THE ROLE OF SELF-CONTROL IN THE IMPACT OF ARTIFICIAL INTELLIGENCE INNOVATION ON LENDING DECISIONS IN ONLINE FINTECH

by Istianingsih, Islamiah Kamil Robertus Suraji

ISSN: 2633-4828 Vol. 4, No.1,June, 2022

International Journal of Applied Engineering & Technology

THE ROLE OF SELF-CONTROL IN THE IMPACT OF ARTIFICIAL INTELLIGENCE INNOVATION ON LENDING DECISIONS IN ONLINE FINTECH

Istianingsih
Universitas Bhayangkara Jakarta Raya, istianingsih@dsn.ubharajaya.ac.id

Islamiah Kamil
Universitas Dian Nusantara

Robertus Suraji
Universitas Bhayangkara Jakarta , robertus.suraji@dsn.ubharajaya.ac.id

Date of Submission: 19th November 2021 Revised: 29th December 2021 Accepted: 25th January 2022

How to Cite: Istianingsih et.al. et.al.(2022). The Role of Self-Control in the Impact of Artificial Intelligence Innovation on Lending Decisions in Online Fintech. International Journal of Applied Engineering & Technology, Vol.4(2022).

***Abstract* - This research contributes to the literature by measuring the impact of artificial intelligence (AI) innovation on the decision to borrow funds through online financial technology (FinTech) applications; this has not been researched before. The purpose of this study is to examine the impact of AI on decisions to borrow funds through an online Fintech application. This study also includes self-control as an intervening variable in the relationship between perceptions of AI innovation and online FinTech. In addition, we also tested the effect of lifestyle, impulsive buying, and hedonism on loan decisions in online FinTech applications with self-control as an intervening variable. The sample is 150 online FinTech application users in the DKI Jakarta area. This study collected primary data with questionnaires. The analytical method used to test the hypothesis is path analysis. The results show that there is a direct effect of AI, lifestyle, impulsive buying, and hedonism on borrowing decisions in online FinTech applications. The result shows a direct and indirect effect of AI on the decision to loan in online FinTech. Lifestyle and impulsive buying have a positive effect on the decision to use online FinTech. Hedonism also positively affects borrowing decisions in online FinTech. Self-control links AI, lifestyle, impulsive buying, and hedonism. The direct effect is greater than the indirect effect.All papers must include an abstract and a set of index terms. The Abstract and Index Terms text must be 10 point Times New Roman, fully justified and contained within one paragraph. Begin the Abstract with the word Abstract - in Times New Roman italic. The entire Abstract should be in bold. Do not indent. Use a standard dash after the word "Abstract." Do not cite references or use abbreviations in the abstract. It should be approximately 125 - 175 words. A copy of this abstract will be copied and included in the conference program book so please follow these guidelines to ensure every presentation will have an abstract in the program book.**

Index Terms - artificial intelligence, lifestyle, impulsive buying, hedonism, self-control, online FinTech loan application

INTRODUCTION

Technological innovation has been the basis for the transformation of the financial services industry (Karagiannaki, Angeliki; Vergados, Georgios; and Fouskas, Konstantinos, 2017; Helmi Muhammad, 2020). It is ready to drive the next wave of WEF financial services innovation (2016). One form of this transformation in financial industry innovation is financial technology (FinTech) (Frame et al., 2018). The FinTech industry is increasing worldwide amid the digital revolution 4.0 by offering innovative services in the banking industry and financial institutions (Peter Gomber, Robert J. Kauffman, Chris Parker, Bruce W. Weber. 2018). The FinTech industry is growing because of the strict rules and limitations of traditional banking and financial institutions in serving people in certain areas (David VAarga, 2017; Helmi Muhammad, 2020). Customers' preferences for alternative financing are now changing to a more democratic, efficient, and transparent direction, thereby reaching a wider community (Yingying Zhang-Zhang, Sylvia Rohlfer, Jay Rajasekera. 2020).

This progress, which is seen as an innovative disruption, has changed how people engage in social interactions and personal relationships. Users of cellular telephones (cellphones) in Indonesia may even be much more than those who have access to electricity or clean water (World Bank. 2016). Digital technology innovation has penetrated almost all aspects of the life and economy of Indonesia, such as transportation, health, education, retail, hotels, and finance.

New innovations in technology and the financial services industry are reflected in FinTech (Zavolokina, Liudmila; Dolata, Mateusz; Schwabe, Gerhard. 2017). The interest of many parties at various levels in Indonesia, such as decision-makers, academics, financial business practitioners, and FinTech users, in FinTech is increasing. This increased interest is also about various negative issues of FinTech innovation that affect various business activities (Ryan Randy Suryono, Indra Budi, and Betty Purwandari. 2020).

In the digital industrial revolution 4.0, several technologies are changing industries to digital-ready industries (Zavolokina, Liudmila; Dolata, Mateusz; Schwabe, Gerhard. 2017). The digital industry 4.0 comprises the internet of things and physical technology in analytical, manufacturing, robotics, (Saurabh Vaidyaa, Prashant Ambadb, Santosh Bhosle .2018) advanced computing, artificial intelligence (AI), cognitive technology, advanced materials, and augmented reality in carrying out the business operation cycle Shu Ing Tay, Lee Te Chuan, A. H. Nor Aziati, Ahmad Nur Aizat Ahmad; 2018).

Technological developments affect many sectors, such as communication and medicine. One of the developments in the financial sector is the use of gadgets (Brookings, 2020). This development has an impact on the economy and people's lifestyle. According to the National Digital Research Center (NDRC), FinTech is an innovation in the financial sector that makes it easier for users to conduct financial transactions. FinTech can be used for buying and selling shares, payments, peer-to-peer lending, fund transfers, retail investment, and financial planning (personal finance). Based on APJII's survey data, internet users' penetration in 2019–2020 is 196.71 m out of the 266.91 m people in Indonesia.

