

The Willingness to use P2P Lending: Influence of Investors' characteristics.

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ABSTRACT,

This bachelor thesis investigates the impact characteristics of an investor has on their intention to make use of P2P (Peer-to-Peer) lending. With the development of new digital technologies, alternative financing methods have emerged. One of these methods is P2P lending. In order to find out how individuals respond to this new investing method, quantitative data from an anonymously sent out survey was used. The key areas of focus include the demographics Age, Gender and Level of Education. Furthermore, the personality trait Openness to Experience was taken into account. Key findings indicate that these characteristics seem to have no significant impact on the investor's willingness to use P2P lending.

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Keywords

Fintech, P2P lending, Investor, Intention, Characteristics, Openness to Experience

1. INTRODUCTION

For investment projects funding is needed and traditionally this meant funding through methods such as bank loans or equity offerings. These methods often require borrowers to meet high criteria and at remarkable costs in order to be approved for a loan. This means that for many individuals these loans were unattainable (Sevara, 2023). To the more traditional forms of financing such as bank loans, alternative financing methods have emerged. These methods have continued to develop and created various possibilities, not without its risks, in terms of financing (Ziegler et al., 2019). Some of these methods were able to develop due to new digital technologies that have been changing the financial service industry, which caused the growth of fintech (Hendershott et al., 2017). Fintech stands for financial technology and refers to business models that make use of the previously mentioned digital technologies to provide financial services (Clarke et al., 2018). One of those business models belonging to fintech is P2P (peer-to-peer) lending that has risen due to the advancements of web technology in recent years which connects individuals in new and advanced ways (Sevara, 2023).

Through P2P platforms such as LendingClub (US), Upstart (US) and Zopa (UK), individuals can obtain loans directly from other individuals that are willing to invest in their projects instead of having a financial intermediary such as a bank in between. This means that direct connections are made between lenders and borrowers which improves the efficiency of fundraising (Bao et al., 2023). The loans that are given out are unsecured loans, meaning that the borrowers do not have to give collateral in order to get approved for a loan which makes it more accessible compared to traditional financing methods. Instead, the creditworthiness of the borrower is used (Wang et al., 2015).

Lenders look for investments that fulfil their monetary wants and match the level of risk they are willing to take (Abdullatif et al., 2020). The lender assesses the information the loan listing provides such as the purpose of the loan, the profile of the borrower, the details of the loan and a business plan if the aim of the loan is to fund a startup project or business venture. The platform sets the interest rates, the terms and enables the transaction between the two parties, the lender and the borrower. Additionally, transaction costs are reduced due to the platform making use of online credit scoring and authentication systems. Furthermore, through P2P platforms fundraisers are easier able to reach a broader range of potential investors which in turn makes it easier to raise funds (Bao et al., 2023).

The risks associated with P2P lending include issues such as regulatory uncertainties, insufficient credit assessment and information asymmetry and are the main issues on peer-to-peer lending platforms for potential investors. These issues, particularly the last one, increase the risk for fraud and loans defaulting (Sevara, 2023). In order to diminish information asymmetry, the creditworthiness of borrowers is examined. In order to verify the creditworthiness of borrowers within this new financial investing landscape, various factors, extending beyond the traditional credit metrics, are taken into account that improve the ability of lenders to screen borrowers and helps lenders determine the risk fullness of the potential investment project. These factors include demographics such as age, race, gender, and educational background, but also employment characteristics of the borrower (Bao et al., 2023). This information reduces the information asymmetry between lender and borrower and leads to the increase of P2P lending performance (Davaadorj et al., 2024). Additionally, the interest

rate borrowers receive on P2P platforms is also influenced by these factors. For example, according to Davaadorj et al. (2024) lenders are more likely to give out appealing loans to borrowers that hold jobs that require extensive prior knowledge. This due to these type of borrowers being less likely to fail on making payments on their loans, and thus less likely to break their loan agreement with investors.

Aspects such as the aforementioned information asymmetry, the level of risk investors are willing to take and the use of web technology amongst individuals all influence the willingness of investors to make use of P2P lending and lend money to borrowers. Information asymmetry is an important issue as the lender is at a disadvantage compared to the borrower with regard to the loan decision. The borrower has nearly all the information they need as opposed to the lender that only has the information the platform provides. This asymmetry could result in moral hazard or adverse selection and impact the success of individual P2P lending platforms (Cummins et al., 2018). Risk tolerance is the level of risk an individual is willing to bear when it comes to investment undertakings/endeavours. This is an important factor with regard to investing as it has influence on individual financial decision making (Snelbecker et al., 1990). Individuals that have a higher risk tolerance are inclined to invest in higher-risk assets to gain greater long-term returns. However, investors with lower risk tolerance require greater compensation in order to accept the uncertainty brought by risks as they are averse or incapable of taking risks for future wealth growth (Zhang et al., 2024). Aspects such as information asymmetry and risk tolerance affect the confidence that is held in the P2P market (Amalia et al., 2019; Ariza-Garzón et al., 2021). Additionally, an investor's belief in their own capability has a significant effect on their likelihood to participate in crowdfunding investments. An investor is more likely to invest if they feel confident in having sufficient investment knowledge, skills and financial resources (Wang et al., 2024). Henceforth, all these aspects are important when it comes to the intention of an investor to invest.

