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Research Article

The Moderating Role of Financial Literacy on the Effects of Subjective Norms, Product Involvement, and Perceived Behavioral Control on Investment Intention of Young Investors from a Mobile Wallet App in the Philippines

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ABSTRACT

Investment has grown to be an industry of its own, becoming more diverse in portfolio, now not only in mutual funds and bonds, but now covering or blending with insurance, and growing in market size and reach extending to people who are yet to join the work force. Being an investor was made even more accessible through mobile wallet apps that allow individuals to start investing with just a few clicks of their cellphones. And, as this industry gets bigger, it becomes more important to determine the determining factors why young people start investing with their mobile wallet apps. This study aims to determine the moderating role of financial literacy on the effect of subjective norms, product involvement, and perceived behavioral control on investment intention of mobile wallet app users among the youth in the Philippines. An online survey was administered online to 407 young insurers from mobile wallet apps who are within the ages of 18 and 30. Moderated regression through path analysis determined that subjective norms, perceived behavioral control, and product involvement significantly affect the investment intention of young insurers. Further, financial literacy amplifies the effects of product involvement and subjective norms on investment intention. This research posits that educating people more to be financially literate will most likely lead to more people in the younger generation deciding to invest early for their future.

Keywords: *financial literacy, investment intention, mobile wallet app users, perceived behavioral control, product involvement, subjective norms*

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Background

In the Philippines, the rise of electronic-wallet usage has been apparent especially after movements were restrained for a few months due to government's response to the pandemic. Among the many services now offered by mobile wallet apps is insurance. It now allows users an accessible entry point towards investing in the stock market through the application with only the need to verify their account information, along with answering a form to know their investor risk profiles (GCash, 2021). Once the account is verified, they can proceed to investing in different mutual funds or unit investment trust funds (UITFs) of ATRAM Group. With the low barrier of entry to investments in mutual funds and UITFs to mobile app users, people are encouraged to start investing with as little as Fifty Philippine peso or less than One US Dollar in select funds, without any commission and selling fees, and can cash-in and -out all within the mobile wallet application. According to the 2019 Financial Inclusion survey done by the Central Bank of the Philippines (2020), out of eighteen million adults who have investments, only three percent had UITF investment accounts. Moreover, in terms of financial literacy in the same report, respondents were presented with three questions about the basic financial concept of inflation and interest rate. The results of the survey revealed that generally, older respondents (aged twenty to forty years old) scored higher than younger respondents (aged fifteen to nineteen). The results also say that the respondents do not have enough knowledge when it comes to savings and compounding interest compared to their knowledge of inflation.

Praja et al. (2020) defined intention as an individual's desire, either immediate or long-term, to undertake a given activity. In their study, Ejigu and Filatie (2020) explored the variables of investment intention in micro and small firms among business students in their study. According to the study's findings, financial literacy, perceived behavioral control, projected return, attitude, perceived trust, and perceived risk were significant predictors of students' propensity to engage in micro and small businesses. Yang et al. (2021) added that risk tolerance, herding tendency, and social

contact had significant beneficial effects on stock market investing intention.

Financial literacy, in simplest sense, refers to a person's ability to manage money (Remund, 2010). According to Lusardi and Mitchell (2011), financial literacy among the young is inadequate; less than one-third of young adults have a fundamental understanding of interest rates, inflation, and risk diversification. They contended that sociodemographic factors and family financial sophistication are substantially associated with financial literacy.

With the access to investments that mobile wallet applications offer, specifically in mutual funds or UITFs, more people should be interested with investing. This paper aims to determine what exactly can contribute to the investment intention of young mobile wallet app users. Specifically, it aimed to look at how subjective norms, perceived behavioral control, and product involvement can affect investment intention and how this impact can be moderated by financial literacy.

Methods

The study employed a descriptive-causal research design. A quantitative research design was deemed suitable for this type of study as it concerns itself with how the dependent variable, investment intention, is affected by the independent variables, subjective norms, perceived behavioral control, and product involvement, as moderated by financial literacy.

Data Collection and Instrumentation

The data collection was done using an online Google form survey administered to 400 mobile app wallet users and investors. Considering the focus is to draw causal relationship between variables and not to represent a certain group, non-probability sampling was employed in the selection of respondents. The sample size was deemed acceptable as it crosses the 30:1 ratio of respondents to variables required to enable the detection small effect size in testing the relationships between variables (VanVoorhis and Morgan, 2007). There are, in effect eight variables, inclusive of the interaction variables used in the study, bringing the minimum to 240 respondents if

the study is to have good statistical power. This figure was increased to 400 as when the dependent variable is expectedly skewed or when stepwise regression is used, a larger sample size is needed (Tabachnick and Fidell, 1996). Further, this sample size of 400 respondents offers an acceptable margin of error that fall before the point of diminishing returns, where the enhanced accuracy is deemed inconsequential (Krantz, 2016).

