates to around one-fourth of people surveyed. Office workers account for the largest proportion of all the featured occupations, because of the popular age group from 26-45 of the surveyors. This also means that office workers and private enterprise workers have knowledge or interest in this new kind of credit than people in other occupations. The borrowers' occupation has big effects on the lender's decision. Public and private office workers are most likely chosen and trusted by the lender, because of their stable jobs. They are also middle-aged and have a higher ability for loan repayment. Especially, officers contributed to half of the answers (47.10%) as the most trusted candidates to the lender. The lowest portions were students and factory workers. To sum up, most lending decisions are lender's subjective thinking and prejudice, so lending decision depends on many factors, especially age and occupation of the borrowers.

The survey is diverse in all parts of Vietnam, with more than half of the participants is from the North and also another big part comes from the South. It is understandable because peer-to-peer activities are booming, mostly in Ho Chi Minh City and Hanoi. Also, the support of many P2P company headquarters in major cities has contributed to the dissemination of this model. Tima, Vaymuon, Doctor, and Huydong all have offices in Hanoi and Ho Chi Minh city. The survey did not draw the attention of people who live in the middle of Vietnam because P2P lending has not become popular and well-marketed there. The survey recorded a balance between male and female participants who had done the survey. The ratio between males (46%) and females (54%) is considered to be fairly equal which brings higher reliability to the survey. The proportion of married and unmarried interviewees stood at 64% and 32% respectively and coincides with the

major age recorded in the survey. The different genders of borrowers do not have a big effect on the lending decision of the lender. Most answers are equally chosen for both genders. However, the male ratio is still slightly higher than the female when either of them is selected. As seen in the age ratio, the percentage of women participating in the survey is higher than that of men, inversely proportional to the fact that male is often more preferred to female. A similar trend is observed in the interest rate being offered for each gender. To the people surveyed, gender does not affect much on the lending decision so that more than half (53%) chose no gender is required higher interest rate. However, the male is recorded to have a slightly higher required higher interest rate compared to females, which is similar to Wen *et al.* (2017) findings, which they concluded that females pay fewer interests than males. Wen *et al.* (2017) stated that lenders seem to make less rational decisions because they invest less in people of the same gender, especially the ones that seem more attractive than them. Gender is inversely proportional to the lending decision and lenders often prefer the opposite sex.

Among the two lending purposes, consumer loans are more popular than investment loans, because consumption loans are rather small, short-term, and safer compare to business loan. The number of consumer loans is higher, so is its interest rate. Nonetheless, the gap between the two borrowing purposes is not so big (41% to 59%). The reason may come from lenders' concern about the risk in investing activities of borrowers. The lowest interest rate offered by the lenders is mostly from 11.9% - 13.5% annually which is also the rate listed on most P2P platforms in Vietnam. Lending rates in P2P platforms are much higher than deposit rates, and sometimes even higher than credit interest rates of commercial banks. This seems attractive at first and is the most beneficial way to approach new P2P lenders, but implicit in those interest rates are risks. Users may be aware of hidden risks, so they tend to grant some loans at a fairly high-interest rate in the hope to bear lower risk.

There were 180 people surveyed that have used P2P lending (35.6%), and about 40% chose neutral when being asked about their experiences using P2P lending. The dissatisfaction when using P2P (31.3%) is recorded to be higher than the satisfaction ratio (16.9%) (Table 1).

**Table 1.** P2P Lending User's Satisfaction Level

	Strong disagree	Disagree	Neutral	Agree	Strong Agree
Satisfied with your chosen P2P service	3.5%	31.3%	43.3%	16.9%	5.0%
Fear of using P2P model	0.0%	5.9%	42.4%	24.9%	26.8%

Source: Authors' survey data, 2020

### *Statistical results*

#### *Reliability test via Cronbach's alpha*

The Cronbach alpha results of the good factor show that the observed variables listed are excellent, reflecting the characteristics of that factor. High-quality tests are important to evaluate the reliability of data supplied in an examination or a research study. In the first run, most factors satisfy the requirements of the test. The accessibility factor has a Cronbach's alpha value of 0.827; the demography factor has a Cronbach's alpha value of 0.705; the finance factor has a Cronbach's alpha value of 0.911; the social capital factor has a Cronbach's alpha value of 0.775 (Table 2). All



Cronbach's alphas are greater than 0.6; and all factors have Corrected Item-Total correlation values of greater than 0.3.