In accordance with previously conducted research men are generally more predisposed towards risk when it comes to investing. This holds for both short-term and long-term investments (Lazanyi et al., 2017). This research was conducted on a sample of enterprises, where respondents are entrepreneurs. Furthermore, the study by Mayfield et al. (2008) states that in alignment with findings of other researches such as Bajtelsmit et al. (1999), when it comes to risk in relation to investing, females are generally less willing to take high risks compared to their male counterparts. Additionally, it states that people that are less open are predisposed to risk aversion. However, the study by Mayfield et al. (2008) does not take into account how the knowledge of investors, which can be influenced by level of education, might play a role in the risk they are willing to take and thus its influence on their investment choices. These choices include making use of P2P lending platforms as a method to invest. The understanding of investments is also influenced by education, as educated individuals are more willing to invest in general (Aren & Aydemir, 2015). Therefore this research will take into account the difference in gender and level of education has on the willingness to make use of P2P lending.

The study by González-Igual et al. (2018) is about the impact of education, age and gender on Investors behaviour and thus does take into account the effect the difference in level of education has on the behaviour of an investor. It too finds that female investors are more risk-averse as they are driven by

rationality. Additionally, it states that “younger investors are more influenced by cognitive and emotional biases”. Lastly, it finds that confidence levels is higher for females and more experienced investors. However, the sample size used in this study consists of only professional investors instead of a more general widespread one. This is of importance as P2P lending and the platforms that make use of this method are growing considerably the last few years and one of the proclaimed benefits of these P2P lending platforms is that it is easily accessible (Liu et al., 2024).

Therefore this research will focus on the investing behaviour of individuals as opposed to institutional investors as these individuals are not as similar to each other as professional investors are to each other. They are more likely to differentiate in various aspects such as economic background, profession and income. Due to these varying characteristics investors might be influenced differently by age, gender and education with regard to the use of P2P lending. A higher age, for example, often correlates with lower technological inclination (Kuoppamäki, 2018) which may affect the willingness of an investor to use P2P lending. Furthermore, the level of education may also have an impact, as individuals with higher education levels may possess greater knowledge on alternative financing methods such as P2P lending. As indicated previously, gender and the level of openness can influence the amount of risk an individual is willing to take and thus effect their willingness on using P2P lending platforms. Therefore the research question is as follows:

How do age, gender, level of education and level of openness affect the willingness of potential individual investors to make use of P2P lending platforms?

This research further contributes to the understanding of how demographic and psychological factors, of which a more thorough definition will be provided in the following sections, influence investment behaviour of individual investors with regard to P2P lending. The practical contribution of this study lies in the actionable insights that P2P lending platforms can use to develop targeted marketing strategies that appeal to specific groups of individuals.

2. CONCEPTUAL FRAMEWORK

Willingness is the quality or state of being prepared to do something. In the context of this research it is about the intention to make use of the alternative financing method, P2P lending, as an investor. In this section, insights from behavioural finance are integrated to develop a comprehensive framework that explains the relevance of demographics and personality traits for lending decisions when it comes to P2P lending. Theoretical frameworks such as the Theory of Planned Behaviour and Prospect Theory offer valuable insights into how individuals analyse and respond towards risk. The theory of planned behaviour proposed by Icek Ajzen (1991), is a social psychological theory that anticipates human behaviour based on their intention to perform that behaviour. These intentions are based on three main factors: individuals’ attitudes toward the behaviour, subjective norms and perceived behavioural control. The attitude towards the behaviour reflects the analysis of the behaviour by the individual, either positive or negative. With regard to investing using the P2P lending method, attitudes can be influenced by factors such as risk tolerance, perceived returns, personal financial goals and technological literacy (Nayak et al., 2010). Subjective norms refer to how individuals perceive social pressure to either partake in or avoid certain behaviour. Investment decisions may be shaped by social influences from an individual’s family, friends and financial advisor. For instance, individuals from communities with strong

financial literacy may feel more inspired to invest. The last factor, perceived behavioural control, pertains to the perceived level of difficulty of performing the behaviour. Access to financial markets, self-efficacy in managing investments and availability of investment information are among the aspects that are crucial to perceived control. Openness to new information and financial products may increase perceived control.

The theory introduced by Kahneman and Tversky (1979), called Prospect Theory, argues that instead of individuals making decisions based on absolute outcomes, decisions are based on potential outcomes relative to a reference point. The theory consists of two main components, loss aversion and diminishing sensitivity. The first component suggests that individuals have a higher sensitivity with regard to potential losses than potential gains of the same value. This phenomenon can make investors more careful and conservative in their choices of investment. Characteristics of an investor can influence this risk perception (Collard, 2009). The second component, diminishing sensitivity, refers to the sensitivity of individuals towards further changes decreasing as the magnitude of gains or losses increases. For instance, the impact of subsequent gains or losses of the same size has a lesser emotional impact than the initial one. The personality trait openness to experience may influence the adaptability and resilience of individuals and as they are more open to new investment opportunities (Rajasekar et al., 2022), it may make them more adaptable to changing market conditions and potentially less affected by loss aversion as they are more inclined to see potential losses as a learning opportunity.

