

Analysis of Perceived Financial Well-Being and Digital Financial Inclusion: Implications Well-Being of Muslim Women Entrepreneurs

Aftuqa Sholikatur Rohmania¹, Risma Nurhapsari², Erlinda Sholihah³

Abstract:

This study analyzes the impact of current financial management stress, expected future financial security, and digital financial inclusion on Muslim Women Entrepreneurs (WOEs) well-being. From an Islamic perspective, wise budgeting and retirement security are part of the ethical principles of Islamic economics that support individual well-being. Researchers also looked at how self-control functions as a moderating factor in the relationship between the well-being of Muslim WOE and the stress associated with money management today, future financial security expectations, and digital financial inclusion. The hope is to develop knowledge and essential components for achieving success in WOE within Central Java. Using both primary and secondary data sources, this study employs a quantitative methodology and an explanatory research design. Respondents were 200 MSMEs in the food or culinary sector in Central Java whose owners are Muslim women entrepreneurs. Data gathering through questionnaire distribution and analysis using the PLS-SEM method. The study results show that stress in current financial management greatly influences expected future financial security and the well-being of Muslim WOE. In addition, expected future financial security greatly influences well-being, while digital financial inclusion does not show a significant impact. Self-control has been shown to directly affect well-being, although it does not function as a moderating variable. These findings enrich the comprehension of the elements that contribute to the success of Muslim WOE in Indonesia's economic and social context, taking into account the Islamic values that underlie economic well-being.

Keywords: Perceived Financial Well-Being, Digital Financial Inclusion, Self Control, Well-Being, Muslim Women Entrepreneurs

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1. Introduction

MSMEs are important in improving the standard of living and national stability (Cant et al., 2016). The Central Java Cooperatives and Small and Medium Enterprises Service supports 187,000 MSMEs out of a total of 4.2 million MSMEs in Central Java. MSMEs fostered by the Central Java Provincial Government are able to absorb a workforce of around 1,337,156 people, generating an asset value of Rp 38.995 billion and a turnover of Rp 68 trillion. In Central Java, 96% of MSME contributions are women-owned businesses (Vilysta, 2024). Women play a significant part in

¹ Universitas Sains dan Teknologi Komputer. <u>aftuqa@stekom.ac.id</u>.

² Sekolah Tinggi Ilmu Ekonomi Studi Ekonomi Modern.

³ Sekolah Tinggi Ilmu Ekonomi Studi Ekonomi Modern.

transforming the economy towards social welfare (Anggadwita & Dhewanto, 2016; De Vita et al., 2014). Seeing the significant progress, Muslim women entrepreneurs do not yet dominate. In Islam, the Prophet Muhammad (SAW) and his wife, Khadijah, were exemplified as being successful in the realm of business ownership (Rafiki & Nasution, 2019). The involvement of Muslim women can strengthen the well-being of the family and the community as well as strengthen their personal and interpersonal selves. Muslim Women Entrepreneurs (WOE) must think that receiving God's grace will be possible if they follow all of the teachings of Islam.

Women who are active in activities and earn income show courage in seeking experience and are more productive (Hassan & Saleem, 2017). The involvement of Muslim women will strengthen the well-being of society (*ummah*). Muslim WOEs who generate income in accordance with Islamic law will reflect prosperity in their businesses. Well-being is not only a worldly aspect but also a spiritual and moral aspect. Every activity must be based on the concept of halal and tayyib as a business goal. Muslims must believe that carrying out activities must be based on obtaining blessings and pleasure from Allah SWT.

One of the main indicators of well-being is perceived financial well-being, which is a major contributor to well-being and has two components, specifically the stress of money management today and the anticipated financial stability of the future (Netemeyer et al., 2017). Good asset management must be in accordance with Sharia by providing a sense of security and reducing financial stress so that it will form blessings and be in compliance with Islamic religious principles. According to Ruberton et al. (2016), building wealth for retirement can provide long-term financial security. It is in accordance with the Koran Surah Al-Isra verses 26-27, which emphasizes the dangers of being wasteful. This attitude teaches us to save as a financial management action. Muslim WOE who run their business according to Islamic financial management are able to maintain their way of life, Brüggen et al., (2017). There is a need for a healthy balance between spending and savings so that Muslim WOEs can maintain their long-term financial well-being. The principle of financial management is in accordance with the principle of tawakkul, namely surrendering to Allah after trying so that it can provide inner peace and financial stability, which will support a fulfilled life in the world and the hereafter.

In today's era, the concept of well-being is not limited to aspects of income and compensation but has developed into a more dynamic approach, such as inclusion (Hojman & Miranda, 2018). The Islamic perspective is that overall well-being cannot be measured only in material terms but also in social, economic, and worldly balance. One way to achieve this prosperity is through digitalization and financial inclusion. It is able to open up all levels of society, including Muslim WOE, to obtain wider financial benefits and services. Financial inclusion promotes overall well-being, which includes cost-effective business operations, accessible services, income equality, and availability of financial products and services (Kanungo & Gupta, 2021). Financial inclusion is in line with the principle of adl (justice), which emphasizes equality, while digitalization can be used for the benefit of the people.

In this case, one way that digital innovation brings the traditional supply and demand sides into alignment is through digital financial inclusion to increase development space (Rasheed et al., 2019). For Muslim WOE, the implementation of digital financial inclusion provides an opportunity to raise living standards as a whole, both in financial, social, and spiritual aspects. When Muslim WOE adopts digital financial inclusion as part of its business renewal and management process, Muslim WOE can automatically identify and minimize existing problems.

Given the dominance of women in the MSME sector, this study must follow up on the well-being of Muslim WOE. Previous research suggests that stress related to money management today and anticipated future financial stability are both strongly correlated with overall well-being (Netemeyer et al., 2017). Perceived financial well-being is predicted to give financial protection in the coming time (Ponchio et al., 2019). Financial security is very relevant to Islamic teachings, namely responsible and ethical financial management, as in Surah At-Taubah verse 103. However, there is still little research that highlights the perceived financial well-being towards wellbeing of Muslim WOEs.

