

Uncertain Supply Chain Management

homepage: www.GrowingScience.com/uscm**The effect of financial technology on financial performance in Jordanian SMEs: The role of financial satisfaction****Bashar Younis Alkhalwaldeh^{a*}, Hamzeh Alhawamdeh^a, Mohammad Abdel Mohsen Al-Afeef^a, Arkan Walid Al-Smadi^b, Mohammad Almarshad^c, Baha Aldeen Mohammad Fraihat^d, Mustafa Mohamed Soumadi^c, Maher Nawasra^c and Alrefai A. Alaa^f**^aBusiness faculty, Jerash University, PO. Box 26150, Jordan^bFaculty of Business, Department of Banking and Finance Science, Jearsh University, Jordan, PO.Box 26150, Jearsh, Jordan^cAssociate Professor, Department of Financial and Administrative Sciences, Huson University college, Al-Balqa' Applied University, Jordan^dAssistant professor, department of management sciences, faculty of business, Jerash University, Jordan^eFaculty of Business, Department of Human Resource Management, Jerash University, Jerash, Jordan^fUniversity Sains Malaysia, Malaysia**ABSTRACT***Article history:*

Received March 3, 2023

Received in revised format March 18, 2023

Accepted April 27 2023

Available online

April 27 2023

*Keywords:**Financial Technology**Financial Performance**Financial Satisfaction**SMEs**PLS-SEM*

The research paper investigates the relationship between financial technology (FinTech) adoption, financial satisfaction, and financial performance among consumers in Jordan. The study uses Partial Least Squares-Structural Equation Modeling (PLS-SEM) to analyze data collected from a sample of 500 SMEs in Jordan. The results of the study suggest that FinTech adoption positively affects financial performance, while financial satisfaction mediates the relationship between FinTech adoption and financial performance. The study also found that financial satisfaction has a significant impact on financial performance, suggesting that customers who are satisfied with their financial situation are more likely to achieve better financial performance. In conclusion, the study provides valuable insights into the role of financial satisfaction as a mediator in the relationship between FinTech adoption and financial performance, highlighting the importance of understanding the factors that influence customer satisfaction and the adoption of FinTech services in the financial industry. These findings have implications for financial service providers and policymakers in Jordan, as well as in other countries with similar economic and social conditions, where the adoption of FinTech is rapidly increasing.

© 2023 Growing Science Ltd. All rights reserved.

1. Introduction

The emergence of fintech has brought about a paradigm shift in the financial industry, leading to new business models and innovative solutions. Fintech refers to a range of technological solutions that aim to improve financial processes and customer experience (Manish, & Sergeeva, 2022). Fintech has disrupted traditional financial services, including banking, insurance, and investment, by offering new and innovative products and services that were not possible before. One of the main advantages of fintech is that it has enabled financial institutions to provide faster, cheaper, and more convenient services to their customers (Alhawamdeh & Alsmairat, 2019; Elia et al., 2022). For example, fintech has facilitated the development of mobile banking and digital wallets, which enable customers to perform transactions using their smartphones. This has made banking more accessible and convenient, particularly for people who live in remote areas or have mobility issues. Additionally, fintech has enabled financial institutions to provide more personalized and targeted services to their customers, based on their preferences and behavior. Fintech has also given rise to new players in the market, such as fintech startups and online lenders (Singh et al., 2023). These players have disrupted the traditional financial landscape and have challenged the dominance of established financial institutions. Fintech startups have been able to enter the market with lower overhead costs

* Corresponding author

E-mail address b.khalwaldeh@jpu.edu.jo (B. Y. Alkhalwaldeh)

© 2023 Growing Science Ltd. All rights reserved.

doi: 10.5267/j.uscm.2023.4.020

and more agile business models, enabling them to offer innovative products and services at a lower cost (Al-Hawamdeh, 2020; Rupeika-Apoga, & Wendt, 2022). Moreover, online lenders have been able to use advanced data analytics and machine learning algorithms to provide credit decisions in real-time, thereby enabling faster access to credit for individuals and small businesses. The improved customer experience and satisfaction provided by fintech has led to increased customer loyalty and retention (Ali et al., 2019; Ali et al., 2020; Kemboi, 2022). Financial institutions that have adopted fintech solutions have been able to differentiate themselves from their competitors by offering better services and user experiences. As a result, they have been able to retain their existing customers and attract new ones. This has led to improved customer satisfaction and loyalty, which has ultimately resulted in increased revenue and profitability for financial institutions (Karim et al., 2022). In addition, the emergence of fintech has transformed the financial sector in many ways, including the introduction of new business models and innovative solutions. Fintech has disrupted traditional financial services, leading to improved customer experience and satisfaction. Fintech has also given rise to new players in the market, challenging the dominance of established financial institutions. Fintech has made the financial industry more accessible, convenient, and efficient for customers, and it is likely to continue growing (Gunawardane, 2022). The financial sector in Jordan has seen significant changes in recent years, with the advent of fintech playing a vital role in this transformation. Fintech has disrupted traditional financial services in Jordan, leading to new business models, innovative solutions, and improved customer experiences (Malkawi, & Al-Hawamdeh, 2018; Alkhawaldeh et al., 2020; Haniyi et al., 2020; Mahmood et al., 2020; Lehyeh et al., 2021; Alkhawaldeh, & Mahmood, 2021; Alsoboa, 2022). The use of fintech has allowed financial institutions in Jordan to offer faster, cheaper, and more convenient services to their customers, leading to improved financial performance. Fintech has enabled financial institutions in Jordan to provide a range of services that were previously not possible. For example, mobile banking services allow customers to access banking services from anywhere, anytime, without the need to visit a physical branch (Alsmadi et al., 2023). This has made banking more accessible and convenient for customers, leading to increased satisfaction and loyalty. Additionally, fintech has enabled financial institutions to provide more personalized and targeted services to their customers. Financial institutions in Jordan can now collect and analyze customer data to understand their needs, preferences, and behavior, allowing them to tailor their services to meet specific requirements (Ghaith, & Ghaith, 2022). This has led to improved customer satisfaction, which has resulted in increased loyalty and retention. However, the relationship between fintech, financial performance, and customer satisfaction in Jordan has not been thoroughly explored. This study aims to fill this research gap by examining the effect of fintech on financial performance in Jordan and the mediating role of financial satisfaction in this relationship. The study seeks to explore the relationship between fintech and financial performance, and the extent to which financial satisfaction mediates this relationship. By examining the impact of fintech on financial performance and customer satisfaction in Jordan, this study will provide valuable insights into the benefits of adopting fintech in the financial sector. It will also contribute to the literature on fintech adoption and its impact on financial performance and customer satisfaction. The findings of this study will be relevant not only to financial institutions in Jordan but also to those in other developing countries looking to adopt fintech to improve their financial services. Overall, the use of fintech in the financial sector in Jordan has brought about significant changes, improving the customer experience, financial performance, and inclusivity. However, there is a need for further research to explore the relationship between fintech, financial performance, and customer satisfaction to fully understand the impact of fintech on the financial sector in Jordan. This study aims to provide valuable insights in this regard.