2.1 Age

Age is an essential demographic variable that influences financial decision-making across the lifespan of an investor. It has a significant impact on investment behaviour due to differences in risk tolerance, financial goals and time horizons. Generally, the young are observed to have a greater risk appetite than the old due to a longer investment horizon (Collard, 2009). Therefore, they may be more inclined to invest in P2P lending, seeking greater returns regardless of the associated risks. Research by Bayar et al. (2020), for instance, found that younger individuals are more willing to engage in higher-risk investments due to being less exposed to time constraints needed to make up for possible financial losses (Grable, 1997). Young investors may also be more receptive towards new investment platforms and innovative financial products. The fact that technological literacy amongst younger investors is higher than amongst older ones contributes to this (Nayak et al., 2010). This aligns with the findings of Krupa and Buszko (2023), which states that young individuals expressed a considerably greater interest and willingness in all aspects of the use of fintech considered within the study, including P2P lending, than other individuals. Additionally, the younger ones showed a higher interest in the possibility of fintech replacing the traditional financial products and services entirely. Furthermore the article states that this interest is primarily driven by the familiarity of young individuals with technology on which the majority of the operations of fintech are based.

However, the attitude towards financial risk changes over time as the willingness of individuals approaching retirement to take financial risks typically diminishes significantly as they prioritize wealth preservation and may prefer more stable and predictable investment options (Collard, 2009). This group is more inclined to select lower-risk investment options and minimize potential losses (Grable, 1997). Furthermore, individuals of a more advanced age have a

harder time keeping up with the continuously evolving technologies as they are often late adopters due to their ability and attitude towards the use of technology among other reasons (Nayak et al., 2010). This due to the various resources needed to adapt to these new developments such as cognitive capabilities and motor skills which often decline with age (Goggin & Stelmach, 1990). These reasons can influence the relationship between age and the willingness to make use of P2P lending platforms. Therefore, the hypothesis with regard to age and its influence on the willingness of individuals to invest using P2P lending is as follows:

H1: Younger individuals are more willing to invest using P2P lending than older individuals.

2.2 Gender

Another important demographic factor that influences investment behaviour is the gender of an individual (Collard, 2009). Empirical studies have indicated that different approaches are used towards risk and investment decisions by men and woman. Generally, men have greater risk tolerance compared to women (Krystyniak & Staneva, 2024), which can influence their willingness to invest in P2P lending. For example, the study by Lazanyi et al. (2017) states that men are more likely to partake in riskier investment behaviours than women, which may mean that males have a higher likelihood of investing in P2P lending platforms, which are associated with higher risks.

In contrast, females are inclined to be more cautious and risk-averse in their attitudes and behaviours with regard to their investment decisions (Collard, 2009). This careful approach can lead to women being more particular about the borrowers they decide to fund in P2P lending in order to minimize potential losses. Furthermore, gender differences in risk aversion are more pronounced in the general population than amongst professionals according to studies employing economic experiments (Krystyniak & Staneva, 2024). Investment decisions are also impacted by gender differences in financial literacy and confidence. Women are often reported as having lower levels of financial literacy and showing a lower level of confidence (Lusardi, 2019; Sadiq & Ishaq, 2014). The study by Igamo et al. (2024) states that the variable gender influences the decision to make use of methods falling under fintech. It reports challenges that women face such as lack of financial literacy and trust in banking institutions that contribute to this gap which therefore can affect their willingness to engage with P2P lending platforms. Therefore the hypothesis with regard to gender is as follows:

H2: Males are more willing to invest using P2P lending than females.

2.3 Level of Education

Investment behaviour in P2P lending is substantially affected by the demographic level of education as is reflected in the differences in financial knowledge, investment preferences and risk perception across individuals with varying educational backgrounds (Geetha & Ramesh, 2012). Empirical research has routinely stated that individuals with a higher educational background tend to be more financially literate and confident in regard to investment decisions (Legenzova & Lecké, 2024). The study by De Bassa Scheresberg (2013), for instance, states that financial knowledge is greater amongst individuals with a higher level of education which can contribute to an individual's capability to analyse and manage the risks associated with investing using the P2P lending method. Moreover, the accessibility to broader sources of

information and the likelihood to partake in sophisticated investment strategies is greater amongst higher educated individuals. This is supported by studies such as the one by Katyayani and Varalakshmi (2019) that states that education influences the intention of users to adopt fintech. Furthermore, the study by Ichwan and Kasri (2019) states that higher education will contribute to a greater understanding of the use of P2P lending due to supporting an individual's ability to access or use information technology. Additionally, it states that individuals with a higher education are more interested and thus willing to explore alternative investment opportunities and more likely to invest through the use of P2P lending. Individuals with a lower educational background, on the other hand, may be correlated with a limited financial literacy and a more cautious approach towards investment decisions (Lazanyi et al., 2017; Legenzova & Lecké, 2024). Research suggests that lower educated individuals may prefer traditional investment methods with perceived lower risk profiles as P2P lending may be perceived as having a higher risk characteristics (Bayar et al., 2020). Therefore, the level of education is expected to positively influence the willingness of individuals to use P2P lending. The hypothesis is as follows:

H3: Individuals with a higher level of education are more willing to invest through the use of P2P lending.

2.4 Openness to Experience

The personality trait openness as described by the Big Five personality is that people scoring higher on this trait tend to have a wider range of interests than lower scoring individuals. They are eager to learn about the world and other people and are fond of new experiences. Furthermore, this trait is also related to showing signs of self-awareness and individualism and is associated with a greater tolerance for risk as high scoring individuals are generally considered more comfortable with change and uncertainty. Thus, these individuals are more likely to partake in investment decisions that are considered riskier (Rajasekar et al., 2022). Moreover, research suggests that individuals scoring high in openness are more likely to search for and utilize new financial technologies when they are open to creative ideas and the associated risks of new technologies which can influence how they analyse potential gains and losses (Gupta et al., 2015). The paper by Mayfield et al. (2008) uses the shortened version of the Big Five in order to measure personality in conjunction with personal finance. The results indicate that the personality trait of openness has a significant but negative impact on risk aversion and thus supports the notion that individuals with this trait may consider greater investment risk than people that are less open. Therefore, the hypothesis with regard to the trait of openness to experience and its impact on the use of P2P lending is as follows:

H4: Individuals with a higher score on openness to experience are more willing to invest using P2P lending.