In maintaining financial security, macroeconomic stability, and inclusive growth, Muslim WOE requires stable digital financial inclusion (Kuznyetsova et al., 2022; Naumenkova et al., 2019). According to Islam, technology and innovation must be used for the benefit of the people, including in financial management. Using digital financial inclusion that is in accordance with Islamic principles will provide transactions that are free from elements of gharar (uncertainty) or riba (interest). Therefore, Du et al. (2022) state that digital financial inclusion is positively related to household well-being. It includes having financial well-being that is in line with the principle of blessing in Islam. Various digital financial services can contribute to the well-being of a group (Koh et al., 2018).

In contrast (Kanungo & Gupta, 2021), digitalization has not been fully able to increase financial inclusion, so the expected well-being has not been achieved. There needs to be better integration between digital financial technology and Islamic principles to regulate wealth management better so that digitalization can truly have a positive impact on improving the well-being of Muslim WOE as a whole. Thus, this study purposes to evaluate and examine the impact of present financial management stress, expectations for future financial security, and digital financial inclusion on Muslim WOE well-being, with an approach that takes into account the principles of Islamic economics to create well-being that is not only material but also spiritual.

Exploring the factors that influence well-being is an important step toward achieving high levels of well-being (Steptoe et al., 2015), both materially and spiritually. That requires self-control as a capacity that regulates immediate cravings and promotes long-term objectives. Self-control is a personal capacity to overcome strong emotional urges or responses to achieve greater goals (Milyavskaya, 2019). In the Islamic view, self-control is not only related to financial management. Still, it is also part of a highly valued work ethic because Islam teaches the importance of refraining from detrimental things and focusing on things that bring benefits, both to oneself and to others (Aldulaimi, 2020). Explained in QS. Ghafir verse 19 states, "He knows the

treacherous eyes and what is hidden in the breasts." In the context of Muslim WOE, self-control is very important to manage finances wisely and avoid detrimental consumer behavior.

Previous research supports that high self-control has a positive impact on individual well-being (De Ridder & Gillebaart, 2017; Li et al., 2022; Wiese et al., 2017). The ability of Muslim WOE to control themselves in terms of financial management can be achieved by strengthening the relationship between current money management stress, future financial security expectations, and digital financial inclusion toward well-being. Thus, self-control becomes an important factor that not only influences short-term financial decisions but also helps build financial resilience in the future, which is in line with Islamic principles of fair, wise, and responsible wealth management. Thus, this study aims to analyze further whether self-control possessed by Muslim WOE can strengthen the relationship between current money management stress, future financial security expectations, and digital financial inclusion on their well-being. With an approach that integrates Islamic values, it is hoped that more effective solutions can be found to improve the welfare of Muslim women in entrepreneurship.

2. Theoretical Background

Well-Being

Well-being is characterized by a blend of positive emotions, potential development, control over one's life, purpose, and positive relationships, as well as optimal functioning (Huppert, 2009). People can flourish when they are in a condition of sustainable well-being. Positive mental health, which the WHO defines as a condition in which a person recognizes their abilities, can manage stress, work effectively, and contribute to the community, is frequently confused with subjective well-being. In the Islamic perspective, well-being is more than material and emotional achievements; well-being must achieve inner peace that is balanced between Allah SWT, oneself, and others. Well-being in Islam is seen as the condition of an individual being able to achieve holistic happiness, namely physical, mental, emotional, and spiritual, which is reflected in peace and faith in Allah SWT.

Informal businesses run by women contribute to well-being. Individuals with high well-being levels are more creative, more productive at work, and learn more effectively, better pro-social behavior, and positive relationships (Diener, 2012; Huppert & So, 2013). At WOE Muslim, well-being is not only financial achievement and business productivity but spiritual and social in line with Islamic values. The well-being literature recognizes finance as one domain of general well-being. Still, both overall and financial well-being is impossible to test by objective metrics only, as they encompass life experiences, cognitive appraisals, and affective reactions. Meanwhile, welfare in Islam is related to the quality of life that reflects religious principles, such as fulfilling the rights of others, maintaining trust, and doing good to family and society. For Muslim WOE, prosperity is not only measured by how successful Muslim WOE is in business but also by how much they are able to create a business that is based on justice blessings and is able to make a positive contribution to society.

Therefore, true well-being in Islam must provide a balance in life that involves a spiritual relationship with Allah, emotional and mental well-being, and social contributions that benefit society.

Perceived financial well-being

This study has proposed a conceptual understanding of financial well-being that includes both current and future dimensions (Brüggen et al., 2017; Netemeyer et al., 2017). The first dimension is Current money management stress, which includes feelings of anxiety or worry about the current financial situation, difficulty in managing money to fulfill financial responsibilities, and the ability to live life as desired. The second dimension is Expected future financial security, which relates to the belief that one will be financially secure in the future and capable of reaching financial objectives.

Perceptions of financial well-being are considered an important topic in consumer research. It is also increasingly relevant when it comes to the well-being of Muslim WOE, where there is little systematic research examining how perceptions of financial well-being may impact the overall well-being of women entrepreneurs. Given that women largely dominate MSMEs in Indonesia, it is important to follow up on the well-being of Muslim WOE, as they often face dual challenges in managing businesses and social and family obligations.

Previous research states that there is a strong correlation between present financial management stress and expectations for future financial security and general wellbeing. (Netemeyer et al., 2017). In the context of Muslim WOE, the stress of managing current finances can often affect emotional stability and business productivity. At the same time, perceptions of future financial security are closely related to a sense of security and hope in planning for a better future. Thus, these findings give valuable insights for the development of policies and programs that support the well-being of Muslim WOE. Policies that support better financial education can help reduce the financial stress experienced by Muslim WOE. In addition, this policy can also provide security regarding a person's future finances, which is in line with Islamic teachings about the importance of planning the future wisely, as well as trying to obtain halal and blessed sustenance. Therefore, this research is not only relevant in the context of economic development but can also strengthen the social and spiritual well-being of Muslim women entrepreneurs.