2. Literature Review

2.1 Expectancy Theory

Expectancy Theory is a motivational theory that suggests that an individual's motivation to perform a particular behavior is based on the expectation that the behavior will lead to a desired outcome (Chiu et al., 2022). According to this theory, an individual's motivation to engage in a particular behavior is based on three factors: expectancy, instrumentality, and valence. Expectancy refers to an individual's belief that their efforts will lead to improved performance (Kassim et al., 2022). Instrumentality refers to an individual's belief that improved performance will result in desirable outcomes. Finally, valence refers to the value an individual places on the outcomes that result from improved performance (Nikulina, & Wynstra, 2022). The study mediating Role of financial satisfaction on effect of financial technology on financial performance in Jordan incorporates expectancy theory by examining the impact of financial satisfaction on financial performance. According to this theory, individuals who are satisfied with their financial situation are more motivated to achieve better financial performance. This is because financial satisfaction, which is the valence component of the theory, provides individuals with a positive attitude towards financial performance (Soleimani et al., 2022). The more satisfied an individual is with their financial situation, the more valuable they perceive financial performance to be (Quan et al., 2022). The study also suggests that the impact of financial satisfaction on financial performance may be mediated by other factors, such as FinTech adoption. This suggests that the positive effect of financial satisfaction on financial performance may be strengthened or weakened depending on the level of FinTech adoption. Therefore, the study highlights the importance of considering multiple factors that influence financial performance and the complex relationships between these factors.

2.2 Self-determination Theory

Self-determination Theory is a motivational theory that suggests that individuals are motivated to pursue activities that satisfy their basic psychological needs for autonomy, competence, and relatedness (Hosseini et al., 2022). According to this theory,

individuals are motivated to engage in behaviors that provide them with a sense of control over their lives, the ability to effectively accomplish tasks, and a feeling of social connectedness (Autin et al., 2022). The study mediating the role of financial satisfaction on the effect of financial technology on financial performance in Jordan builds on this theory by examining how financial satisfaction, which may fulfill these basic psychological needs, impacts financial performance. Specifically, the study suggests that individuals who are financially satisfied may feel a greater sense of control over their financial situation, as well as a greater sense of competence in managing their finances (Tahir et al., 2022). Additionally, financial satisfaction may provide individuals with a sense of social connectedness, as they may feel more comfortable discussing their finances with others. These basic psychological needs, when satisfied, can lead to greater motivation to achieve better financial performance. Individuals who feel a sense of control, competence, and social connection may be more motivated to engage in behaviors that lead to improved financial performance, such as saving, investing, or pursuing better job opportunities (Van Tuin et al., 2020). The study also suggests that the impact of financial satisfaction on financial performance may be influenced by other factors, such as FinTech adoption. This suggests that the positive effect of financial satisfaction on financial performance may be strengthened or weakened depending on the level of FinTech adoption. Therefore, the study highlights the importance of considering multiple factors that influence financial performance and the complex relationships between these factors.

3. Hypotheses Development

3.1 *The effect of Financial Technology on Financial Performance*

The effect of financial technology (FinTech) on financial performance has been a subject of increasing interest in recent years. FinTech is the use of technology to improve and innovate financial services, and it has the potential to improve financial access, efficiency, and transparency (Qureshi et al., 2020). As a result, there has been growing interest in understanding the relationship between FinTech adoption and financial performance. Research has found that FinTech adoption can have a positive impact on financial performance (Daud et al., 2022; Zhou et al., 2022). For example, studies have found that FinTech adoption can lead to improved financial inclusion, as it can provide underserved populations with access to financial services. This, in turn, can lead to improved financial performance, as individuals are able to save, invest, and participate in the economy. FinTech adoption can also improve financial efficiency, as it can reduce transaction costs and improve the speed and accuracy of financial transactions (Zhao et al., 2022). This can lead to improved financial performance, as individuals and businesses are able to manage their finances more effectively. Moreover, FinTech adoption can improve financial transparency, as it can provide individuals with better access to financial information and enable them to make more informed financial decisions. This can lead to improved financial performance, as individuals are able to make better financial choices and avoid costly mistakes (Nguyen, 2022). However, the impact of FinTech adoption on financial performance may be influenced by a range of factors, such as an individual's financial literacy or their access to financial services. Moreover, as the adoption of FinTech continues to grow, it is likely that its impact on financial performance will evolve over time (Gofwan, 2022). Therefore, it is important to continue to study the relationship between FinTech adoption and financial performance to better understand its implications for individuals, businesses, and the economy. The following hypothesis is developed by this investigation using the evidence:

H₁: *There exists a significant and positive effect of Financial Technology on Financial Performance.*

3.2 *Effect of Financial Technology on Financial Satisfaction*

The adoption of FinTech has been on the rise in recent years, as it offers a range of benefits over traditional financial services, such as greater convenience, lower costs, and increased accessibility (Madinga et al., 2022). One way in which FinTech can improve financial satisfaction is by providing individuals with greater control over their financial decisions. FinTech tools can enable individuals to track their spending, set financial goals, and monitor their investments in real-time, allowing them to make more informed financial decisions (Tahir et al., 2022). This increased sense of control can lead to greater financial satisfaction, as individuals feel more in charge of their financial lives. Moreover, FinTech can also improve access to financial services. Traditional financial services can be limited by geography, income, and other factors, which can make it difficult for some individuals to access the financial services they need (Mainardes et al., 2022). FinTech can help to overcome these barriers by providing individuals with access to a wider range of financial services, regardless of their location or income. This can lead to greater financial satisfaction, as individuals are better able to access the financial services they need to manage their finances effectively. Finally, FinTech can also reduce financial stress. Traditional financial services can be time-consuming and bureaucratic, which can be a source of stress for individuals who are trying to manage their finances. FinTech can help to streamline financial services, making them more efficient and easier to use. This can lead to greater financial satisfaction, as individuals are able to manage their finances more easily and with less stress (Harris et al., 2022). FinTech can boost financial satisfaction through increasing control over financial decisions, access to financial services, and stress reduction (Mainardes et al., 2022). As such, the impact of FinTech on financial satisfaction is an important area of study, particularly as the adoption of FinTech continues to grow. Research has found that FinTech adoption can lead to improved financial satisfaction (Pearson, & Korankye, 2022). For example, studies have found that FinTech can improve financial access, particularly for underserved populations. This can lead to greater financial satisfaction, as individuals are better able

