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Does Financial Behavior Influence Financial Well-being?

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Abstract

Financial behavior and financial well-being are two closely related aspects of an individual's financial decision making. This study attempts to investigate the extent to which financial behavior influences financial well-being in the Indian scenario. The data is collected using a structured questionnaire from a sample of 150 respondents. The study employs Financial Management Behaviour Scale (FMBS) (Dew & Xiao, 2012) to measure financial behavior. Factor analysis and multiple regression are performed to find the influence of financial behavior on financial well-being. The findings of the study suggest that except for credit commitment all the other behavioral factors like future security, savings and investments, credit indiscipline, and financial consciousness have a significant impact on the financial well-being of an individual in the Indian scenario. The regression coefficients of financial well-being are strongly determined by financial consciousness. The study is a contribution to the existing behavioral studies literature and the model used identifies the factors that influence the financial well-being in the Indian scenario. The study is conducted during the year 2020, so the results could have been influenced by the economic scenario of the period. The results of the study can be used by financial advisors to understand the financial well-being in the Indian scenario.

Keywords: Financial Behavior, Financial Well-being, Financial Literacy, Emerging Economy, India

JEL Classification Code: G51, G53, E21, G41

1. Introduction

According to the World Economic Outlook database 2020, India has a GDP of \$2.94 trillion. This study throws light on the financial behavior of individuals in India, and the extent to which financial behavior influences the financial well-being of individuals. Financial behavior is how individuals respond to the information obtained and take action in the form of decision making (Marsh, 2006). The measurement indicators for financial behavior are budgets, savings, setting financial goals, paying bills on time, considering several

alternatives while making financial decisions, and investing in financial markets.

Past research demonstrates that individuals engage in financial behavior and this behavior influences their financial well-being (Starobin et al., 2013; Gutter & Copur, 2011). Individuals do not deliberately make bad financial decisions, and they experience regret while executing bad financial decision making. Behavioral heterogeneity is the reason for the differences in the financial decisions of individuals (Camilla et al., 2017). The research found that financial literacy enhances financial well-being (Bakar & Bakar, 2020; Fernandes et al., 2014), and numeric skills (Lusardi, 2012) influence financial behavior. Past research studies demonstrate that financial literacy is required while engaging in financial markets (Lusardi & Mitchell, 2011).

Financial Literacy is the awareness related to financial issues (Hagadorn, 2017). Individuals around the world have difficulty in understanding financial markets (Lusardi & Mitchell, 2007). To engage with financial markets and to evaluate alternatives, financial literacy, and financial knowledge are required (Behrman et al., 2012). Studies show that financial literacy and financial knowledge result in higher levels of involvement with financial markets in the form of savings and better retirement planning (Lusardi & Mitchell, 2011)

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2. Literature Review

2.1. Financial Behavior

Past literature identifies the factors that affect financial behavior such as financial literacy (Fazli et al., 2012; Arifin, 2017; Susilowati et al., 2017; Mandell & Klein, 2009), financial socialization (Akben, 2015), financial attitude (Setiawati & Nurkhin, 2017), and self-control (Pirouz, 2009; Zulfaris et al., 2020). There exist significant differences in financial behavior among people in different countries. (Stateman, 2008).

Culture plays a vital role and is the reason for differences in financial behavior among different countries. Gathergood (2012) in his study ascertained that expenditure and savings are drivers for financial behavior. The multi-dimensional model developed by Dew & Xiao (2012) psychometrically validated is used in this study. The 'Financial Management Behavioural Scale' (FMBS) is based on assumption that individuals will adopt good financial management behaviors and the scale will measure the sound financial behavior exhibited by the respondents. Xiao et al. (2009) in their study ascertained that individuals who display positive financial behaviors such as maintaining budgets, savings, avoiding risky financial decisions, controlling their expenses, and avoiding or indulging in compulsive buying have high financial well-being.