Current Money Management Stress

Perceptions of financial well-being are dynamic, meaning that an assessment of an individul of their financial well-being can change over time. These changes are influenced by various contextual and personal elements that affect a person's financial circumstances. These changes are influenced by various personal and contextual factors that affect a person's financial condition. For example, individuals who manage their finances well tend to feel more optimistic about future financial security (Ponchio et al., 2019). On the other hand, current financial problems can lower an individual's expectations of future financial well-being. This study assessed that there

is a reciprocal relationship between current assessments and expectations for the future in determining perceptions of financial well-being. That is especially relevant as many Muslim WOEs face challenges in managing business and family finances simultaneously. The stress caused by poor financial management today can affect future financial security. Thus, WOE must manage finances wisely and efficiently in line with Islamic principles regarding the importance of planning and managing wealth. This study looks into the reciprocal relationship between current financial management stress levels and expectations for a more financially secure future, which is particularly relevant for Muslim WOEs in managing personal, business, and family finances responsibly and thoughtfully. Therefore, the study hypothesizes that:

H1: Expected future financial security is significantly positively impacted by current money management stress.

Current money management stress is thought to negatively impact well-being. Research by Ruberton et al. (2016) showed that having enough cash to meet daily needs was inversely connected with existing debt and positively correlated with life satisfaction. Easily accessible accounts serve as a reminder of financial conditions. In addition, Brown et al. (2005) found that excessive debt can cause psychological stress. In general, stress related to money management and general well-being indicate how an individual evaluates their present financial status. However, Netemeyer et al. (2017) stated that the impact of current money management stress on well-being has varying significance depending on income group and other causal factors. In other words, both perceived financial well-being and money management stress are significant variables that influence overall well-being. Many Muslim WOEs manage MSMEs with limited resources and challenges in meeting business and family obligations that cause stress and affect inner peace. On the other hand, wise financial management, by prioritizing Islamic principles such as honesty in business and prioritizing blessings, can reduce stress and improve well-being. Therefore, the hypothesis of this study is:

H2: Current money management stress has a significant positive effect on well-being.

Expected Future Financial Security

Future financial stability is considered to have a positive correlation with wellbeing. Expectations for enhanced financial access in the future affect life satisfaction more than current income does (Johnson & Krueger, 2006). People who strategically save or invest for their future tend to experience greater satisfaction with life. Mental health in retirement is also connected to attitudes and behaviors that secure financial wellbeing in the future (Lusardi & Mitchell, 2011). The belief in future financial security fosters a sense of optimism in individuals when dealing with possible health concerns. The report indicates a connection between future financial security and overall wellbeing.

In Islamic teachings, it is important to plan finances wisely, including saving and investing for the future according to the Quran, Surah Al-Nisa' verse 9, which explains the preparation for future needs. In addition, several verses of the Qur'an can be a spirit to save, namely Al-Kahfi verse 82, Al-Asr 'verses 1-3, Ali-Imran verse 14, Yusuf

verses 43-49. The hope of a financially secure future provides a sense of optimism for Muslim WOE in facing various life challenges. Thus, future financial security can improve the overall well-being of Muslim WOE, both in financial, psychological, and social aspects, which is in line with Islamic teachings on the importance of good financial planning and management to achieve a better and blessed life. The proposed hypothesis is:

H3: Expected future financial security has a significant positive effect on well-being.

Digital Financial Inclusion

Digital financial inclusion, as part of digital innovation, aims to connect the supply and demand sides of the traditional economy. That creates opportunities to increase development space and efficiency in financial management (Rasheed et al., 2019). Through digital financial inclusion, people, including Muslim women entrepreneurs (WOE), can access more diverse and flexible financial services, which may have previously been difficult to reach. For Muslim WOE, the implementation of digital financial inclusion can significantly improve their quality of life. By utilizing digital technology, Muslim WOE can conduct financial transactions, manage savings, and access loans or investments more easily. In addition, when Muslim WOE implements digital financial inclusion, it can automatically identify and minimize various problems faced in the process of renewing its business. For example, Muslim WOEs can quickly view cash flow, manage debt, and plan better investments, which can then enhance the sustainability and growth of their businesses. Rasheed et al. (2019) stated that although digitalization has not greatly increased financial inclusion, there has been an improvement in financial performance in the banking sector. Furthermore, it is necessary to broaden the understanding of inclusion as an indicator of socioeconomic welfare in all sectors. Digital financial inclusion not only increases access to financial services but also empowers Muslim WOE to manage their finances more efficiently and effectively, thereby improving overall well-being. Thus, the hypothesis of this study is that:

H4: Digital financial inclusion has a significant positive effect on well-being.

Self-Control

Recognizing the factors that affect well-being is essential to promoting optimal wellbeing (Steptoe et al., 2015). One of the key factors in this regard is self-control, namely the individual's ability to regulate short-term desires and encourage the achievement of long-term objectives. Self-control includes the ability to overcome strong urges to achieve competing goals (Milyavskaya, 2019). In the context of Islamic work ethic, self-control becomes an important dimension. Referring to QS. Ghafir verse 19, which states, "He knows the treacherous eyes and what is hidden in the breasts," shows the importance of self-control for individuals, including Muslim women entrepreneurs (WOE), in order to better utilize their financial resources.

Higher levels of self-control have been linked to improved personal well-being, according to research (De Ridder & Gillebaart, 2017; Li et al., 2022; Wiese et al., 2017). Therefore, it is important to analyze further whether self-control in Muslim WOE can strengthen the relationship between current money management stress,

future financial security expectations, and digital financial inclusion on their wellbeing. By understanding the role of self-control in this context, it is hoped that more effective strategies can be identified to improve the well-being of Muslim WOE through better financial management.