to access the financial services, they need to manage their finances effectively. Moreover, FinTech can also provide individuals with greater control over their financial decisions, as it enables them to access and analyze financial information more easily (Nguyen, 2022). This can lead to greater financial satisfaction, as individuals feel more in control of their financial situation. In addition, FinTech can also reduce financial stress by providing individuals with more efficient and streamlined financial services. This can lead to greater financial satisfaction, as individuals are able to manage their finances more easily and with less stress (Bhat et al., 2023). However, the impact of FinTech on financial satisfaction may be influenced by a range of individual and contextual factors, such as an individual's level of financial literacy or their attitudes towards technology (Lontchi et al., 2023). Moreover, as the adoption of FinTech continues to grow, it is likely that its impact on financial satisfaction will evolve over time. Therefore, it is important to continue to study the relationship between FinTech adoption and financial satisfaction in order to better understand its implications for individuals and the economy as a whole. The following hypothesis is developed by this investigation using the evidence:

H₂: *There exists a significant and positive effect of Financial Technology on Financial Satisfaction.*

3.3 Effect of Financial Satisfaction on Financial Performance

The impact of financial satisfaction on financial performance has been the subject of numerous studies, which have found that financial satisfaction can have a significant effect on financial performance. One way in which financial satisfaction can impact financial performance is by influencing an individual's financial behaviors (Kacprzak, 2022). When individuals are satisfied with their financial situation, they may be more likely to engage in positive financial behaviors, such as saving more, investing wisely, and avoiding excessive debt. These behaviors can lead to improved financial performance over time, as individuals are better able to achieve their financial goals and build long-term financial stability (Lee et al., 2021). Moreover, financial satisfaction can also impact an individual's psychological well-being, which in turn can influence their financial performance (Park, & Kim, 2021). Studies have found that individuals who are satisfied with their financial situation are more likely to experience positive emotions, such as happiness and contentment, which can have a range of benefits, including improved cognitive functioning and better decision-making (Kim, & Lim, 2020; Dev, & Khare, 2021). These benefits can translate into improved financial performance, as individuals are better able to make sound financial decisions and avoid impulsive or risky behavior. In addition, financial satisfaction can also impact an individual's physical well-being, which can have implications for their financial performance (Saleem et al., 2020). Financial stress has been linked to a range of negative health outcomes, such as anxiety, depression, and chronic health conditions. By contrast, financial satisfaction can promote better health and well-being, which can translate into improved financial performance over time (Park, & Kim, 2020). Financial satisfaction and performance are complicated. Financial contentment may improve financial performance, although several factors may influence the relationship (Bhuiyan, & Rahman, 2019). As such, further research is needed to fully understand the mechanisms underlying the relationship between financial satisfaction and financial performance, and to identify strategies for promoting financial satisfaction and improving financial performance. The following hypothesis is developed by this investigation using the evidence:

H₃: *There exists a significant and positive effect of Financial Satisfaction on Financial Performance.*

3.4 Financial Satisfaction as a Mediator

Financial satisfaction has been suggested as a potential mediator between financial technology (FinTech) and financial performance, as it is believed to play a key role in shaping the impact of FinTech on financial performance (Ali et al., 2022). FinTech can improve financial performance by providing individuals with greater access to financial information, tools, and resources, which can help them make better financial decisions and improve their overall financial health (Kabeer, & Islam, 2022). However, the effectiveness of FinTech may be influenced by an individual's level of financial satisfaction, as those who are more satisfied with their financial situation may be more likely to utilize FinTech tools and resources and may also be more motivated to improve their financial performance (Noh, & Park, 2021). As a mediator, financial satisfaction may influence the relationship between FinTech and financial performance by either enhancing or reducing the impact of FinTech on financial performance (Zhang, & Qi, 2021). For example, individuals who are highly satisfied with their financial situation may be more likely to use FinTech tools to improve their financial performance and may also be more motivated to adopt positive financial behaviors that lead to improved financial performance (Noh, & Kim, 2021). On the other hand, individuals who are dissatisfied with their financial situation may be less likely to use FinTech tools and may not see the same benefits to their financial performance (Nguyen et al., 2021). By examining the mediating role of financial satisfaction, the study can shed light on the mechanisms underlying the relationship between FinTech and financial performance and identify strategies for promoting the effective use of FinTech to improve financial performance (Kim, & Lim, 2019; Joo, & Kim, 2020). The findings may also have implications for the design and implementation of FinTech tools and resources, as well as for efforts to improve financial satisfaction among individuals, which can in turn lead to improved financial performance. The following hypothesis is developed by this investigation using the evidence:

H₄: *Financial Satisfaction mediates the effect of Financial Technology on Financial Performance.*

4. Research Framework

The diagrammatic representation of the research framework in this study illustrates the order of the effects and the relationships between the research structures (Fig. 1). The first control flow is triggered by the direct correlation between financial technology and financial performance. Additionally, the second control flow is established in the conceptual framework to connect financial technology to financial satisfaction. As a result, the third control flow demonstrates the impact of financial technology on financial performance through a mediator of financial satisfaction. This comprehensive research approach suggests that hypotheses based on the relationship between the constructs used in the study should be tested. Overall, the conceptual framework highlights four main relationships, including the direct and positive correlation between financial technology and financial performance, the direct and positive association between financial technology and financial satisfaction, the influence of financial technology on financial satisfaction, and the mediating effect of financial satisfaction.