Thus, after Cronbach's alpha validation, none of the observed variables are removed before running the EFA - exploratory factor analysis.

**Table 2.** Summary of the reliability test for accessibility (Cronbach's alpha)

No.	Variable	Number of observation variables left	Cronbach's alpha value
1	Demography	5	0.705
2	Finance	12	0.911
3	Social capital	5	0.775
4	Accessibility	7	0.827

Source: Authors' data analysis, 2020

#### Exploratory Factor Analysis (EFA)

Exploratory factor analysis was used to assess the convergence and differentiation values of the scales. The analysis results show that all scales meet the requirements of reliability and value. Specifically, Cronbach's alpha of all 4 scales shows high reliability ( $> 0.7$ ) (Table 3). EFA was implemented separately for the dependent variable (accessibility) and concurrently executed with 20 variable observations measuring 3 independent variables. The results of the EFA analysis show that the scales meet the requirements for deductible factors, the total cumulative error of more than 50%, and load factor more than  $> 0.5$  (Table 3).

**Table 3.** Factor Loadings

	Component		
	1	2	3
D2	0.770		
D3	0.778		
D4	0.822		
D5	0.790		
F1		0.711	
F2		0.726	
F3		0.620	
F4		0.729	
F5		0.742	
F6		0.685	
F7		0.744	
F8		0.707	
F9		0.700	
F10		0.621	
F11		0.726	
F12		0.737	
S1			0.668
S2			0.711

S3	0.631
S5	0.679

*Extraction method: Principal Component Analysis.*

*Rotation method: Varian with Kaiser Normalization.*

*Rotation converged in 3 iterations.*

*Source: Authors' data analysis, 2020*

After running EFA, our research excluded two items: D1 of the demography variable and S4 of a social capital variable. D1 expresses that the lender trusts and prefers to lend to someone who belongs to the same gender; and S4 represents the fact that the lender prefers to lend to someone good-looking.

### *Hypothesis testing*

**Table 4. Regression Results**  
Dependent variable: Accessibility to P2P lending

Independent	Model 1 $\beta$
Demography	-0.030
Finance	0.046*
Social capital	0.878*
R2	0.751
Adjusted R2	0.750
F	500.329

*N = 501*

*\* p < 0.05*

*\*\* p < 0.01*

*\*\*\* p < 0.001*

*Source: Authors' data analysis, 2020*



From **Table 4** above, Social capital has a strong impact on Accessibility ( $\beta = 0.878$ ); meanwhile finance variable has a small impact on Accessibility ( $\beta = 0.046$ ). In contrast, Demography has a negative and insignificant impact on Accessibility ( $\beta = -.030$ ).

Moreover, according to ANOVA, the research model is significant ( $p = 0.00$ ) with the adjusted R Square = 0.750, therefore independent variables affect 75.0% of the change of the dependent variable, the remaining 25% is due to variables outside the model and random errors. The Durbin-Watson value = 1.825, so, there is no superlative chain correlation in the model.

**Table 5. Hypothesis Results**

Hypothesis	Result
H1: Demography is positively related to Accessibility	N. S
H2: Finance is positively related to Accessibility	S
H3: Social capital is positively related to Accessibility	S

*S: support; N.S: not support*

*Source: Authors' data analysis, 2020*

## RESULTS AND DISCUSSION

According to the Reliability test results via Cronbach's alpha, independent variables were proved to be reliable. **Table 5** shows a summary of our hypothesis testing result.

First, based on demography data collected, people agree that if they are lenders, they have more trust in borrowers who live in the same region, city, or province. It can be said that borrowers who live within the same proximity make the lender feel safer when granting any loan. Besides, education and occupation both play important role in the borrowers' success of funding due to the trust of lenders in someone who has the same education level and occupation. On another hand, the same gender between lenders and borrowers does not affect the accessibility to the credit of borrowers.