2.2. Financial Well-being

Financial well-being is defined as a sense of security in the future with proper money management in the present (Netemeyer et al., 2018). The way people feel about their financial situation is financial well-being. It is also about what extent people are confident about their financial decisions and their impact on their future. The American Psychological Association (APA) found that approximately three-quarters of adults are stressed about money and one-quarter experience high financial stress regularly for paying their bills and difficult situations in terms of expenses (APA, 2015).

According to the study of Mokhtar et al., (2020) respondents agreed that they practiced financial behavior such as reviewing and evaluating their expenses, set aside money for unexpected expenses, and achieved financial goals and in turn financial well-being. Financial well-being is dependent on the demographics and individual differences in people like optimism and pessimism (Hofferth, 2006; Kahneman & Krueger, 2006; Puri & Robinson, 2007; Strunk et al., 2006). Financial well-being is perceived to result from financial knowledge, financial capability, and investing in financial products and plans (Bayer et al., 2009; Gerardi et al., 2010; Hung et al., 2009; Sabri & Zakaria, 2015). Financial well-being is having control over one's finances, not feeling stressed and learning to live within one's means, less dependence on debt, focus on the future, save and being

able to afford expenses, being able to retire when desired (PwC, 2019).

Financial well-being is about meeting financial commitments on time and having enough savings and resources to be able to cope with financial shocks. Financial well-being is a state of being wherein a person can fully meet current and ongoing financial obligations, can feel secure in their financial future and is able to make choices that allow them to enjoy life (Camilla et al., 2017). The variables used in the study to measure financial well-being are individuals' secure feeling about the current financial situation, feeling of confidence regarding one's future in financial terms, and feeling confident to fund one's retirement.

3. Research Methods and Materials

This study contributes to the literature on behavioral finance by understanding the extent of the influence of financial behavior on financial well-being in the Indian scenario. The questionnaire is prepared using Financial Management Behavioural Scale proposed by Dew & Xiao (2012). A pilot survey questionnaire was sent to 30 sample respondents. From the collected data set, the sample size is determined statistically as 145.

An online survey questionnaire is sent to 200 samples, out of which 150 respondents filled the survey and the responses were used for the analysis. The questionnaire is tested for its reliability. The internal consistency of items within a factor is determined through Cronbach's alpha. The reliability coefficient is 0.8 which means the financial well-being factor has satisfied the norms of internal consistency. The objectives of the study are to examine various factors influencing financial behavior and to examine the influence of financial behavior on financial well-being in the Indian scenario.

The following hypotheses are formulated for the study:

H1: *There is no association between future security and financial well-being*

H2: *There is no association between saving and investment and financial well-being.*

H3: *There is no association between credit indiscipline and financial well-being.*

H4: *There is no association between financial consciousness and financial well-being.*

H5: *There is no association between credit commitment and financial well-being.*

4. Results and Discussion

A sample size of 150 respondents filled the questionnaire. The socio-demographic profile of respondents is as follows.

A higher percentage of respondents (51.4%) are female and 48.6% are male. Out of the 150 respondents, 72.6 percent fall into the age group between 21 – 30 years, 20 percent of the respondents are between 31 – 40 years, 6 percent of the respondents are between 41 – 50 years, and 1 percent of the respondents are above 50 years. 70.6 percent of the respondents are graduates and 28 percent of them are postgraduates and the remaining 1.4 percent are qualified only up to higher secondary level. The majority (75.3 percent) of the respondents earn a monthly income between Rs. 20,000 – Rs.50,000, 12.6 percent of the respondents earn between Rs.50,001 – Rs.100,000, From the data, it is found that the sample characteristics are best suited to study financial behavior.

4.1. Measurement of Financial Management Behaviour Scale (FMBS)

FMBS is used to measure financial behavior and is validated using Factor Analysis. To reduce the fifteen variables to similar constructs and to extract factors, the Principal Component Analysis (PCA) method is used. PCA attempts to explain the maximum amount of variance by the minimum number of underlying factors. Variables with factor loadings of higher than 0.5 are grouped under one factor. Varimax rotation is used to summarize the factors. The factors having Eigenvalues greater than unity are considered.

