



Pursuing Millennial Workers' Financial Well-Being in Digital Context: Using R Studio

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ABSTRACT

The financial well-being pursued by millennial workers in the digital financial era is still shrouded in anxiety and far from feeling secure. This study investigates what makes millennial workers in Greater Jakarta feel financially secure or anxious when using digital financial products. It focuses on how their behavior with these tools impacts their well-being. This study surveyed 425 millennial workers (born 1981-2005) in Greater Jakarta. It used questionnaires and analyzed the data with the software R Studio to see the demographics of respondents and utilize PLS-SEM. The study found that digital financial behavior significantly negatively affects financial anxiety and positively affects financial security. In other words, smart financial behavior with digital products can improve how millennials in Greater Jakarta perceive their financial well-being. It means feeling less stressed and more secure about their current and future finances. Based on these findings, the study suggests that millennials should learn to manage different digital financial products early on. By understanding financial technology, they can make informed financial decisions and feel less worried about their money, ultimately reducing anxiety and building financial security in their financial condition

INTRODUCTION

As our world gets more modern, there are more and more options available for people to take control of their finances. Indonesia is a country with the second-highest development of the financial service industry in Asia (Davis et al., 2017). The Indonesian industrial world has also been spoiled by the presence of financial technology, which has brought financial services closer to companies and workers.

According to the data from Indonesia's 2021 State of the Labor Force publication, the Central Bureau of Statistics (2021b) reported that the workforce in Indonesia is currently dominated by the millennial generation aged from 20 years to 34 years. The millennial generation of workers is certainly familiar with accessing the internet using smart cell phones. A report by Central Bureau of Statistics (2021a) on telecommunication data shows that between 2010 and 2021, teenagers (under 19) were not the biggest internet users in Indonesia. Adults (19 and over) topped the charts for internet access.

Unfortunately, a number of studies have indicated that an increasing number of young adults between the ages of 19 and 29 are encountering financial challenges, with those between the ages of 20 and 30 being particularly susceptible to financial risks (Williams & Oumlil, 2015). Strömbäck et al. (2017) explain that human experience anxiety as a result of financial attitude and are susceptible to feelings of safety derived from financial status.

The aforementioned issues have prompted this study to concentrate on factors that may impact millennial employees' financial welfare. One of the primary objectives of study on enhancing financial well-being is to identify the inside and outside interventions (Mahendru et al., 2022), and its significance is being highlighted worldwide in a scientific manner (Brüggen et al., 2017). People are encouraged to have regular financial controls to have financial independence and enjoy a more prosperous life (Consumer Financial Protection Bureau, 2015). Zulfiqar & Bilal (2016) state that there is a correlation between financial welfare and age, income, and education. Garman & Fogue (2006) argue that behavioral personal finance can be a crucial element in defining financial welfare. Even, Nurkholik (2024) and Younas et al. (2019) revealed that financial welfare is affected by financial literacy, which in turn are influenced by financial behavior variables.

There are studies that focus on how financial welfare or financial well-being is influenced by individual financial behavior. Bruggen et al. (2017) place the financial behavior variable at the heart of their research model because it directly affects financial well-being, as do with Houmanfar et al. (2015) and Zyphur et al. (2015). Rea et al. (2019) revealed that attitudes towards money as a proxy for financial behavior have an influence on individual financial welfare. Besides that, skills, confidence, and self-motivation shape financial behavior and then affect financial well-being (Riitsalu & Murakas, 2019). Healthy behavior refers to spending and saving actions that make it possible to maintain a great financial balance (Damian et al., 2020).

Nevertheless, some of these previous publications have not discussed the explicit role of the digital financial behavior towards individual financial well-being. According to previous researches, a research gap can be identified, namely that there is still very little research that tries to explore the explanation of financial well-being by involving the digital finance context and psychological aspects of financial conditions, through behavior when utilizing financial technology, especially for millennial generation workers. Therefore, this study puts forward a novel discussion on the scope of digital financial engagement and aspects of a person's feelings, namely anxiety and security with their own financial behavior.

