JURNAL
Riset Akuntansi dan Keuangan Indonesia
URL : http://journals.ums.ac.id/index.php/reaksi/index

Gender Differences in Financial Technology (FINTECH) Adoption in Indonesia: An Analysis Of Risk Perceptions And Benefits

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ABSTRACT

This study aims to examine the gender differences in Fintech services adoption in Indonesia using the risk-benefit framework. This framework assumes that the user behaviours in adopting Fintech services are simultaneously affected by the positive factors (perceived benefits) and negative factors (perceived risks. The study utilized the snowball sampling data collection technique to gather data from 446 male and female online respondents. Smart PLS 3.0 was used to analyze the data and found that perceived benefits have a greater impact on the intention to adopt fintech services compared to perceived risks. Moreover, this study also reveals that, when examining gender-based differences in perceived benefit, both gender groups chose the convenience factor as the most dominant compared to the other two factors. In terms of risk perception, men tend to prioritize legal risk when using fintech services. This is because uncertainty in the legal aspect greatly affects their willingness to use these services. On the other hand, operational risk emerges as the dominant risk for women. This finding aligns with previous research, which emphasizes women's sharp attention to technical and operational issues in technology adoption.

Keywords:
Gender differencess on fintech adoption, financial technology (fintech), Fintech in Indonesia, Perceived risk, Perceived Benefit

INTRODUCTION

The development of information and communication technology (ICT) in recent decades has not only increased the use of the internet and smartphones, but also encouraged the growth and expansion of new and innovative financial services, or Fintech (financial technology). The term Fintech comes from the words "financial" and "technology". This term is interpreted differently by many experts. This term describes the digitalization that occurs in the financial sector[1], or an innovation in technology-based financial services[2]. Currently, various Fintech start-ups have emerged that offer a wide range of financial service systems and processes, from loan and payment providers to asset management and foreign exchange. Accenture's data shows that investment in fintech companies worldwide has increased rapidly by 75 percent in 2015 to reach $22.3 billion. Global fintech financing and financial activities are estimated to grow from US$ 3 billion in 2016 to US$ 6-8 in 2018[3].

The rapid development of Fintech has brought great benefits to many people. These developments have brought new opportunities to empower many people through increased transparency, reduced costs by cutting intermediaries and opening up broad access to information [4]. Furthermore, there are high hopes for this new financial technology to increase financial inclusion and narrow the gender gap in access to financial services[5][6]. Hitherto, there are gender differences in terms of access to financial services, where the level of bank account ownership in women is lower than that of men [7], it is unlikely that women manage family finances [8], or participate in the capital market [9]. Access to better financial services provided by Fintech is expected to help overcome the gender gap and improve the welfare of women and families. To benefit from such Fintech, Fintech services must be acceptable, adopted and used, not only by men but also women.

In the above context, an understanding of the adoption and use of Fintech is important to research. One of the issues that is important to research and has not received much attention is the issue of gender differences in the adoption and use of Fintech services. For this reason, this study aims to deepen the understanding of fintech adoption behavior by focusing on the role of gender differences in fintech adoption in Indonesia by using a risk and benefit perception analysis framework. In particular, this study tried to answer some of the following questions. First, what are the risk factors and benefits that consumers perceive in fintech adoption in Indonesia? Second, are there significant differences between women and men in fintech adoption and how do these risk and benefit factors affect the behavior of fintech adoption from each gender?

There are several contributions that this research can make. First, the study describes the decision-making process from consumers as enlightening and contributing to researchers interested in this topic. In addition, it can also broadly enrich the literature and develop knowledge related to fintech adoption, especially in Indonesia. Second, this research reveals the specifics of the benefits and risks that contribute to the formation of fintech adoption intentions in general and specifically based on gender groups. This information could have practical/managerial implications for fintech service providers to formulate appropriate strategies in approaching their future target users based on a gender approach, while retaining existing users and ensuring they will continue to use fintech in the future. Third, for the government and regulators, the findings of this study can also encourage better regulation and legal rules related to fintech that can create a sense of security and comfort for users, thereby encouraging the wider use of this type of financial services.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Gender Differences in the Adoption of New Information Technology

In the literature related to information systems, there are many studies that have examined the behavior of accepting, adopting and using technology, including Fintech (e.g.([10]–[13]. However, attention to gender differences in individual behavior to accept, adopt and use technology still receives less attention. There are very few studies that focus on the influence of gender in the acceptance, adoption and use of Fintech (e.g. [14]–[18].