Table 1 KMO (Kaiser – Meyer – Olkin) measures explaining sampling adequacy is 0.721 and is adequate to conclude.

Table 2 shows the factor loadings of all the fifteen factors. Other than three factors all the others have good factor loadings.

Table 3 explains the total variance. There are five major factors extracted with a 60.162 percent cumulative percentage of variance.

The fifteen variables from FMBS comprise various aspects of financial behavior. They are regrouped into five factors like future security, savings and investments, credit indiscipline, financial consciousness, and credit commitments. Variables with the highest factor loadings are

Table 1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.721
Bartlett's Test of Sphericity	Approx. Chi-Square	518.255
	Df	105
	Sig.	0

Table 2: Principal Component Analysis

Communalities		
	Initial	Extraction
I compare products or services when I shop	1	0.606
I paid all my bills timely	1	0.388
I keep a written record of my expenses	1	0.476
I spend keeping my budget in mind	1	0.583
I clear all my credit card balance regularly every month	1	0.814
I have exceeded the maximum limit on credit cards	1	0.651
I made very few minimum payments on my loan	1	0.552
I maintain money for an emergency in an account	1	0.683
I save money every month from my salary	1	0.699
I save money for future financial goals	1	0.554
I have contributed money to my retirement	1	0.527
I invested in bonds, stocks, or mutual funds	1	0.425
I purchased an adequate health insurance policy for myself	1	0.700
I have purchased adequate property insurance	1	0.604
I have invested in life insurance products	1	0.764

grouped into five major factors extracted. They are Future Security, Savings and Investments, Credit Indiscipline, Financial Consciousness, and Credit Commitment. All variables have factor loading greater than 0.5 except one variable, 'paid all your bills on time'. There is a sense of credit indiscipline observed in millennials which resulted in a drastic change in the financial behavior exhibited. As per the CIBIL Report in 2019, it should be noted that the number of millennial loans increased by 58 percent as against a 14 percent growth in the non-millennial segment and that there have been concerns about the financial behavior of the millennial segment on their overdependence on debt. This is in line with the research conducted by (Achtziger et al., 2015; Miotto & Parente, 2015; Stromback et al., 2017). Past research points to the role of credit indiscipline and lack of self-control on spending among the millennial.

Table 3: Total Variance

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.576	23.837	23.837	3.576	23.837	23.837	2.831	18.876	18.876
2	1.74	11.6	35.437	1.74	11.6	35.437	2.021	13.47	32.346
3	1.511	10.076	45.513	1.511	10.076	45.513	1.657	11.048	43.394
4	1.144	7.627	53.139	1.144	7.627	53.139	1.428	9.523	52.917
5	1.053	7.022	60.162	1.053	7.022	60.162	1.087	7.245	60.162
6	0.948	6.319	66.481						
7	0.873	5.817	72.298						
8	0.819	5.461	77.76						
9	0.733	4.884	82.644						
10	0.629	4.193	86.836						
11	0.565	3.765	90.601						
12	0.499	3.327	93.929						
13	0.342	2.278	96.207						
14	0.333	2.218	98.424						
15	0.236	1.576	100						

Table 4: Rotated Component Matrix

Factors		Component				
		1	2	3	4	5
Future Security	I have invested in life insurance products	0.857				
	I purchased an adequate health insurance policy for myself	0.816				
	I have purchased adequate property insurance	0.705				
	I have contributed money to a retirement account	0.662				
	I save money for future financial goals	0.500	0.484			
Savings and Investments	I maintain money for an emergency in an account		0.82			
	I save money every month from my salary		0.748			
	I invested in bonds, stocks, or mutual funds		0.513			
Credit Indiscipline	I have exceeded the maximum limit on credit cards			0.800		
	I made very few minimum payments on my loan			0.718		
	I paid all my bills on time			-0.473		
Financial Consciousness	I keep a written record of my expenses				0.675	
	I spend keeping a budget in mind				0.672	
	I compare products or services when I shop		0.343		0.501	0.403
Credit Commitment	I clear all my credit card balance regularly every month					0.873

Extraction Method: Principal Component Analysis.