Two requirements had to be met before a respondent is selected. The first is that the respondent must be using the mobile wallet application with the investment option, and the second is that the respondent must be residing in the Philippines. Originally, there were 441 responses, but because some of them did not meet one of or both these criteria, only 407 were retained.

Subjective norms refer to the result of what a person perceives peers about a particular behavior as influenced by the judgement or perception of others deemed significant by the individual (Amjad and Wood, 2009 and Arshad, 2018). This was measured using a 5-point Likert scale developed by Yoopetch, and Chaithanapat (2021). There are three descriptors in this scale and one of which is "The people in my life whose opinions I value would approve of my stock investment using [mobile wallet app]".

Product involvement can be defined as a person's perceived relevance of a product based on their inherent needs, values, and interests balancing economic risks and costs (Ibrahim and Arshad, 2018 and Friedmann and Lowengart, 2019). A 7-item, 5-point Likert scale adapted from Peng, et al (2019) was used to measure this construct. It included descriptors like "[Name of investment section in mobile wallet app] as a service is a need for me" and "[Name of investment section in mobile wallet app] is fascinating for me".

Perceived behavioral control, or a person's perception of how much he is in control over performing a certain behavior in a given situation (Xiao and Wong, 2020), was measured using the 4-item, 5-point Likert scale patterned after the scale by Miller and Miller (2011). This included items like "I have control over regular investments using [Name of investment section in mobile wallet app]".

Investment intention, which is the motivation or drive to invest (Sashikala and Chitramani, 2018) using the mobile wallet app, was measured using the 4-item, 5-point Likert scale proposed by Yoopetch, and Chaithanapat (2021). A sample item from the scale is, "I want to invest in stocks using [Name of investment section in mobile wallet app]".

Financial literacy, defined as the, was measured using the Assessment of Economic and Financial Literacy (ASSET) validated by Folke (2019). A sample question from the 11-item multiple choice, objective-type questionnaire reads, "After working at the job for two months, your friends have invited you to a spontaneous beach weekend. For you to go with them you will have to use the money you have saved. If you decide to go on the trip, how many months in total, from when you started your job, will it take you to save for a new laptop?"

A pilot test was conducted with 30 respondents to measure the reliability of the scales using Cronbach's alpha. The overall Cronbach's alpha coefficient was 0.803 (0.712 for subjective norms, 0.918 for product involvement, 0.716 for perceived behavioral control, and 0.866 for investment intention), which translate to the instrument having a good measure of reliability George and Mallery (2003).

Hypotheses Tested and Framework Validated

From psychological viewpoints, behavioral finance has been widely utilized in the financial sphere, with an emphasis on herding and disposition effects. However, insufficient research has been conducted on the effects of personality factors on individuals' stock investing intentions. Individuals' stock investing intentions are highly influenced by subjective norm, attitude, and perceived behavioral control, with subjective norm considerably influencing attitude. Individuals with open and amiable dispositions are more likely to have an impact on subjective norms (Lai, 2019). Furthermore, Ibrahim and Arshad (2018) discovered that product involvement and subjective norm have a significant impact on investment intentions of individual investors in Pakistan in their study, which aimed to examine the impact of product involvement, subjective norm, and perceived

behavioral control on investment intentions of individual investors in Pakistan.

In the study conducted by Wan, Shen, and Choi (2017), in investigating the interaction effect of attitude and subjective norm on recycling intention, two interaction terms (i.e., experiential attitude and subjective norm; instrumental attitude and subjective norm) influenced recycling intention. It suggests that subjective norms are important in promoting recycling activities. Furthermore, subjective norms may boost the chance of recycling for people who have a good experience attitude, as well as inspire those who have less understanding about the advantages of recycling activities. Furthermore, Shin and Hancer (2016) stated that attitude, subjective norm, perceived behavioral control, and moral norm were discovered to impact customers' local food purchase intention either directly or indirectly. When consumers have varied subjective product knowledge or social information comparison dispositions, the relative impact of attitude, subjective norm, and perceived behavioral control in predicting intention differs since subjective norm was a strong predictor of attitude and behavioral intention (Chiou, 1998; Yang and Jolly, 2009). In another study, results revealed that the attitude and subjective norm had a substantial positive link with the desire to invest in Bonds (Awn and Azam, 2020). As subjective norm, or the perception of others important to an individual is deemed important in decision making, this paper tests the hypothesis:

H1: Subjective norms significantly affect the investment intention of young mobile wallet app users in the Philippines.

