

## The Impact of Personal Characteristics on Lender's Trust in Online P2P Lending

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**Abstract:** Online Peer-to-Peer (P2P) lending is an online innovative lending and investment without the intermediation of traditional financial institutions. This study examines the impact of characteristics of borrower (gender, occupation and proximity) and lender (gender, age and income) on lender's trust in borrower when using online P2P lending decision. This study was collected from 312 respondents who always use Internet banking, online transaction or had experienced in using online P2P lending in Thailand. The conclusion tells that gender of lender and occupation of borrower are related to lender's trust. However, this study does not support the impact of borrower's gender, proximity, lender's age and lender's income on lender's trust in borrower.

**Keywords:** Trust, Online P2P lending, Lending decision, Demographic characteristics, Thailand

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### I. Introduction

Online peer-to-peer lending (online P2P lending) provides online users an innovative loaning and investment pattern without the intermediation of traditional financial institutions [1]. Primarily targeted at low and micro amount loans, Online P2P lending was not only fund small scaled businesses but also provide short-term financial liquidity [2]. Since 2005, online P2P lending has increased in many countries around the world such as United States, United Kingdom, Canada, Japan, China and Italy. Lending Club, the world's largest online P2P platform, reported the total loan issuance gradually increases from 2009 to 2016, where the total loan issuance in 2016 were about 24 billion dollars as shown in figure 1. Similarly, Transparency Market Research suggests that the opportunity in the global online P2P market will be worth \$897.85 billion by the year 2024, from \$26.16 billion in 2015. It is believed that the market is going to rise at a remarkable compound annual growth rate of 48.2% between 2016 and 2024. Meanwhile the data shows that those small and medium sized companies in the developing economies are longing for the loans, and this trend will lead to the great development of P2P lending market in Asia Pacific area.

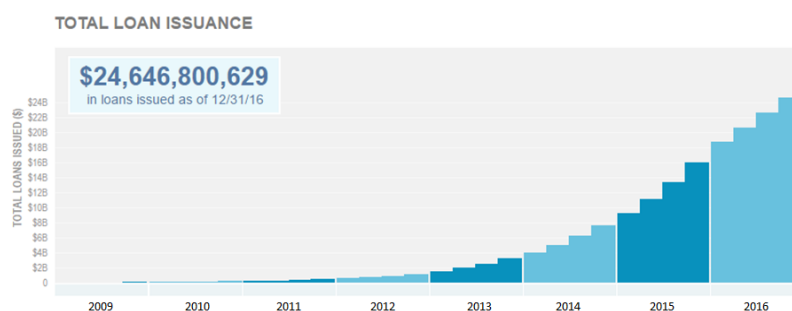


Figure 1 The total loan issuance of Lending Club from 2009 to 2016

Lenders' trust in borrower is important for a successful lending case. Prior empirical researches show trust is important to interpersonal and commercial relationship (Mayer et al., 1995). Socially proximate

offender and borrower in term of gender, occupation and first name initial might lead to a successful loan [3], [4]. Although online P2P lending platform has fixed interest rates that could reduce the issues of unfair loan agreements in the loaning money, problems related to unethical practices still occur. Lenders may make trust judgments from bias and stereotype. Thus, this study examines the effects of lender and borrower characteristics in terms of gender occupation and proximity (between borrower and lender) on online P2P lending. Therefore, this paper is designed experiment utilizing two heterogeneous samples by mixed 2 gender of borrower (male, female) x 2 occupation of borrower (government officer, non-government officer), while controlling for age of borrower.

This paper is organized as follows. The second section reviews previous literatures on online P2P lending, trust, and demographic characteristics. This section also proposes the hypotheses of this study. The next section provides a research methodology and data collection. The fourth section reports an analysis of results and discussion of findings. The final section presents conclusions and limitations of this study.