One of the advances in finance is the adaptation of FinTech, which comes from the term financial technology. According to the NDRC, FinTech is an innovation in the financial sector. This financial innovation has a touch of modern technology. FinTech can bring about a more practical and safer financial transaction process. An example of a financial service platform offered by FinTech is online loans. Online loan business practices (P2P lending) connect lenders and borrowers.

The difference between FinTech and FinTech lending lies in the financial services industry. FinTech is general and is not limited to a particular financial services industry, but FinTech lending is limited to financial service innovations in lending and borrowing transactions. A FinTech lending operator can be either a legal entity or a cooperative. These legal entities or cooperatives have a system they use to carry out lending and borrowing transactions online through applications or websites. FinTech lending organizers must get a registered trademark before carrying out their operational activities. No later than a year after getting a registered trademark, the organizers are required to apply for a license from the OJK. As many as 149 FinTech lending companies were registered with the OJK as of December 28, 2020, and as many as 149 companies and 51 FinTech lending companies were illegal (Tirto.co.id, 2021).

Peoples' decision to borrow money through online FinTech lending is influenced by their perception of AI technology. The decision to apply for a loan through FinTech is related to reasoning. One of the definitions of AI refers to the reasoning process (Pomerol, 1996). Before making decisions, people reason, so this study includes AI as a factor that influences people to acquire loans through online FinTech, which has not been researched before.

AI is a computer science technology that incorporates human intelligence into machines (computers) to solve various problems and handle various tasks. AI is an intelligent machine that is capable of completing repetitive and monotonous tasks with greater accuracy and shorter time than humans (ICAEW, 2017). AI is simulations in machines programmed to resemble human intelligence processes and imitate human actions. The system can now think systematically and more quickly like humans and generate output immediately. These processes are included in learning (acquisition of information and the rules for using information), reasoning (using rules to arrive at a definite estimate of conclusions), and perception. The presence of this technology has eliminated and narrowed some jobs in companies.

FinTech is a cross-disciplinary subject that comprises finance, technology management, and innovation management (Kelvin Leong & Anna Sung, 2018). Lifestyle is how people live, including how they use their money and time. Lifestyle comprises how people spend their time (activities), what they consider important in their environment (interests), and what they think about themselves and their world.

Impulse buying is defined as the act of buying in which the purchase intention was not consciously thought of before entering a store. Emotional consumers often do not think rationally in their purchasing decision-making process; they often shop more than initially planned. Some people even buy things that are not on their shopping list. This purchasing behavior indicates that Indonesians like to buy unplanned products (Habib, 2018).

Currently, most consumers in Indonesia are more oriented towards recreation when shopping. This change is the same for consumers that engage in hedonic shopping, which is shopping to experience joy and happiness. Hedonic shopping value reflects the direct emotional benefits of a shopping experience, such as having fun and new things. Hedonic consumption includes aspects of behavior related to multi-sensory, fantasy, and emotional consumption that are controlled by benefits, such as pleasure in using products and aesthetic approaches. Self-control is the ability to guide one's behavior and suppress impulsive behavior. Thus, self-control is an individual's ability to direct his behavior to reduce or avoid behavior that is detrimental to him/her (Chaplin, 2015).

AI's development is consistent with the growth of new businesses (start-ups), such as FinTech in the accounting sector. Online loan applications have increased, especially during the COVID-19 pandemic, so it cannot be denied that people's lifestyles have changed, making it easier to meet their needs through online transactions. This situation also increases impulse buying when shopping online, and it is supported by hedonic shopping value, i.e., the feeling of joy and happiness from an online shopping experience. This experience requires strong self-control in order not to be trapped in a consumptive attitude.

Amid the current COVID-19 pandemic, the potential for online loan providers to experience bad debt is quite enormous. The potential can be seen from the Pay Success Rate (TKB90) of FinTech, which fell to 95.78 percent in March 2020. FinTech statistics reported by the Financial Services Authority (OJK) revealed that FinTech TKB90 experienced a downward trend. At the end of 2018, TKB90 reached 98.55 percent, falling to 96.35 percent in December 2019, and then to 95.78 percent in the first quarter of 2020 or the COVID-19 season. The COVID-19 pandemic has affected many business sectors, including the financial services sector, which includes FinTech. He admits that loan disbursements have declined; however, some members are experiencing loan growth. According to the OJK data, as of March 2020, online loans had reached IDR 14.79 trillion, increasing by 90 percent over last year's. This figure has also increased since December 2018, which amounted to IDR5.04 trillion and December 2019 amounted to IDR 13.16 trillion.

Moreover, as of March 2020, accumulated loan disbursement was IDR 102.53 trillion, increasing by 208.83 percent over last year's. This amount is more than the borrower's accounts of 24.15 million people. The number of borrowers increased by 246.99 percent over last year's. Moreover, the total accumulated lender accounts reached 640.23 thousand in March 2020. The Investment Alert Task Force found 81 illegal peer-to-peer (P2P) lending FinTech or online loan companies that offered loans to the public throughout April 2020, amid the spread of COVID-19. The total illegal P2P lending companies that the Investment Alert Task Force identified from 2018 to April 2020 is 2,486 entities. The head of the Investment Alert Task Force, Tongam L. Tobing, revealed that the loan offered by illegal FinTech P2P lending entities is very detrimental to the public. The problem is that the company often charges high interest for a short period. Therefore, he asked the public to be more careful with offers made by P2P lending FinTech companies that have not received permission from the OJK. Moreover, during a pandemic, many companies take advantage of the deteriorating economic situation. A preliminary study shows that hedonism has a positive and significant effect on purchasing decisions. However, lifestyle and impulsive buying have a negative effect on self-control (Anak Agung, 2018).