From several studies related to the influence of gender in the adoption of the new technology,

p-ISSN:1411-6510
e-ISSN:2541-6111

there were mixed results. Some studies show that compared to men, women have less chance of adopting and using technology, have lower confidence in their ability to use technology and have a lower chance of choosing a career/job in information technology ([17]–[20]. There are a variety of reasons for this. In the use case of online shopping (e-commerces), for example, Rodgers & Harris argue that the differences result from emotional, trust, and comfort factors that affect the participation of women and men in online shopping[21]. Similarly, Dittmar et al. explains that women's emotional factors and psycological involvement in the entire buying and spending process are major factors in explaining gender differences in e-commerce use[22]. Meanwhile, several other studies show inverse results. These studies show that gender gaps are currently decreasing or disappearing due to an increase in the number of men and women who have known and used computers and their applications in their work and personal lives [16][23].

In Indonesia, to the author's knowledge, until now there have been few studies that have discussed the adoption and use of Fintech in this country e.g [24]–[28]. There have been no studies have ever discussed the influence of gender differences in the acceptance and adoption of various types of Fintech in Indonesia. Based on that, this study wants to fill the void. Using a risk and benefit perception analysis framework in fintech adoption, this study will try to see how the risk and benefit factors perceived by each female and male user together or simultaneously affect the adoption of various types of Fintech services in Indonesia.

Risk and Benefit Perception Analysis Framework in Fintech Adoption and Hypotheses

There are various theoretical and empirical models that have been used to examine the problem of technology adoption. Some of these theories/ models include The Theory of Reasoned Action (TRA) introduced by Fishbein & Ajzen[29]. This theory was later developed by Ajzen [30] into the Theory of Planned Behavior (TPB), which further also had an expansion into the Decomposed Theory of Planned Behavior [31]. The existence and development of information systems has contributed to the birth of the Theory Acceptance Model (TAM) which was first created by Davis [32] and is a development of TRA. Subsequently, this TAM was developed and expanded to give birth to The Extension of the Technology Acceptance Model (TAM2) [33], The Unified Theory of Acceptance and Use of Technology (UTAUT) [34], and the Technology Acceptance model 3 (TAM3) [36].

All theoretical models related to technological acceptance are designed to measure the level of acceptance and satisfaction of individual users with a technology or information system, but from a different point of view, depending on the constituent constructions or determining factors incorporated into the structure of the model [37]. These theoretical models have generally helped to improve understanding of individual behavior, along with factors of acceptance and use of information technology. Among the many theories mentioned above, The Technology Acceptance Model (TAM) is one of the most popular and dominant models. TAM is a very popular theoretical lens from the field of information systems and technology that is generally used to understand how users can receive and use for a particular technology [38]. Tang & Chen [39] for example, claim that the accumulation of existing theoretical and empirical studies shows support for the Technology Acceptance Model (TAM), The Extension of the Technology Acceptance Model (TAM2), The Unified Theory of Acceptance and Use of Technology (UTAUT), and the Technology Acceptance model 3 (TAM3). Although TAM has been very popular, developed, and has received widespread support, this model still has many weaknesses and has received a lot of criticism [40], [41].

Related to the adoption of Fintech, this study chose to use and expand theoretical models based on the theory of reasoned action (TRA) and and the theory of planned behavior (SDGs). This is because these two theories are the most basic and common theories that explain almost all human behaviors so that they are easy to use to analyze various kinds of behaviors, including the behavior of adopting fintech services. TRA, along with TPB, is a powerful and tested model for explaining a wide variety of behaviors [29], [42]), including the acceptance, adoption and use of technology ([31], [43], [44]. Based on TRA and TPB, subjective attitudes and norms, which can be traced back to the behavior of each individual and his normative beliefs, will determine the intention of an individual to adopt innovation. At this point, each individual's positive or negative evaluation of the behavior carried out

is reflected by behavioural beliefs. Meanwhile, normative beliefs refer to the perception of an individual of social pressure to adopt or not adopt innovations. The impact of these two types of behavioral intentions can vary from individual to individual [29], [45].