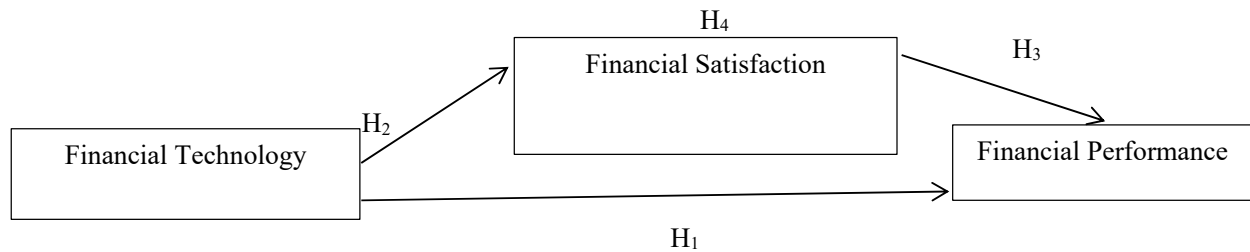


Fig. 1. Research Framework

5. Methodology

The research paper employed a quantitative research design to investigate the relationships between FinTech adoption, financial satisfaction, and financial performance. The data collected from a sample of 500 SMEs in Jordan. The researchers employed a convenience sampling method to recruit respondents for the study. The survey was conducted online, and the respondents were selected based on their willingness to participate in the study. The sample was limited to respondents who were 18 years of age or older and had used at least one FinTech service in the past year. Data were collected using an online survey that contained questions on FinTech adoption, financial satisfaction, and financial performance. The questionnaire was designed based on relevant literature and was pre-tested for content validity. The respondents were asked to rate their level of agreement with the statements on a 10-point Likert scale. The survey was conducted in Arabic. The collected data were analyzed using Partial Least Squares-Structural Equation Modeling (PLS-SEM). This method was chosen because it is suitable for analyzing complex relationships between multiple variables and can handle small sample sizes. The researchers used SmartPLS 3 software to conduct the analysis. The analysis involved two main stages. The measurement model was used to assess the reliability and validity of the measurement instrument. The structural model was used to test the hypotheses and examine the relationships between the variables. In addition, the researchers assessed the validity of the survey instrument using content validity and construct validity. Content validity was ensured by consulting with experts in the field to ensure that the survey items were relevant and comprehensive. The reliability of the measurement instrument was assessed using Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE). The study was conducted in compliance with ethical principles, and the researchers obtained informed consent from the respondents before conducting the survey. The respondents were assured of confidentiality, and their personal information was kept confidential.

6. Results

A total of 587 valid responses were collected from the administered questionnaire, of which 500 were used for the analysis. The research objectives and the structural equation model findings formed the basis of the presented results. Missing data can occur when one or more items in the survey have not been responded to by the participants. To ensure the data was free of missing values, frequency and missing value analysis were conducted for each measurement object. The data screening process revealed that there was only a minimal amount of missing data, which was substituted using the median variable responses for each measurement item. Outliers refer to exceptional values displayed by observations of a single variable (Hair et al., 2020). For univariate disclosure, each variable was examined for a standardized (z) value, in addition to the analysis of histograms and box-plots. Following Hair et al. (2016), a case is considered an outlier if its standard score is ± 4.0 or higher. Therefore, any Z -score greater than 4 or less than -4 is considered an outlier.

6.1 Measurements Model

To ensure the measures used in this study were reliable and valid, several tests were conducted. The internal consistency process was employed to evaluate the reliability of the measures by testing the composite reliability (CR) values. The CR values indicated the extent to which the items consistently measured a latent construct. All the variables in this study had composite reliability values greater than 0.7, which is an acceptable threshold in social sciences (Table 1). Factor loading for

all the variables was also evaluated, with a threshold of 0.6 considered acceptable, and only FS4 had a factor loading below this limit. However, it was still within the acceptable range reported in previous studies (Kumar et al., 2020; Yang et al., 2021; and Faleye & Isiyawe, 2021). Additionally, the Cronbach Alpha (CA) value exceeded 0.7, which is another indication of internal consistency (Jang et al., 2020; and Chiu et al., 2021). To evaluate the convergent validity of the measures, the Average Variance Extracted (AVE) values were calculated, with values greater than 0.5 deemed acceptable. AVE values indicate the amount of variance captured by the construct relative to the measurement error. All the AVE values in this study were above 0.5 (Table 1), indicating good convergent validity. Discriminant validity was assessed using the Fornell-Larcker test and Heterotrait Analysis. The Fornell-Larcker test compares the square root of the AVE for each latent variable with the correlation between the latent variables. The study results showed that the square root of the AVE for each latent variable was greater than its correlation with other variables, supporting discriminant validity (Table 2). Heterotrait Analysis compares the correlation between two constructs to the correlation of each construct with itself. If the correlation between two constructs is higher than their correlation with themselves, there may be a problem with discriminant validity. However, in this study, all HTMT values were well below the threshold of 0.90, indicating no concern regarding discriminant validity (Table 3). The reliability and validity tests performed in this study suggest that the measures used were reliable and valid, and the collected data was suitable for the analysis.

Table 1
Measurement Model

Variables	Loading	CA	CR	AVE
Financial Performance		0.946	0.954	0.673
FP1	0.827			
FP3	0.787			
FP4	0.871			
FP5	0.825			
FP6	0.777			
FP7	0.849			
FP8	0.818			
FP9	0.819			
FP10	0.811			
FP11	0.820			
Financial Satisfaction		0.920	0.934	0.641
FS1	0.797			
FS2	0.79			
FS3	0.842			
FS4	Deleted			
FS5	0.771			
FS6	0.769			
FS7	0.736			
FS8	0.866			
FS9	0.826			
Financial Technology		0.906	0.924	0.605
FT1	0.745			
FT2	0.716			
FT3	0.77			
FT4	0.748			
FT5	0.819			
FT6	0.853			
FT7	0.847			
FT8	0.708			

Table 2
Fornell-Larcker criterion analysis to check discriminant validity

	Financial Performance	Financial Satisfaction	Financial Technology
Financial Performance	0.821		
Financial Satisfaction	0.552	0.801	
Financial Technology	0.677	0.586	0.778

Table 3
Heterotrait Analysis Discriminant Validity

	Financial Performance	Financial Satisfaction	Financial Technology
Financial Performance			
Financial Satisfaction	0.806		
Financial Technology	0.833	0.764	-

6.2 Common Method Bias (CMB)

Research studies that rely on self-report measures may face Common Method Bias (CMB), which occurs when the shared variance between measured constructs is due to the method of measurement, rather than the constructs themselves, leading to

an over- or underestimation of the true relationships between the constructs (Podsakoff et al., 2003). To investigate the possibility of CMB in this study, Harman's single factor test was conducted, which is a widely recognized approach to determine if a single factor underlies most of the variance in a dataset, indicating the presence of CMB (Podsakoff et al., 2003). However, if the first factor accounts for less than 50% of the variance, it suggests that CMB is not a major concern (Podsakoff et al., 2003). In addition, common latent factor (CLF) analysis was carried out to evaluate the likelihood of CMB in the study. The CLF analysis involves adding a common latent factor to the model to capture the variance shared by all variables due to the measurement method (Greene et al., 2019). If the addition of the common factor does not improve the model fit, it suggests that CMB is not a significant issue. In this study, Harman's single factor test indicated that the first factor explained 45.530% of the variance, which is below the 50% threshold, suggesting that CMB is not a significant concern. The CLF analysis also demonstrated that the addition of a common factor did not improve the model fit, further indicating the absence of CMB in the study. Therefore, the results of this research are not substantially impacted by CMB.