Research on the impact of AI on decisions to borrow funds through FinTech has not been conducted yet. Although it has received a lot of attention from both the scientific community and the public, it is often assumed that AI has many positive impacts on various social and economic domains. However, there are growing concerns about the impact of AI on society and individuals. Due to the different perceptions about the potential threats of AI innovation and FinTech applications, it is essential to measure these two variables. We propose a new model to measure online FinTech users in Jakarta's perception of AI, which is the main contribution of this research.

This research is expected to provide additional information and develop the theory about the influence of AI, lifestyle, impulsive buying, and hedonism on loan decisions in online FinTech applications with self-control as an intervening variable. It also relates to accounting information systems, FinTech, as well as business and professional ethics. This research is expected to help consumers to make borrowing decisions on online FinTech applications. Moreover, companies engaged in online FinTech applications are expected to maintain and increase their user's and public trust in them. We hope that this research will improve the quality of self-control in making lending decisions on online FinTech applications and increase their ability to make wise decisions. Responding to AI development, minimizing lifestyle and impulsive buying, and balance in expressing pleasure in shopping online (hedonism).

LITERATUR REVIEW

2.1. Loan Decisions in Online FinTech Applications

2.1.1. FinTech

One of the most recent technological developments in Indonesia is FinTech. This industry is a financial service method that is gaining popularity in today's digital era. Moreover, digital payments are one of the most developed sectors in Indonesia's FinTech industry. The governm 13 and society expect this sector to significantly increase the number of people who have access to financial services. The Bank of Indonesia has registered and grouped FinTech companies into several categories, including payment systems, market support, investment and risk management, loans, financing, capital provision, and other financial services. The FinTech category with most transactions is payment system (32%), and the least is personal finance.

The difference between FinTech and FinTech lending lies in the financial services industry. FinTech is general and is not limited to a particular financial services industry. However, FinTech lending is limited to financial service innovations in lending and borrowing transactions. A FinTech lending operator can be either a legal entity or a cooperative. These legal entities or cooperatives have a system they use to carry out lending and borrowing transactions online through applications or websites (Tirto.co.id, 2021).

2.1.2. Online Fintech Lending Decisions

A decision is a choice among alternatives. This definition comprises three elements, which are as follows:

1. there is a choice based on logic or reason
2. there are several alternatives to choose from
3. there is a goal to be achieved and the decision is getting closer to that goal.

Decision making is a process of making a choice to solve problems. Thus, decision making is a process of selecting the best alternative from several alternatives systematically to solve problems. One type of FinTech that is growing quite rapidly, getting public attention, and regulated by the Financial Services Authority and the Bank of Indonesia is peer-to-peer lending. This type of FinTech is a lending and borrowing activity between individuals. Peer-to-peer lending has been running in different forms, often in the form of formal agreements. There are various types of platforms, products, and technologies for analyzing credit. Borrowers and lenders do not meet physically and often do not know each other; peer-to-peer lending is not the same and cannot be categorized as traditional financial institutions.

Financial service providers are working to adopt AI for automation of mundane tasks, consistent customer service, in-depth behavioral analysis, and efficient fraud discovery (Deloitte, 2010). They also need to manage the risks and concerns that arise along the transformation journey (Deloitte, 2020).

2.2. AI

AI is simulations in machines programmed to resemble human intelligence processes and mimic human actions. The system can now think systematically and more quickly as humans to generate output immediately. These processes include learning (acquiring information and the rules for using information), reasoning (using rules to arrive at a definite estimate of conclusions), and perception. The presence of this technology has eliminated and narrowed some jobs in companies. This study explores the relationship between AI and users of online FinTech lending decisions; this has not been studied before. Referring to the opinion of Pomerol (1996) that in making decisions, a person will make a diagnosis and foresight. Pomerol (1996) also stated that AI has a lot to do with case-based reasoning diagnosis although sometimes it does not consider the uncertainties and preferences.

2.3. Lifestyle

Lifestyle is how people live and how they spend their money and time. Lifestyle measures how humans spend their time, their interest in what is considered necessary, their views of both themselves and others, the essential experiences they have passed through in life, their income, education, and where they live (Ratih Hurruyati, 2015).

Lifestyle is a way of life, which comprises how people spend their time (activities), what they consider important in their environment (interests), and what they think about themselves and the world around them (opinions). The lifestyle of a community is different from that of other communities. Lifestyle is dynamic, implying that from time to time, the lifestyle of a particular individual and community changes. However, lifestyle does not change quickly, so at a particular time, the lifestyle of a community is relatively permanent. Lifestyle defines a consumptive pattern that defines how people spend their time and money. In an economic sense, lifestyle represents how individuals choose to allocate income for various products and services. Other differences that are somewhat similar describe consumers in terms of their consumption patterns, such as distinguishing people based on the size of their total expenditure on food or sophisticated technology or information-intensive goods, such as entertainment and education (Solomon, 2009). Others are at the bottom of the economic ladder (strugglers). They are mostly concerned about making ends meet and have a limited ability to acquire anything beyond the essential items needed to survive.

In this study, three new psychographic measures of lifestyle, which are activities, interests, and opinions, are used. The lifestyle indicators are explained below:

1) Activities are what consumers do, the products they buy or use, and what they do in their spare time. Although these activities can usually be observed, the reasons for their actions can hardly be measured directly.

2) Interest suggests the likes, hobbies, and priorities of a consumer.

3) Opinion revolves around consumers' views and feelings in response to global and local economic and social issues. Opinions are used to describe interpretations, expectations, and evaluations, such as beliefs about others' intentions, the anticipation of future events, and weighing the consequences, the reward or punishment, of the course of alternative actions (Solomon, 2009).