2.5 Other Factors on Willingness

The paper by Arfina et al. (2023) states that there are 90 factors from seven frameworks that influence the willingness of users to invest on online investing platforms in general. To measure the factors that influence the intention of consumers, the Technology Acceptance Model (TAM) framework was most frequently used which is a theory that explains how to interest users in accepting and utilising new technology. The paper by Thaker et al. (2019) states that few studies have focused on the investors' perspective thus the factors that influence the behavioural intentions of investors to invest in a P2P lending platform was investigated. The study made use of

an extended TAM framework and states that intention to invest is mostly driven by trust and that the other variables; perceived ease of use, security and perceived risk were of no influence on the decisions of investors. However, as all respondents are retail investors, meaning having previous experience in non-professional investing, and taking into account the age demographic of 95% being within the age group of 20-40 years, it is not representative of the general public that has the ability to make use of P2P lending platforms.

3. RESEARCH METHODOLOGY

3.1 Data Collection & Measurement

This study makes use of a survey questionnaire to gather primary data from respondents on the following: the demographic factors age, gender and level of education, prior experience with P2P lending, Openness to Experience, Perceived Usefulness, Perceived Ease of Use, and Intention to make use of P2P lending. The survey was created using Qualtrics, a program that aids in the creation of surveys. The items used for the questionnaire (see Appendix A) are based on previously performed research using similar type of variables.

For the independent variable age, the minimum required age to fill in the survey is 18 and the variable is divided in 5 age groups. The value of the independent variable gender is either male, female, other or prefer not to say. Level of education is divided in 3 levels, these being high school diploma, undergraduate and graduate and above. The variable prior experience either takes on a yes or a no from the respondent. Furthermore, the independent variable openness to experience is assessed using five items measured with the Likert scale from the shortened version of the Big Five called the NEO Five-Factor Inventory of which the reliability and validity have been established across various cultures (Mayfield et al., 2008; Rabadi & Rabadi, 2021), which includes items such as “I am intrigued by the patterns I find in art and nature” and “I often try new and foreign foods”. The independent variables perceived usefulness and perceived ease of use are measured according to several items each also using the Likert scale (Pan et al., 2023; Putri et al., 2023) and used as control variables to offer additional insights. These items include items such as “Using P2P lending is useful for me” and “My interaction with P2P lending is clear and understandable” respectively. Lastly, the dependent variable Intention to Use is measured based on four items such as “Given the opportunity, I will use peer-to-peer lending platforms” and uses the Likert scale (Pan et al., 2023; Putri et al., 2023). The Likert scale of the variables openness to experience, perceived usefulness, perceived ease of use and intention to use are based on a 5-point Likert scale using the following levels (Putri et al., 2023):

- A. Strongly Agree (5)
- B. Agree (4)
- C. Neutral (3)
- D. Disagree (2)
- E. Strongly Disagree (1)

The sample was obtained from a diverse set of people using the strategy of convenience sampling. The diversity lies in the various characteristics respondents possess Through the aid of various social media platforms such as WhatsApp and Instagram, respondents received a link to the questionnaire. Before starting the questionnaire, participants were informed on the purpose of the study and gave their informed consent with regard of the use of their data for the study. The study was

approved in May 2024 by the BMS ethics committee of the university of Twente. Before sending out the survey was previewed and tested by two peers. The sample size would be a number of at least 50 individuals in a period of three weeks. In order to give the respondent some information on the research they are participating in, the following introduction was made:

“Please take a moment to learn a bit more about P2P lending as an investing method before proceeding with this survey. P2P lending, peer-to-peer lending, stands for a method of lending/investing without intermediaries such as banks for example. Peers wanting to invest their money can get into contact with peers wanting to borrow money. P2P lending platforms such as LendingClub and Zopa are used to make these connections. This method of investing money has its benefits (e.g. no intermediaries, reduced transaction costs etc.) and drawbacks (e.g. regulatory uncertainties, insufficient credit assessment etc.). This thesis is about how the variables gender, age, level of education and openness to experience affect the willingness of individuals to make use of P2P lending. Assume you are looking for an investing method and answer the following questions to the best of your ability.”

3.2 Research model

In the study by Pan et al. (2023) where the effect of human factors of sources on consumers’ intention to use Live Commerce is investigated, the hypotheses were corroborated using multiple regression analysis. Furthermore, the study by Reichel et al. (2024) examines the effect of the demographics and personality characteristics of the individuals on their willingness to use implant and wearable technologies. In this study, linear multiple regression was also used in order to analyse the relationship between multiple independent variables (e.g. age and gender) and a single dependent variable (intention to use implant and wearable technologies). The study by Nayak et al. (2010) identified the variables that related to the level of Internet usage by older adults using the principles of TAM. Multiple regression was used in order to evaluate the effect of variables such as gender, usefulness and good health on the dependent variable Internet activity. Based on these papers, this paper too will make use of descriptive statistics and the linear multiple regression method in order to evaluate the relationship between the independent variables age, gender, level of education and openness to experience on the dependent variable that is the willingness of potential investors to make use of P2P lending.