Indeed, the necessity for awareness to financial well-being is becoming increasingly apparent. A review of previous research indicates that the majority concern of industrialized countries is the issue of financial welfare (Brüggen et al., 2017). Davis et al. (2017) said the improving of financial industry in Indonesia is progressing at a rapid pace, with a doubling of the sector over the past year. In light of this, it is imperative that the government establishes a legal framework to formally regulate financial service entities and safeguard the interests of consumers and the state (Tan et al., 2023).

The benefits that will be felt are in the form of changes in people's financial behavior for the better and improved financial welfare. Pursuing financial prosperity for each individual, especially the millennial generation of workers, is very useful and important in today's era. Therefore, this study purposes to elucidate the digital financial behavior effect on subjective financial well-being of millennial workers, in the form of feelings of anxiety or security.

LITERATURE REVIEW

Financial Well-Being

Financial well-being is defined as the insight of being able to maintain a desired current standard of staying and financial liberty (Brüggen et al., 2017). Joo et al. (2008) and Joo & Grable (2004) define financial well-being as an one's satisfaction, a state of being financially healthy from fear with their financial situation based on a subjective assessment. The idea of financial well-being is a relatively recent one, attempting to quantify subjective financial situation and perceived future financial trajectory (Michael Collins & Urban, 2020). The concept of "financial well-being" has undergone a transformation from a simplistic notion of general satisfaction with person's financial circumstances to a multifaceted insight that encompasses a blend of many aspects (Delafrooz & Paim, 2011; Mogaji et al., 2021). In light of the preceding research, it can be posited that financial well-being may be interpreted as a state of satisfaction, security, or freedom with regard to one's personal financial status, enabling the individual to make decisions.

Strömbäck et al. (2017) use the dimensions of perceived anxiety and perceived security to measure the effect on a person's financial well-being. Zulfiqar & Bilal (2016) posit that financial well-being is correlated with income, and education. Garman & Fogue (2006) contend that behavioral personal finance can be a significant element in defining financial well-being. Sabri et al. (2008) demonstrate robust evidence that financial behavior is indicative of financial welfare among students. Additionally, Nurkholik (2024) and Younas et al. (2019) demonstrated that financial well-being is influenced by financial literacy, with the mediation of financial behavior variables. High levels of financial well-being can have a profound positive impact on both the household level and general welfare (Brenner et al., 2020).

Digital Financial Behavior

One of the most outstanding models used to reveal human social attitude is the Theory of Planned Behavior (TPB) (Ajzen, 2011). Fishbein & Ajzen (1975) created the Theory of Reasoned Action (TRA) before TPB Ajzen (1991). Joo & Grable (2004), linking behavior with financial topics, say that the attitude of human in the field of finance are assigned to as "financial behavior."

Financial management behavior is regarded as a pivotal concept within the discipline of finance, particularly with regard to the prudent administration of financial resources (Thi et al., 2015). Financial behavior is defined as the style in which a household or individual manages their financial resources. This encompasses the planning of savings, insurance, and investment budgets (Hasibuan et al., 2018). In addition, financial behavior can be defined as the manner in which humans interact with financial resources (Nurkholik, 2024a). So, the term "behavioral finance" is used to describe the intersection of behavior and finance. This field of study encompasses the financial arrangements made by individuals or families, including planning, spending, and future goals.

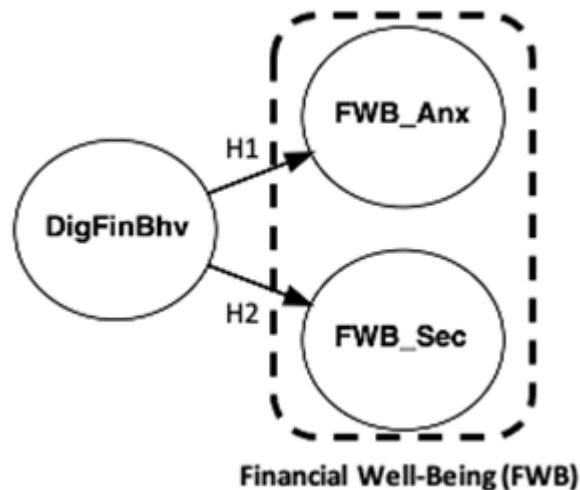
Healthy financial behavior is defined as a set of spending and saving actions that facilitate the maintenance of a favorable financial balance (Damian et al., 2020). Strömbäck et al. (2017) reveal that people with good discipline have better financial behavior using platform, thereby increasing financial well-being. Besides that, skills, confidence, and self-motivation shape financial behavior and then affect financial well-being (Riitsalu & Murakas, 2019). Financial behavior when in online debt can affect financial well-being personally (Cwynar et al., 2019). Attitudes towards money as a proxy for financial behavior have an influence on individual financial well-being (Castro-González et al., 2020). The financial behaviour and financial well-being of an individual are two aspects of their financial decision-making that are closely related (Chavali et al., 2021).