Meanwhile, just like any other behavior, the decision or behavior to use Fintech services by an individual is determined by their perception of the risks and benefits obtained from using it. In the use of fintech services, users/consumers often act on incomplete and perfect information [46] Therefore, users are often faced with a certain level of risk and uncertainty in adoption decisions. Furthermore, as explained by Wilkie & Pessemier [48], risk is not the only factor on which consumers depend on their use/adoption decisions, because perceived benefits also provide incentives for consumers to adopt behavior.

Similarly, Peter & Tarpey combines perceived risks and benefits to build a theory of consumer decision-making, namely: the net valence framework[49]. This framework explains the intention of consumer behavior by considering both positive and negative aspects of behavioral beliefs. This frame of mind assumes that consumers perceive a product or service to have negative and positive attributes and based on these two things the consumer makes a decision to maximize his dignity or satisfaction (net valence). This framework can explain various kinds of information technology adoption behaviors, such as consumer behavior in shopping on-line e.g [46].

According to Ryu, the net valence framework is based on reasoned action, which is also consistent with the TRA theoretical model[50]. Based on TRA, consumers' attitudes towards the adoption of Fintech services influenced by their behavioral beliefs will determine the intention of adopting Fintech services. Specifically, as stated by Jurison, the benefits and risks of adopting Fintech services are considered as behavioral beliefs, be it positive or negative, which will determine the attitudes and intentions of behavior and subsequent actions[51]. Positive trust in the adoption of Fintech will increase perceived benefits while negative trust results in perceived risks.

Based on the foregoing discussion, this study illustrates that individual consumers determine the risks and benefits that may arise from the adoption of Fintech and further combine into perceived risks and benefits. Hereinafter, consumer perceptions of risks and benefits will result in an assessment of the attitude of adopting Fintech as a whole, which leads to attitudes/behaviors of adopting Fintech. The model used in this study is briefly illustrated in Figure 1. This model simultaneously integrates and combines the benefits and risk factors perceived by users in influencing their decision/intention to use Fintech services. Here, both benefits and risks together become an important consideration for users in deciding whether to use a Fintech service.
In practice, users are assumed to compare the available Fintech services and then choose the service that offers the most use value. In other words, when they want to adopt a certain Fintech service, users make risky decisions by not only considering the risks, but also considering the various benefits. In this study, perceived benefits refer to a consumer perception that the adoption or use of Fintech will result in positive output. Meanwhile, the perceived risk is an important obstacle for users who are considering whether to use Fintech services. In other words, this study interprets perceived risk as a perception from users of uncertainty and possible negative outcomes arising from the use of Fintech services.

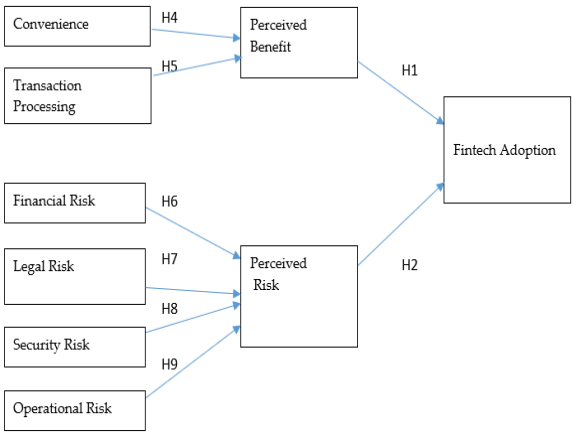

Figure 1. Research Model: A Benefit and Risk Analysis Framework

Source: Adopted from Ryu [52]

Based on this, the intention of fintech adoption will be positively influenced by the various perceived benefits and will be negatively influenced by the various risks posed by the use of Fintech services. In terms of the role of gender differences, this study assumes that there are differences in the level of benefits and risks perceived by men and

p-ISSN:1411-6510
e-ISSN:2541-6111

women. Therefore, here are the hypotheses that will be tested in this study:

H1: The positive effect of the perceived benefits of Fintech services on the intention to use such services differs between men and women.

H2: The negative effect of perceived risk of Fintech services on the intention to use such services differs between men and women.