2.4. Impulsive Buying

Impulsive buying is defined as the act of buying in which the purchase intention was not consciously thought of before entering a store. Shopping is a fun activity for most people, so for some people, it is difficult to separate shopping habits from them. For others, their spending habits changes. People make purchases not only based on their needs but also because they want to fulfill the desires that arise within them. This shopping activity is called a purchase based on impulsivity, or the process of buying an item, where the buyer has no prior intention to buy; thus, it is purchasing without a plan or an instant purchase (Intan Ayu, 2020).

2.5. Hedonism

Hedonic comes from the Greek word "hedon," which means pleasure or enjoyment. Hedonic value is the overall value a consumer receives based on the fulfillment of pleasure. There are six dimensions of measuring a consumer's hedonic level, which are as follows:

1. Adventure: consumers shop because of experience, and by shopping, consumers feel like they are in charge of their world.
2. Social shopping: consumers assume that shopping enjoyment will be created when they spend time with family or friends. Some consumers feel that shopping is a socialization activity between consumers and employees who work in outlets. Consumers also assume that they will get much information about products to be purchased by shopping with family or friends.
3. Gratification shopping: consumers perceive that shopping is an alternative to reduce stress over bad problems and forget about their problems.
4. Idea shopping: consumers shop to follow new fashion trends and see new products or things through the mass media.
5. Role shopping: consumers prefer shopping for other people than for themselves; consumers feel that shopping for other people is fun.
6. Value shopping: consumers consider shopping as a game when bargaining prices, or when consumers are looking for places to shop that offer discounts, sales, or low prices (Intan Ayu, 2020).

2.6. Self-control

Self-control is regulating a person's physical, psychological, and behavioral processes or a series of processes that affect them. Self-control is a personality trait that can influence buying decisions (Savitri Aprilyana Putri, 2017).

Based on the description above, the indicators of self-control are as follows:

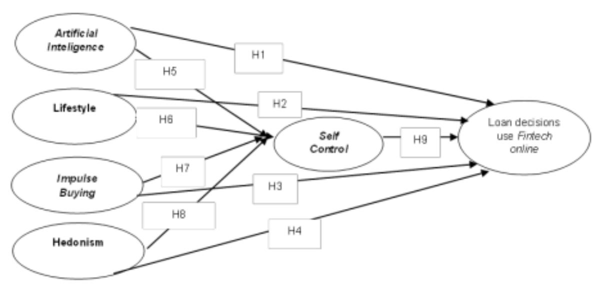
1. The ability to directly respond to an unpleasant situation or anticipate it immediately.
2. The ability to process unwanted information by assessing or linking an event to reduce pressure.
3. Someone can choose a result of action based on something that they believe.

2.7. Research Framework and Hypotheses

The framework used in this study, present in the Figure 1. which describes the relationship between the independent and dependent variables. Several problems are associated with online loans, such as the emergence of illegal online loans, which made the Financial Services Authority block 947 FinTech lending entities and unauthorized peer-to-peer lending. When viewed from a business ethics perspective, online loan activities can be done by maintaining mutual trust, which significantly influences a company's reputation. However, if the company is illegal, it can lead to criminal acts, such as fraud, money laundering, or consumer data misuse. This condition is triggered by many people who do not know about the FinTech business. Personality variables proposed affect impulse buying tendency. This study also test the self-control as the mediation between artificial intelligent and Personality variables on loan decisions in online FinTech applications behavior.

The following hypotheses are proposed:

H1: AI affects loan decisions in online FinTech applications
H2: Lifestyle affects loan decisions in online FinTech applications
H3: Impulsive buying affects loan decisions in online FinTech applications
H4: Hedonism affects loan decisions in online FinTech applications
H5: AI affects self-control
H6: Lifestyle affects self-control
H7: Impulsive buying affects self-control
H8: Hedonism affects self-control
H9: Self-control affects loan decisions in online FinTech applications



METHODE

3.1. Research Methods

This study uses a causal research method to test the effect of AI innovation, lifestyle, impulsive buying, and hedonism on online FinTech loan application decisions. We add self-control as an intervening variable. Statistical tests were used to test the hypotheses.

The AI variable is the respondents' perception of using AI innovations in online loan applications. This variable is measured with six indicators.

The decision to borrow through an online FinTech application is measured by the respondents' experiences of using the application.

The lifestyle variable is a person's way of life, which is seen from the priority of their spending. Impulsive buying is the behavior of online buyers who often do not plan before buying through online applications, and hedonism is a characteristic of online buyers that is inherent in consumer behavior. These three variables are measured by their perception of making online purchase transactions.

In this study, self-control is defined as a person's ability to control him/herself when there is an attractive offer while shopping online, but the offer is not a necessity. This variable connects perceptions of AI innovation, lifestyle, impulsive buying, and hedonism and online FinTech loan application decisions.

3.2. Population and Sample

The population in this study are users of online FinTech loan applications (e.g., friend money, innovative credit, KTAKilat, fast credit, and community capital) in DKI Jakarta. This study uses the convenience sampling technique by distributing questionnaires to online-based loan FinTech users in the DKI Jakarta area. The study sample is FinTech online loan application users that meet the criteria. We followed Hair et al. in determining the number of representative samples (Hair et al, 2018). The required sample size is 5–10 times the number of parameters. With the number of research parameters, which is 30 in this study, the ideal number of respondents is 100–200 respondents. Based on the calculation of the construct indicator 30 x 5, the minimum sample is 150 respondents.