4.2. Measurement of Financial Well-being

The regression model is developed to measure financial well-being which is a multi-dimensional construct. The objective of the model is to examine the influence of the financial behavior of individuals on financial well-being. The model of financial well-being is developed based on the five factors derived from the factor analysis of FMBS. Factor scores of five factors reflecting FMBS are considered as the independent variables and financial well-being is taken as a dependent variable. It is measured on a 5 point Likert scale. The regression model can be developed by assuming a linear relationship among these constructs.

$$Y_i = b_0 + b_1x_{i1} + b_2x_{i2} + \dots + b_mx_{im} + e_i$$

Where $b_1, b_2 \dots b_m$ are partial regression coefficients.

$x_1, x_2 \dots x_m$ are the variables influencing financial well-being. These variables depict five factors of financial management behavior. They are Future Security, Savings and Investments, Credit Indiscipline, Finance Consciousness, and Credit Commitment. The R^2 is used to assess the overall predictive fit of the model. The derived Adjusted R^2 is 0.678 and the model is statistically significant.

The model can be expressed,

$$Y_i = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5$$

Y = Financial well-being, x_1 = Future Security, x_2 = Savings and Investments, x_3 = Credit Indiscipline, x_4 = Finance Consciousness, x_5 = Credit Commitment
 where b_1 and b_2 are partial regression coefficients.

$$Y = 0.887 + 0.275x_1 + 0.209x_2 - 0.2x_3 + 0.329x_4 + 0.152x_5$$

Financial well-being = 0.887 + 0.275 * future security + 0.209 * savings and investments - 0.200* credit indiscipline + 0.329 * financial consciousness + 0.152 * credit commitment.

In Table 6 the regression coefficients of financial well-being are strongly determined by financial consciousness. It is observed that future security, savings, and investments also have an impact on the financial well-being of an investor. As per the findings in Table 6, credit indiscipline has a negative impact on financial well-being. The finding of the study is in line with the Aegon Center for Longevity and Retirement Report. As per the report, the global average on the Aegon Retirement Readiness Index (ARRI) is 5.9 whereas India scored above 7.3. According to the Aegon Center for Longevity and Retirement Report, the global statistics of working people who save for future retirement is 39 percent compared to India which is much higher at 55 percent.

The multiple regression analysis results are as below:

Independent variables Future security ($b=0.275$ t-value=2.987, $p < 0.05$), savings and investments ($b=0.209$ t-value=2.27, $p < 0.05$), credit indiscipline ($b= - 0.2$, t-value= -2.174,

Table 5: Regression Analysis

ANOVA									
Model		Sum of Squares			Df	Mean Square	Sig.		
1	Regression	43.217			5	21.643	.000 ^a		
	Residual	181.457			144	1.26			
	Total	224.673			149				
a. Predictors: (Constant), Future Security Savings and Investments, Credit Indiscipline, Finance Consciousness, Credit Commitment									
b. Dependent Variable: Financial well-being mean score									
Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df ₁	df ₂	Sig. F. Change
1	.739 ^a	.632	0.678	0.423	0.192	6.859	5	144	
a. Predictors: (Constant), Future Security Savings and Investments, Credit Indiscipline, Finance Consciousness, Credit Commitment									

Table 6: Coefficients of Regressed factors

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.887	0.092		35.859	0
	Future Security	0.275	0.092	0.224	2.987	0.003
	Savings and Investments	0.209	0.092	0.17	2.27	0.025
	Credit Indiscipline	-0.200	0.092	-0.163	-2.174	0.031
	Finance Consciousness	0.329	0.092	0.268	3.575	0
	Credit Commitment	0.152	0.092	0.123	1.647	0.102

a. Dependent Variable: financial well-being mean score

$p < 0.05$), financial consciousness ($b = 0.329$, t -value = 3.575, $p < 0.05$), are significant in explaining variations in financial well-being. But, credit commitment does not have the significant relationship with individual's financial well-being. ($b = 0.152$, t -value = 1.647, $p = 0.102$, > 0.05).