Furthermore, the various benefits and risks perceived from the use of Fintech are assumed to be a concept or construction that is multi-dimensional. This study identifies three sources of benefits perceived by Fintech service users, namely: economic benefits, convenience, and transaction processes, and all three of them are the dimensions of benefits perceived by Fintech service users. Chung et al. [53]explains that one of the most common benefits and often identified by previous studies is economic benefits. Furthermore, Mackenzie [54] argues that compared to traditional financial services, Fintech services can lower transaction and capital costs, and this is beneficial for its users. Another benefit that is often brought up fromFintech services is convenience, which is driven by the intention to increase profits and get faster access [53], [55]. Furthermore, Ryu [52] argues that convenience through mobile devices also determines the level of benefit perceived by the use of fintech services, because mobile devices (mobile phones) are one of the most important channels in Fintech services.

Finally, the transaction process is another benefit that can be obtained from the use of Fintech services. This benefit refers to the benefits associated with transactions when using Fintech services for financial transactions (for example, purchases, money transfers, loans, and investments). Furthermore, Chisti & Barberis [56] and Zavolokina et al. [4] explained that smooth/fast transactions that are an important feature of Fintech services also provide benefits by cutting the role of intermediaries to allow users to conduct and manage their financial transactions at a cost-effective and cheap means, thus allowing users to be able to increase the speed and efficiency of their financial transactions. Based on the three potential benefits of using Fintech, this study assumes that economic, convenience and process benefits will positively affect the overall perceived benefits of using Fintech services and the level of these benefits differs between men and women. Therefore, the hypotheses to be tested of the three benefits are as follows:

H3: The positive effect of economic benefits on perceived benefits from the use of Fintech services differs between men and women

H4: The positive effect of convenience on the perceived benefits of using Fintech services differs between men and women

H5: The positive effect of the transaction process on the perceived benefits of using Fintech services differs between men and women.

Meanwhile, there are four main factors used as sources and representations of perceived risk from the use of Fintech services in this study. The four sources of risk include: financial, legal or regulatory risks, security, and operational. Forsythe et al. explains that financial risk is a potential financial loss that can occur in almost all financial transitions from Fintech services [57] and Liu et.al [58]argue that this risk is one of the most consistent determining factors of the behavior of internet users or mobile phone devices. Meanwhile, according to Ryu [52], regulatory/legal risk refers to the vagueness of legal status and the lack or absence of universal regulations related to Fintech services.

Furthermore, Ryu also explained that security risk is a potential loss caused by fraud and hacking that sacrifices the security of financial transactions from Fintech services [52]. These scams and hacks will cause money losses from users and also violate the privacy of the users which is the biggest concern of many internet and mobile phone users. Finally, as explained by Barakat and Hussainey [59], operational risk refers to all potential losses from insufficiency or failure of internal processes, work and systems within the Fintech service provider company. Ryu further argues that potential users of Fintech services will not use its services if the service provider has problems with the financial system and its operasional [52]. In addition, distrust, and dissatisfaction from users, resulting from a lack of operational skills and a slow response to system and transaction problems, will generate usage problems and ultimately hinder the adoption of Fintech services.

Based on the four potential risks from using Fintech, this study assumes that financial, legal or regulatory, security (security), and operational

risks will positively and significantly affect the perceived risks of using Fintech services and the level of influence differs between men and women. Therefore, the hypotheses to be tested of the four dimensions of perceived risk are as follows:

H6: The positive effect of financial risk on the perceived risk of using Fintech services differs between men and women.

H7: The positive effect of regulatory risk on perceived risk from the use of Fintech services differs between men and women

H8: The positive effect of security risks on perceived risks from the use of Fintech services differs between men and women

H9: The positive effect of operational risk on the perceived risk of using fintech services differs between men and women.

RESEARCH METHODS

In order to test the above hypotheses, this study conducted a survey using a structured questionnaire and the results were analyzed using simple descriptive statistical analysis and using the partial least square (PLS) method, namely the structural equation model (SEM model) technique. Here is a more detailed explanation of it.