## **II. Literature reviews and hypotheses**

### **2.1 Online P2P lending**

Online P2P lending also known as person-to-person, peer-to-peer investing or social lending that consists of individual money lending to other individuals or business through online services, without the intermediation of a traditional finance institution such as banks [5]. Johnson, Ashta, and Assadi [2] defined that "online P2P lending has primarily targeted small and micro loans, which not only fund small businesses but also provide short-term financial liquidity". In summary, online P2P lending is the individuals lending money via online services that the lenders and borrowers usually do not know each other without through a traditional finance institution.

### **2.2 Trust**

Definitions of trust have been defined in numerous studies in many different fields. Rotter [6] defined that trust is a kind of expectations from one person or some people that the speaks, verbal or written paper of another person or some people can be depended on. Mayer, Davis, and Schoorman [7] also defined as trust is the willing of one side to be vulnerable to the behaves of another side built on the expectation that the other side will behave a special action vital to the one who has been trusted, irrespective of the ability to supervise or manage that other side. Definition of trust in this study follows the definition of Kim [8] who conceptualizes trust as a behavioral one people based on faiths about the born features of the other people.

Trust is the factor that related to this study. Trust plays a crucial role in the online P2P business. The previous studies suggest that trust is the factor that influences lender's intention. For example, Chen, Lai, and Lin [9] developed an integrated trust model for online P2P lending. The result shows that both trust in borrowers and trust in intermediaries in model of this study are significant factors who influences lenders' lending intention. Furthermore, trust in borrowers also significantly carries influencing trust in intermediaries on lenders' lending intention. They also found that when perception of information asymmetry is stronger, relational social capitals are influential on lending trust [10]. Greiner and Wang [11] study trust between a borrower and a lender in P2P lending and found economic status, social capital and listing quality affect lenders' trust behavior. The study of the relationship of trust indicator with cultural differences and lending propensity shows a greater trust among lenders is associated with increased lending in the cultural differences. This result supports that trust is a main mechanism underlying lending decisions [12]. Dezső and Loewenstein [13] study the impact of loans in relationship between borrower and lender. They study that delinquent lenders show feeling less close and decrease in closeness and trust, than delinquent borrowers do. Yang and Lee [14] develops an integrated model to understand factors that influence lenders' lending intention through the online P2P lending platform. The result of study shows awareness, reputation and perceived risk significantly impact lenders' trust in borrower and lending intention. Moreover, perceived benefit moderates the relationship between borrower trust and lending intention. Wang et al. [15] studies the impact of factors on lending intention by using PPDai.com. The results show trust is mainly influence the lending intention.

Lenders' trust in borrower is important for a successful lending. Previous researches show that trust was the most critical determinant of willingness to lend [1]. Chen, Lai, and Lin [9] found trust in borrowers is significant factors influencing lenders' lending intention. Wang, Wang, Kang and Sun (2014) found positive

reputation and social influence had few impacts on trust toward lending platforms and perceived institutional risks. P2P lenders often not familiar with borrowers are unlikely although they can select loan requests from many potential borrowers [9], [16]. Thus, lender relies on cognitive cue of first impressions rather than the experiential personal interactions [17],[ 18]. Awareness, reputation and perceived risk significantly impact lenders` trust in borrower and lending intention especially for online P2P lending environment in China [14]. In summary, prior researches show trust influence on consumer decisions. Therefore, trust is one of important factors, especially in P2P lending.

### **2.3 Demographic characteristics and lending decision**

In demographic characteristics, researchers study the effects of demographic characteristics of borrowers on lenders' decisions, specifically, gender, race, occupation, culture, physical distance, hardworking and economic hardship. The result tells that gender and race affect funding success. In addition, a borrower's age, gender and occupation influence lending decisions making such as Komarova and Gonzalez [3] found a significant age bias, lenders offer lower loan amount to younger borrowers. Moreover, cultural differences and physical distance also impact individual lenders decision making. Borrowers' age, physical and cultural distances reduce lending probability [4], [19], [20]. On the other hand, educational distance increases lending probability. Thus, lenders favor culturally similar and geographically proximate borrowers [12]. However, economic hardship identity relates negatively to loan payment and hardworking is not related to loan performance [21].