The results of hypothesis testing are that there is an association between future security (H_1), savings & investment (H_2), credit indiscipline (H_3), financial consciousness (H_4), and financial well-being but there is no association between credit commitment (H_5) and financial well-being.

These variables have an impact on an individual's financial well-being. The model also shows the negative impact of credit indiscipline on individuals' well-being. Credit discipline, including paying all your bills on time and not exceeding the maximum credit limit by having self-control will improve an individual's financial well-being in the Indian context. This study also paves the way for future research to explore the in-depth relationship between credit commitment and financial well-being.

5. Conclusion

The present study is conducted in a highly emerging economy like India to understand the financial behavior of individuals and attempts to empirically test the extent to which financial behavior influences the financial well-being of individuals in India. Data was collected using a structured questionnaire from a sample of 150 respondents. FMBS developed by Dew & Xiao (2012) is used to measure financial behavior. PCA is used to extract the factors. Multiple regressions are performed to find the impact of factors of financial behavior on financial well-being. The results reveal that except for credit commitment all the other four behavioral factors like future security, savings and investments, credit indiscipline, and financial consciousness have an impact on the financial well-being of individuals in India. The results of the study can be used by financial

advisors to understand the individuals' financial well-being in the Indian scenario. The study is conducted during the year early 2020, so the results could have been influenced by the economic scenario of the period.

References

- Achtziger, A., Hubert, M., Kenning, P., Raab, G., & Reisch, L. (2015). Debt out of control: The links between self-control, compulsive buying, and real debts. *Journal of Economic Psychology*, 49, 141–149. <https://doi.org/10.1016/j.joep.2015.04.003>
- Akben, S. E. (2015). Factors influencing college students' financial behaviors in Turkey: Evidence from a National Survey. *International Journal of Economics and Finance*, 7(6), 87–94. <https://doi.org/10.5539/ijef.v7n6p87>
- American Psychological Association (APA) (2015). *Stress in America paying with our health*. American Psychological Association Press. <http://www.apa.org/news/press/releases/stress/2014/stress-report.pdf>.
- Arifin, A. Z. (2017). The influence of financial knowledge, control, and income on individual financial behavior. *European Research Studies Journal*, 20(3), 635–648. <https://www.ersj.eu/dmdocuments/2017-xx-3-a-43.pdf>
- Bakar, M. Z. A., & Bakar, S. A. (2020). Prudent financial management practices among Malaysian youth: The moderating roles of financial education. *The Journal of Asian Finance, Economics, and Business*, 7(6), 525–535. <https://doi.org/10.13106/jafeb.2020.vol7.no6.525>
- Bayer, J. B., Bernheim, B. D., & Scholz, J. K. (2009). The effects of financial education in the workplace: Evidence from a survey of employers. *Economic Inquiry*, 47(4), 605–624. <https://doi.org/10.1111/j.1465-7295.2008.00156.x>
- Behrman, J. R., Olivia, S. M., Cindy, K. S., & David, B. (2012). The effects of financial education and financial literacy: How Financial Literacy Affects Household Wealth Accumulation? *American Economic Review: Papers & Proceedings*, 102(3), 300–304. <https://doi.org/10.1257/aer.102.3.300>