In order to create a linear multiple regression model and analyse the data, R studio was used (see Appendix B). First, all the incomplete survey responses were omitted from the data. Then the nominal variable gender was labelled and given levels with 0=male, 1=female, 3=other and 4=prefer not to say. Prior experience is also labelled with 0=No and 1=yes. After that the ordinal variables age and level of education were labelled from 1 to 5 and 1 to 3, respectively. All these variables were made factor variables in order to provide insight into how different categories influence the dependent variable. Both age and level of education were ordered as well. The variables intention to use, openness to experience, perceived usefulness and perceived ease of use are variables that make use of Likert items, these are ordinal data. For the variables using the Likert scale, the average of its items together is taken and used as a composite variable. The Likert scale for the variables, after the items were added, are treated as continuous variables. For the variable openness to experience, the item that is question 7 had to be reverse coded before being used in the equation. This was done in Qualtrics. The reliability of the openness to experience scale was assessed using Cronbach's alpha (see Appendix B). The

analysis showed a Cronbach's alpha value of 0.590, indicating moderate internal consistency among the items (Q5 to Q9). This value is below the regularly accepted threshold of 0.7, suggesting that the items may not be highly consistent with each other. Given the relatively small sample size of 55 respondents, the stability of this estimate may be affected. Future research should consider increasing the sample size and refining the scale items to enhance reliability. Despite these limitations, the scale has been validated and reported as reliable in previous studies (Mayfield et al., 2008; Rabadi & Rabadi, 2021) suggesting that further refinement and larger sample sizes may yield stronger results.

Based on these variables, the multiple linear regression model of this research is as follows:

$$\begin{aligned} & \text{Intention to use P2P lending} \\ &= \beta_0 + \beta_1 \text{Age} + \beta_2 \text{Gender} \\ &+ \beta_3 \text{Level of Education} \\ &+ \beta_4 \text{Openness to Experience} \\ &+ \gamma_1 \text{Prior Experience} \\ &+ \gamma_2 \text{Perceived Usefulness} \\ &+ \gamma_3 \text{Perceived Ease of Use} + \epsilon \end{aligned}$$

Where: β_0 is the intercept, β_1 , β_2 , β_3 and β_4 are the coefficients for the primary independent variables, γ_1 , γ_2 and γ_3 are the coefficients for the control variables and ϵ is the error term.

4. RESULTS

4.1 Descriptive statistics

Out of the 59 respondents who participated in the study, 4 had to be excluded as their response was incomplete and could therefore not be used. Consequently, there were 55 respondents in the final data sample. From this sample, 49.09% of the individuals identified as male and 50.91% identified as female. None of the final respondents chose either the option other or prefer not to say; thus, these levels are left out from the dataset from here on forward. Furthermore, only 14.55% of participants had prior experience with P2P lending. additional details on the demographics and descriptives of the final sample are provided in Table 1.

Table 1. Characteristics of Respondents (N=55)

	N	Percentage (%)
Gender		
Male	27	49.09
Female	28	50.91
Age		
18-25	36	65.45
26-35	8	14.55
36-45	1	1.82
46-55	2	3.64
56+	8	14.55
Education Level		
High School Diploma	10	18.18
Undergraduate	40	72.73
Graduate and above	5	9.09
Prior Experience		
Yes	8	14.55
No	47	85.45

Of the openness to experience scale the sample mean is 3.64 with a standard deviation of 0.61. The distribution of the sample was between a minimum of 1 and a maximum of 5 as the variable is composed of the average of the items of the variable summed. As the mean is 3.64, it is slightly closer to 4 than 3 which means that it was between neutral and agree. Furthermore, the descriptives of the other variables using Likert scale, including the dependent variable intention to use, are show in Table 2 alongside the variable openness to experience.

Table 2. Descriptive statistics for Likert variables

	Mean	SD
Openness to Experience	3.64	0.61
Perceived Usefulness	3.53	0.58
Perceived Ease of Use	3.41	0.69
Intention to Use	3.26	0.94

In order to understand the relationships between the variables a correlation matrix was made of which the results are shown in Table 3. Based on this it can be said that there are no pairs of variables strongly related to each other. The highest correlation coefficients (0.598) is between the variable pair perceived ease of use and perceived usefulness. As this coefficient is below the typical threshold of 0.7 for a high correlation and is not statistically significant, it can be said that there is no significant correlation between this pair of variables. Based on Table 3, it can be stated that that there is no evidence of potential multicollinearity among the variables included in the analysis. This suggest that the reliability of the regression model is not adversely affected by multicollinearity.

Table 3. Correlation Matrix of the variables

	1	2	3	4	5	6	7
1. Gender	-						
2. Age	.014	-					
3. Education	-	.228	-				
	.174						
4. Openness to Experience	.065	-	.024	-			
	.107						
5. Prior Experience	-	-	-	.127	-		
	.008	.141	.027				
6. Perceived Ease Of Use	.036	-	-	.135	.165	-	
	.144	.061					
7. Perceived Usefulness	-	-	.148	.089	.202	.598	-
	.009	.017					

*Statistical significance: * for p < .05, ** for p < .01 and *** for p < .001*

4.2 Hypotheses Testing

After running the multiple regression model in R, a detailed set of statistics was obtained that provide insights in to the performance of the model and the relationship between the independent and dependent variables. The F-statistic(F(11,43) = 3.389, p < 0.01) shows that with a p-value smaller than 0.01, that the model is statistically significant and suggest that at least one of the predictor variables used is related to the independent variable Intention to Use. The adjusted R squared for the regression model is 0.327, indicating that around 32.7% of the variance of intention to use is accounted for by the model. The

adjusted R squared is lower than the R squared (0.464), suggesting that some predictors may not contribute significantly. In Table 4 the results of the model are presented.