- H5: Self-control moderates the relationship between current money management stress and well-being.
- *H6: Self-control moderates the relationship between expected future financial security and well-being.*
- *H7:* Self-control moderates the relationship between digital financial inclusion and well-being.

The research framework is displayed in Figure 1:



Source: Author

3. Methodology

This study uses an explanatory research design and a quantitative methodology. Explanatory research centers on exploring the relationships between variables through hypothesis testing. While it includes descriptive elements, the primary focus is on the interactions among the variables (Widodo, 2017). The indicators relevant to this research are outlined in Table 1, shown below:

Table 1. Research variables and indicators					
Variable	Definition		Indicator	Source	
Current money management stress	Dealing with stress or concern regarding financial issues and the difficulty in managing finances to meet financial commitments and realize lifestyle aspirations.		Feeling as though you never attain what you desire in life Feeling financially disadvantaged Finances dominating your life Whenever you feel you have a grip on your finances, something occurs that causes you to retreat Unable to enjoy life due to an	(Netemeyer et al., 2017)	

Table 1. Research Variables and Indicators

Variable	Variable Definition		Indicator	Source
			excessive preoccupation with money	
Expected future financial security	The perception of having a secure financial future and the ability to achieve future financial goals.	-	Experiencing financial security Capable of ensuring their future financial stability Able to reach the financial goals they have established Having saved sufficient funds to sustain themselves into old age Feeling financially secure throughout their lifetime	(Netemeyer et al., 2017)
Digital financial inclusion	An affordable digital method for providing formal financial services to customers who have traditionally been underserved.	- - -	Cashless payments Digital transactions Ownership of debit cards Access to digital infrastructure	(GPFI, 2016; Tay et al., 2022)
Self-control	A key factor in enhancing individual behavior is to strengthen and direct a person's will, thoughts, and actions toward achieving specific goals.	- - -	Good at resisting temptation Able to control oneself Able to reject the negative Not easily discouraged Able to achieve long-term goals	(Li et al., 2022; Tangney et al., 2004; Wenzel et al., 2021)
Well-Being	Represents an individual living their life positively, encompassing both cognitive evaluations and emotional responses.	- - - -	Perceived achievement Feeling calm Feeling life is worthwhile Optimistic about the future Having lots of energy	(Netemeyer et al., 2017; Ruggeri et al., 2020)

Both primary and secondary data sources are used. Respondents themselves provide primary data by giving insights into current financial stress, anticipated future financial security, digital financial inclusion, self-control, and well-being. Secondary data, on the other hand, are sourced from processed and published materials, including books, research journals, and other relevant information (Sugiyono, 2013).

The study focuses on MSMEs in Central Java, particularly those in the food or culinary sector. Using a purposive sampling technique, participants are chosen according to predetermined standards: (a) MSMEs in the food or culinary industry in Central Java, including restaurants, food stalls, cafes, cafeterias, canteens, and warungs that have been operating for at least one year, and (b) owners who are Muslim women entrepreneurs (WOE). The sample size is determined following the recommendations of Hair et al. (2011), which states that the sample size ought to match the quantity of indicators multiplied by 5 to 10, with a minimum of 100 respondents. Given that this study has 24 indicators, the calculation results in 144 samples, or at least 100 samples from SMEs in the food or culinary sector in Central Java.

This research employed a survey for data gathering, which comprised both closedended and open-ended inquiries. The open-ended questions allows participants to give comprehensive answers, while the closed-ended questions used a five-point Likert scale. The survey was distributed via Google Forms to small and medium-sized enterprises (SMEs) in the food and culinary industry in Central Java. For data analysis, Structural Equation Modeling (SEM) was applied using a Partial Least Squares (PLS) method, which is effective for examining models with direct and indirect relationships. Data processing and analysis were conducted using SmartPLS software.

4. Empirical Findings/Result Results

The study's population comprises MSMEs in Central Java, specifically within the food or culinary sector. Out of 218 respondents, 200 satisfied the research criteria. The response rate for the questionnaire is shown in Table 2 below.

Aspect	Quantity	%
Number of questionnaires in circulation	218	100%
Number of questionnaires not returned	0	0
Number of incomplete and damaged questionnaires	18	8%
Number of questionnaires that can be processed	200	92%

Table ? Despendent Date

Source: Primary Data, processed (2024).

This study also includes a summary of the respondents in relation to the questionnaire and their characteristics based on the length of operation and sales location. The majority of respondents have been operating their businesses for a considerable time, enabling them to provide relevant information. Table 3 presents an overview of the respondents as follows:

Variable	Category	Frequency	%
Length of Operation of	1-5 Years	123	62%
MSMEs	> 5 Years	77	39%
	Kota Semarang	108	54%
	Kab Semarang	30	15%
	Salatiga	18	9%
	Demak	15	8%
Sales Location	Surakarta	12	6%
	Pati	6	3%
	Kudus	4	2%
	Pekalongan	4	2%
	Purwodadi	3	2%

Table 3 Respondent Overview

Source: Primary Data, processed (2024).

Data analysis for this study was carried out using SmartPLS version 3, a software application for Partial Least Squares Structural Equation Modeling (PLS-SEM). The analysis of the outer model aimed to assess the measurement constructs of the latent variables. This evaluation involved tests for internal convergent validity (outer loading and AVE), consistency of reliability (Cronbach's alpha and composite reliability), and discriminant validity (HTMT). A factor loading, along with Cronbach's alpha, rho A, and composite reliability, is considered satisfactory when the factor loading is above 0.7, signifying that the indicators are valid for their respective constructs. Additionally, an AVE value exceeding 0.50 suggests that the construct explains at least 50% of the variance in its items on average (Chin, 1998).