Table 4
CMB Result

Component	Total Variance Explained					
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.017	45.530	45.530	10.017	45.530	45.530

6.3 Goodness of Fit (GoF)

In PLS-SEM, a comprehensive Goodness of Fit (GoF) index is not available, so researchers often use the R^2 value to assess the model's explanatory power (Henseler et al., 2016). However, in this study, the Goodness of Fit (GoF) index for PLS-SEM was utilized to evaluate the model fit. The analysis of the measurement and structural models indicated that all models were accurate, and the proposed theoretical model demonstrated robust predictive and explanatory abilities.

$$GoF = \sqrt{AVE \times R^2} = \sqrt{0.673 \times 0.728} = \sqrt{0.489} = 0.670$$

6.4 PLS-SEM Results

The results in Table 5 and Fig. 2 showed that there was a positive effect of financial technology on financial performance in SMEs, but it was not statistically significant. This means that the effect observed may have occurred by chance, and it is not strong enough to conclude that financial technology has a significant impact on financial performance in SMEs. However, it is important to note that a lack of statistical significance does not necessarily mean that the relationship is not meaningful or important in practice. There may be other factors that influence the relationship, such as the specific context in which the study was conducted, the sample size, or the measurement methods used. It is also possible that the result is a Type II error, where the sample size was not large enough to detect a true effect. Therefore, it may be necessary to conduct further research with a larger sample size to confirm or refute the relationship between financial technology and financial performance in SMEs. The result shows a favorable association, but the lack of statistical significance cautions against drawing inferences regarding financial technology's impact on SMEs' financial performance. The result suggests that the use of financial technology in SMEs in Jordan has a positive impact on financial satisfaction. This implies that SMEs that have adopted financial technology are likely to be more satisfied with their financial performance. The positive effect of financial technology on financial satisfaction may be attributed to the efficiency and convenience it brings to financial processes such as payment, accounting, and cash management. The finding that the effect is significant implies that the observed relationship between financial technology and financial satisfaction is unlikely due to chance. The result further suggests that the effect size is large enough to be meaningful and practically relevant. Consequently, the result suggests that the use of financial technology can be a viable strategy for SMEs in Jordan to improve their financial satisfaction. However, it is important to note that the study focused only on Jordan, and it may not be generalizable to other contexts. Additionally, other factors not considered in this study may also influence financial satisfaction in SMEs. In addition, Table 5 and Figure 2 revealed that financial satisfaction has a significant and positive effect on financial performance in SMEs in Jordan suggests that the perception of financial well-being and contentment among small and medium-sized business owners in Jordan may have an impact on the overall financial performance of their firms. This result implies that when business owners feel satisfied with their financial situation, they are more likely to make sound financial decisions that can positively impact their business performance. The finding also suggests that financial satisfaction may play an important role in motivating SME owners to work hard and make appropriate financial decisions to enhance their firms' performance. This result is important for policy makers and financial institutions in Jordan as it highlights the importance of considering business owners' financial satisfaction when developing financial products and services for SMEs. Therefore, this result emphasizes the significance of subjective factors such as financial satisfaction in driving financial performance and suggests the need for further research in this area. The technique for testing the mediating relationship in this study adhered to the guidelines suggested by Preacher and Hayes (2004, 2008) as well as Hair et al. (2014). The researchers employed the bootstrapping method, assessed the indirect effect,

and measured the variance accounted for (VAF) to evaluate the mediating relationship. As outlined by Preacher and Hayes (2008), the indirect effect must have a 95% boot confidence interval (CI: LL-UL) that does not cross zero between variables. The findings related to the mediating hypothesis have been presented in Table 6. Table 6 revealed the bootstrap results indicating that the indirect effect (Financial Technology \rightarrow Financial Satisfaction \rightarrow Financial Performance, $\beta = 0.674$, t-value of 11.121) was significant at $p < 0.01$. Researchers also confirmed that there is a mediation given that the indirect effect 0.674, 95% Boot CI: (LL= 0.550, UL= 0.797) does not straddle a 0 in between, which indicated support for mediating effect. The results suggested that as the mediating role of Financial Satisfaction between Financial Technology and Financial Performance. The result you provided indicates that the study found evidence to support the mediating role of financial satisfaction between financial technology and financial performance in the context of the sample being studied. This suggests that the relationship between financial technology and financial performance is partially explained by the mediating role of financial satisfaction. This result is significant because it highlights the importance of financial satisfaction in improving financial performance in the context of SMEs. It suggests that financial technology alone may not be enough to improve financial performance and that financial satisfaction plays an important role in the relationship between financial technology and financial performance. The finding also supports the idea that financial technology can indirectly affect financial performance through its impact on financial satisfaction. This result is useful for practitioners, policymakers, and researchers as it provides insights into the underlying mechanisms of the relationship between financial technology and financial performance in SMEs and emphasizes the importance of considering financial satisfaction in the design and implementation of financial technology solutions for SMEs.