Second, data explored that lenders have higher requirements for borrowers' financial situations. Most of the 501 surveyors agree and strongly agree that high credit scores, stable and high average income, timely repayment history, and having collateral are factors that positively impact their lending decision. Without meeting these conditions, lenders tend to demand a higher interest rate from borrowers. They also require higher interest rates with larger loan sizes and a longer-term loan. On the other hand, the finance factor has a low standardized beta on Accessibility. Therefore, financial knowledge does not play an important role in the accessibility to P2P credit as expected. Third, the social capital factor expresses very important conditions in choosing reliable borrowers, including borrowers who belong to trusted social groups; loans examined by the group leader; borrowers who are confident to show public profile pictures in applications and if they are introduced by lenders' friends. A borrower who has one of the above conditions may be more likely to receive loans with a lower interest rate.

After running EFA, the research results show that borrowers' appearance does not significantly contribute to the accessibility to P2P lending in Vietnam. It can be explained by the high caution of Vietnamese lenders regardless of the borrowers' appearance.

Fourth, the research model explained 75% of the change of the dependent variable, which is acceptable. This study only focuses on evaluating the impact of internal factors from users and ignore external factors. 25% that this research model cannot explain may belong to these above factors. Because P2P lending is not greatly popular in Vietnam, there are up to 20% of surveyors answered they have not heard about P2P companies and P2P lending through media, advertisement, newspapers, or the news. It is also hard to find P2P offices and subsidiaries in the area of surveyors. Poor media and community of P2P lending prevent people from using this service in Vietnam. Also, research data show that the number of people who use P2P lending is much less than those who know about it. Consumers are still hesitant to try this service due to the lack of trust and a clear understanding of P2P lending.

The database found that 79% of P2P users think that there is a lack of transparency in handling and securing customer information; 94.6% said that the collateral was not specified; 70% of users agree that the information management and monitoring before and after the investment are loose.

## CONCLUSION

From the analysis of the factors affecting the accessibility to P2P lending of individual lenders and borrowers, some suggestions were proposed as below. Firstly, the government of a developing country such as Vietnam should be able to realize both benefits and risks of the P2P lending model to propose appropriate policies for controlling and monitoring this activity in the financial market. Moreover, the government can learn experiences from other countries that allow P2P lending in its financial system. One of the reasons for the P2P failure lessons in China is the lack of a legal



framework. Therefore, the government should impose laws on P2P lending activity as well as P2P companies regarding required capital, management system, proper credit rating system, the maximum fine and penalties for borrowers when they make a late payment, etc. Secondly, P2P lending platforms should become more transparent to the public. These companies should be open about their operations and provide financial statements to build market's trust. Besides, P2P companies should be able to provide some more detailed information about the borrowers, such as education, hobbies, credit score, average income, history of borrowings, and profile picture; so that lenders can evaluate borrowers' reliability. Although occupation and gender information are now displaying on the P2P platform, there are still mistakes, unverified, or lacking details. P2P companies can also create a users' network, improve, and cultivate trust among users. P2P companies should tighten regulation to lower the risks and put immediate action when bad debts occur to protect lenders. Technical systems should be regularly updated and improved to secure the user's information and increase the level of transparency throughout the lending process. The next thing is to eliminate users who have a high rate of non-performing loans and have a strict inspection process on the collateral if any. Moreover, P2P companies should regularly provide pieces of training to their staff to serve better customer service as well as a better screening process. While our research is limited by the scope of the investigation, we still believe that it may contribute to the foundation of further research on the topic of P2P lending as well as to promote the development of new business method using technology in the economy according to the following reasons: (i) many existing pieces of literature on P2P lending have been conducted in developed countries, whilst Vietnam is a developing country with characteristics of an emerging economies. Therefore, it is necessary to test a model that is suitable for Vietnam. (ii) this paper clarifies the level of impact of finance, demography, and social factors on the accessibility to P2P credit and interest rate of both individual borrowers and lenders at a 75% confidence level.



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