Table 4. Results of the Regression model

(Intercept)	-.099 (.898)
Gender (female)	.295 (.222)
Age Group	-.250 (.336)
Education Level	.168 (.354)
Openness to Experience	.024 (.181)
Prior experience	.640* (.318)
Perceived Ease Of Use	.164 (.202)
Perceived Usefulness	.722** (.240)
Fit Statistics	
Residual Standard Error:	.770 on 43 DF
R-squared:	.464
Adjusted R-squared	.327
F-statistic:	3.389** on 11 and 43 DF

*Statistical significance: * for $p < .05$, ** for $p < .01$ and *** for $p < .001$*

Based on Table 4 it can be said that the variable age does not have a significant effect on the dependent variable intention to use. This can be seen by the fact that for the variable age the p-value is non-significant for the β of -0.250 and thus there is not enough evidence to support H1. Accordingly, it can be said that age is not significantly related to the intention to use P2P lending.

When looking at the results that belong to the independent variable gender it can be stated that gender does not seem to have a significant influence on the variable Intention to Use as the p-value of this variable is not significant (see Table 4) as it is greater than the p-value of 0.05. This means that there is not enough evidence to support the second hypothesis. Based on this it can be stated that there is no significant relation between gender and the willingness to invest using P2P lending

For the relationship between the demographic variable level of education and Intention to Use, Table 4 shows a β of 0.168 and no statistically significant p-value. This means that there is not enough evidence to support H3, as there is no statistically significant relationship found between level of education and intention to use. Accordingly, it can be said there is no significant relationship between level of education and the willingness to make use of P2P lending.

When it comes to the personality trait openness to experience and its relationship with Intention to Use, Table 4 shows a β of 0.024 and no statistically significant p-value. This means that there is not enough evidence to support H4, as there is no significant relationship found between openness to experience and intention to use. Based on this it can be said that

there is no significant relation between openness to experience and the willingness to invest using P2P lending.

The control variables prior experience, perceived usefulness and perceived ease of use were also used in the model. In Table 4 it can be seen that perceived ease of use does not have a significant p-value. As this value is greater than a p-value of 0.05 it can be stated that according to this model there seems to be no significant relationship between the variables perceived ease of use and intention to use. However, when it comes to the variables prior experience and perceived usefulness it can be said that according to this model these variables have a significant influence on the variable intention to use. In Table 4 it can be seen that the coefficient (0.640) for the variable prior experience is significant at the 0.05 level, indicating that having prior experience is associated with a higher Intention to Use P2P lending. For the variable perceived usefulness the coefficient (0.722) is significant at the 0.01 level. This indicates a strong positive effect of the variable perceived usefulness on the intention to use P2P lending, meaning that for every point increase in perceived usefulness, intention to use will increase with 0.722.

5. DISCUSSION

The purpose of this research was to investigate the relationship between the characteristics of an individual investor with regard to their intention to use P2P lending. The demographics age, gender and level of education were analysed. Additionally, the influence of the trait openness on the intention to use P2P lending as an investment method was investigated. The findings suggest that there seems to be no relationship between the investigated variables and the dependent variable Intention to Use. In other words, the characteristics of the individuals do not seem to have an influence on their intention to make use of the investment method P2P lending. In order to reach this objective, the research question was split up into four sub questions in the form of hypotheses.

For the first hypothesis, “*Younger individuals are more willing to invest using P2P lending than older individuals.*” no significant results were found during the regression analysis. The absence of influence age has on the intention of individuals to invest using P2P lending is contradictory to previous research such as the one by Krupa and Buszko (2023), which states that overall, younger individuals seem to have a greater appetite for fintech and all its aspects. Krupa and Buszko (2023) concluded that persons under the age of 30 have a higher likelihood of using fintech in a greater than average amount than other adults. These results cannot be traced back to the findings in this study.

The second hypothesis, “*Males are more willing to invest using P2P lending than females.*” was also not supported as the regression analysis showed no significant results for this relationship. The literature discussed the gender difference in risk tolerance and investment behaviours. For instance, men tend to display a higher risk tolerance and are more likely to engage in riskier investment behaviours compared to women (Krystyniak & Staneva, 2024; Lazanyi et al., 2017). The findings of this study however, contradict the existing literature, by demonstrating that gender does not seem to significantly predict the intention to use P2P lending platforms.

The third hypothesis that was explored, “*Individuals with a higher level of education are more willing to invest through the use of P2P lending.*” was also not corroborated by the regression analysis as it did not show significant results for this relationship. In contrast to studies such as those by Geetha

& Ramesh (2012) and De Bassa Scheresberg (2013), which suggest that education positively influences financial decision-making and adoption of fintech, this study does not align with these findings. This difference in results may come from a variation in sample characteristics, regional factors or methodological approaches for example.

For the fourth and last hypothesis, “*Individuals with a higher score on openness to experience are more willing to invest using P2P lending.*”, the variable openness to experience was explored. The literature suggest that individuals with a higher level of openness, characterised by a curiosity for new experiences and a tolerance for uncertainty, may be more open to riskier investment behaviours (Rajasekar et al., 2022; Gupta et al., 2015). However, the findings of this study do not support this as the regression analysis indicates no statistically significant relationship between the personality trait openness to experience and the willingness to invest through the use of P2P lending platforms.