3.3. Data Analysis Methods

Path analysis is an analytical technique used to analyze the inherent causal relationship between variables arranged based on temporary order by using path coefficient as a value in determining the influence of exogenous independent variables on endogenous dependent variables. Path analysis with the structural equation model was used to test the hypotheses; it is as present in figure 2. As follows:

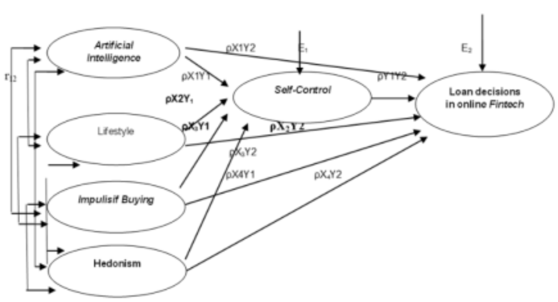


Figure 2.

$$Y1 = \rho X1Y1X1 + \rho X2Y1X2 + \rho X3Y1X3 + \rho X4Y1X4 + \rho\varepsilon 1Y1$$

$$Y2 = \rho X1Y2X1 + \rho X2Y2X2 + \rho X3Y2X3 + \rho X4Y2X4 + \rho Y1Y2Y1 + \rho\varepsilon 2Y2$$

The variables in the above equations are described below:

ρX1Y1: Standardized path coefficient of the direct influence of X1 on Y1

ρX2Y1: Standardized path coefficient of the direct influence of X2 on Y1

ρX3Y1: Standardized path coefficient of the direct influence of X3 on Y1

ρX4Y1: Standardized path coefficient of the direct influence of X4 on Y1

ρX1Y2: Standardized path coefficient of the direct influence of X1 on Y2

ρX2Y2: Standardized path coefficient of the direct influence of X2 on Y2

ρX3Y2: Standardized path coefficient of the direct influence of X3 on Y2

ρX4Y2: Standardized path coefficient of the direct influence of X4 on Y2

ρY1Y2: Standardized path coefficient of the direct influence of Y1 to Y2

ε1: The magnitude of the influence of other variables

ε2: The magnitude of the influence of other variables

X1: AI

X2: Lifestyle

X3: Impulsive buying

X4: Hedonism

Y1: Self-control

Y2: Users of online FinTech loan applications decisions

All papers must use the following layout:

RESULT AND ANALYSIS

4. Analysis of Results

Table 1 present the statistic of the sample data.

Table 1. Descriptive Statistic

	N	Minimum	Maximum	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic
Artificial intelligence	150	11.00	30.00	28.3312	3.74346
Lifestyle	150	5.00	20.00	17.1211	2.82391
Impulsive buying	150	8.00	22.00	20.3524	2.62621
Hedonism	150	5.00	25.00	23.2816	3.55133
Self-control	150	5.00	20.00	18.1112	2.24346
Loan decisions in *online Fintech*	150	12.00	30.00	29.2116	3.97138

Valid N (listwise)	150

4.1. Path Analysis Model 1

The coefficient of the path analysis of Model 1 is 0.540, implying that 54% of self-control can be explained by AI, lifestyle, impulsive buying, and hedonism. Moreover, the amount of variance of self-control that AI, lifestyle, impulsive buying, and hedonism cannot explain or is influenced by other variables is 0.460. The F statistical test results of the path analysis of Model 1 are an F value of 3.451 and a probability value (sig) of 0.000. Because the significance value is <0.05, it means that the path analysis coefficient is significant, so an individual test (t) can be carried out.

Table 2. T-test Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.112	3.312		1.995	0.001
	Artificial Intelligence	0.894	0.686	0.448	1.991	0.041
	Lifestyle	0.781	0.555	0.411	1.887	0.038
	Impulsive buying	0.815	0.621	0.466	1.812	0.026
	Hedonism	0.653	0.443	0.429	1.923	0.047

a. Dependent variable: *Self-control*

4.1.1. The Effect of AI on Self-control of Users of Online Fintech Loan Applications Decisions

AI is simulations in machines programmed to resemble human intelligence processes and mimic human actions. The system can now think systematically and more quickly as humans to generate output immediately. Self-control is regulating a person's physical, psychological, and behavioral processes or a series of processes that shape them. Self-control is a personality trait that can influence buying decisions. This study's results indicate that the development and use of AI technology affect the self-control of users of online FinTech lending applications. This result is not consistent with that of Intan Ayu (2020).

4.1.2. The Effect of Lifestyle on Self-control of Users of Online FinTech Loan Applications Decisions

Lifestyle is how people live and how they spend their money and time. Lifestyle measures how humans spend their time, their interest in what is considered necessary, their views of themselves and others, the essential experiences they have passed through in life, income, education, and where they live. This study indicates that lifestyle affects the self-control of users of online FinTech lending applications in the DKI Jakarta area. This result is not consistent with that of Ratih Dewi (2020). The results show that lifestyle has a positive and significant effect on consumers' online shopping behavior. Moreover, self-control and financial literacy have a negative and significant effect on consumers' online shopping behavior.

4.1.3. The Effect of Impulsive Buying on Self-control of Users of Online Fintech Loan Applications Decisions

Impulsive buying is defined as the act of buying in which the purchase intention was not consciously thought of before entering a store. Self-control is regulating a person's physical, psychological, and behavioral processes or a series of processes that shape them. Self-control is a personality trait that can influence buying decisions. This study indicates that impulsive buying affects the self-control of users of online FinTech lending applications in the DKI Jakarta area. This result is not consistent with that of Intan Ayu (2020). The results show that religiosity has a partial negative and insignificant effect on purchasing decisions, and impulsive buying does not affect purchasing decisions. However, hedonism has a positive and significant effect on purchasing decisions. Price and lifestyle do not affect purchasing decisions. Moreover, lifestyle, impulsive buying, and religiosity do not affect self-control. Hedonism and price have a positive and significant effect on self-control. Self-control has a negative and insignificant effect on purchasing decisions.