Lenders favor individual borrowers that are socially proximate to themselves in term of gender, occupation and first name initial [4]. Similarly, same gender of lender and borrower might lead to loan successful [3]. Investees are easier to obtain more funding when investors share similar birthplace, location or occupation [22]. Conversely, Gonzalez and Loureiro[23] found attractiveness might lead to loan failure when lender and borrower are same gender.

Based on above literature, characteristics of borrower and lender could be having an impact on trust of lender. Therefore, this study aims to examine the impact of characteristics of both lender and borrower and lender's trust in borrower in the online P2P lending in Thailand. Following hypotheses were proposed.

Borrower characteristics

**Hypothesis 1.** There is a significant difference in lender's trust in borrower between male borrowers and female borrowers.

**Hypothesis 2.** There is a significant difference in lender's trust in borrower between borrowers who are government officer and those who are non-government officer.

**Hypothesis 3.** There is a significant difference in lender's trust in borrower between borrowers who have proximity with lenders and those do not have proximity with lenders.

Lender characteristics

**Hypothesis 4.** There is a significant difference in lender's trust in borrower between male lenders and female lenders.

**Hypothesis 5.** There is a significant difference in lender's trust in borrower between four different spans of lender's age.

**Hypothesis 6.** There is a significant difference in lender's trust in borrower between six different lender's incomes.

## **III. Methodology**

Respondents of this study were collected from Thai people who always use Internet banking, online transaction or had experience with using online P2P lending during August to October 2017. All 312 responses were collected. After screened out invalid responses, a total of 234 response were obtained for using analysis. The demographic information of respondents is summarized in Table 1.

To ensure content validity of measures, this study adapted from previous researches in context of online P2P lending and e-commerce. Meanwhile, pilot test was tested for reliability and Kaiser-Meyer-Olkin(KMO) and Bartlett's test to ensure the appropriateness of the research instrument. Pilot test collected 50 respondents for testing instrument. The reliability was evaluated by calculating Cronbach's alpha. All of Cronbach's alpha of this study are greater than 0.7, suggesting acceptable reliability (Hair et al., 1998). Kaiser-Meyer-Olkin(KMO) test is a measure of sampling adequacy for each variable. The KMO varies between 0 and 1.

If a value close to 1, the patterns of correlations are relatively compact. Accepting values are greater than 0.5 as acceptable (Kaiser, 1974). Moreover, values between 0.5 and 0.7 are mediocre. Values between 0.7 and 0.8 are good. Values between 0.8 and 0.9 are great. Values greater than 0.9 are superb (Hutcheson, Sofroniou, 1999). The values of this study are greater than 0.5, suggesting acceptable.

This study was mainly divided into two parts. First, demographic information will create to collect demographic data. This part will identify personal characteristics including gender, age, income, education background and online banking or online transaction experience. Secondly, this study develops an online experiment by utilizing two heterogeneous borrower samples to collect data and test hypotheses. All of samples are defined as loan amount request 100,000 baht, credit rating above average, annual interest rate 5% and loan maturity 1 year. The experiment of this study was mixed 2 gender of borrower (male, female) x 2 occupation of borrower (government officer, non-government officer) x 2 loan purposes of borrower (for develop business or work, for private), while controlling for age of borrower as shown in Appendix. The questionnaires were adapted from previous researches such asSinghapakdi[24], Chen, Lai, and Lin [9], Lee & Turban [25] and anchored with a 5-point Likert scales.

**Table 1** Demographic information of respondents

		<i>Frequency</i>	<i>Percent</i>
<b>Gender</b>	Male	78	33.3
	Female	156	66.7
<b>Age</b>	25-35	40	17.1
	36-45	30	12.8
	46-55	70	29.9
	56-65	73	31.2
	More than 65	21	9.0
<b>Education</b>	High school or below	5	2.1
	Bachelor degree	125	53.4
	Master degree	97	41.5
	Doctor degree	7	3.0
<b>Income</b>	Less than 20000 Baht	20	8.5
	20000-40000 Baht	97	41.5
	40000-60000Baht	75	32.1
	60000-80000 Baht	16	6.8
	80000-100000 Baht	14	6.0
	More than 100000 Baht	12	5.1
<b>Frequency</b>	Less than 1 times	69	29.5
	1-5 times	43	18.4
	6-10 times	29	12.4
	11-15 times	22	9.4
	16-20 times	15	6.4
	More than 20 times	56	23.9

#### IV. Results and Discussion

In this section, we examine the factors that can impact lender's trust by testing hypotheses. The data were analyzed by using descriptive statistics, independent sample t-test and one-way ANOVA.