Product Involvement, according to Quester & Lim (2003), is how an individual perceives a specific product. It does not measure the individuals' perception only in one point of time, but rather on an on-going basis. Given this, product involvement dives into how the individual evaluates the product and its alternatives. The study of Richins and Bloch (1986; as cited in Quester & Lim, 2003) explains that high product involvement does not inhibit an imme-

diate purchase response, but it gives the individual thoughts about the product that may or may not stay with them over time. This is supported by Aspara's (2013) study regarding optimism and confidence in the role of brand perceptions. In the case of investing, brand familiarity does not precede overconfidence for their belief in getting profits from stock performance. Furthermore, Aspara (2013) also notes that having high involvement in terms of brand familiarity of a specific company does not make the individual disregard other alternatives. Similarly, Chi et al. (2009) found that brand awareness has a positive effect on purchase intention. Specifically, brand recall and brand identity (brand recognition) both positively affect a consumers' purchase intention. As such, based on the research done by Chi et al. (2009) using perceived quality as a mediating variable for brand awareness on purchase intention, they concluded that brand awareness has a significant positive impact on perceived quality.

In the study of Ibrahim & Arshad (2018), they proposed that product involvement had a significant impact on investment intentions. The findings of their study showed that those who have high involvement with a product (in the case of investors) show that by regularly updating their information about stocks, it positively impacts the investment intention of the investor. Ibrahim & Arshad (2018) therefore concluded that higher involvement in regard to stocks results in higher intentions to invest. Furthermore, Lim, Soutar, & Lee (2013) hypothesized that investment intentions will be greater when the individual is more involved in their financial matters. The results of their study proved their hypothesis, as product involvement in relation to financial activity positively impacts investment intentions significantly. Thus, this paper tests the hypothesis:

H2: Product involvement significantly affects the investment intention of young mobile wallet app users in the Philippines.

Perceived Behavioral Control (PBC) is one of the key components of the Theory of Planned Behavior as explained by Ajzen (1991; as cited in Barua, 2013). Ajzen (2002, p.667; as cited in

Barua, 2013) also explains that PBC helps in affecting the intentions of the individual and become a factor towards their behavior. In the study of Barua (2013), PBC is seen as a moderating variable, rather than an independent variable. Furthermore, Barua (2013) brings up the study of Cheung, Chan, & Wong (1999; as cited in Barua, 2013) and elaborates that PBC has a positive correlation with moderations of beliefs to be able to manipulate the performance of the behavior in both negative and positive ways.

According to Ibrahim and Arshad (2018), perceived behavioral control (PBC) is thought to have a significant impact on investment intentions. In addition, Cuong and Jian (2014) identified a substantial link between perceived behavioral control and behavioral intention of individual investors. Perceived behavioral control in this study refers to an investor's ability to exercise control over a certain behavior in the context of stock investing. People's judgment, according to Hamid (2014), is demonstrated by their perceived behavioral control over their capacity to perform judgements and behavior about independence over the decision to undertake the activity. When a person considers participating in a certain action, perceived behavioral control is the individual's response to the question. Furthermore, those with high perceived behavioral control are predicted to be motivated to engage in the behavior (Yzer, 2012). There have been few empirical studies on the link between PBC and investment ambitions. Alleyne and Broome (2011) identified specific elements that are likely to influence potential investors' investment decisions, and their findings support the hypothesis that PBC has a significant influence on potential investors' investment decisions. Hence, the hypothesis:

H3: Perceived behavioral control significantly affects the investment intention of young mobile wallet app users in the Philippines.

Lusardi and Mitchell (2011) posited that financial literacy among the young is inadequate; with only less than one-third of young adults having a fundamental understanding of interest rates, inflation, and risk diversification. According to a study conducted by Sabir and Shahr (2019) which examines the moderating effect of financial literacy on the relationship of overconfidence and past investment experience with the herding behavior of individual investors, the results provided strong evidence that both overconfidence and past investment experience motivate investors to herd. Furthermore, it was discovered that financial literacy has a minor influence on the link between cognitive profile and herding behavior. Hayat and Anwar (2016) claimed that the results of their study, which focused on the influence of behavioral biases in investment decision making with the moderating role of financial literacy in Pakistan, showed that disposition effect, overconfidence, and herding have a significant positive impact on investment decisions. Hence, this paper wishes to test the extent that financial literacy moderates the effects of social norms, product involvement, and perceived behavioral control on investment intention:

H4: Financial literacy moderates the effects of subjective norms on the investment intention of young mobile wallet app users in the Philippines.