4.1.4. The Effect of Hedonism on Self-control of Users of Online Fintech Loan Applications Decisions

The hedonic value is the overall satisfaction of a consumer based on the fulfillment of pleasure. Self-control is regulating a person's physical, psychological, and behavioral processes or a series of processes that shape them. Self-control is a personality trait that can influence buying decisions. The results of this study indicate that hedonism affects the self-control of users of online FinTech loans applications in the DKI Jakarta area. This result is consistent with that of Intan Ayu (2020). However, this result is not inconsistent with that of Fahtia Nur Azizah et al. (2015). The results show that there is a negative and significant relationship between self-control and a hedonic lifestyle among students of the Faculty of Economics and Business, Diponegoro University (r = 0.480; p < 0.001). The higher the student's self-control, the lower the hedonic lifestyle, and the lower their self-control, the higher their hedonic lifestyle. The practical contribution of self-control to a hedonic lifestyle is 23%.

4.2. Path Analysis Model 2

The coefficient of the path analysis of Model 1 is 0.635, implying that 63.5% of users of online FinTech loan application decisions in the DKI Jakarta area can be explained by AI, lifestyle, impulsive buying, hedonism, and self-control. Moreover, the variance of users of online FinTech loan application decisions in the DKI Jakarta area that those variables cannot explain or are influenced by other variables is 0.365 or 36.5%. The F statistical test results for the path analysis of Model 2 are an F value of 5.224 and a probability value (sig) of 0.002. Because of the significance value <0.05, it means that the path analysis coefficient is significant, so an individual test (t) can be carried out.

4.2.1. The Effect of AI on Users of Online FinTech Loan Applications Decisions

AI is simulations in machines programmed to resemble human intelligence processes and mimic human actions. The system can now think systematically and more quickly as humans to generate output immediately. Decision making is a process of selecting the best alternative from several alternatives systematically to be used to solve problems. The difference between FinTech and FinTech lending lies in the financial services industry. FinTech is general and is not limited to a particular financial services industry. However, FinTech lending is limited to financial service innovations in lending and borrowing transactions. A FinTech lending operator can be either a legal entity or a cooperative. These legal entities or cooperatives have a system they use to carry out lending and borrowing transactions online through applications or websites. This study's results indicate that the development and use of AI technology affect online FinTech lending decisions.

4.2.2. The Effect of Lifestyle on Users of Online FinTech Loan Applications Decisions

Lifestyle is how people live and how they spend their money and time. Lifestyle measures how humans spend their time, their interest in what is considered necessary, their views of both themselves and others, the essential experiences they have passed through in life, their income, their education, and where they live. Decision making is a process of selecting the best alternative from several alternatives systematically to use to solve problems. The difference between FinTech and FinTech lending lies in the financial services industry. FinTech is general and is not limited to a particular financial services industry. However, FinTech lending is only limited to financial service innovations in lending and borrowing transactions. A FinTech lending operator can be either a legal entity or a cooperative. These legal entities or cooperatives have a system they use to carry out lending and borrowing transactions online through applications or websites. This study indicates that lifestyle influences loan decisions use online FinTech in the DKI Jakarta area. This result is consistent with that of Nadia et al. (2019). The research was conducted using a questionnaire method and interviews with students using an "installment application." This application makes it easy for students who want to borrow funds for their school activities or buy goods online but do not have enough funds. They can make payments in installments with a certain amount of interest, depending on the length of the period the student chooses. The use of installments, which attract students' interest, affects the behavior of these students, both positively and negatively. Thus, this study aims to analyze the use of installment application, which can impact consumptive life habits.

4.2.3. The Effect of Impulsive Buying on Users of Online FinTech Loan Applications Decisions

Impulsive buying is defined as the act of buying in which the purchase intention was not consciously thought of before entering a store. Decision making is a process of selecting the best alternative from several alternatives systematically to solve problems. The difference between FinTech and FinTech lending lies in the financial services industry. FinTech is general and is not limited to a particular financial services industry. However, FinTech lending is only limited to financial service innovations in lending and borrowing transactions. A FinTech lending operator can be either a legal entity or a cooperative. These legal entities or cooperatives have a system they use to carry out lending and borrowing transactions online through applications or websites. This study indicates that impulsive buying affects users of online FinTech loan applications decisions in the DKI Jakarta area. This result is consistent with that of Anak Agung et al. (2018). The results show that each personality and shop enjoyment variable positively and significantly affect impulse buying tendency. This study also concludes that impulse buying tendency has a significant positive effect on impulse buying behavior. Moreover, impulse buying tendency significantly mediates the relationship between personality and impulse buying behavior and shop enjoyment. This also study finds that each personality variable and shop enjoyment positively and significantly affect impulse buying behavior.

4.2.4. The Effect of Hedonism on Users of Online FinTech Loan Applications Decisions

Hedonic or enjoyment value is the overall satisfaction of a consumer based on the fulfillment of pleasure. Decision making is a process of selecting the best alternative from several alternatives systematically to solve problems. The difference between FinTech and FinTech lending lies in the financial services industry. FinTech is general and is not limited to a particular financial services industry. Moreover, FinTech lending is only limited to financial service innovations in lending and borrowing transactions. A FinTech lending operator can be either a legal entity or a cooperative. These legal entities or cooperatives have a system they use to carry out lending and borrowing transactions online through applications or websites. This study finds that hedonism affects users of online FinTech loan applications in the DKI Jakarta area. This result is consistent with that of Anak Agung et al. (2018). The results show that each personality and shop enjoyment variable positively and significantly affect impulse buying tendency. This study also finds that impulse buying tendency has a significant positive effect on impulse buying behavior. Moreover, impulse buying tendency also significantly mediates the relationship between personality and impulse buying behavior and shop enjoyment. This study also finds that each personality variable and shop enjoyment positively and significantly affect impulse buying behavior.