- Camilla, S., Lind, T., Skagerlund, K., Vastfjall, D., & Tinghog, G. (2017). Does self-control predict financial behavior and financial well-being? *Journal of Behavioural and Experimental Finance*, 14, 30-38. <https://doi.org/10.1016/j.jbef.2017.04.002>
- Dew, J., & Xiao, J. J. (2012). The financial management behavior scale: Development and validation. *Journal of Financial Counselling and Planning*, 22(1), 43-59. https://www.afcpe.org/assets/pdf/vol_22_issue_1_dew_xiao.pdf
- Fazli, S. M., Cook, C. C., & Gudmunson, C. G. (2012). The financial well-being of Malaysian college students. *Asian Education and Development Studies*, 1(2), 153–170. <https://doi.org/10.1108/20463161211240124>
- Fernandes, D., Lynch, J. G., & Netemeyer, R. G. (2014). Financial literacy, financial education, and downstream financial behaviors. *Management Science*, 6(8), 54-69 <https://doi.org/10.1287/mnsc.2013.1849>
- Fujita, K. Y., Trope, N., Liberman, M., & Levin-Sagi. (2006). Construal levels and self-control. *Journal of Personality and Social Psychology*, 90(3), 351-367. <https://doi.org/10.1037/0022-3514.90.3.351>
- Gathergood, J. (2012). Self-control, financial literacy, and consumer over-indebtedness. *Journal of Economic Psychology*, 33, 590-602. <https://doi.org/10.1016/j.joep.2011.11.006>
- Gerardi, K., Goette, L., & Meier, S. (2010). *Financial literacy and subprime mortgage delinquency: Evidence from a survey matched to administrative data*. <https://www.frbatlanta.org/research/publications/wp/2010/10.aspx>
- Gutter, M., & Copur, Z. (2011). Financial behaviors and financial well-being of college students: Evidence from a National Survey. *Journal of Family and Economic Issues*, 32(4), 699–714. <https://doi.org/10.1007/s10834-011-9255-2>
- Hagadorn, B M. (2017). Role of colleges and universities in student’s financial well-being *Journal of Higher Education: Theory and Practice*, 17(8), 18-29.
- Hofferth, S. L. (2006). Residential father family type and child well-being: Investment versus selection. *Demography*, 43(1), 53–77. <https://doi.org/10.1353/dem.2006.0006>
- Hung, A., Parker, M., Andrew., & Yoong, J. K. (2009). *Defining and measuring financial literacy*. Working Paper WR-78. RAND Corporation, https://www.rand.org/content/dam/rand/pubs/working_papers/2009/RAND_WR708.pdf.
- Kahneman, D., & Krueger, A. B. (2006). Developments in the measurement of subjective well-being. *Journal of Economic Perspectives*, 20(1), 3–24. <https://doi.org/10.1257/089533006776526030>
- Lusardi, A., & Mitchell, O. S. (2007). Baby boomer’s retirement security: The role of planning, financial literacy, and housing wealth. *Journal of Monetary Economics*, 54(1), 205–224.
- Lusardi, A., & Mitchell O. S. (2011). *Financial literacy around the world: An overview*. Working Paper 17107. Cambridge, MA: National Bureau of Economic Research.
- Lusardi, A. (2012). *Numeracy, financial literacy, and financial decision making*. Working Paper 17821. Cambridge, MA: National Bureau of Economic Research.
- Lusardi, A., Daniel, S., & Peter T. (2011). Financially fragile households: Evidence and implications. *Brookings Papers on Economic Activity*, 42(1), 83-150. https://www.brookings.edu/wp-content/uploads/2011/03/2011a_bpea_lusardi.pdf
- Mandell, L., & Klein, L. S. (2009). The impact of financial literacy education on subsequent financial behavior. *Journal of Financial Counselling and Planning*, 20(1), 15–24. <https://files.eric.ed.gov/fulltext/EJ859556.pdf>
- Marsh, B. A. (2006). *Examining the personal financial attitudes, behavior, and knowledge levels of the first-year and senior students at Baptist Universities in the State of Texas*. Doctoral thesis, Bowling Green State University. https://scholarworks.bgsu.edu/he_diss/8/
- Miotto, A. P. S. C., & Parente, J. (2015). Antecedents and consequences of household financial management in Brazilian lower-middle-class. *Revista de Administracao de Empresas*, 55(1), 50–64. <https://doi.org/10.1590/S0034-759020150106>
- Mokhtar, N., Sabri, M. F., & Ho, C. S. F. (2020). Financial capability and differences in age and ethnicity. *The Journal of Asian Finance, Economics, and Business*, 7(10), 1081–1091. <https://doi.org/10.13106/jafeb.2020.vol7.no10.1081>
- Netemeyer, R. G., Warmath, D., Fernandes, D., & Lynch, J. G. (2018). How am I doing? Perceived financial well-being, its potential antecedents, and its relation to overall well-being. *Journal of Consumer Research*, 45(1), 68–89. <https://doi.org/10.1093/jcr/ucx109>
- Pirouz, D. (2009). Culture, self-control, and consumer financial behavior. *Advances in Consumer Research*, 36, 908-909. <https://www.acrwebsite.org/volumes/14670/volumes/v36/NA-36>
- PricewaterhouseCoopers. (2019). *Special report: Financial stress and the bottom line*. <https://www.pwc.com/us/en/private-company-services/publications/assets/pwc-2019-employee-wellness-surveO.pdf>.
- Puri, M., & Robinson, D. T. (2007). Optimism and economic choice. *Journal of Finance and Economics*, 86(1), 71-99. <https://doi.org/10.1016/j.jfineco.2006.09.003>
- Sabri, M. F., & Zakaria, N. F. (2015). The influence of financial literacy, money attitude, financial strain, and financial capability on young employees’ financial well-being. *Pertanika Journal of Social Sciences and Humanities*, 23(4), 827-848.
- Starobin, S. S., Hagedorn, L. S., & Purnamasari, A. (2013). Examining financial literacy among transfer and non-transfer students: Predicting financial well-being and academic success at a four-year university. *Journal of Research and Practice*, 37(3), 216–225. <https://doi.org/10.1080/10668926.2013.740388>
- Statman, M. (2008). Countries and culture in behavioural finance. *CFA Institute Conference Proceedings Quarterly*, 25(3), 38-44. <https://doi.org/10.2469/cp.v25.n3.6>