H5: Financial literacy moderates the effects of product involvement on the investment intention of young mobile wallet app users in the Philippines.

H6: Financial literacy moderates the effects of perceived behavioral control on the investment intention of young mobile wallet app users in the Philippines.

These hypotheses are illustrated in the operational framework in Figure 1.

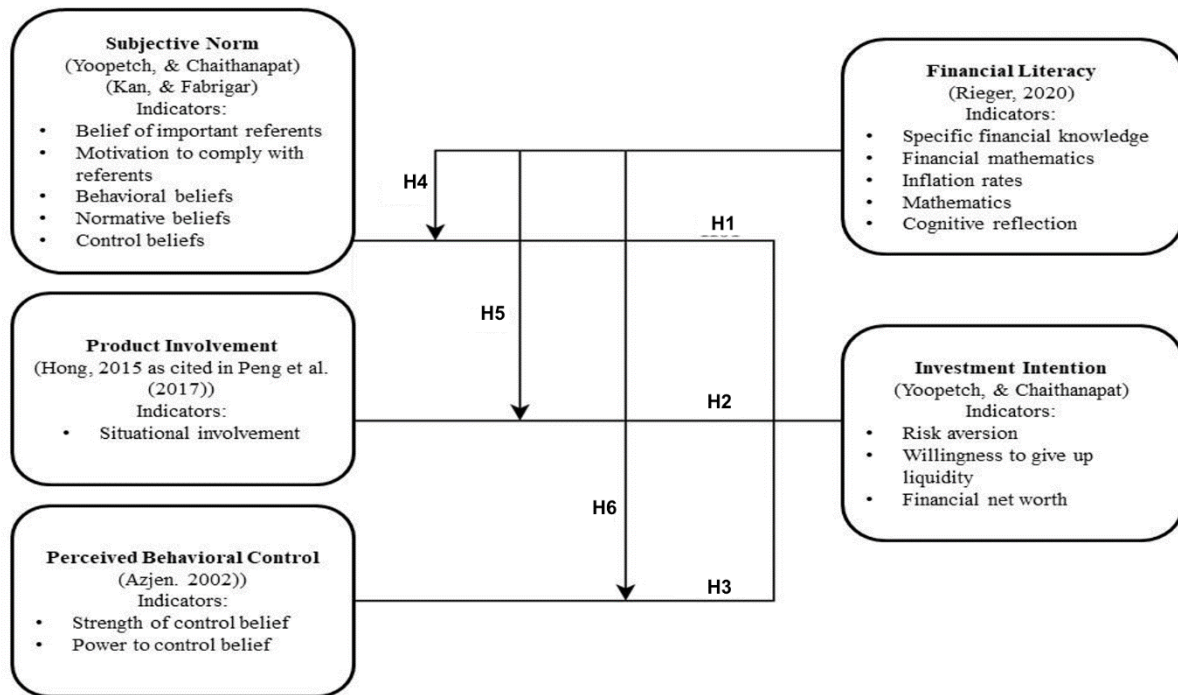


Figure 1. Operational Framework of the Study

Result and Discussion

The respondents comprised a total of 407 mobile wallet app users, within the age of 18 to 30 years old and residing in the Philippines. 60 percent of respondents were aged 22 to 25 years old, 29 percent of respondents were 26-30 years old, and the remaining 11 percent of respondents were 18-21 years old. The educational background of the respondents may also be an important indicator as the level of education and sociodemographic status is often

correlated with financial literacy (Lusardi and Mitchell, 2011). As such, the educational backgrounds of the respondents were recognized and divided into two categories, namely Secondary Level and Tertiary Level. Two hundred forty-seven respondents completed their tertiary education, which accounted for 61% of the sample size, whereas 160 respondents completed their secondary education only, which accounted for 39% of the sample size. This is summarized in Table 1 below:

Table 1. Summary of Demographics

Variable	n	%
Age		
18 - 21	45	11.06
22 - 25	245	60.20
26 - 30	117	28.75
Educational Attainment		
Secondary Level (Highschool Diploma)	160	39.31
Tertiary Level (Bachelor's Degree)	247	60.69

Note. Due to rounding errors, percentages may not equal 100%.