4.2.5. The Effect of Self-control on Users of Online FinTech Loan Applications Decisions

Self-control is regulating a person's physical, psychological, and behavioral processes or a series of processes that shape them. Self-control is a personality trait that can influence buying decisions. Decision making is a process of selecting the best alternative from several alternatives systematically to solve problems. The difference between FinTech and FinTech lending lies in the financial services industry. FinTech is general and is not limited to a particular financial services industry. Moreover, FinTech lending is only limited to financial service innovations in lending and borrowing transactions. A FinTech lending operator can be either a legal entity or a cooperative. These legal entities or cooperatives use a system to carry out lending and borrowing transactions online through applications or websites. This study indicates that self-control does not affect users of online FinTech lending applications decisions in the DKI Jakarta area. This result is consistent with that of Intan Ayu (2020).

The path analysis test shows that the direct effect of AI, lifestyle, impulsive buying, and hedonism on users of online FinTech applications through self-control is greater than the indirect effect. This result proves that users of online FinTech lending applications in the DKI Jakarta area cannot exercise high self-control consumptive behavior, which affects their loan decisions.

CONCLUTIONS

Perceptions of AI innovation in FinTech applications are important because applications that use AI technology are increasing in various domains of society. There are some opinions that AI can harm people's trust in online FinTech applications. Research on the perception of threats from various AI innovation systems and FinTech applications is interesting. The results of this research have implications for technological developments.

The path analysis test shows that the direct effect of AI, lifestyle, impulsive buying, and hedonism on users of online FinTech loan applications through self-control is greater than the indirect effect.

The public must understand the risks of online FinTech loan applications before deciding to use them. There are several things we should know about FinTech lending. Nothing in this world is free from risk, big or small; there are risks involved, including online loans. These risks need to be considered when deciding to use an online Fintech lending application.

The following recommendations are proposed:

1. Online loan providers (FinTech lending) should provide transparent socialization and information to online lending users (FinTech lending). Regulators should ensure that people are not deceived by illegal online lending companies (FinTech lending) and improve product services so that FinTech can be easy and safe to use.
2. Future research can examine other variables that influence users of online FinTech loan applications decisions to arrive at a more robust conclusion about public opinion of online loans (FinTech lending).

REFERENCES

[1] Aaron, M., Rivadeneyra, F., Sohal, S., and Bank of Canada Staff Discussion Paper (2017). Fintech: Is this time different? A framework for assessing risks and opportunities for central banks (Working Paper No. 2017-10). Bank of Canada Staff Discussion Paper website. https://www.econstor.eu/handle/10419/200480

[2] Anak Agung, dkk. 2018. "Pengaruh Personality Dan Shop Enjoyment Terhadap Impulse Buying Behavior Yang Dimediasi Impulse Buying Tendency". E-Jurnal Manajemen Unud, Vol. 7, No. 6, 2018: 3320-3352 ISSN : 2302-8912

[3] Deloitte.2021. FinTech How is AI changing the financial services industry? Article. https://www2.deloitte.com/cn/en/pages/financial-services/articles/fintech-how-ai-is-changing-the-financial-services-industry.html

[4] Kimon Kieslich, Marco Lünich, Frank Marcinkowski. 2020. The Threats of Artificial Intelligence Scale (TAI). Development, Measurement and Test Over Three Application Domains. International Journal of Social Robotics. https://doi.org/10.1007/s12369-020-00734-w

[5] Pomcrol. J.-Ch. (1996). Artificial Intelligence And Human Decision Making. European Journal of Opcmtional Research 99 (1997) 3-25

[6] Wirtz BW, Weyerer JC, Geyer C (2019) Artificial intelligence and the public sector–applications and challenges. Internatopnal Journal of Public Administration 42:596–615. https://doi.org/10.1080/01900692.2018.1498103

[7] Bourne C (2019) AI cheerleaders: public relations, neoliberalism and artificial intelligence. Public Relat Inq 8:109–125. https://doi.org/10.1177/2046147X19835250

[8] Katz Y (2017) Manufacturing an artificial intelligence revolution.SSRN Electron J https://doi.org/10.2139/ssrn.3078224

[9] Habib, M. D., & Qayyum, A., 2018,. Cognitive Emotion Theory and Emotion-Action Tendency in Online Impulsive Buying Behavior. Journal of Management Sciences, 5(1), 86-99. doi:10.20547/jms.2014.1805105

[10] Araujo T, Helberger N, Kruikemeier S, de Vreese CH (2020) In aiwe trust? Perceptions about automated decision-making by artificial intelligence. AI Soc. https://doi.org/10.1007/s00146-019-00931-w

[11] Zhang B, Dafoe A (2019) Artificial intelligence: American attitudes and trends. SSRN Electron J 122:122. https://doi.org/10.2139/ssrn.3312874

[12] Muhammad Afdi Nizar, 2017. Teknologi Keuangan (Fintech) : Konsep dan Implementasinya di Indonesia. Warta Fiskal Edisi #5. https://www.researchgate.net/publication/323629323

[13] Raden Ani, dkk. 2019 "Praktik Finansial Teknologi Ilegal Dalam Bentuk Pinjaman Online Ditinjau Dari Etika Bisnis" Jurnal Pembangunan Hukum Indonesia Volume 1, Nomor 3, Tahun 2019 Fakultas Hukum Universitas Diponegoro

[14] Ratih Dewi. 2020. "Pengaruh Life Style, Self Control Dan Financial Literacy Terhadap Perilaku Konsumtif Mahasiswa Melakukan Online Shopping". Equilibrium: Jurnal Ekonomi-Manajemen-Akuntansi Volume 16, Nomor 1, April 2020. Hal. 29-36

[15] Frame, W., Wall, L., and White, L. (2018). Technological Change and Financial Innovation in Banking: Some Implications for Fintech. Federal Reserve Bank of Atlanta, Working Papers.