- Stromback, C., Lind, T., Skagerlund, K., Vastfjall, D., & Tinghog, G. (2017). Does self-control predict financial behavior and financial well-being? *Journal of Behavioral and Experimental Finance*, 14, 30–38. <https://doi.org/10.1016/j.jbef.2017.04.002>
- Strunk, D. R., Lopez, H. R., & Rubeis, J. D. (2006). Depressive symptoms are associated with unrealistic negative predictions of future life events, *Behaviour Research and Therapy*, 44(6), 861-882. <https://doi.org/10.1016/j.brat.2005.07.001>
- Setiawati, S., & Nurkhin, A. (2017). Testing of student financial literacy construct dimensions. *Economic Education Analysis Journal*, 3(1), 727–736. <https://journal.unnes.ac.id/sju/index.php/eeaj/article/view/20283>
- Susilowati, N., Latifah, L., & Jariyah, O. (2017). College student financial behavior: An empirical study on the mediating effect of attitude toward money. *Advanced Science Letters*, 23(8), 7468–7472. <https://doi.org/10.1166/asl.2017.9500>
- Xiao, J. J., Tang, C., & Shim, S. (2009). Acting for happiness: Financial behavior and life satisfaction of college students. *Social Indicators Research*, 92, 53-68. <https://doi.org/10.1007/s11205-008-9288-6>
- Zulfaris, M. D., Mustafa, H., Mahussin, N., Alam, M. K., & Daud, Z. M. (2020). Students and money management behavior of a Malaysian public university. *The Journal of Asian Finance, Economics, and Business*, 7(3), 245–251. <https://doi.org/10.13106/jafeb.2020.vol7.no3.245>