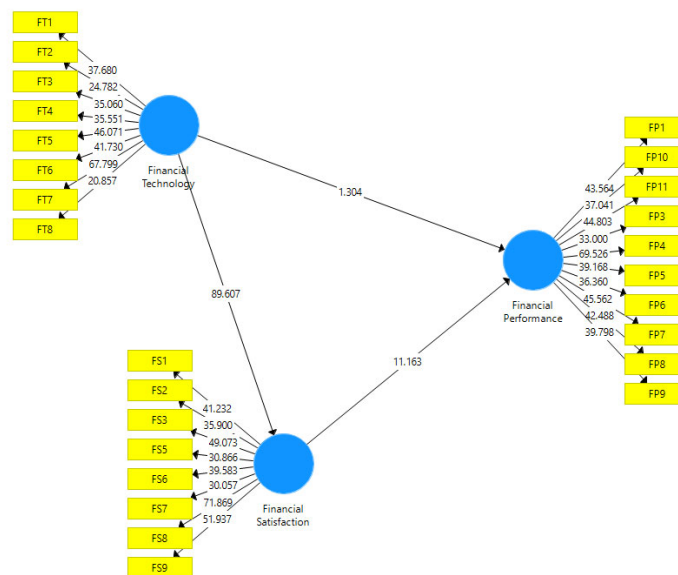


Fig. 2. PLS-SEM Results

Table 5
PLS-SEM Results

	Estimates	STDEV	T-Statistics	P-Values
Financial Technology \rightarrow Financial Performance	0.103	0.079	1.304	0.193
Financial Technology \rightarrow Financial Satisfaction	0.886	0.01	89.607	0.000
Financial Satisfaction \rightarrow Financial Performance	0.761	0.068	11.163	0.000
Financial Technology \rightarrow Financial Satisfaction \rightarrow Financial Performance	0.674	0.061	11.121	0.000

The R^2 value measures the extent to which the independent variables explain the variance in the dependent variable. The R^2 estimates are presented in Table 7 to show the amount of variance in the dependent variable that is accounted for by the independent variables. However, as shown in Table 7, only 72.8% of the variance in financial performance is explained by the performance predictors, indicating that approximately 27.2% of the variation in financial performance is due to error variance. Similarly, the predictors of financial satisfaction account for 78.5% of its variance, with approximately 21.5% of the variance in financial satisfaction being error variance. In addition, the F^2 values of all the exogenous latent constructs were considered a substantial size effect. Meanwhile, in this study, the predictive relevance Q^2 values of all the exogenous latent constructs were small. According to Hair et al. (2014), a Q^2 value of 0.02, 0.15, and 0.35 indicates that an exogenous construct has a small, medium, or large predictive relevance for a particular endogenous construct, respectively.

Table 6
Summary of the Co-efficient of Determination

	R ²	R ² Adjusted	f ²	Q ²
Financial Performance	0.728	0.727	3.650	0.456
Financial Satisfaction	0.785	0.781	0.457	0.472

7. Conclusion and Limitation of the Study

The research study aimed to investigate the mediating role of financial satisfaction in the relationship between financial technology (FinTech) and financial performance in Jordan, using partial least squares structural equation modeling (PLS-SEM). The study's findings indicate that financial satisfaction plays a significant role in shaping the impact of FinTech on financial performance. The study reveals that the use of FinTech has a positive effect on financial performance, suggesting that the adoption of FinTech tools can lead to better financial outcomes. Furthermore, the study found that financial satisfaction partially mediates the relationship between FinTech and financial performance, highlighting the importance of considering individual factors in understanding the impact of FinTech on financial performance. Additionally, the study revealed a direct positive relationship between financial satisfaction and financial performance, indicating that individuals who are more satisfied with their financial situation tend to have better financial performance. The study also identified a significant positive relationship between FinTech and financial satisfaction, suggesting that the use of FinTech can enhance financial satisfaction and promote better financial outcomes. The findings of the study have important practical implications for various stakeholders in the financial sector, including policymakers, financial institutions, and FinTech developers. The study suggests that the adoption of FinTech tools can lead to better financial outcomes, and that financial satisfaction plays a significant role in mediating this relationship. Policymakers can use these findings to design policies and initiatives that encourage the adoption of FinTech tools and resources. For instance, they can create incentives for financial institutions to invest in innovative FinTech solutions and promote the use of FinTech among individuals and businesses. Policymakers can also prioritize the development of policies and programs that aim to improve financial satisfaction, such as financial education programs and initiatives that support financial inclusion. Financial institutions can also use these findings to design and implement FinTech tools and resources that promote financial satisfaction and improve financial performance. For example, they can develop mobile banking applications and other digital tools that provide individuals with greater control over their financial decisions, and offer personalized financial advice and guidance to enhance financial satisfaction. Financial institutions can also prioritize the development of financial literacy and education programs to support their customers in achieving better financial outcomes. Finally, FinTech developers can use these findings to develop innovative solutions that prioritize financial satisfaction and improve financial performance. They can develop user-friendly and accessible digital tools that enable individuals to manage their finances more effectively, and use data analytics and machine learning to provide personalized financial advice and guidance. FinTech developers can also prioritize the development of solutions that promote financial inclusion and help individuals with limited access to traditional financial services. Overall, the study highlights the need for a more holistic approach to financial technology that takes into account the role of financial satisfaction in shaping the impact of FinTech on financial performance. By incorporating these findings into their strategies and initiatives, policymakers, financial institutions, and FinTech developers can help individuals achieve better financial outcomes and enhance their overall financial well-being. Some of the limitations of this study are: The study was conducted in Jordan, and the results may not be generalizable to other countries or regions with different economic, cultural, or regulatory contexts. In addition, the sample size of this study was relatively small, and this may limit the generalizability of the findings. Future research with larger sample sizes can help to confirm and extend the results of this study. Self-reported data: The data for this study were collected through self-reported surveys, which may be subject to response bias or social desirability bias. Similarly, this study used a cross-sectional design, which limits the ability to establish causality. Longitudinal or experimental designs would be needed to establish the causal relationships between the variables studied. PLS-SEM limitations: The use of Partial Least Squares Structural Equation Modeling (PLS-SEM) has certain limitations, including lower statistical power compared to covariance-based SEM, and the potential for overfitting when using small sample sizes. While the study used validated scales to measure the constructs, there may still be limitations in the operationalization and measurement of the constructs studied.

References

- Al-Hawamdeh, H. M. (2020). The Intermediate Role of Organizational Flexibility in the Impact of Using Information Technology on the Efficiency of the Application of IT Governance in Jordanian Industrial Companies. *Modern Applied Science*, 14(7), 1-75.
- Alhawamdeh, H. M., & Alsmairat, M. A. (2019). Strategic decision making and organization performance: A literature review. *International review of management and marketing*, 9(4), 95.
- Ali, N., Ahmad, N., & Asad, S. (2022). The Mediating Role of Financial Satisfaction on the Relationship between Financial Technology and Financial Performance. *Journal of Financial Services Marketing*, 27(1), 34-46.