Analysis of variance or ANOVA was used to determine if the mean of investment intention

is different among the three age groups. At 0.05 level of significance, the differences were

significant, $F(2, 404) = 48.71$, $p < .001$, indicating that age is a factor in the investment intention of mobile wallet app users. The eta squared

was 0.19, which means age can explain approximately 19% of the variations in investment intention.

Table 2. Analysis of Variance Table for Investment Intention by Age

Term	SS	df	F	p	η_p^2
Age	23.36	2	48.71	< .001	0.19
Residuals	96.88	404			

A 2-tailed independent samples t-test was employed to determine if there's a significant difference in the mean investment intentions of mobile wallet app users when grouped according to educational attainment. The result based on an alpha value of .05 is $t(405) = -15.69$, $p < .001$, indicating that there's overwhelming evi-

dence to warrant the rejection of the null hypothesis. This suggests that the mean investment intention was significantly different between the those who completed secondary school only and those who have earned their bachelor's degree. The summary statistics are found in Table 3.

Table 3. Two-Tailed Independent Samples t-Test for Investment Intention by Educational Attainment

Variable	Secondary Level (Highschool Diploma)		Tertiary Level (Bachelor's Degree)		t	p	d
	M	SD	M	SD			
Investment Intention	4.10	0.36	4.79	0.47	-15.69	< .001	1.64

Note. N = 407. Degrees of Freedom for the t-statistic = 405. d represents Cohen's d.

While beyond the scope of the research, having found out that age and educational attainment are factors in the investment intention of mobile app wallet users may help ex-

plain the other findings of the study. The descriptive statistics as well as the inferential analyses must be framed with these demographic variables in mind.

Table 4. Summary of Descriptive Statistics

Construct	Overall Mean	Standard Deviation	95% CI		Verbal Interpretation
			Lower	Upper	
Subjective Norms	4.47	0.69	4.403	4.537	High to Very High Level of Subjective Norms
Product Involvement	4.46	0.59	4.403	4.517	High to Very High Level of Product Involvement
Perceived Behavioral Control	4.56	0.49	4.512	4.608	Very High Level of Perceived Behavioral Control
Investment Intention	4.52	0.54	4.468	4.572	High to Very High Level of Investment Intention
Financial Literacy	9.32/11	1.56	9.168	9.472	High Level of Financial Literacy

The responses for Subjective Norms (SN) had an average of 4.47 (SD = 0.69, SEM = 0.03, Min = 1.33, Max = 5.00, Skewness = -1.60, Kurtosis = 3.20). With 95% confidence, it can be said that for investors using the mobile wallet app, mean subjective norms rating will be between 4.403 and 4.537 translating to high to very high level of subjective norms. The distribution is also highly skewed left, which means more investors have higher mean response for SN. This means that investors from the mobile wallet app believe that people around them, especially those that they value, think that they are doing the right thing when it comes to investing in the platform.

For Product Involvement (PI) the mean average rating of respondents was (SD = 0.59, SEM = 0.03, Min = 1.94, Max = 5.00, Skewness = -1.18, Kurtosis = 1.61). The mean response of the population of investors of the mobile wallet app would likely be, with 95% confidence, between 4.403 and 4.517, inclusive. The distribution is also highly skewed left, which means more investors have higher product involvement. This means these mobile wallet app investors have high bordering to very high to very high PI with the investment opportunities within the app. They find the investment section of the mobile wallet app as something that excites them, as something they want, and even as something they need.

The observation for Perceived Behavioral Control (PBC) slightly exceeds the first two in terms of numerical value of the mean. It had an average of 4.56 (SD = 0.49, SEM = 0.02,

Min = 2.50, Max = 5.00, Skewness = -0.70, Kurtosis = -0.30). At 95% confidence level, the expected population mean for PBC is within the range 4.512 to 4.608. This means that the population of investors of the mobile wallet app have very high levels of PBC. They strongly believe that it is easy to understand the investment process, and they are confident about their online investment transactions.

The mean for Financial Literacy (FL) is 9.32 (SD = 1.56, SEM = 0.08, Min = 1.00, Max = 11.00, Skewness = -2.84, Kurtosis = 8.51) out of a perfect 11. The distribution is highly skewed left and leptokurtic. This means there's an overwhelming number of investors who have high financial literacy. With 95% confidence, the mean FL rating of the population will be located between 9.168 and 9.472. This means those who invest using their mobile wallet apps are highly financially literate.