[16] FSB (2017). Financial Stability Implications from FinTech. Financial Stability Board. https://www.fsb.org/2017/06/financial-stability-implications-from-fintech/.

[17] Hadad, M. D. (2017). Financial Technology (FinTech) di Indonesia. http://www.ibs.ac.id/img/doc/MDH%20-%20FinTech%20IBS%20June%202017.pdf.

[18] Romānova, I. and Kudinska, M. (2016). Banking and Fintech: A Challenge or Opportunity? Contemporary Studies in Economic and Financial Analysis. 98, 21–35.

[19] Kelvin Leong and Anna Sung, 2018. FinTech (Financial Technology): What is It and How to Use Technologies to Create Business Value in Fintech Way?. International Journal of Innovation, Management and Technology, Vol. 9, No. 2, April 2018. doi: 10.18178/ijimt.2018.9.2.791

[20] Karagiannaki, Angeliki; Vergados, Georgios; and Fouskas, Konstantinos, "The Impact Of Digital Transformation In The Financial Services Industry: Insights From An Open Innovation Initiative In Fintech In Greece" (2017). MCIS 2017 Proceedings. 2. http://aisel.aisnet.org/mcis2017/2

[21] Peter Gomber, Robert J. Kauffman, Chris Parker, Bruce W. Weber. 2018. On the Fintech Revolution: Interpreting the Forces of Innovation, Disruption, and Transformation in Financial Services. Journal of Management Information Systems 35(1):220-265. DOI: 10.1080/07421222.2018.1440766

[22] David Varga. 2017. Fintech, the new era of financial services. Vezetéstudomány / Budapest Management Review XLVIII. ÉVF. 2017. 11. SZÁM/ ISSN 0133-0179 DOI: 10.14267/ VEZTUD.2017.11.03.

[23] Yingying Zhang-Zhang, Sylvia Rohlfer, Jay Rajasekera. 2020. An Eco-Systematic View of Cross-Sector Fintech: The Case of Alibaba and Tencent. Sustainability 2020, 12, 8907; doi:10.3390/su12218907

[24] World Bank. 2016. "World Development Report 2016: Digital Dividends." Overview booklet. World Bank, Washington, DC. License: Creative Commons Attribution CC BY 3.0 IGO

[25] Zavolokina, Liudmila; Dolata, Mateusz; Schwabe, Gerhard. 2017. FinTech Transformation: How IT-Enabled Innovations Shape the Financial Sector. Conference: International Workshop on Enterprise Applications and Services in the Finance Industry. Lecture Notes in Business Information Processing 276:75-88. DOI: 10.1007/978-3-319-52764-2_6

[26] Ryan Randy Suryono, Indra Budi, and Betty Purwandari. 2020. Challenges and Trends of Financial Technology (Fintech): A Systematic Literature Review. Information 2020, 11, 590; doi:10.3390/info11120590

[27] Shu Ing Tay, Lee Te Chuan, A. H. Nor Aziati, Ahmad Nur Aizat Ahmad. 2018. An Overview of Industry 4.0: Definition, Components, and Government Initiatives. Journal of Advanced Research in Dynamical and Control Systems 10(14):14

[28] Saurabh Vaidyaa, Prashant Ambadb, Santosh Bhosle .2018. Industry 4.0 – A Glimpse. Procedia Manufacturing 20 (2018) 233–238

[29] Konsbruck Robert Lee Route de Chavannes, 27C CH-1007 Lausanne-Vidy Switzerland. Impacts of Information Technology on Society in the new Century

[30] https://www.brookings.edu/research/the-fourth-industrial-revolution-and-digitization-will-transform-africa-into-a-global-powerhouse/#footnote-18 (assessed, 22/04/2021)

THE ROLE OF SELF-CONTROL IN THE IMPACT OF ARTIFICIAL INTELLIGENCE INNOVATION ON LENDING DECISIONS IN ONLINE FINTECH

ORIGINALITY REPORT

4%	1%	3%	1%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Nova Ch. I. Mamuaya, Aditya Pandowo. "The effect of the situational factor, store atmosphere, and sales promotion on hedonic shopping motivation and its implication on supermarket consumer impulsive buying in Manado city", Journal of Business & Retail Management Research, 2018 Publication	1%
2	"Advances in Education and Management", Springer Science and Business Media LLC, 2011 Publication	1%
3	Submitted to Macquarie University Student Paper	<1%
4	www.mdpi.com Internet Source	<1%
5	Submitted to unars Student Paper	<1%

6	www.researchgate.net Internet Source	<1 %
7	Mahsa Darehshiri, Mahdi Ghaemi Asl, Oluwasegun Babatunde Adekoya, Umer Shahzad. "Cross-spectral coherence and dynamic connectedness among contactless digital payments and digital communities, enterprise collaboration, and virtual reality firms", Technological Forecasting and Social Change, 2022 Publication	<1 %
8	journal.uwks.ac.id Internet Source	<1 %
9	repository.fe.unj.ac.id Internet Source	<1 %
10	ijtech.eng.ui.ac.id Internet Source	<1 %
11	stia-saidperintah.e-journal.id Internet Source	<1 %
12	Yanuar Bachrul Aqsony, Santirianingrum Soebandhi, Ani Wulandari. "The Effect of Green Marketing, Brand Image, and Atmosphere Store On Purchasing Decisions In Arei Adventure Store Surabaya 3", Quantitative Economics and Management Studies, 2020 Publication	<1 %

13	pdfs.semanticscholar.org Internet Source	<1%
14	rsepconferences.com Internet Source	<1%
15	Scott A. Desmond, Jeffery T. Ulmer, Christopher D. Bader. "Religion, Self Control, and Substance Use", Deviant Behavior, 2013 Publication	<1%

Exclude quotes	On	Exclude matches	Off
Exclude bibliography	On		