Additionally, the study showed that of the selected control variables, prior experience and perceived usefulness appear to have a significant effect on intention to use. The other variable perceived ease of use showed no significant relation to intention to use. The absence of significant relationships suggest that the variables age, gender, level of education and openness to experience examined in this study may not be primary factors influencing the willingness of individuals to invest using P2P lending platforms. Prior experience and perceived usefulness do influence the intention to use P2P lending platforms in accordance with previous research.

6. CONCLUSION

The main question of this research was, “How do age, gender, level of education and level of openness affect the willingness of potential individual investors to make use of P2P lending platforms?”. The key findings of the study indicate that there is no significant relationship between the studied variables and the independent variable, Intention to Use. This suggest that a younger individual is not necessarily more willing to make use of P2P lending platforms than an older one. Furthermore, men are not more willing to invest using P2P lending than women based on the findings. Moreover, an individual investor with a higher level of education is not more willing to make use of P2P lending as an investing method than lower educated ones. Lastly, the findings suggest that an individual scoring higher on the openness to experience scale does not increase their willingness to use P2P lending platforms. Even though this study did not find significant predictors amongst the primary variables examined, it shows the importance of the complexity individual decision-making has with regard to P2P lending.

6.1 Implications and future research

The results of this study have several practical implications for the various stakeholders in the P2P lending industry, such as P2P lending platforms, policy makers and financial advisors. The findings show that the explored characteristics of individual investors do not significantly impact their intention to use P2P lending. Therefore, lending platforms should focus on developing marketing campaigns that appeal to a broad audience in order to attract individual investors. Furthermore, they could invest in financial literacy programs covering the basics of P2P lending and further advertise the usefulness of their platform and the benefits that are associated with it in order to enhance the user experience. Additionally, they should focus on building trust by showcasing the implemented security measures and adherence to regulatory compliance.

The findings of this research challenge existing theories with regard to fintech adoption by suggesting that traditional demographic variables (age, gender, education) and the personality trait openness to experience may not be significantly related to the intention to use P2P lending platforms. In contrast to previous literature, which suggested that younger individuals, males, those with a higher level of education, and individuals that score high on openness to experience are more willing to engage in P2P lending, this study found no significant relation between the characteristics of the individual investor and the intention to use P2P lending. This questions theoretical frameworks that overly emphasise demographic and personality factors when it comes to predicting fintech adoption behaviour by nonprofessional investors. Instead, it suggests a need to incorporate a broader range of situational and behavioural factors into predictive frameworks. Future research could further investigate the interactive relationship between the characteristics of nonprofessional investors and other influences to create more robust theories around the adoption of fintech, and more specifically P2P lending, in diverse demographic and cultural contexts. Furthermore, future research could focus on examining additional variables and make use of diverse methodologies in order to gain a better understanding of the factors that influence the willingness to use this method. This may be crucial for creating strategies to promote the use of P2P lending and increasing its integration into the broader financial system.

6.2 Limitations

This research has a few limitations. First of all, all individuals above the age of 18 were included in the final sample and more than half of the respondents were in the age group of 18-25. As this is not representative of the variable age, it can be considered as a limitation. For the variable level of education more than seventy percent were undergraduates, which can also be considered a limitation. Furthermore, as stated before, all individuals could participate even if they had not necessarily made use of investing methods before. The control variable prior experience was only with regards to the method of P2P lending itself and does not take into account previous experience with investing in general.

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9. APPENDIX

9.1 Appendix A. Measurement Items

9.1.1 Introduction to the Questionnaire

“My name is Aleida Mentink and I am doing my thesis on the willingness of individuals to make use of P2P lending as an investing method. It would greatly help me if you fill in this survey for me.

Please take a moment to learn a bit more about P2P lending as an investing method before proceeding with this survey.

P2P lending, peer-to-peer lending, stands for a method of lending/investing without intermediaries such as banks for example. Peers wanting to invest their money can get into contact with peers wanting to borrow money. P2P lending platforms such as LendingClub and Zopa are used to make these connections. This method of investing money has its benefits (e.g. no intermediaries, reduced transaction costs etc.) and drawbacks (e.g. regulatory uncertainties, insufficient credit assessment etc.). This thesis is about how the variables gender, age, level of education and openness to experience affect the willingness of individuals to make use of P2P lending.

Assume you are looking for an investing method and answer the following questions to the best of your ability.”

9.1.2 The Questionnaire

Survey Questionnaire
Gender
Male
Female
Other
Prefer not to fill in
Age
18-25
26-35
36-45
46-55
56 and above
Level of education
Without a tertiary degree (High School)
Undergraduate (Bachelor)
Postgraduate (Master and above)
Prior experience with P2P lending
Yes/No
Openness to Experience (Mayfield et al., 2008)
1. I am intrigued by the patterns I find in art and nature.
2. I often try new and foreign foods.
3. I have little interest in speculating on the nature of the universe or the human condition. (Reverse scored)
4. I have a lot of intellectual curiosity.
5. I often enjoy playing with theories or abstract ideas.
Perceived Usefulness (Pan et al., 2023), (Putri et al., 2023)
1. Using P2P lending is useful for me.
2. Using P2P lending makes it easier to invest.
3. P2P lending method is easy to understand.
4. In general, P2P lending is useful.
Perceived Ease of Use (Pan et al., 2023), (Putri et al., 2023)
1. My interaction with P2P lending is clear and understandable.
2. Interacting with P2P lending does not require a lot of my mental effort.
3. I find it easy to use P2P lending method to do what I want.
4. In general, P2P lending is easy to use.
Intention to Use (Pan et al., 2023), (Putri et al., 2023)
1. Given the opportunity, I will use peer-to-peer lending platforms.
2. I am likely to use peer-to-peer lending platforms in the near future.
3. I am open to using peer-to-peer lending platforms in the near future.
4. I would recommend investing using the method of P2P lending to others.