With SN, PI, PBC and FL rating from high to very high, it is to be expected that Investment Intention (II) will also be high if the model is supported. II reported a mean rating of 4.52 (SD = 0.54, SEM = 0.03, Min = 1.75, Max = 5.00, Skewness = -1.21, Kurtosis = 2.47), which translates to having very high investment intentions. With 95% confidence, it can be said that the population of investors in mobile wallet apps have high to very high investment intentions with expected mean ranging from 4.468 to 4.572.

To test the first three hypotheses regarding the effects of SN, PI, and PBC on II, a multiple linear regression analysis was performed.

Table 5. Summary of Multiple Regression Results with SN, PI, and PBC Predicting II (Model 0)

Variable	B	SE	95.00% CI	β	t	p
(Intercept)	0.50	0.11	[0.28, 0.72]	0.00	4.43	< .001
Subjective Norms	-0.26	0.04	[-0.33, -0.18]	-0.32	-6.84	< .001
Product Involvement	0.85	0.06	[0.73, 0.96]	0.92	14.56	< .001
Perceived Behavioral Control	0.38	0.04	[0.31, 0.46]	0.35	10.16	< .001
Financial Literacy	-0.04	0.007	[-0.05, -0.02]	-0.11	-5.19	< .001

Note. Results: $F(4,402) = 593.77, p < .001, R^2 = .86$

Unstandardized Regression Equation: Investment_Intention = 0.50 - 0.26*Subjective_Norms + 0.85*Product_Involvement + 0.38*Perceived_Behavioral_Control - 0.04*Financial_Literacy

The results of the linear regression analysis revealed that subjective norms, product involvement, perceived behavioral control and financial literacy significantly predict investment intention with $F(4,402) = 593.77$, $p < .001$, and $R^2 = .855$. This translates to approximately 85.52% of the variance in Investment Intention being accounted for by SN, PI, PBC, and FL collectively. Subjective Norms significantly predicted Investment Intention, $B = -0.26$, $t(402) = -6.84$, $p < .001$, indicative that on average, a unit increase in SN will result to a decrease in II by 0.26 units, 95% CI [-0.33, -0.18], on average. The same can be said about PI predicting II, $B = 0.85$, $t(402) = 14.56$, $p < .001$, indicating that on average, a unit increase in PI will also increase the value of II by 0.85 units, 95% CI [0.73, 0.96]. PBC significantly predicted II as well, with $B = 0.38$, $t(402) = 10.16$, $p < .001$.

This means that on average, a unit increase in PBC rating will increase the average II by 0.38 units, 95% CI [0.31, 0.46]. Financial Literacy significantly predicted Investment Intention as well, $B = -0.04$, $t(402) = -5.19$, $p < .001$. This indicates that on average, a unit in FL will decrease the value of II by 0.04 units, 95% CI [-0.05, -0.02].

The effect of financial literacy and subjective norms is seemingly contrary to expected. While the effect is significant, the direction is inverse. Though close to almost not having an effect, an increase in financial literacy is, based on the model, likely to result to lower investment intention. However, this may be due to FL affecting II not independently, but in sync with another predictor. Hence, the test for moderation.

Table 6. Summary of Multiple Regression Results with Interaction Effects (Model 1)

Variable	B	SE	95.00% CI	β	t	p
(Intercept)	1.46	0.59	[0.31, 2.61]	0.00	2.49	.013*
Subjective Norms	0.41	0.19	[0.05, 0.78]	0.52	2.22	.027*
Product Involvement	-0.18	0.25	[-0.67, 0.32]	-0.19	-0.70	.483
Perceived Behavioral Control	0.49	0.18	[0.14, 0.83]	0.44	2.74	.006*
Financial Literacy	-0.14	0.06	[-0.26, -0.02]	-0.41	-2.28	.023*
SN-FL Interaction	-0.08	0.02	[-0.12, -0.04]	-1.52	-3.79	<.001*
PI-FL Interaction	0.13	0.03	[0.07, 0.19]	2.21	4.19	<.001*
PBC-FL Interaction	-0.02	0.02	[-0.06, 0.02]	-0.29	-0.88	.377

Note. Results: $F(7,399) = 368.04$, $p < .001$, $R^2 = .87$, *significant at 0.05 alpha level
Unstandardized Regression Equation: Investment_Intention = $1.46 + 0.41 \times \text{Subjective_Norms} - 0.18 \times \text{Product_Involvement} + 0.49 \times \text{Perceived_Behavioral_Control} - 0.14 \times \text{Financial_Literacy} - 0.08 \times \text{Subjective_Norms:Financial_Literacy} + 0.13 \times \text{Product_Involvement:Financial_Literacy} - 0.02 \times \text{Perceived_Behavioral_Control:Financial_Literacy}$