Table 4. Outer Model Analysis								
Variable	Item	Outer Loading	Cronbach's Alpha	rho_A	Composite Reliability	AVE		
	X1.1	0.480		0.743	0.808	0.466		
Current Money	X1.2	0.816	0.725					
Management	X1.3	0.605						
Stress	X1.4	0.645						
-	X1.5	0.806	-					
Farra e de d	X2.1	0.811						
Expected - Future -	X2.2	0.694	-					
Future - Financial -	X2.3	0.721	0.629	0.594	0.653	0.350		
Security -	X2.4	-0.051	-					
Security	X2.5	0.297						
Digital	X3.1 0.88	0.886		0.918	0.935			
Digital Financial	X3.2	0.901	- 0.908			0.782		
Inclusion -	X3.3	0.867	0.908			0.782		
menusion	X3.4	0.883	-					
	Y1.1	0.690						
-	Y1.2	0.727	-					
Self-Control	Y1.3	0.835	0.643	0.755	0.765	0.441		
-	Y1.4	0.706	-					
-	Y1.5	0.059	-					
	Y2.1	0.705						
-	Y2.2	0.702	-					
Well-Being	Y2.3	0.783	0.745	0.756	0.830	0.496		
	Y2.4	0.615	-					
-	Y2.5	0.706	-					

Source: SmartPLS output, processed (2024).

According to Table 4, the results of the outer loading values indicate that several indicators are invalid, such as indicators X1.1, X1.3, X1.4, X2.2, X2.4, X2.5, Y1.1, Y1.5, and Y2.4. In Cronbach's alpha test, variables such as expected future financial security and self-control were found to be invalid. Additionally, in the tests for rho_A and composite reliability, it was also found that the expected future financial security variable was invalid. That is because the obtained values are less than 0.70, indicating that these indicators and variables do not yet demonstrate high reliability. Meanwhile, the AVE values for each variable in this study showed figures less than 0.50, except for digital financial inclusion, which reached 0.782. Therefore, these indicators do not provide a clear depiction of the variables being measured.

The structural model was assessed using R-squared for the dependent constructs, the Stone-Geisser Q-squared test to assess predictive relevance (Q^2), significance testing of the structural path coefficient parameters, and hypothesis testing. The R-squared value reflects the capacity of the endogenous variables to predict the model, with the following interpretations: 0.75 = strong, 0.50 = moderate, and 0.25 = weak (Hair et al., 2011).

The R-square value for expected future financial security, which is 0.061, indicates that this latent variable has weak predictive ability. It means that this variable only explains a small portion of the variance, suggesting that other elements might influence the measured outcomes more. In contrast, the R-square value for well-being, which reaches 0.525, indicates that this variable has moderate predictive ability. It indicates that over half of the current variance can be explained by the well-being variable, making it sufficiently relevant to the context of this study.

The Q^2 (Q-square) value is employed to evaluate the structural model's predictive relevance (Ghozali, I., & Latan, 2015). A Q^2 value above 0 signifies the model has strong predictive power, whereas a Q^2 value below 0 implies that the model is less effective at predicting the dependent variables. In this study, Table 5 demonstrates that the Q^2 values exceed 0, confirming that the developed structural model satisfies the criteria for a well-fitting model. That suggests that the model effectively explains the variation in the data and can be relied upon to provide accurate predictions of the measured outcomes.

Table 5. Q-Square					
	SSO	SSE	Q ² (=1-SSE/SSO)		
Current Money Management Stress	1000.000	1000.000			
Expected Future Financial Security	1000.000	987.806	0.012		
Digital Financial Inclusion	800.000	800.000			
Self-Control	1000.000	1000.000			
Well-Being	1000.000	756.708	0.243		
Current Money Management Stress	1000.000	1000.000			

Source: SmartPLS output, processed (2024).

This study's significance test for hypotheses was conducted using the bootstrapping method in SmartPLS 3.0, focusing on the path coefficients table, which presents the t-statistics and p-values. The criteria used to determine significance are p-values < 0.05, indicating a significance level of 5%. The results of the inner model analysis are presented in Table 6 and Figure 2, which illustrate the relationships among the tested variables. The table shows each hypothesis's path coefficients and significance test results. At the same time, Figure 1 provides a visual representation of the model structure and the directional relationships among the variables. These findings offer a strong foundation for discussing the implications of the identified relationships in this research.

	Table 6. Results of Inner Model Analysis							
	Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values		
H1	Current Money Management Stress -> Expected Future Financial Security	-0.246	-0.271	0.078	3.154	0.002		
H2	Current Money Management Stress -> Well-Being	-0.225	-0.210	0.098	2.311	0.021		
Н3	Expected Future Financial Security -> Well-Being	0.232	0.225	0.079	2.942	0.003		

	Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
H4	Digital Financial Inclusion ->	-0.145	-0.146	0.145	0.995	0.320
	Well-Being					
H5	SC*CMMS -> Well-Being	0.084	0.076	0.064	1.309	0.191
H6	SC*EFFS -> Well-Being	0.097	0.096	0.053	1.842	0.066
H7	SC*DFI -> Well-Being	-0.023	-0.021	0.122	0.186	0.852
	Self-Control -> Well-Being	0.419	0.431	0.077	5.411	0.000

Source: SmartPLS output, processed (2024).



Figure 2. Results of Inner Model Analysis Source: SmartPLS output, processed (2024).

The results of the analysis show that current money management stress has a significant influence on expected future financial security, with an O value of -0.246 (0.002 < 0.05), so the first hypothesis (H1) is accepted. In addition, both current money management stress (O = -0.225; p = 0.021) and expected future financial security (O = 0.232; p = 0.003) were proven to have a significant effect on well-being, which indicates that the second (H2) and third (H3) hypotheses are also accepted. On the other hand, digital financial inclusion does not have a significant effect on wellbeing (O = -0.145; p = 0.320), so the fourth hypothesis (H4) is rejected. In addition, the self-control moderation variable failed to moderate the relationship between current money management stress, expected future financial security, and digital financial inclusion on well-being, with O values of 0.084 (p = 0.191), 0.097 (p = (0.066), and (0.023) (p = (0.852)), respectively, so H5, H6, H7 were rejected. However, interestingly, self-control itself was shown to have a significant effect on well-being (O = 0.419; p = 0.000), although this effect was not hypothesized in this study. This finding suggests that although self-control does not function as a moderating variable, it is still an important factor influencing individual well-being.