Measurement and Data Collection Process

As explained above, this study will simultaneously integrate and combine the benefits and risks perceived by users in influencing their decision/intention to use Fintech services. Fintech adoption is defined as the use of certain Fintech services. This is determined by the perceived benefits and perceived risks from the use of the Fintech service. The perceived benefit variable refers to a consumer perception that the adoption or use of Fintech will produce positive output, while the perceived risk variable is an important obstacle for users in considering whether to use Fintech services. This study identifies three sources of benefits perceived by Fintech service users, namely: economic benefits, convenience, and transaction processes, and the three Compile the dimensions of benefits perceived by Fintech service users. Meanwhile, the perceived risks of using Fintech consist of financial, legal or regulatory, security (security), and operational risks.

The various research variables above are further translated into survey questions. Following [52], this study made a survey questionnaire consisting of questions about perceived risks and benefits in order to test and validate the research model and test the hypotheses above. This study used survey questions with a 5-point Likert scale (from strongly disagree=1 to strongly agree=5) which reflected respondents' subjective assessment of various questions from the variabel studied in this study. The question items in the survey instrument are made based on adaptations of validated measures from previous studies or by converting definitions of the dimensions and variables described above into a survey question format.

Before conducting the main survey, pre-tests and pilot tests are carried out to test the survey instrument and increase the reliability and validitas of the instruments and measurements that have been made. Furthermore, the survey questionnaire is loaded online through the google form. Sampling or selecting respondents in this study was carried out using snowball sampling methods, through the distribution of questioner links on various popular social media, such as: Instagram, Facebook, Twitter, Facebook, Whatsapp and one stock investment social media called Stockbit. This method of data collection can be used if the population is not clearly known and it is difficult to collect the part of the population to be used as a sample [60]. The distribution of the survey questionnaire was carried out and successfully collected responses from 446 respondents, greater than the initial target of 100 to 300 respondents.

Data Processing and Analysis

In addition to conducting a simple statistical analysis, this research will also process the survey results obtained using the PLS Smart 3.0 program or software. To test the research model, a two-step method, namely the measurement model and the structural model. For this reason, this study uses the partial least square (PLS) method, namely the structural equation model (SEM model) technique. Using a combination of statistical data and qualitative assumptions, the method tests and estimates causality relationships using a combination of statistical data and qualitative assumptions from the variables studied. This PLS

p-ISSN:1411-6510
e-ISSN:2541-6111

is more specifically a technique based on variance-based technique. PLS is a powerful analytical method and is often called soft modelling because it negates the assumption of ordinary least squares (OLS) regression, such as data must be distributed normally in a multivariate manner and the absence of multicollinearity problems between exogenous variables [61].

RESULTS AND DISCUSSION

General Profile of Respondents

The total number of respondents was 446 people consisting of 262 women and 184 men. The data for each gender group is then analyzed based on their general characteristics, such as their position as users or non-users of Fintech services, educational background and the types of Fintech services they use. Table 1 below briefly describes the profile of the respondents in this study according to several categories that are considered important.

Table 1. Respondent Profiles

	Men	Women
1. Fintech User and Non-User		
Fintech User	85%	89%
Non-Fintech User	15%	11%
Total	100%	100%
2. Types of Fintech used		
Using 1 (One) Type of Fintech	62%	88%
Using More Than One Type of Fintech	38%	12%
Total	100 %	100 %
3. Educational Background		
Junior High School	1%	0%
Senior High School	26%	33%
D3 dan S1	57%	49%
Post Graduate	16%	18%
Total	100%	100%

Source: Processed by the author

Table 1 shows that based on educational background, the respondents in this study were dominated by highly educated respondents and this applies to both male and female respondents. 65 percent of respondents have completed Diploma III (D3) to postgraduate education. Furthermore, the majority of respondents are fintech users, namely 85 percent for women and 89 percent for men.

In addition, the data shows that most female respondents prefer one type of fintech service (88%). Meanwhile, the proportion of male respondents who use more than one fintech service has a fairly large proportion compared to women, which is 38%. This finding is supported by Rollison and Shenton [62], which explain that men have a higher probability than women of engaging in activities that are considered high risk, including the use of financial services related to loans (Fintech Lending) and investments (marketplaces and financial planners). Furthermore, e-money and digital payments are the most popular services among both male and female respondents. It was followed by other services such as cryptocurrencies, online loans (Fintech Lending), and marketplaces (marketplace dan financial planner).