A moderated regression analysis was performed to test if financial literacy significantly moderates the effects of subjective norms, product involvement, and perceived behavioral control on investment intention. The results of the analysis were significant, $F(7,399) = 368.04$, $p < .001$, $R^2 = .866$, indicating that approximately 86.6% of the variations in II can be attributed to the changes in SN, PI, PBC, FL, and the interaction of FL with each of the first three predictors. SN significantly predicted II, $B = 0.41$, $t(399) = 2.22$, $p = .027$. This indicates that

on average, a unit increase in SN will increase II by 0.41 units. PI did not significantly predict II, $B = -0.18$, $t(399) = -0.70$, $p = .483$. Based on this sample, a unit increase in PI does not have a significant effect on II. PBC significantly predicted II, $B = 0.49$, $t(399) = 2.74$, $p = .006$. This indicates that on average, a unit increase in PBC will increase II by 0.49 units. FL significantly predicted II, $B = -0.14$, $t(399) = -2.28$, $p = .023$. This means that on average, a unit increase in FL will decrease the value of II by 0.14 units. The interaction between SN and FL had a

significant effect on II, $B = -0.08$, $t(399) = -3.79$, $p < .001$. On average, a unit increase in FL will weaken the effects of SN on II. The interaction between PI and FL had a significant effect on II, $B = 0.13$, $t(399) = 4.19$, $p < .001$. On average, a one-unit increase of FL will strengthen the relationship of PI on II. The interaction between PBC and FL did not have a significant effect on II, $B = -0.02$, $t(399) = -0.88$, $p = .377$. Based on this data, a unit increase in FL does not significantly affect the relationship of PBC on II.

From the above results, it can be shown that financial literacy significantly moderates the effects of subjective norms and product involvement on investment intention. However, it did not moderate the effects of PBC on II. It must also be noted that in Model 1 or in the interaction model, PI is no longer a significant predictor of II, though its interaction with FL is. This indicates the significance in the moderated relationship of these variables.

Table 7. ANOVA Results and Comparison of Model 0 and Model 1

Model		Sum of Squares	df	Mean Square	F	p
H ₀	Regression	102.832	4	25.708	593.767	< .001
	Residual	17.405	402	0.043		
	Total	120.237	406			
H ₁	Regression	104.112	7	14.873	368.039	< .001
	Residual	16.124	399	0.040		
	Total	120.237	406			

Note. Null model includes Subjective Norms, Product Involvement, Perceived Behavioral Control, Financial Literacy

Based on the tests of analysis of variance, both Model 0 and Model 1 significantly predict Investment Intention. To test if it is Model 0 or Model 1 (interaction) that is better supported

by the data collected, a comparison of the explained variance of the two models is necessary.

Table 8. Summary of Explained Variance and Errors

Model	R	R ²	Adjusted R ²	RMSE	R ² Change	F Change	df1	df2	p
H ₀	0.925	0.855	0.854	0.208	0.855	593.767	4	402	< .001
H ₁	0.931	0.866	0.864	0.201	0.011	10.564	3	399	< .001

Note. Null model includes Subjective Norms, Product Involvement, Perceived Behavioral Control, Financial Literacy

The H₀ model includes Subjective Norms, Product Involvement, Perceived Behavioral Control, Financial Literacy as predictors of Investment Intention, while The H₁ model includes the interaction effects of Financial Literacy with each of the other predictors on Investment Intention. Both models significantly predict investment intention with H₀ being able to explain 85.5% of the variances in the dependent variable and H₁ 86.6%. There is only a change of 1.1% after the addition of three interaction terms. Hence, it is best to test if the change in the amount of variation explained is

significant. From the JASP output in Table 8, it was reflected that 1.1% change in r-squared is significant even at the 0.01 level of significance. Thus, the interaction is the better and optimal model in predicting investment intention. Moderation is supported.