Departing from the theoretical exposure of various relevant previous studies, the following hypothesis is put forth in this study:

H1: Digital financial behavior significant negative effects on financial anxiety

H2: Digital financial behavior significant positive effects on financial security

The study then presents a conceptual framework, depicted in Picture 1, which is as follows:



Picture 1. Conceptual Framework
Source: Processed by The Author, 2023

METHODOLOGY

This quantitative research employs a survey method with an explicative approach (Nurkholik, 2023; Rahayu et al., 2022). This research is limited by the scope of its subjects, namely workers in the Greater Jakarta area (Jabodetabek) in Indonesia. The object of the research is Generation Y (millennials) born between 1980 and 1996 (Carlson, 2008). Furthermore, a questionnaire comprising 28 questions was distributed to respondents between 30 November and 15 December 2023.

Based on data belonging to the Indonesian Central Bureau of Statistics, distribution of millennials in Greater Jakarta of approximately 12 million from the total population is approximately 34 million. Data on the number of millennials in the population in this study. Furthermore, to determine the sample size, this study obtained 400 samples by utilizing the Slovin formula (1960) with the margin of error of five percent. Additionally, 396 respondents have involved completely from distributed 425 questionnaires. This yields a response rate of approximately 93% for the sample of respondents.

Furthermore, the sampling technique applied was purposive sampling, with the criterion of respondents was millennial workers who work in the Greater Jakarta. The selected individuals must have been born between 1982 and 2004. This criterion excludes millennial workers who are not employed inside the Greater Jakarta. In the context of collecting survey data, this study employs a questionnaire as an instrument containing 28 statement indicator items to be answered by respondents based on their individual preferences.

Measurement of financial well-being variable use indicators are divided into two dimensions: financial anxiety (4 indicator items) and financial security (3 indicator items) (Strömbäck et al., 2017). Cronbach's alpha for the financial anxiety dimension is 0.68, while it is 0.91 for the financial security dimension. Consequently, all indicator items are deemed to be reliable. Furthermore, measurement of digital financial behavior variable use 10 modified indicators from Alonso-García et al. (2017); Setiawan et al. (2022) and Watson (2003). Given

the relative rarity of this variable, the Delphi method is employed to validate each indicator. This method entails the collection of expert judgments from eight panelists representing various related institutions. The Delphi process was carried out in two rounds, resulting in unanimous agreement among all panelists on all indicators, with all indicators thus deemed to be of high reliability. All indicators of all variables in this study are measured on a Likert scale of 1 to 5 (1932). Table 1 presents a comprehensive overview of the indicators or questionnaire items for all variables.

The data were gathered via online questionnaires utilizing the Google Form. Respondents' responses are automatically saved on Google Drive and processed with a Microsoft Excel file format to analysis. (Anwar et al., 2023). Furthermore, data analysis including demographic analysis and PLS-SEM approach use the free software R Studio with the SEMinR package.