Validity and Reliability testing

Before testing the hypothesis, this study first tested its data validity and reliability. The validity test was analyzed by looking at the convergent validity (AVE value greater than 0.5) and discriminant validity (by looking at the results of the Fornell Lacker matrix table). Meanwhile, the reliability test must comply with the rules where both Cronbach alpha and composite reliability (CR) values are greater than 0.7[63].

Table 2. Validity and reliability test

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Intention to Use Fintech	0,875	0,915	0,730
Ease of Transaction	0,839	0,925	0,861
Convenience	0,911	0,944	0,848
Economic Benefits	0,769	0,897	0,813
Perceived Benefits	0,920	0,936	0,678
Perceived Risks	0,924	0,936	0,596
Security Risks	0,859	0,914	0,780
Financial Risk	1,000	1,000	1,000
Operational Risk	0,881	0,944	0,893
Legal Risk	0,876	0,915	0,730

Source: Processed by the author

Table 3. Validity Test Results with the Former-Larcker Criterion

	Intention to Use Fintech	Ease of Transaction	Convenience	Economic Benefit	Perceived Benefits	Perceived Risks	Security Risks	Financial Risks	Operational Risks	Legal Risks
Fintech Adoption Intention	0,855									
Ease of Transaction	0,573	0,928								
Convenience	0,576	0,757	0,921							
Economic Benefit	0,634	0,647	0,675	0,901						
Perceived Benefit	0,658	0,888	0,938	0,841	0,823					
Perceived Risk	-0,196	0,059	0,022	-0,065	0,010	0,772				
Security Risk	-0,158	0,029	0,041	-0,043	0,017	0,891	0,883			
Financial Risk	-0,155	0,072	-0,017	-0,105	-0,017	0,706	0,550	1,000		
Operational Risk	-0,193	0,017	-0,021	-0,070	-0,026	0,850	0,751	0,539	0,945	
Legal Risk	-0,165	0,085	0,037	-0,042	0,033	0,891	0,653	0,590	0,615	0,854

Source: Processed by authors

The test results for these two tests can be seen in Tables 2 and 3. The numbers in the two tables indicate that the results follow the rule of thumbs. All the numbers generated meet the requirements and exceed the minimum limit to pass the validity and reliability tests in terms of AVE, CR, and Cronbach Alpha. In addition, table 3 shows the Fornell-Larcker criterion matrix, indicating no discriminate validity issues exist. Therefore, the data used in this study are valid and reliable.

The Effect of Perceived Risks and Benefits on Fintech Adoption

This study tested the same hypothesis for both categories of respondents. In testing these hypotheses, the rules used to measure research results are as follows: (1) How is the coefficient or direction of the variable relationship (indicated by the original sample value) in line with the hypothesis, and (2) the results of hypothesis testing are accepted if the t-statistic value is greater than 1.64 (two tiles) or 1.96 (one tile) and has a probability value (p-value) less than 0.05 or 5%.
Figure 2 and Table 4 below show the results of the calculation of the entire sample (male and female) which shows that perceived benefits and perceived risks do have a significant effect on the intention to adopt fintech services. Nonetheless, the two perceptions have different directions of relationship, where perceived benefits positively influence the intention to use fintech services, while perceived risks affect them in the opposite direction. These results also show that the effect of perceived benefits is greater than perceived risk, as indicated by the O coefficient with the numbers 0.661 and -0.203 for each perception. This means that in general respondents are more willing to use fintech in Indonesia as long as the benefits outweigh the risks according to their perception.

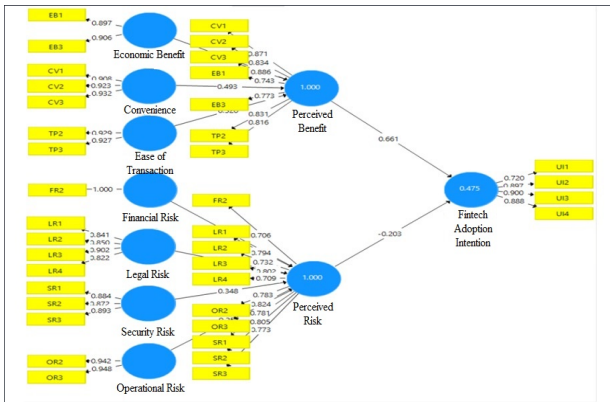

Figure 2. Hypothesis test results for all data (Male and Female)