9.2 Appendix B. R script

```
#ImplementDataSet
data <- read_excel("ThesisData.xlsx") #, sep = ",")
data <- na.omit(data) #Delete incomplete responses
#RenameColumns
New_data <- rename(data, AgeGroup = Q2, Gender =
Q1, EducationLevel = Q3, PriorExperience = Q4)
# Convert Gender to factor (dummy coding)/ 0 is male
Gender_factor <- factor(New_data$Gender, levels = c(0,
1), labels = c("male", "female"))
AgeGroup_factor <- factor(New_data$AgeGroup, levels
= 1:5, ordered = TRUE)
levels(AgeGroup_factor) <- c("18-25", "26-35", "36-45",
"46-55", "56+")
EducationLevel_factor <-
factor(New_data$EducationLevel, levels = 1:3, ordered =
TRUE)
levels(EducationLevel_factor) <- c("High School
Diploma", "Undergraduate (Bachelor)", "Postgraduate
(Master and above)")
PriorExperience_factor <-
factor(New_data$PriorExperience, levels = c(0, 1), labels
= c("No", "Yes"))
New_data$Gender_factor <- Gender_factor
New_data$AgeGroup_factor <- AgeGroup_factor
New_data$EducationLevel_factor <-
EducationLevel_factor
New_data$PriorExperience_factor <-
PriorExperience_factor
#Table all Primary variables and Prior Experience
table(New_data$Gender_factor)
# Calculate percentage of respondents and print
agegroup_percentages <-
prop.table(table(New_data$AgeGroup_factor)) * 100
Gender_percentages <-
prop.table(table(New_data$Gender_factor)) * 100
Education_percentages <-
prop.table(table(New_data$EducationLevel_factor)) *
100
PriorExperience_percentages <-
prop.table(table(New_data$PriorExperience_factor)) *
100
print(PriorExperience_percentages)
#New variables
alpha_result <- alpha(New_data[, c("Q5", "Q6", "Q7",
"Q8", "Q9")]) # Cronbach's alpha OpennesstoExperience
print(alpha_result)
New_data$OpennessToExperience <-
rowMeans(New_data[, c("Q5", "Q6", "Q7", "Q8",
"Q9")])
likert_items <- New_data[, c("Q5", "Q6", "Q7", "Q8",
"Q9")]
New_data$PerceivedUsefulness <-
rowMeans(New_data[,c("Q10", "Q11", "Q12", "Q13")])
New_data$PerceivedEaseOfUse <-
rowMeans(New_data[,c("Q14", "Q15", "Q16", "Q17")])
New_data$IntentionToUse <-
rowMeans(New_data[,c("Q18", "Q19", "Q20", "Q21")])
#Mean & SD for Likert variables
mean(New_data$OpennessToExperience)
```

```
SD(New_data$OpennessToExperience)
#Model
model <- lm(IntentionToUse ~ Gender_factor +
AgeGroup_factor + EducationLevel_factor +
OpennessToExperience + PriorExperience_factor +
PerceivedEaseOfUse + PerceivedUsefulness
, data = New_data)
summary(model)
selected_columns <- New_data[, c("Gender",
"AgeGroup", "EducationLevel",
"OpennessToExperience", "PriorExperience",
"PerceivedEaseOfUse", "PerceivedUsefulness")]
# Compute the correlation matrix for the selected
columns
cor_matrix <- cor(selected_columns)
# Print the correlation matrix
print(cor_matrix)
# Initialize a matrix to store p-values for correlation
p_matrix <- matrix(NA, ncol = ncol(selected_columns),
nrow = nrow(selected_columns))
colnames(p_matrix) <- colnames(selected_columns)
rownames(p_matrix) <- rownames(selected_columns)
# Loop through each pair of variables to calculate the p-
values
for (i in 1:(ncol(selected_columns) - 1)) {
  for (j in (i + 1):ncol(selected_columns)) {
    test <- cor.test(selected_columns[, i],
selected_columns[, j])
    p_matrix[i, j] <- test$p.value
    p_matrix[j, i] <- test$p.value }
  }
print(p_matrix)
# Function to annotate significance levels
signif_code <- function(p) {
  if (is.na(p)) {
    return("") # Handle NA values
  } else if (p < 0.001) {return("***")}
  } else if (p < 0.01) {return("**")}
  } else if (p < 0.05) {return("*")}
  } else {return("") }
}
# Create a new matrix to store the annotated correlations
annotated_cor_matrix <- matrix("", nrow =
nrow(cor_matrix), ncol = ncol(cor_matrix))
colnames(annotated_cor_matrix) <-
colnames(cor_matrix)
rownames(annotated_cor_matrix) <-
rownames(cor_matrix)
# Fill in the annotated matrix
for (i in 1:nrow(cor_matrix)) {
  for (j in 1:ncol(cor_matrix)) {
    if (i != j) {
      annotated_cor_matrix[i, j] <-
paste0(round(cor_matrix[i, j], 2), signif_code(p_matrix[i,
j])) } else {
      annotated_cor_matrix[i, j] <- round(cor_matrix[i, j],
2) } }
}
print(annotated_cor_matrix)
```