Table 1. Research Instrument

Variable	Code	Indicator
Financial well-being. (Strömbäck et al., 2017)	FWBa.1	I feel unsure about the term financial expert.
	FWBa.2	I am preoccupied with financial matters and the management of my financial resources.
	FWBa.3	I tend to postpone making financial decisions.
	FWBa.4	Once I had made my decision, I was concerned about the accuracy of my assessment.
Financial security	FWBs.1	I am confident in my current financial position.
	FWBs.2	I am optimistic about my financial future.
	FWBs.3	I am confident that I will have sufficient financial resources to maintain my standard of living throughout my retirement, regardless of the length of my life.
Digital financial behavior. (Alonso-García et al., 2017; Setiawan et al., 2022; Watson, 2003)	DFB.1	I engage in regular online shopping.
	DFB.2	The majority of my shopping is conducted via digital platforms, such as Shopee and Tokopedia, rather than digital platforms, such as traditional markets, traditional stores, and shopping malls.
	DFB.3	I have elected to utilize digital platforms for the purpose of procuring personal products.
	DFB.4	I tend to prefer shopping via digital platforms, as I find it a more relaxing and enjoyable experience.
	DFB.5	I have chosen to utilize a digital platform for my shopping endeavors due to the convenience it offers.
	DFB.6	I utilize digital financial products for transactional and shopping purposes.
	DFB.7	I maintain digital financial savings products with the intention of investing them for speculative purposes.
	DFB.8	I maintain a reserve of digital financial instruments for contingencies.
	DFB.9	I hold the conviction that the utilization of digital financial products offers a secure means of accumulating savings.
	DFB.10	I derive a sense of satisfaction from the financial savings that result from the use of digital financial products.

Source: Processed by the Author, 2023

RESULTS

Respondent Demographics

The data pertaining to the respondents is shown in Table 2. This table describes the respondents' demographics, including gender, age, educational qualification, workplace location, field of job, working period, and monthly income (expressed in IDR). The table reveals that there were 224 male respondents (56.6%) and 172 female respondents (43.4%). The respondents' age distribution was concentrated in the 26 to 30 age bracket, with 158 respondents (39.9%) falling within this category. The majority of respondents had completed their most recent education at the undergraduate, with 249 respondents (62.9%) having done so. The majority of respondents were employed in the Jakarta region, with 123 respondents (31.1%) employed there. The largest number of respondents (11.1%) was drawn from the infrastructure field. The majority of respondents had been employed for between one and five years, with 149 (37.6%). The respondents had the highest income per month, with 204 (51.5%) earning between IDR 6,000,000 and IDR 10,000,000.

Table 2. Demographic of Respondents

Gender	Number of Respondents	%	Sector/Field of Work	Number of Respondents	%
Man	224	56.6%	Basic Materials	33	8.3%
Woman	172	43.4%	Consumer Cyclical	17	4.3%
Total number	396	100%	Consumer Non-Cyclical	37	9.3%
Age	Number of Respondents	%	Energy	12	3.0%
18 - 25 years	71	17.9%	Financials	37	9.3%
26 - 30 years	158	39.9%	Government Services	22	5.6%
31 - 35 years	135	34.1%	Healthcare	30	7.6%
> 35 years	32	8.1%	industrials	23	5.8%
Total number	396	100%	Infrastructures	44	11.1%
Last education	Number of Respondents	%	Properties & Real Estate	22	5.6%
Senior high school	43	10.9%	Technology	39	9.8%
First/second diploma	18	4.5%	Transportation & Logistics	42	10.6%
Third diploma	43	10.9%	Other Sectors	38	9.6%
Undergraduate	249	62.9%	Total number	396	100%
Master (Postgraduate)	42	10.6%	Length of Working Period	Number of Respondents	%
PhD (Postgraduate)	1	0.3%	< 1 year	44	11.1%
Total number	396	100%	15 years	149	37.6%
Workplace Location	Number of Respondents	%	5 - 10 years	129	32.6%
Jakarta	123	31.1%	10 - 20 years	71	17.9%
Bogor City	33	8.3%	> 20 years	3	0.8%
Bogor Regency	24	6.1%	Total number	396	100%
Depok City	34	8.6%	Income per Month	Number of Respondents	%
Tangerang City	48	12.1%	< IDR 3,000,000	12	3.0%
Tangerang Regency	34	8.6%	IDR 3,000,000 - IDR 5,000,000	56	14.1%
South Tangerang City	48	12.1%	IDR 6,000,000 - IDR 10,000,000	204	51.5%
Bekasi City	43	10.9%	IDR 11,000,000 - IDR 20,000,000	112	28.3%
Bekasi Regency	9	2.3%	> IDR 20,000,000	12	3.0%
Total number	396	100%	Total number	396	100%