Source: Processed by authors using Smart-PLS 3.0

Table 4. Hypothesis test results for all data (Male and Female)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Ease of Transaction -> Perceived Benefit	0,320	0,319	0,008	38,069	0,000
Convenience -> Perceived Benefit	0,493	0,493	0,010	49,345	0,000
Economic Benefit-> Perceived Benefit	0,301	0,301	0,009	34,164	0,000
Perceived Benefit -> Fintech Adoption Intention	0,661	0,661	0,035	18,788	0,000
Perceived Risks-> Fintech Adoption Intention	-0,203	-0,204	0,038	5,280	0,000
Security Risk-> Perceived Risk	0,348	0,349	0,010	34,712	0,000
Financial Risk-> Perceived Risk	0,120	0,120	0,006	21,621	0,000
Operational Risk-> Perceived Risk	0,257	0,258	0,009	29,342	0,000
Legal Risk-> Perceived Risk	0,435	0,433	0,013	34,659	0,000

Source: Processed by authors using Smart-PLS 3.0 (2021)

Furthermore, these results show that economic benefits, convenience and ease of transaction have a positive and significant effect on perceived benefits. Interestingly of the three factors, convenience has a greater coefficient on perceived benefits than economic benefits and ease of transaction. This shows that convenience is an important factor to be considered in the intention to use fintech services. In addition, the test results also show that financial, legal, security and operational risks also have a significant positive relationship with the user's risk perception. The highest loading value of legal risk

indicates a strong impact on their perceived risk, while financial risk has the weakest impact. On the other hand, the effect of security risk is greater than operational risk on the respondent's perception of risk. This result is in line with Ryu's research findings [52], which identified that legal risk and convenience have the most substantial effect on the intention to adopt Fintech in Korea.

Analysis of Gender Differences in the Relationship of Risk and Benefit Perception to Fintech Adoption

In order to understand how gender differences actually influence the intention to adopt fintech in Indonesia, the data in this study were then divided into two groups of respondents, namely men and women. Separate hypothesis testing was then performed based on this data. The test results for each group are shown below:

Table 5. Test Results for Male Respondents

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Ease of Transaction -> Perceived Benefit	0,355	0,353	0,014	25,560	0,000
Convenience -> Perceived Benefit	0,406	0,407	0,015	26,752	0,000
Economic Benefit-> Perceived Benefit	0,355	0,355	0,017	20,373	0,000
Perceived Benefit -> Fintech Adoption Intention	0,625	0,624	0,055	11,469	0,000
Perceived Risks-> Fintech Adoption Intention	-0,255	-0,259	0,061	4,194	0,000
Security Risk-> Perceived Risk	0,270	0,269	0,016	16,631	0,000
Financial Risk-> Perceived Risk	0,250	0,250	0,014	17,389	0,000
Operational Risk-> Perceived Risk	0,301	0,301	0,013	24,029	0,000
Legal Risk -> Perceived Risk	0,334	0,334	0,018	18,338	0,000

Source: Processed by authors using Smart-PLS 3.0 (2021)

Table 6. Test results for female respondents

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Ease of Transaction -> Perceived Benefit	0,311	0,315	0,011	29,687	0,000
Convenience -> Perceived Benefit	0,497	0,497	0,012	39,910	0,000
Economic Benefit-> Perceived Benefit	0,304	0,303	0,010	29,499	0,000
Perceived Benefit -> Fintech Adoption Intention	0,699	0,696	0,046	15,282	0,000
Perceived Risks-> Fintech Adoption Intention	-0,199	-0,201	0,040	5,024	0,000
Security Risk-> Perceived Risk	0,346	0,346	0,013	25,719	0,000
Financial Risk-> Perceived Risk	0,217	0,216	0,011	19,321	0,000
Operational Risk-> Perceived Risk	0,370	0,370	0,016	23,110	0,000
Legal Risk -> Perceived Risk	0,232	0,231	0,009	25,001	0,000

Sumber: Processed by authors using Smart-PLS 3.0 (2021)

As shown in Tables 5 and 6, in general the test results for the two groups were almost in line with the results for all respondents. For Perceived Benefit, both men and women have a positive and significant effect on the intention to adopt fintech services, with a coefficient O=0. 625 and p<0.05 and O=0. 699 and p<0.05. Meanwhile, risk perception has a negative and significant effect on the intention to adopt fintech services, with a coefficient of O= -0.255 and p<0.05 and O= -0.199 and p<0.05. Interestingly the risk perception loading value in male respondents is greater than that of female respondents. It indicates that men's perceptions of risk have a stronger impact on their intention to use fintech services than women.