In order to test hypothesis 1, hypothesis 2 and hypothesis 3 the relationship between lender's trust in borrower and difference characteristics of borrower, we used independent sample t-test to compare mean of two group. In first hypothesis, t-test was conducted to compare lender's trust in male borrower and female borrower. There was not a significant difference in the scores for male borrower (M=3.00, SD=0.83) and female borrower (M=2.97, SD=0.90), conditions;  $t(472)=0.329$ ,  $p=0.742$ . The result shows gender of borrower does not affect trust of lender. In the hypothesis 2, independent sample t-test was conducted to compare lender's trust in borrowers who are government officer and those who are non-government officer. There was a significant difference in the scores for borrowers who are government officer (M=3.2, SD=0.90) and borrowers who are non-government officer (M=2.7, SD=0.89), conditions;  $t(470)=6.5$ ,  $p=0.00$ . These results suggest that occupation of borrower really does have an effect on trust of lender. The third hypothesis, independent sample t-test was conducted to compare lender's trust in borrowers who have proximity with lenders and borrow who do not have

proximity with lenders. There was no statistically significant difference between borrowers who have proximity with lenders ( $M=2.8$ ,  $SD=1.04$ ) and borrowers do not have proximity with lenders ( $M=2.9$ ,  $SD=0.99$ ), conditions;  $t(472)=-0.129$ ,  $p=0.897$ . This finding shows that characteristics of borrower affect trust of lender in borrower in term occupation, but it does not affect in gender and proximity between borrower and lender as can be seen in Table 2.

**Table 2** Independent sample t-test results for relationship between characteristics of borrower and lender's trust in borrower

		Mean	SD	t	df	p	95% Confidence Interval
<b>Gender</b>	Male	3.00	.835	.32	47	.742	-.130 - .183
	Female	2.97	.905				
<b>Occupation</b>	Government officer	3.26	.908	6.54	470	.000	.381 - .708
	Non-government officer	2.71	.897				
<b>Proximity</b>	Have proximity	2.89	1.046	-.129	472	.897	-.196 - .172
	Not have proximity	2.91	0.995				

**Table 3** Independent sample t-test results for relationship between gender of lender and lender's trust in borrower

		Mean	SD	t	df	p	95% Confidence Interval
<b>Gender</b>	Male	3.18	.870	2.55	235	.011	.067 - .517
	Female	2.89	.812				

In the characteristics of lender, independent sample t-test was conducted to compare lender's trust in male lender and female lender. The result shows a significant difference in the scores for male lender ( $M=3.18$ ,  $SD=0.87$ ) and female lender ( $M=2.89$ ,  $SD=0.81$ ), conditions;  $t(235)=2.55$ ,  $p=0.011$  as shown in table 3. As such, hypothesis 4 was supported. A one-way ANOVA was conducted to compare the effect of span of lender's age on the lender's trust. An analysis of variance showed that effect of span of lender's age on lender's trust in borrower was not a significant,  $F(4,229)=1.51$ ,  $p=.199$  as shown in table 4. A one-way analysis of variance was calculated on the effect of lender's income on lender's trust in borrower. The analysis was not significant,  $F(5, 228)=1.296$ ,  $p=.266$  as shown in table 4. Therefore, hypothesis 5 and hypothesis 6 were not supported. Table 5 summarizes results related to hypotheses of this study.