5. Discussion

First, this study confirms that Current Money Management Stress has a significant relationship with Expected Future Financial Security. This outcome agrees with prior research (Netemeyer et al., 2017), which also revealed that current money management stress can reduce expected future financial security. For a Muslim entrepreneur, good financial management not only influences the success of her business but is also closely related to Islamic principles that teach balance between the world and the hereafter. In Islamic teachings, women entrepreneurs are required to manage their assets wisely and responsibly because assets are a trust from Allah SWT. Stress that arises due to difficulties in financial management can have a negative impact on hopes of achieving Expected Future Financial Security, as explained by research (Karlan et al., 2014; Lusardi & Mitchell, 2011). Similarly, when Muslim WOEs experience financial stress, it tends to reduce their self-confidence and optimism regarding the future of their business. WOE Muslim emphasizes that women entrepreneurs should manage financial stress in a way that reflects Islamic values, such as honesty, justice, and blessings in business. With good management, a Muslim woman entrepreneur can feel more secure and optimistic about her financial future while maintaining peace of mind by entrusting the results of her efforts to Allah SWT. Therefore, it is important for a Muslim WOE to manage stress in financial management in a balanced way so that not only Expected Future Financial Security is achieved but also continues to receive blessings in every effort made.

Second, the outcomes of this research suggest that stress related to money management today has a big impact on well-being. It means that the level of stress experienced by Muslim WOEs in managing their finances can affect how Muslim WOEs feel about their overall well-being. For a Muslim WOE, poor financial management can affect not only financial conditions but also inner and spiritual wellbeing. Research by Netemeyer et al. (2017), which states that stress in financial management can affect well-being, is also very relevant in this context. When a Muslim woman entrepreneur experiences financial stress, it affects not only her physical health but also her mental peace, which is an integral part of well-being in Islam. Research by Ruberton et al. (2016) also indicated that having sufficient funds in bank accounts and savings was positively related to life satisfaction, while high debt was associated with life satisfaction in a negative way. From an Islamic perspective, having sufficient funds to meet living needs without relying on debt is a principle that is highly emphasized because Islam teaches Muslims to maintain financial independence, avoid debt (with clear and fair conditions), and manage finances wisely. Islam encourages its followers to prioritize halal savings and investments, which not only provide financial security but also maintain inner peace. Wise financial management of Muslim WOE will be able to achieve better well-being, both in material and spiritual aspects. Good management provides a sense of security, increases life satisfaction, and allows Muslim WOE to focus on their long-term goals without being hampered by financial anxiety. Thus, managing financial stress with an approach that is in accordance with Islamic principles not only improves well-being but also creates blessings in life, which is highly valued in Islamic teachings.

Third, the outcomes of this research suggest that expected future financial security has a significant effect on well-being, with a positive correlation. That is relevant for Muslim WOE because confidence in future financial security can increase life satisfaction and overall well-being. In Islamic teachings, financial security is considered a worldly need and a means to achieve inner peace and balance in life. As stated in the research by Johnson & Krueger (2006), individuals who have hope for better financial access in the future tend to feel more satisfied with their lives. Muslim WOEs who hope for future financial stability will feel more optimistic and have a clearer purpose in life, which can improve their overall well-being. Islam teaches that good planning and wise management of wealth are part of the efforts that must be made to achieve a valuable life. Careful financial planning, such as halal investments and wise debt management, provides a sense of security and opens the door to blessings and convenience in the future. This research is in line with CFPB (2015), which states that there is a relationship between expected financial security and overall well-being. With expected financial security, Muslim WOE can make wiser business decisions, improve mental health, and achieve higher life satisfaction. Thus, it will provide financial stability that allows Muslim WOE to focus on business development, family, and social contribution, all of which contribute to overall wellbeing.

Fourth, the Acceleration of digital financial services makes digital financial inclusion very important for sustainable growth. According to Tay et al. (2022), low-income countries should boost digital financial inclusion to combat poverty through actions such as improving digital infrastructure, simplifying banking systems, and promoting financial education. Although digitalization has not significantly improved overall financial inclusion, digital financial inclusion in the banking sector has shown improvements in financial performance (Kanungo & Gupta, 2021). However, digital financial inclusion has not been fully implemented in MSMEs. The outcomes of the study demonstrate that digital financial inclusion does not have a significant effect on well-being. This study focuses on Muslim WOE and how they manage their finances using digital financial inclusion. However, it turns out that many have difficulty utilizing financial services. This indicates that more work needs to be done to enhance financial literacy and accessibility for Muslim WOE so that Muslim WOE can benefit their well-being. In addition, Muslim WOEs need support in easy access to financial services through digital platforms. Financial services that are digital, like mobile banking and online loans, can help them manage their finances, develop their businesses, and build capital. Access to social and institutional inclusion, as well as savings accounts, is critical to improving well-being and financial stability. In achieving this, there needs to be an environment that supports financial inclusion so that this will help Muslim WOEs contribute to their well-being and wider economic growth.

Lastly, self-control in this study did not moderate the relationship between current financial stress, anticipated future financial security, digital financial inclusion, and well-being. This implies that an individual's level of self-control, while important, does not affect how much financial stress, expectations for future financial security, and digital financial inclusion influence their well-being. However, an intriguing

finding is that self-control itself was discovered to significantly affect well-being.. While this effect was not originally hypothesized, the results suggest that Muslim WOEs with better self-control tend to be happier and more content with their lives. This research supports earlier findings that show high self-control has a beneficial effect on individual well-being (De Ridder & Gillebaart, 2017; Li et al., 2022; Wiese et al., 2017). In Islam, self-control plays a significant part as well in maintaining peace of mind and maintaining gratitude for what is owned. Muslim WOE who have compatible self-control will make it easier to manage the stress that arises from financial management and will be more easily optimistic and grateful for the hope of financial security in the future. Although self-control did not function as a moderating variable in the correlations between the measured factors, this study confirms the need for more attention to self-control as a key element in enhancing individual well-being, especially in a financial context. Good self-control enables Muslim WOEs to maintain discipline in running their businesses, prioritize long-term halal investments, and avoid excessive debt, all of which contribute to their financial and mental well-being. Thus, the outcomes of this research suggest that self-control plays a significant part in the management of the financial situation of Muslim WOE. However, it does not moderate the relationship between other measured factors. A Muslim WOE needs to continue to develop self-control in every aspect of life, including financial management, to achieve better and more blessed prosperity according to Islamic teachings.