The finding of the study that there are significant effects of Subjective Norms on Investment Intention conforms with the studies of Ibrahim and Arshad (2018), Lai (2019), and Awn and Azam (2020). External influences, especially those important to the person, significantly affect the individual's investment

intention. The opinion of people around an individual matters even when it comes to investing within the mobile wallet app, which is already part of a person's personal belongings (cellphone). The result of the analysis also showed Perceived Behavioral Control is a significant predictor of Investment Intention. This conforms with the findings of Ajzen (2002), Alleyne and Broome (2011), Cuong and Jian (2014), and Ibrahim and Arshad (2018). This somehow shows the comfort level investors of mobile wallet app feel about the product and about using the technology. They feel confident enough to say that they are in control of their investments when using that section of the mobile wallet app. Product Involvement is significant in affecting Investment Intention, but less so when there's already the interaction with Financial Literacy. This supports the findings of Chi et al. (2009), and Ibrahim and Arshad (2018), but contradicts that of Richins and Bloch (1986; as cited in Quester & Lim, 2003), and Aspara (2013). Relatively, it is product involvement that affects investment intention the most. Hence, the decision on the following hypotheses:

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| H1: Subjective norms significantly affect the investment intention of young mobile wallet app users in the Philippines. | Supported |
| H2: Product involvement significantly affects the investment intention of young mobile wallet app users in the Philippines. | Supported |
| H3: Perceived behavioral control significantly affects the investment intention of young mobile wallet app users in the Philippines. | Supported |

Financial literacy significantly moderates the effects of subjective norm and product involvement on investment intention, but not

that of perceived behavioral control. When the effect of subjective norms on investment intention is tested separately from that of financial literacy, the relationship is inverse, but when the interaction of the two is also considered, the total effects on investment intention becomes positive and gains magnitude. Thus, hearing good/bad things about investing in mobile wallet apps from others, even from people close to an individual, may not be enough to entice the person to invest. But, hearing from the same people with a good understanding of how investment works, investment intention can be perked up. This finding supports the study of Aren and Aydemir (2015) but contradicts the study of Fachrudin (2016). Financial literacy also moderates the effect of Product Involvement on Investment Intention. This result supports the findings of Lim et al. (2016) in their study regarding product involvement positively affecting investment intentions when correlated with financial activities. Furthermore, it also supports the study of Natsir et al. (2021) in relation to quality information being a factor towards product involvement on purchase intention. A high level of financial literacy makes the young investors be more critical in discerning whether a product or service is trustworthy and useful to them. Lastly, financial literacy does not moderate the effects of Perceived Behavioral Control towards Investment Intention. This supports the findings of Sabir and Shahr (2019) but contradicts the findings of Bandura (1977; as cited in Boyd & Vozikis, 1994). Still, the moderating effects of financial literacy, on the effects of predictors of investment intention on investment intention is supported. The following decisions are made on H4 to H6.

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| H4: <i>Financial literacy moderates the effects of subjective norms on the investment intention of young mobile wallet app users in the Philippines.</i> | Supported |
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- H5: *Financial literacy moderates the effects of product involvement on the investment intention of young mobile wallet app users in the Philippines.* **Supported**
- H6: *Financial literacy moderates the effects of perceived behavioral control on the investment intention of young mobile wallet app users in the Philippines.* **Not Supported**

Conclusion

Young investors in mobile wallet apps, as with many youths in their generation, are highly influenced by peers and loved ones. People who invest know people who also invest, or at least people who look at investing in a similar light. They are, however, confident with investments they make. The ease of use and quick access to mobile wallet apps brought investing closer to young investors. They feel a sense of security in investing with the investment section of the mobile wallet app thinking that they have control over almost anything that happens within their cellphones. The young investors also understand the value of investing for the future. They see investing not just as something they want or something that excites. Rather, they see it as important and something that they need for the future. Indeed, social norms, perceived behavioral control, and product involvement all contribute to the investment intention of young mobile wallet app investors.

The drive to start investing young may be furthered by educating people on financial literacy. It is things like knowledge of how to save, how to pay bills, and how to borrow money responsibly, that make young investors appreciate investing more and that makes them validate the positive opinion of peers and trusted confidants enough to be enticed to invest using the mobile wallet app. It is with knowledge of how money works, with principles of time value of money, and with wisdom of practicing

theories in personal economics that young investors realize why there is a need not just to save but to invest. It is understanding the risks and gains that elates them to practice what they know and invest the little money they have saved. Financial literacy not only predicts investment intention of young mobile wallet users, but it also amplifies the effects of social norms and product involvement.

If the youth is hope to the economy after the long recession brought by the pandemic, then peoples and institutions should start encouraging and educating for financial literacy. Modules on personal finance and how to start investing should be taught as early as secondary school. The small investors in mobile wallet apps today are the more confident, self-made business investors of the future.

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