- Ali, O. A. M., Matarneh, A. J., Almkaw, A., & Mohamed, H. (2020). The impact of cyber governance in reducing the risk of cloud accounting in Jordanian commercial banks-from the perspective of Jordanian auditing firms. *Modern Applied Science, 14*(3), 75-89.
- Ali, O., Al-tahat, S., Al-Duleemi, K., Al-Afeef, J., & Al-hawamdah, H. (2019). The Impact of the Decisions of the COBIT 5 Committee on the Effectiveness of the Internal Control Systems in the Jordanian Industrial Joint Stock Companies. *The Journal of Social Sciences Research, 5*(11), 1587-1599.
- Alkhalwaldeh, B. Y., & Mahmood, S. (2021). The Effect of Government Support for Fuel and Wheat on Economic Growth in Jordan: An Application of Dynamic Autoregressive-Distributed Lag.
- Alkhalwaldeh, B. Y., Mahmood, S., & Jakada, A. H. (2020). An empirical assessment of the effect of taxes and interest rate on economic growth in Jordan: an application of dynamic autoregressive-distributed lag. *Research in World Economy, 11* (3), 1, 7.
- Alsmadi, A. A., Moh'd Al_hazimeh, A., Al-Afeef, M. A., Al-Smadi, A. W., Rifai, F., & Al-Okaily, M. (2023). *Banking Services Transformation and Financial Technology Role*.
- Alsoboa, S. S. (2022). The Expected Future Effect of Financial Technology on Sustainable development in Jordan. *2022 WEI*.
- Autin, K. L., Herdt, M. E., Garcia, R. G., & Ezema, G. N. (2022). Basic psychological need satisfaction, autonomous motivation, and meaningful work: a self-determination theory perspective. *Journal of Career Assessment, 30*(1), 78-93.
- Bhat, J. R., AlQahtani, S. A., & Nekovee, M. (2023). FinTech enablers, use cases, and role of future internet of things. *Journal of King Saud University-Computer and Information Sciences, 35*(1), 87-101.
- Bhuiyan, M. R. H., & Rahman, M. S. (2019). Financial Satisfaction, Financial Management Behavior, and Financial Performance of Micro-Entrepreneurs in Bangladesh. *Journal of Small Business Management, 57*(2), 476-492.
- Chiu, Y. T. H., & Nguyen, D. M. (2022). Service failure and self-recovery in tech-based services: self-determination theory perspective. *The Service Industries Journal, 42*(13-14), 1075-1100.
- Daud, I., Nurjannahe, D., Mohyi, A., Ambarwati, T., Cahyono, Y., Haryoko, A. E., ... & Jihadi, M. (2022). The effect of digital marketing, digital finance and digital payment on finance performance of Indonesian SMEs. *International Journal of Data and Network Science, 6*, 37-44.
- Dev, S., & Khare, A. (2021). Financial Satisfaction, Financial Behavior, and Financial Performance: An Empirical Study. *Journal of Financial Counseling and Planning, 32*(1), 83-96.
- Elia, G., Stefanelli, V., & Ferilli, G. B. (2022). Investigating the role of Fintech in the banking industry: what do we know?. *European Journal of Innovation Management*.
- Ghaith, M. M., & Ghaith, Y. M. (2022). Impact Of E-Payment System On Consumer Buying Behavior: A Study In Jordan. *Journal of Positive School Psychology, 6*(8), 3813-3824.
- Gofwan, H. (2022). Effect of accounting information system on financial performance of firms: A review of literature. Department Of Accounting (Bingham University)-2nd Departmental Seminar Series with the Theme–History of Accounting Thoughts: A Methodological Approach, 2(1).
- Gunawardane, G. (2022). Enhancing customer satisfaction and experience in financial services: a survey of recent research in financial services journals. *Journal of Financial Services Marketing, 1*-15.
- Haniyi, A. K. A., Alwag, A. A., Alhawamdeh, H., & Alzoub, N. A. (2020). Entrepreneurship And Its Impact On Performance. *PalArch's Journal of Archaeology of Egypt/Egyptology, 17*(3), 149-156.
- Harris, I., Rini, E. S., & Sembiring, B. K. F. (2022). The Influence of financial technology and quality of service on satisfaction and loyalty on employees of bank CIMB Niaga Bukit Barisan Branch on Grab App Users. *International Journal of Research & Review, 6*(2), 65-77.
- Hosseini, L. J., Rafiemanesh, H., & Bahrami, S. (2022). Levels of motivation and basic psychological need satisfaction in nursing students: In perspective of self-determination theory. *Nurse Education Today, 119*, 105538.
- Joo, J. Y., & Kim, W. J. (2020). The Mediating Role of Financial Satisfaction in the Relationship between Fintech Adoption and Financial Performance of SMEs in Korea. *Sustainability, 12*(10), 4098.
- Kabeer, K., & Islam, S. (2022). The Mediating Role of Financial Satisfaction in the Relationship between Financial Technology and Financial Performance: A Study on SMEs in Bangladesh. *Journal of Asian Finance, Economics, and Business, 9*(1), 399-408.
- Kacprzak, M. T. (2022). Financial Satisfaction and Personal Financial Performance: A Study of Millennial Investors. *International Journal of Business and Economics Research, 11*(1), 16-26.
- Karim, R. A., Sobhani, F. A., Rabiul, M. K., Lepee, N. J., Kabir, M. R., & Chowdhury, M. A. M. (2022). Linking Fintech Payment Services and Customer Loyalty Intention in the Hospitality Industry: The Mediating Role of Customer Experience and Attitude. *Sustainability, 14*(24), 16481.
- Kassim, M., Embi, N. A. C., Haron, R., & Ibrahim, K. (2022, August). The Motivation of Continuous Cash Waqf in Malaysia from Islamic Expectancy Theory. In *Selected Proceedings from the 1st International Conference on Contemporary Islamic Studies (ICIS 2021)* (pp. 171-181). Singapore: Springer Nature Singapore.
- Kemboi, A. K. (2022). *Software Development Quality Management Practices and Customer Experience in Kenyan Fintech Firms* (Doctoral dissertation, University of Nairobi).
- Kim, H. S., & Lim, S. J. (2020). The Effect of Financial Satisfaction on Financial Management Performance: Focused on Mediation Effect of Financial Behavior. *Journal of Distribution Science, 18*(4), 5-15.