6. Conclusions

Halal finance contributes to the overall economic and social health, positively impacting the wider community. This study shows that current money management stress significantly affects the expected future financial security and well-being of Muslim WOE. High financial stress can reduce feelings of security and optimism about the financial future, which in turn affects their well-being. However, there is a tie between expected financial security and overall quality of life. Confidence in future financial stability, through careful planning and the hope of obtaining halal financial support, improves life satisfaction and business motivation in accordance with the principle of tawakal. Although digital financial inclusion shows potential benefits, its impact on the well-being of Muslim WOE in this study has not been significant, indicating the need to raise financial literacy to maximize the use of digital technology in financial management. While self-control did not act as a moderator in the relationship between the tested factors, high levels of self-control were shown to contribute positively to the well-being of Muslim WOE. In Islam, self-control is an important value that encourages discipline in financial management, reduces stress, and supports wise financial decisions. Therefore, developing self-control and improving digital financial literacy are key factors that can help Muslim WOEs achieve better well-being, both financially and spiritually, as well as support the sustainability and growth of their businesses in accordance with Islamic principles.

Two shortcomings of this study need to be recognized. First, the survey sample only included Muslim Women of Entrepreneurs (WOE) in Central Java. Consequently, the results cannot be generalized to all Muslim WOEs across Indonesia. Second, this

study only used quantitative methods, which may limit the understanding of more complex phenomena. For further research, it is recommended that the sample be expanded to include Muslim WOEs from various regions in Indonesia so that the results are more representative. Future research can also consider using more varied measurement methods, such as mixed methods, to examine the factors that shape the financial well-being of Muslim WOEs more thoroughly.

This highlights the need to elevate financial understanding among MSMEs so they can better manage their finances and fully leverage technology. Therefore, supporting the development of self-control and ensuring access to digital financial services are crucial for improving well-being and growth in MSMEs, especially for Muslim WOE.

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References:

- Aldulaimi, S. H. (2020). Islamic work ethics: Multidimensional constructs and scale validation. *International Journal of Applied Management Science*, 12(3), 186–206. https://doi.org/10.1504/IJAMS.2020.108073
- Anggadwita, G., & Dhewanto, W. (2016). The influence of personal attitude and social perception on women entrepreneurial intentions in micro and small enterprises in Indonesia. *International Journal of Entrepreneurship and Small Business*, 27(2–3), 131– 148. https://doi.org/10.1504/IJESB.2016.073974
- Brown, S., Taylor, K., & Price, S. W. (2005). Debt and distress : Evaluating the psychological cost of credit. 26, 642–663. https://doi.org/10.1016/j.joep.2005.01.002
- Brüggen, E. C., Hogreve, J., Holmlund, M., Kabadayi, S., & Löfgren, M. (2017). Financial well-being : A conceptualization and research agenda. *Journal of Business Research*. https://doi.org/10.1016/j.jbusres.2017.03.013
- Cant, M. C., Wiid, J. A., & Meyer, A. (2016). SMEs: Do they follow a shotgun or rifle approach when it comes to target marketing? *Problems and Perspectives in Management*, 14(3), 504–511. https://doi.org/10.21511/ppm.14(3-2).2016.06
- CFPB. (2015). Financial Well-Being: The Goal of Financial Education. *Consumer Financial Protection Bureau*. http://www.consumerfinance.gov/reports/financial-well-being
- Chin, W. W. (1998). The partial least squares approach for structural equation modeling. *Modern Methods for Business Research, April*, 295–336.
- De Ridder, D., & Gillebaart, M. (2017). Lessons learned from trait self-control in well-being: making the case for routines and initiation as important components of trait self-control. *Health Psychology Review*, *11*(1), 89–99. https://doi.org/10.1080/17437199.2016.1266275
- De Vita, L., Mari, M., & Poggesi, S. (2014). Women entrepreneurs in and from developing countries: Evidences from the literature. *European Management Journal*, 32(3), 451– 460. https://doi.org/10.1016/j.emj.2013.07.009
- Diener, E. (2012). *New findings and future directions for subjective well-being research*. 67(8), 583–605. https://doi.org/10.1093/acprof