Moreover, the results above show that the factors of convenience, economic benefits and ease of transactions have a positive and significant impact on both men and women. Furthermore, from the comparison of the O coefficient values in the two tables above, the convenience factor has the strongest effect on Perceived Benefit in the two gender groups compared to the economic benefits factor and also the ease of transactions. These results indicate that the speed of transactions, the flexibility of using financial services that are not limited by space and time and the convenience that accompanies them, as part of the convenience factor, have a positive and significant impact on respondents' perceptions of benefits regardless of gender differences. However, if we look at the O coefficient between the two tables, the comfort value for women (O coefficient = 0.497) is stronger than that for men (O coefficient = 0.406) in influencing the perception of benefits.

Furthermore, security risk, financial risk, operational risk and legal risk have a positive and significant effect in shaping the risk perception of all respondents so that all hypotheses are accepted. Meanwhile, for men, legal risk is the risk with the highest O value with a score of 0.334, while financial risk is the risk with the lowest score with O = 0.250. These findings suggest that legal risk, which refers to the unclear legal status and absence of universal regulation for Fintech, strongly influences the risk perception of male respondents towards fintech financial services.

Different results were shown in the female respondent group. In this group operational risk shows the highest loading value with O = 0.370 and financial risk is also the risk with the lowest loading value with O = 0.217. These results are in line with research by MacGregor & Vrazalic [64] who found that women are more concerned about technical and operational problems and issues in the use of technology. This concern relates to

responses and solutions from fintech managers regarding technical and operational issues such as: the possibility of leakage of data and financial information. This is the main factor that greatly influences the perceptions of female respondents towards financial services in the form of Fintech.

CONCLUSION

This study aims to clarify whether gender differences influence consumers' willingness to adopt technology-based financial services (fintech). In particular, this study examines positive factors related to perceived risks and benefits that simultaneously affect the intention of adopting fintech services in Indonesia. For this reason, this study carried out a survey using a structured questionnaire, and the results were analyzed using simple descriptive statistical analysis and the partial least squares (PLS) method, namely the structural equation model technique (SEM model).

In general, this study found that the perceived benefits and risks significantly influenced all users' intention to use fintech services. Though the perceived benefits have a positive effect on the fintech adoption intention while the perceived risk has the opposite effect. Furthermore, when comparing the existing findings, it shows that the perception of benefits has a stronger relationship than the perception of risk in influencing the intention to adopt fintech for both men and women.

In gender-based hypothesis testing, it was discovered that convenience is the major variable in men's and women's perceived benefit. However, the findings reveal that the factors that dominate risk perception in men and women provide different result. Men prioritize legal risk when considering adopting fintech services in terms of risk perception. This is because legal ambiguity has a significant impact on their willingness to use these services. For women, however, operational risk appears as the dominating concern.

This study contributes theoretically to developing the literature in Fintech and related fields. Apart from that, there are also practical and managerial implications of the findings of this study for fintech companies. In order to attract more new users, they can focus on convenience as the main factor that users consider regardless of gender. In addition, in terms of risks, they can consider strengthening legal certainty and minimizing operational risks to convince potential users from both gender groups to adopt Fintech.

As with previous studies, this research also has some limitations. First, social media and online applications still have limitations in collecting a balanced number of respondents from both gender groups and the type of Fintech used. To further refine further research, it can complement the strategies, methods, and tools for collecting respondents so that more reliable data with a wider geographical distribution is obtained so that it is more representative of the population. Second, the benefit and risk factors that shape the perceptions of fintech users used in this study still need to be explored further, especially from other diverse perspectives that have not been widely studied in Indonesia.

p-ISSN:1411-6510
e-ISSN:2541-6111

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