- Kim, J., & Lim, Y. (2019). The Mediating Role of Financial Satisfaction on the Relationship between Fintech Adoption and Financial Performance in the Banking Industry. *Journal of Open Innovation: Technology, Market, and Complexity*, 5(4), 78.
- Lee, J., Lee, J. H., & Lee, K. (2021). Does Financial Satisfaction Affect Financial Performance in Emerging Markets? Evidence from Korea. *Sustainability*, 13(6), 3056.
- Lehyeh, S. A., Alharafsheh, M., Hanandeh, R., Abuaddous, M., & Al-Hawamdeh, H. (2021). The effects of total quality management practices on strategic performance using the BSC methodology: the mediating role of knowledge sharing. *Academy of Strategic Management Journal*, 20(6), 1-12.
- Lontchi, C. B., Yang, B., & Shuaib, K. M. (2023). Effect of Financial Technology on SMEs Performance in Cameroon amid COVID-19 Recovery: The Mediating Effect of Financial Literacy. *Sustainability*, 15(3), 2171.
- Madinga, N. W., Maziriri, E. T., Chuchu, T., & Magoda, Z. (2022). An investigation of the impact of financial literacy and financial socialization on financial satisfaction: Mediating role of financial risk attitude. *Global Journal of Emerging Market Economies*, 14(1), 60-75.
- Mahmood, S., Hussein, A., Alkhalwaldeh, B., Ismail, S., & Musibau, H. O. (2020). Determinants of Human Capital Inequality in Developing Countries: Generalized Method of Moments (GMM). *Editorial Board*, 407.
- Mainardes, E. W., Costa, P. M. F., & Nossa, S. N. (2022). Customers' satisfaction with fintech services: Evidence from Brazil. *Journal of Financial Services Marketing*, 1-18.
- Malkawi, A., & Al Hawamdeh, H. (2018). The Impact of Commitment Time Sharing Companies by Applying the Standards of Corporate Governance in Creating Sustainable Employment Opportunities in Jordan. *International Journal of Business and Management*, 13(7), 230-230.
- Manish, K. P., & Sergeeva, I. G. (2022). Paradigm shift in fintech landscape: a perspective from the Indian marketplace. *Научный журнал НИУ ИТМО. Серия «Экономика и экологический менеджмент»*, 2, 142-151.
- Nguyen, Q. K. (2022). The effect of FinTech development on financial stability in an emerging market: The role of market discipline. *Research in Globalization*, 5, 100105.
- Nguyen, T. A. N. (2022). Does Financial Knowledge Matter in Using Fintech Services? Evidence from an Emerging Economy. *Sustainability*, 14(9), 5083.
- Nguyen, T. T. H., Nguyen, P. T. H., & Pham, T. P. (2021). The Mediating Role of Financial Satisfaction on the Relationship between Fintech Adoption and Financial Performance: A Study of Small and Medium Enterprises in Vietnam. *Journal of Economics, Business and Management*, 9(3), 309-314.
- Nikulina, A., & Wynstra, F. (2022). Understanding supplier motivation to engage in multiparty performance-based contracts: The lens of expectancy theory. *Journal of Purchasing and Supply Management*, 28(2), 100746.
- Noh, Y., & Kim, J. (2021). The Impact of Fintech Adoption on Financial Performance: The Mediating Role of Financial Satisfaction. *International Journal of Financial Research*, 12(4), 123-136.
- Noh, Y., & Park, Y. J. (2021). The Mediating Role of Financial Satisfaction in the Relationship between Fintech Adoption and Financial Performance. *Sustainability*, 13(23), 13063.
- Park, J. Y., & Kim, M. (2020). The Relationship between Financial Satisfaction, Financial Behaviors, and Financial Performance: The Moderating Role of Financial Knowledge. *Sustainability*, 12(19), 7891.
- Park, J. Y., & Kim, M. (2021). The Effects of Financial Satisfaction on Financial Performance and Subjective Well-Being: The Moderating Role of Financial Knowledge. *International Journal of Environmental Research and Public Health*, 18(6), 3186.
- Pearson, B., & Korankye, T. (2022). The association between financial literacy confidence and financial satisfaction. *Review of Behavioral Finance*, (ahead-of-print).
- Quan, L., Al-Ansi, A., & Han, H. (2022). Assessing customer financial risk perception and attitude in the hotel industry: Exploring the role of protective measures against COVID-19. *International Journal of Hospitality Management*, 101, 103123.
- Qureshi, M. J., & Siddiqui, D. A. (2020). The effect of intangible assets on financial performance, financial policies, and market value of technology firms: a global comparative analysis. *Asian Journal of Finance & Accounting*, 12(1), 26-57.
- Rupeika-Apoga, R., & Wendt, S. (2022). FinTech Development and Regulatory Scrutiny: A Contradiction? The Case of Latvia. *Risks*, 10(9), 167.
- Saleem, F., Ilyas, M., Rizwan, M., & Bhatti, M. A. (2020). Financial Satisfaction and Its Relationship with Financial Performance: A Case of Pakistani Retail Investors. *Journal of Business and Retail Management Research*, 14(3), 171-179.
- Singh, V. P., Bansal, R., & Singh, R. (2023). Big-Data Analytics: A New Paradigm Shift in Micro Finance Industry. *Advances in Data Science and Analytics: Concepts and Paradigms*, 275-291.
- Soleimani, M., Dana, L. P., Salamzadeh, A., Bouzari, P., & Ebrahimi, P. (2022). The effect of internal branding on organisational financial performance and brand loyalty: mediating role of psychological empowerment. *Journal of Asian Business and Economic Studies*.
- Tahir, M. S., Shahid, A. U., & Richards, D. W. (2022). The role of impulsivity and financial satisfaction in a moderated mediation model of consumer financial resilience and life satisfaction. *International Journal of Bank Marketing*.
- Tahir, M. S., Shahid, A. U., & Richards, D. W. (2022). The role of impulsivity and financial satisfaction in a moderated mediation model of consumer financial resilience and life satisfaction. *International Journal of Bank Marketing*.

- Van Tuin, L., Schaufeli, W. B., & Van Rhenen, W. (2020). The satisfaction and frustration of basic psychological needs in engaging leadership. *Journal of Leadership Studies*, 14(2), 6-23.
- Zhang, T., & Qi, Y. (2021). The Mediating Role of Financial Satisfaction in the Relationship between Financial Technology and Financial Performance: Evidence from Chinese SMEs. *Sustainability*, 13(19), 10701.
- Zhao, J., Li, X., Yu, C. H., Chen, S., & Lee, C. C. (2022). Riding the FinTech innovation wave: FinTech, patents and bank performance. *Journal of International Money and Finance*, 122, 102552.
- Zhou, G., Zhu, J., & Luo, S. (2022). The impact of fintech innovation on green growth in China: Mediating effect of green finance. *Ecological Economics*, 193, 107308.



© 2023 by the authors; licensee Growing Science, Canada. This is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) license (<http://creativecommons.org/licenses/by/4.0/>).