**Table 4** One-way ANOVA results for relationship between characteristics of lender and lender's trust in borrower

		Sum of Squares	df	Mean Square	F	Sig.
AGE	Between Groups	4.280	4	1.070	1.514	.199
	Within Groups	161.832	229	.707		
	Total	166.112	233			
INCOME	Between Groups	4.590	5	.918	1.296	.266
	Within Groups	161.521	228	.708		
	Total	166.112	233			

**Table 5** Results of Hypothesis testing

Hypothesis	Result
H1: There is a significant difference in lender's trust in borrower between male borrowers and female borrowers.	Not supported
H2: There is a significant difference in lender's trust in borrower between borrowers who are government officer and those who are non-government officer.	Supported
H3: There is a significant difference in lender's trust in borrower between borrowers who have proximity with lenders and those do not have proximity with lenders.	Not supported
H4: There is a significant difference in lender's trust in borrower between male lenders and female lenders.	Supported
H5: There is a significant difference in lender's trust in borrower between four different spans of lender's age.	Not supported
H6: There is a significant difference in lender's trust in borrower between six different lender's incomes.	Not supported

### V. Discussion

This study examined the factors affecting lender's trust in borrower in online P2P lending. The results suggest that some characteristics of borrower and lender affect trust of lender in borrower. In the characteristics of borrower, we found that occupation of borrower had a significant impact on lender's trust in borrower. This result is consistent with finding of Jeff et al. [4] also found that occupation was related to loan success. Besides, the result also shows that lenders trust borrowers who are government officer more than borrowers who non-government officer. However, we discovered that gender of borrower and proximity with lender had not a significant impact on lender's trust in borrower. This finding is inconsistent with prior researches, which found lenders favor borrowers who are socially proximate to themselves [4], [23]. Similarly, Ravina [26] found gender does not have a statistically significant effect on the likelihood of getting a loan.

In addition, this study found the significant relationship between lender gender and trust in borrower. Result shows the impact of gender on trust in borrower by male lenders more trust in borrower than female lender. This is consistent with previous research such as Ravina [26] who found that gender affects lending decisions. Herzenstein et al. [20] found gender do affect likelihood of funding success. Conversely, age and income of lender were not influencing trust in borrower. The results of this study demonstrated no significant relationship between both age and income of lender and lender's trust in borrower. According to the literature, there are a few prior studies that reviews relationship between characteristics of lender and trust in borrower. Those researches emphasized on the effect of demographic characteristics of borrowers on lenders' decisions [4], [19], [20].

### VI. Conclusions

This study examines the impact of characteristics of borrower and lender on lender's trust in borrower on online P2P lending decision. Previous studies were mainly focusing on factors that influence on lenders or borrowers, such as herding behavior, information asymmetry, lenders' perspective, characteristics of borrower. This research extends prior studies in trust by including characteristics of lenders and borrowers. The result confirms that gender of lender and occupation of borrower are related to lender's trust. However, this study does not support the impact of borrower's gender, proximity, lender's age and lender's income on lender's trust in borrower. It is possible that gender and proximity does lay more importance on individuals' trust, but occupation is related to possibility and ability of repayment loan on the borrower. Future research may be focus on other factors which influencing on lender's trust in borrower or lending decision. The result of this study can be applied as a guideline for borrowers who need online P2P lending. In particular, Thailand will approve online P2P lending shortly. More understanding of the differences and similarities in personal characteristics of the people from various countries is useful for people who plan to be involved in or invest in the online P2P lending business.

### Appendix

**Table 6** Information of borrower samples

Format	Sample	Age	Gender	Occupation	Loan Purpose
MGD	4	32	M	Dentist	To buy medical equipment
MGP	9	35	M	Soldier	To buy new car
MPD	3	30	M	Freelance	To open coffee shop
MPP	10	38	M	Salesperson	To repair the housing
FGD	16	32	F	Teacher	For study master degree
FGP	6	30	F	Soldier	To buy new computer and accessories
FPD	8	28	F	Salesperson	For study master degree
FPP	11	37	F	Private business	To buy new car

**M = Male**

**F = Female**

**G = Government officer**

**P = Private Business/ non-government occupation**

**D = For develop business, work or education**

**P = Buy or repair the private things**

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