Source: Author's Calculation, 2023

Outer Models

The outer model delineates the interrelationship between latent construct variables and their respective indicators. Table 3 presents the outcomes of the validity and reliability testing of each indicator. The convergent validity test is concerned with the loading factor value of each indicator in relation to its latent variables. This study employs a threshold of 0.4 for loading factor values, with indicators exceeding this threshold being retained and those below it being discarded (Hair et al., 2019; Setiawan et al., 2022).

All seventeen indicators were evaluated. Five indicators (FWBa.2, FWBs.1, DFB.2, DFB.4, and DFB.7) were found to fail to meet the requisite criteria for convergent validity and were therefore eliminated. Consequently, the remaining twelve indicators were recalculated, and all complied with the requisite criteria. Furthermore, the discriminant validity test uses the Fornell–Larcker criterion developed by Fornell & Larcker (1981). The correlation of the digital financial behavior variable with the digital financial behavior variable itself has the highest correlation value of 0.535 when compared to the correlation of the digital financial behavior variable with the other two construct variables. The same phenomenon was observed in the case of the financial anxiety variable, which exhibited the highest correlation value of 0.583, and the financial security variable, which exhibited the highest correlation value of 0.813, when compared to the correlation with the other two construct variables. This shows that all of the indicator items used in this study are valid and have met the provisions of discriminant validity in forming each of the latent construct variables.

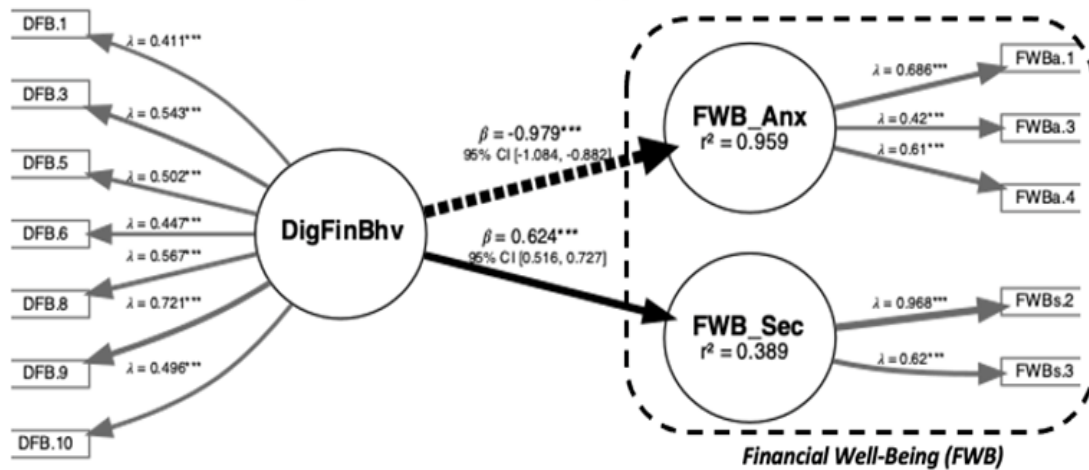
A construct variable in a structural model is considered reliable if the value of Cronbach's alpha and the values of rho_a and rho_c are greater than 0.6 or 0.7, respectively Sarstedt et al. (2011). As indicated in Table 3, all the construct variables comply with the stipulated criteria, thereby demonstrating their reliability.