- Du, Q., Zhou, F., Yang, T., & Du, M. A. (2022). Digital Financial Inclusion, Household Financial Participation and Well-Being: Micro-Evidence from China. *Emerging Markets Finance* and *Trade*, 59(4), 1–15. https://doi.org/http://dx.doi.org/10.1080/1540496X.2022.2153592
- Ghozali, I., & Latan, H. (2015). Partial least square: Concept, application technique using Smart PLS 3.0 program for empirical research. Diponegoro University Publishing Agency.
- GPFI. (2016). G20 Financial Inclusion Indicators. In *Global Partnership fo Financial Industri*. http://datatopics.worldbank.org/g20fidata/
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. Journal of Marketing Theory and Practice, 19(2), 139–152. https://doi.org/10.2753/MTP1069-6679190202
- Hassan, A., & Saleem, S. (2017). An Islamic microfinance business model in Bangladesh: Its role in alleviation of poverty and socio-economic well-being of women. *Humanomics*, 33(1), 15–37. https://doi.org/10.1108/H-08-2016-0066
- Hojman, D. A., & Miranda, Á. (2018). Agency, Human Dignity, and Subjective Well-being. World Development, 101, 1–15. https://doi.org/10.1016/j.worlddev.2017.07.029
- Huppert, F. A. (2009). Psychological Well-being: Evidence Regarding its Causes and Consequences. *Applied Psychology: Health and Well-Being*, 1(2), 137–164. https://doi.org/10.1111/j.1758-0854.2009.01008.x
- Huppert, F. A., & So, T. T. C. (2013). Flourishing Across Europe: Application of a New Conceptual Framework for Defining Well-Being. Social Indicators Research, 110(3), 837–861. https://doi.org/10.1007/s11205-011-9966-7
- Johnson, W., & Krueger, R. F. (2006). How Money Buys Happiness: Genetic and Environmental Processes Linking Finances and Life Satisfaction. 90(4), 680–691. https://doi.org/10.1037/0022-3514.90.4.680
- Kanungo, R. P., & Gupta, S. (2021). Financial inclusion through digitalisation of services for well-being. *Technological Forecasting and Social Change*, 167(July 2020), 120721. https://doi.org/10.1016/j.techfore.2021.120721
- Karlan, D., Ratan, A. L., & Zinman, J. (2014). Savings by and for the Poor: A Research Review and Agenda. *Center for Global Development, November 2013*.
- Koh, F., Phoon, K. F., & Ha, C. D. (2018). Digital Financial Inclusion in South East Asia. In Handbook of Blockchain, Digital Finance, and Inclusion (1st ed., Vol. 2). Elsevier Inc. https://doi.org/10.1016/B978-0-12-812282-2.00015-2
- Kuznyetsova, A., Boiarko, I., Khutorna, M., & Zhezherun, Y. (2022). Development of financial inclusion from the standpoint of ensuring financial stability. *Public and Municipal Finance*, 11(1), 20–36. https://doi.org/10.21511/pmf.11(1).2022.03
- Li, Q., Xiang, G., Song, S., Huang, X., & Chen, H. (2022). Examining the Associations of Trait Self-control with Hedonic and Eudaimonic Well-being. *Journal of Happiness Studies*, 23(2), 667–687. https://doi.org/10.1007/s10902-021-00418-w
- Lusardi, A., & Mitchell, O. S. (2011). Financial Literasi and Planning: Implications For Retirement Wellbeing. *National Bureau of Economic Research*.
- Milyavskaya, M. (2019). The many faces of self-control: Tacit assumptions and recommendations to deal with them. *Motivation Science*, 5(1), 79–85. https://doi.org/https://doi.org/10.1037/mot0000108
- Naumenkova, S., Mishchenko, S., & Dorofeiev, D. (2019). Digital financial inclusion: Evidence from Ukraine. *Investment Management and Financial Innovations*, 16(3), 194–205. https://doi.org/10.21511/imfi.16(3).2019.18
- Netemeyer, R. G., Warmath, D. E. E., Fernandes, D., & Jr, J. L. (2017). How Am I Doing ? Perceived Financial Well-Being, Its Potential Antecedents, and Its Relation to Overall Well-Being. *Journal of Consumer Research*. https://doi.org/10.1093/jcr/ucx109

- Ponchio, M. C., Cordeiro, R. A., & Gonçalves, V. N. (2019). Personal factors as antecedents of perceived financial well-being: evidence from Brazil. *International Journal of Bank Marketing*, 37(4), 1004–1024. https://doi.org/10.1108/IJBM-03-2018-0077
- Rafiki, A., & Nasution, F. N. (2019). Business success factors of Muslim women entrepreneurs in Indonesia. *Journal of Enterprising Communities*, 13(5), 584–604. https://doi.org/10.1108/JEC-04-2019-0034
- Rasheed, R., Siddiqui, S. H., Mahmood, I., & Khan, S. N. (2019). Financial Inclusion for SMEs: Role of Digital Micro-financial Services. *Review of Economics and Development Studies*, 5(3), 429–439. https://doi.org/10.26710/reads.v5i3.686
- Ruberton, P. M., Lyubomirsky, S., & Gladstone, J. (2016). How your bank balance buys happiness: The importance of "cash on hand" to life satisfaction. *Emotion*, 16(5), 575– 580. https://doi.org/10.1037/emo0000184
- Ruggeri, K., Garcia-Garzon, E., Maguire, Á., Matz, S., & Huppert, F. A. (2020). Well-being is more than happiness and life satisfaction: A multidimensional analysis of 21 countries. *Health and Quality of Life Outcomes*, 18(1), 1–16. https://doi.org/10.1186/s12955-020-01423-y
- Steptoe, A., Deaton, A., & Stone, A. A. (2015). Subjective wellbeing, health, and ageing. *The Lancet*, 385(9968), 640–648. https://doi.org/10.1016/S0140-6736(13)61489-0
- Sugiyono. (2013). Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif, dan R&D). Alfabeta.
- Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High Self-Control Predicts Good Adjustment, Less Pathology, Better Grades, and Interpersonal Success. *Journal of Personality*, 72(2), 271–324. https://doi.org/10.1111/j.0022-3506.2004.00263.x
- Tay, L. Y., Tai, H. T., & Tan, G. S. (2022). Digital financial inclusion: A gateway to sustainable development. *Heliyon*, 8(6), e09766. https://doi.org/10.1016/j.heliyon.2022.e09766
- Vilysta, T. (2024). Data UMKM Jateng 4,2 Juta, Mayoritas Milik Perempuan.
- Wenzel, M., Rowland, Z., & Kubiak, T. (2021). Examining five pathways on how self-control is associated with emotion regulation and affective well-being in daily life. *Journal of Personality*, 89(3), 451–467. https://doi.org/10.1111/jopy.12590
- Wiese, C. W., Tay, L., Duckworth, A. L., D'Mello, S., Kuykendall, L., & Hofmann, W. (2017). Too much of a good thing? Exploring the inverted-U relationship between self-control and happiness. *Journal of Personality*, 86(3), 380–396.