Table 3. The Validity and Reliability Testing

Variable	Indicator	Loading Factor	FL Criterion	Cronbach's alpha	rho _c	rho _a	Results
Criteria		>0.4	Highest Correlation	>0.7	>0.6	>0.6	
<i>Financial Anxiety</i>			FWBa←→FWBa: 0.583 FWBa←→FWBs: -0.646	0.612	0.601	0.623	Reliable
	FWBa. 1	0.686					Valid
	FWBa. 3	0.420					Valid
	FWBa. 4	0.610					Valid
<i>Financial Security</i>			FWBs←→FWBs: 0.813	0.750	0.788	0.855	Reliable
	FWBs. 2	0.968					Valid
	FWBs. 3	0.620					Valid
<i>Digital Behavior</i>	<i>Financial</i>		DFB←→DFB: 0.535 DFB←→FWBa: -0.669 DFB←→FWBs: 0.449	0.731	0.731	0.748	Reliable
		DFB. 1	0.411				Valid
		DFB. 3	0.543				Valid
		DFB. 5	0.502				Valid
	DFB. 6	0.447				Valid	
	DFB. 8	0.567				Valid	
	DFB. 9	0.721				Valid	
	DFB. 10	0.496				Valid	

Inner Model

Once the outer model requirements have been met, the structural model (inner model) should be subjected to testing using the PLS-SEM approach (Hair et al., 2021).



Picture 2. PLS-Sem Calculation Results
 Source: Processed by the Author, 2023

Picture 2 illustrates the R2 financial anxiety value at 0.959, which is indicative of substantial (strong) criteria, while the R2 financial security value is 0.389, indicating moderate criteria (Hair et al., 2011). It can be demonstrated that the model is fit and that the dependent variable can be explained by the independent variables to a degree of 95.9% and 38.9%.

Table 4. Hypothesis Testing Results

Hypothesis	Variable Relations	Path Coefficient	T-Statistics	2.5% CI	97.5% CI	Results
H1	DFB→FWBa	-0.979	-19,187	-1,084	-0.882	Accepted
H2	DFB→FWBs	0.624	11,300	0.516	0.727	Accepted

Source: Author’s Calculation Using R Studio, 2023

PLS-SEM is a nonparametric method, necessitating the application of bootstrapping to calculate confidence intervals and estimate standard errors (Hair et al., 2021). Table 4 presents all hypothesis are significant and can be accepted because the T-statistic values are greater than or equal to +/-1.960 and there is no zero value (0) between the 2.5% and 97.5% percentile values (Aguirre-Urreta & Rönkkö, 2018).

DISCUSSION

The digital financial behavior exerts a significant negative effect towards financial anxiety and a positive effect towards financial security. In line with this, some individuals experience feelings of anxiety or security in relation to their financial behavior and the financial condition they find themselves in (Strömbäck et al., 2020). Besides that, the behavior of spending and saving money in a healthy way allows for a safe balance of financial conditions (Damian et al., 2020). In fact, behavior in debt has an influence on the security of a prosperous financial situation (Cwynar et al., 2019).

It is therefore recommended that members of the millennial workers who are engaged in the management of their financial affairs digitally pay close attention to their own behavior, with a view to acquiring mastery of the knowledge required to operate financial technology products. It would be better if supported with skills, confidence, and self-motivation that would direct a person's financial behavior to change his financial well-being (Riitsalu & Murakas, 2019). Consequently, the subjective perception of financial well-being will be high.

Furthermore, by finding a significant influence on all hypotheses, it turns out that this is influenced by the demographics of the millennial generation of workers themselves. The majority of respondents are between the ages of young adult, have attained a bachelor's degree, have a worthy monthly income, and working in DKI Jakarta with high living cost. In managing their monthly income, these individuals employ digital financial products in order to prevent reduce on the wealth.

CONCLUSIONS AND RECOMMENDATIONS

The objective of this study is to examine the factors influencing the subjectively financial well-being of millennial workers. All hypotheses are supported. The utilization of digital financial behavior has been demonstrated to have a significantly negative impact on financial anxiety and a positive impact on financial security. This subjective improvement is likely to manifest in two ways: firstly, as a reduction in anxiety about current and future personal financial circumstances, and secondly, as an increase in feelings of security regarding these same circumstances.

FURTHER STUDY

For further investigation, it is essential to recognize that millennial employees' financial well-being in the management of digital finances still requires more guidance in a more effective direction. It's also important to keep looking into different contexts and broader or more diverse subjects related to the factors that affect financial well-being so that more useful solutions to this problem can be found.

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